



The 23rd World
Congress of Soil Science



International Union of Soil Sciences



The 23rd World Congress of Soil Science

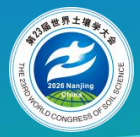
Programme

JUNE 7–12, 2026 Nanjing · China



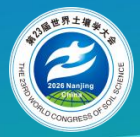
Contents

| | |
|---|----|
| Programme Schedule | 1 |
| Welcome | 2 |
| Organization | 3 |
| Congress Information | 5 |
| Contacts | 11 |
| Sponsors | 12 |
| Venue Map | 13 |
| Meeting Rooms Plan | 14 |
| Information for Oral Presenters | 19 |
| Information for Poster Presenters | 21 |
| Sessions Schedule | 24 |
| Plenary Sessions | 33 |
| Featured Talks | 34 |
| Panel Discussions | 36 |
| Panel Discussion 01: Bridging the Soil Science Divide: Empowering Developing Nations through Global Collaboration of National Soil Science Societies | 37 |
| Panel Discussion 02: Women in Soil Science: Closing Gaps and Strengthening Collaboration | 38 |
| Panel Discussion 03: Fostering International Collaboration in Soil Science | 39 |
| Panel Discussion 04: A 35-Year Journey of Pedosphere: Promoting Soil Sciences across the World | 40 |
| Panel Discussion 05: Climate-friendly and sustainable agricultural practices with plateau-specific characteristics and multi-dimensional symbiosis in Yunnan under climate change | 41 |
| Panel Discussion 06: Open discussion session on observed phenomena in soils and their underlying pedogenic processes: bring and share photos of your macro- and micromorphological observations and join the discussion on debated phenomena! | 42 |
| Panel Discussion 07: Opportunities and challenges for the development of soil science journals | 43 |
| Panel Discussion 08: China-Spain Summer School on Soil Health and Sustainability | 44 |
| Panel Discussion 09: Elsevier Journal Editors Symposium | 45 |
| Entrepreneur Sessions | 46 |
| Workshops | 54 |
| Workshop 01: Author Workshop & Editorial Q&A: How to Publish Successfully in Soil Science Journals .. | 55 |
| Workshop 02: Advancing Research Integrity: Best Practices in Peer Review and Artificial Intelligence | 56 |
| Workshop 03: The Soil Lexicon - Co-shaping Memory, Culture, and Future | 57 |
| Workshop 04: Soil Profile Simulation Workshop with Recyclable Cartons | 58 |
| Workshop 05: Chinese Community-Supported Agriculture Networks and Participatory Guarantee Systems | 59 |
| Parallel Sessions | 60 |
| 101 Soil Morphology and Micromorphology | 60 |
| Session 101001: Advances in Soil Morphology and Micromorphology: Unveiling the Earth's Hidden Resource | 60 |



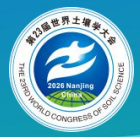
Contents

| | |
|--|-----|
| Session 101002: Micromorphology as a Tool for Understanding the Evolution of Soils and Environments in Natural and Human-Impacted Landscapes | 62 |
| 102 Soil Geography/Soil Genetic Classification and Soil Geography | 64 |
| Session 102001: Magnetic Enhancement of the Soils in Urban/Industrial Areas: Sources and Properties of Anthropogenic Magnetic Particles and Its Influences on Soil Genesis | 64 |
| Session 102003: Soil Structure and Ecosystem Functioning in Earth's Critical Zone | 65 |
| Session 102005: Soil Survey Technology and Spectral Database | 68 |
| 104 Soil Classification | 70 |
| Session 104002: Classification Systems for the Anthropocene and Human-Made Soils | 70 |
| 105 Pedometrics | 72 |
| Session 105001: Advancing pedometrics | 72 |
| 106 Paleopedology | 73 |
| Session 106003: Reading Soil Memory Across Geological Timescales: Traditional Insights and Novel Approaches | 73 |
| 107 Permafrost Affected Soils | 75 |
| Session 107001: Permafrost-Affected Soils of the Changing High-Latitude and High-Altitude Environments | 75 |
| 108 Digital Soil Mapping | 79 |
| Session 108001: Advances in Remote Sensing for Soil Property Mapping | 79 |
| Session 108002: Democratizing Digital Soil Mapping: Innovative Technologies for Global Soil Services and Solutions | 81 |
| Session 108003: Leveraging Site and Spatial Data for Soil Monitoring | 83 |
| Session 108004: Operational Digital Soil Mapping: Fitness for Use of DSM Products: Pitfalls to Avoid and Way Forward | 85 |
| Session 108005: Digital Soil Mapping and Assessment: Advances, Applications, and Future Directions | 87 |
| 110 Proximal Soil Sensing/Soil Remote Sensing and Information | 90 |
| Session 110001: Advances in Soil Health Monitoring with Proximal Sensing | 90 |
| Session 110003: Soil Spectroscopy: A Global Solution for Sustainable Soil Management and Food Security | 94 |
| 112 Universal Soil Classification | 96 |
| Session 112001: Advances in Numerical Soil Classification | 96 |
| 201 Soil Physics | 97 |
| Session 201001: Beyond Plant Available Water - New Insights on Soil Water Accessibility | 97 |
| Session 201002: Linking Physical and Hydrological Processes with Soil Health and Functionality in Terrestrial Ecosystems | 102 |
| 202 Soil Chemistry | 106 |
| Session 202001: Physicochemical and Biological Processes of Chemicals in Soils | 106 |
| Session 202002: Advances in Soil Carbon Dynamics Across Scales: From Molecules to Ecosystems | 111 |
| 203 Soil Biology/Soil Biology and Biochemistry/Soil Virus | 115 |
| Session 203001: Diversity and Function of Soil Viromes | 115 |



Contents

| | |
|--|-----|
| Session 203002: Roles of Extracellular Polymeric Substances in Biogeochemical Cycling and Soil Health | 116 |
| Session 203003: Soil Biodiversity and Soil Health: Interactions, Indicators, and Innovative Approaches | 119 |
| Session 203004: Soil Biogeochemistry in Wetlands: Foundations for Restoration and Climate Resilience | 124 |
| Session 203005: Soil Microbiomes - Importance for Climate Resilient Future, Degraded Lands Restoration and Plant Health Control | 126 |
| Session 203007: Diversity Dynamics and Ecosystem Functions in Soil Microbial Ecology | 130 |
| 204 Soil Mineralogy | 133 |
| Session 204003: Disciplinary Development and Interdisciplinary Frontiers in Soil Mineralogy | 133 |
| 206 Hydropedology | 134 |
| Session 206001: Hydropedology: Addressing Real-World Problems Through Interdisciplinary Science | 134 |
| 207 International Soil Modeling Consortium | 136 |
| Session 207001: Modelling Soil Processes from Ped to Global Scale | 136 |
| Session 207002: Soil Erosion Modelling: Global Alliance | 139 |
| 301 Soil Evaluation and Land Use Planning | 141 |
| Session 301001: Better Management of Organic Agro-Waste in Response to Various Global Environmental Issues | 141 |
| Session 301002: Soil Evaluation and Land Use Planning for Sustaining Productivity | 143 |
| 302 Soil and Water Conservation/Soil Erosion and Soil-Water Conservation | 145 |
| Session 302004: Rethinking the Planning of Soil and Water Management Under Climate Change | 145 |
| Session 302005: Soil Erosion and Conservation | 147 |
| Session 302007: Soil-Water Interactions: From Saturation to Repellency, From Processes to Management | 155 |
| 303 Soil Fertility and Plant Nutrition/Soil-Plant Nutrition/Soil Fertility and Fertilizer | 158 |
| Session 303001: Advances in Soil Fertility Management Through the Utilization of Organic Waste ... | 158 |
| Session 303002: Global and Regional Trends in Cropland Nutrient Balance and Use Efficiency | 164 |
| Session 303003: Global Phosphorus Stewardship: Innovations and Strategies for Sustainable Soil Systems and Food Security | 166 |
| Session 303004: Novel Fertilizer Research and Industrial Development | 169 |
| Session 303005: Plant Nitrogen Utilization: From Cell to Field | 174 |
| Session 303006: Rhizobiont for High Nutrient Use Efficiency | 178 |
| Session 303007: Sustainable Phosphorus Use in Agroecosystems: New Approaches to Optimizing Nutrient Management and Ecosystem Functionality | 180 |
| 304 Soil Engineering and Technology/Soil Engineering/Soil Analysis Technique | 183 |
| Session 304003: Can Enhanced Rock Weathering Capture and Store Atmospheric CO ₂ ? Its Expectations and Limitations | 183 |
| Session 304004: Engineering Technology System for Efficient Quality Improvement of Obstructed Soil | 185 |
| Session 304007: Frontier Technologies for Soil Analysis: From Single-Cell to Nanosensors | 186 |
| 305 Soil Degradation Control, Remediation and Reclamation/Soil Remediation/Environmental Micro-Plastics | 188 |



Contents

| | |
|---|-----|
| Session 305001: Deciphering the Soil-Pollutant Nexus: Biogeochemical Frontiers for Soil Health and Sustainable Ecosystems | 188 |
| Session 305002: Enhanced In Situ Bioremediation for Contaminated Sites | 194 |
| Session 305003: Integrated Remediation and Utilization Strategies for Degraded Soils in Mined Lands | 197 |
| Session 305005: Micro-and Nano-Plastics in the Soil: From Pollution to Solution | 198 |
| Session 305006: New Pollutants in Soils & Agro-Environmental Health | 204 |
| Session 305007: Organohalide Biogeochemical Cycling and Remediation in Soil | 209 |
| Session 305009: Soil Pollution by Heavy Metals and Risk Control | 212 |
| Session 305011: Novel Techniques in Molecular Environmental Soil Science | 218 |
| Session 305012: Soil Pollution and Remediation: Investigation, Mechanisms, and Remediation | 220 |
| 306 Salt-Affected Soils | 223 |
| Session 306003: Understanding, Managing, and Innovating for Salt-Affected Soils | 223 |
| 307 Soils of Urban, Industrial, Traffic, Mining and Military Areas (SUITMA) | 230 |
| Session 307001: Past, Present, and Future of SUITMA (Soils of Urban, Industrial, Traffic, Mining and Military Areas) | 230 |
| 308 Acid Sulphate Soils | 232 |
| Session 308001: Health Maintenance and Sustainable Management of Acidified Soils | 232 |
| Session 308002: Wetland Soils, Acid Sulfate Soils and Sulfidic Materials | 234 |
| 309 Forest Soils | 236 |
| Session 309001: Forest and Grassland Soil Functions and Sustainable Utilization under Global Change | 236 |
| Session 309002: Forest Soil Management: Processes, Challenges, and Sustainable Production | 238 |
| Session 309004: Soil Microbial Diversity and Functions in Carbon and Nitrogen Cycling in Response to Tree Diversity, Wildfires and Climate Change | 241 |
| Session 309005: Soil Organic Matter Dynamics and Nutrient Cycling in Global Forests under Climate Change | 243 |
| 310 Paddy soils | 245 |
| Session 310002: Soil Health-Water-GHG Nexus for Sustainable Crop Production in Paddy Soils | 245 |
| Session 310004: Understanding Paddy Soil Microbiomes for Food and Climate Security | 248 |
| Session 310005: Multiple Paths to Soil Health: From Technology to Policy, From Paddy Fields to the Globe | 250 |
| 401 Soils and the Environment / Soil Environment / Soil Ecology | 253 |
| Session 401001: Peatlands in a Changing World | 253 |
| Session 401002: Soil Food Web Structure and Function under Global Change | 254 |
| Session 401003: Unveiling the Hidden World: Biodiversity and Ecological Function of Soil Fauna ... | 256 |
| 402 Soils, Food Security, and Human Health | 257 |
| Session 402001: Conservation and Restoration of Black Soils in Agro-Ecosystems | 257 |
| Session 402004: Sustainable Management and Restoration of Black Soils: Global Experiences and Actions | 261 |
| Session 402005: Soil Security and Policy: Foundations for a Sustainable Future | 263 |
| Session 402006: Soil, Agriculture, and Human Futures: From Cold Frontiers to Global Challenges ... | 265 |

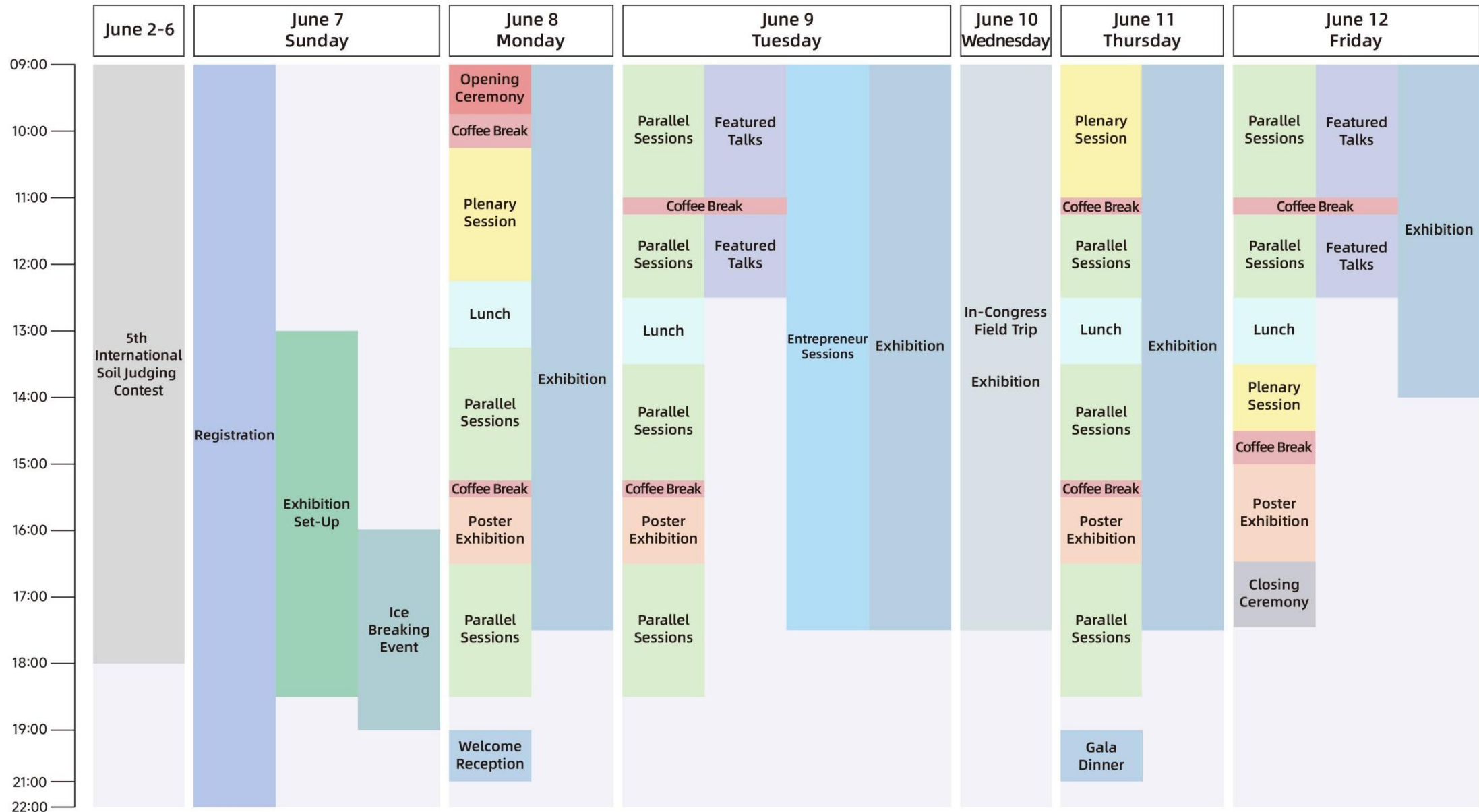


Contents

| | |
|--|-----|
| 403 Soils and Land Use Change | 268 |
| Session 403002: Land Use and Management Effects on Soil Health and Environmental Quality | 268 |
| 404 Soil Education and Public Awareness / Soil Science Education | 274 |
| Session 404002: Share Our Standpoints of Soil Teaching and Learning at School, University and Civil Society for the Future Development of Better Soil Education System | 274 |
| 406 Young and Early Career Scientists / Youth | 278 |
| Session 406003: Soil and People: Culture, Education, and Intergenerational Connections | 278 |
| 407 Nitrogen | 284 |
| Session 407001: Soil Nitrogen Processes, Consequences, and Regulations | 284 |
| 408 Soil Health | 288 |
| Session 408001: Harmonization of Soil Health Monitoring: Scientific, Institutional, and Societal Perspectives | 288 |
| Session 408003: Soil Management Practices on Soil Health in Plastic Greenhouses | 290 |
| Session 408004: Soil & Environmental Health: Advancing Science for Human & Ecosystem Resilience | 292 |
| 409 Carbon Neutrality and Global Change | 296 |
| Session 409001: Advances in Best Management Practices for Achieving Climate-Smart Agriculture . | 296 |
| Session 409002: Advancing Soil Organic Carbon Science for Sustainable Land Management | 300 |
| Session 409003: Climate Change and Soil Microbial Control Carbon Sequestration | 302 |
| Session 409004: Evolution of Soil Organic Matter: Impacts of Climate Change and Land Use Change | 306 |
| Session 409006: One Carbon Metabolism in Terrestrial Ecosystems | 309 |
| Session 409007: Physical, Chemical, and Biological Drivers for Soil Greenhouse Gas Fluxes | 311 |
| Session 409008: Soil Carbon Dynamics and Impacts of Land Use and Management | 315 |
| Session 409009: Soil Carbon Fluxes for Climate and Soil Health | 320 |
| Session 409010: Soil Microbial Life and Death: Impacts on Soil Organic Carbon Dynamics Under Global Change | 322 |
| Session 409011: Soil Organic Matter Transformation, Stabilization and Storage | 327 |
| Session 409012: The Challenge and Opportunity for Precise Assessment and Prediction of Soil Carbon Sequestration and Storage Across Spatial and Temporal Scales | 332 |
| Session 409014: Soil Organic Carbon: Accounting, Mechanisms, and Sustainable Management | 337 |
| 502 Cultural Patterns of Soil Understanding/Soil Science Popularization | 340 |
| Session 502002: From Dirt to Destiny: Communicating Soil Science for Global Sustainability and Cultural Understanding | 340 |
| 503 AI | 342 |
| Session 503005: The Digital Transformation of Soil Science | 342 |
| 505 Special Session | 345 |
| Session 505005: Soil Feeds Life | 345 |
| Poster Session | 351 |



Programme Schedule



Welcome



Jiabao Zhang Academician
Vice President of IUSS,
and President of SSSC



Victor Okechukwu Chude
President of IUSS

Dear Colleagues,

On behalf of the organizing committee, I am delighted to extend an invitation to you for the 23rd World Congress of Soil Science (WCSS 2026), which will be held in Nanjing, China, from June 7 to June 12, 2026. We eagerly anticipate your participation in this prestigious international gathering.

Since its inauguration in 1927, the World Congress of Soil Science has been convened every four years, serving as a pivotal scientific forum in the realm of soil sciences. In 2018, the Soil Science Society of China successfully won the bid to host WCSS 2026 in Nanjing. This marks a significant milestone, as it is the first time the congress will be held in China, and we are honored to undertake the organization of the event in Nanjing.

Nanjing, a sub-provincial city situated in the Yangtze River delta in the southwestern part of Jiangsu province, is the provincial capital and one of China's four great ancient capitals. It is also a vital center for education, culture, economy, industry, politics, and tourism, offering a unique blend of history and modernity for all attendees.

We expect WCSS 2026 to attract a diverse group of participants, including research scientists, soil practitioners, industry representatives, policymakers, regulators, students, and all individuals interested in the sustainable management of soils. This congress will provide an exceptional platform for soil scientists worldwide to exchange ideas, strengthen cooperation, and jointly address the various challenges faced by both developed and developing regions in soil management.

We look forward to welcoming you to WCSS 2026 in Nanjing!

Organization

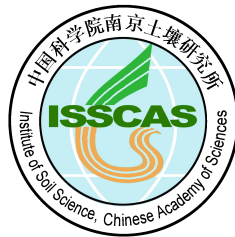
Organizers:



International Union of Soil Sciences®



Hosting Institution:



Organizing Committee:



Chair
Jiabao Zhang



Co-Chair
Victor Okechukwu Chude



Co-Chair
Edoardo A.C. Costantini



Co-Chair
Bruce Lascelles



Vice Chair
Yongguan Zhu



Vice Chair
Renfang Shen



Vice Chair
Xiaoyuan Yan



Vice Chair
Xin Song

Scientific Committee:

Jiabao Zhang (China) - IUSS Vice President Congress (2022-2026)

Victor Okechukwu Chude (Nigeria) - IUSS President

Edoardo A.C. Costantini (Italy) - IUSS Past President (2023-2024)

Bruce Lascelles (UK) - IUSS President elect

Yongguan Zhu (China) - IUSS Division 4, 1st Vice Chair

Renfang Shen (China) - Chair of IUSS Division 3

Xiaoyuan Yan (China) - IUSS Division 2, 1st Vice Chair

Xin Song (China) - IUSS Division 4, 2nd Vice Chair



Organization

Andreas Baumgarten (Austria) - IUSS Treasurer

Cristine Morgan (USA) - IUSS Committee on prizes and awards

Kye-Hoon 'John' Kim (South Korea) - IUSS Committee on budget and finance

Cornie Van Huyssteen (South Africa) - IUSS Committee on statutes and structure

Rainer Horn (Germany) - IUSS Committee on presidential elections

Richard Heck (Canada) - Chair of IUSS Division 1

Giuseppe Corti (Italy) - Chair of IUSS Division 2

Claudio Zaccone (Italy) - Chair of IUSS Division 4

Ganlin Zhang (China) - IUSS Division 1, 1st Vice Chair

Ying Zhang (China) - IUSS Division 1, 2nd Vice Chair

Jianming Xu (China) - IUSS Division 2, 2nd Vice Chair

Fusuo Zhang (China) - IUSS Division 3, Vice Chair

Michael L. Thompson (USA) - SSSA Past President

Advisory Committee:

D.L. Sparks (USA) - IUSS Past President (2002-2006)

R.S. Swift (Australia) - IUSS Past President (2006-2010)

Jae Yang (Korea) - IUSS Past President (2010-2014)

Rainer Horn (Germany) - IUSS Past President (2015-2016)

Rattan Lal (USA) - IUSS Past President (2017-2018)

Takashi Kosaki (Japan) - IUSS Past President (2019-2020)

Laura Bertha Reyes Sánchez (Mexico) - IUSS Past President (2021-2022)

James M. Tiedje (USA) - SSSC Foreign Fellow

Jianmin Zhou (China) - SSSC Fellow

Taolin Zhang (China) - SSSC Fellow

Executive Committee:

Wei Hua, Xiaoyuan Yan, Xin Song, Irene Fabbri, Rong Li, Xiaopeng Li, Jiangtao Qin,

Jianbo Fan, Ruijuan Sun, Jing Song, Mao Ye, Linzhou Liang, Changlong Wei,

Ying Teng, Yisheng Zhang, Weidong Yan, Jinlong Dong, Lingbo Zhou, Feifei Tang



Congress Information

Basic Information

The 23rd World Congress of Soil Science

Date: June 7-12, 2026

Registration: June 7

Congress Sessions: June 8-12

Location:

Nanjing International Expo Center & Nanjing International Expo Convention Center

南京国际博览中心 & 南京国际博览会议中心

Address: No.300 Jiangdong Middle Road, Jianye District, Nanjing, China

江苏省南京市建邺区江东中路 300 号

H5 Websites

The Congress H5 platform provides a mobile-optimized experience for convenient access to Congress information on your smartphone. Scan the QR code to view the Congress Program, General Information, Keynote Speakers, Parallel Sessions, Field Trips & Events, Service Guide, and other event details directly on your mobile device.



Congress Information

Registration

We are delighted to welcome you to the 23rd World Congress of Soil Science (WCSS 2026), taking place from June 7 to 12 at Nanjing International Expo Center (NIEC). Upon arrival at NIEC, all registered delegates are requested to follow the on-site signage to the registration desk and present your Platform ID to complete your check-in and collect your congress materials efficiently.

A confirmation email with your check-in QR code will be sent ten days before the congress. Please download and save the QR code in advance. Present it at the registration desk for fast and efficient check-in.

In addition, an **Ice-Breaking Event** will be held in the check-in area on June 7 from 16:00 to 19:00. **All delegates are welcome to join and interact.**



Registration desk opening hours are as follows:

| Date | Time |
|---------------------|-------------|
| June 7 (Sunday) | 09:00-22:00 |
| June 8 (Monday) | 08:00-18:30 |
| June 9 (Tuesday) | 08:30-18:30 |
| June 10 (Wednesday) | |
| June 11 (Thursday) | |
| June 12 (Friday) | 08:30-14:00 |

Please note that only registered delegates are permitted to enter the congress rooms and exhibition areas. Companions may only access the Welcome Reception and the exhibition hall. They may not access scientific sessions or academic program areas.



Congress Information

Name Badges

Please collect your congress badge at 3B Entrance Hall from June 7, 2026, by presenting your registration QR code. Badge holders may attend all scientific sessions, receive printed congress materials, attend the Welcome Reception and social events, access the exhibition area, and enjoy coffee breaks as scheduled.

Accompanying persons (registered family members of delegates only) may attend the Welcome Reception and visit the exhibition hall. However, they may not access scientific sessions or academic program areas.

IUSS Medals and Awards

Dokuchaev Medal

Von Liebig Medal

Emma Marie Antonie Täuber Award

IUSS Communication Award

IUSS Innovation Award

Jeju Medal

IUSS Honorary Members

Ayoade Olayiwola Ogunkunle (Nigeria)

Deli Chen (Australia)

Erika Michéli (Hungary)

Peter Schad (Germany)

Rattan Lal (USA)

Sviatoslav Baliuk (Ukraine)

Takashi Kosaki (Japan)

Wolfgang Burghardt (Germany)

| Ceremony Schedule | | |
|----------------------------------|--------------------|--------------------|
| Awards and Honors | Ceremony Setting | Date |
| Winners for Soil Judging Contest | Ice-Breaking Event | June 7 (Sunday) |
| IUSS Honorary Members | Opening Ceremony | June 8 (Monday) |
| Von Liebig Award | Gala Dinner | June 11 (Thursday) |
| Dokuchaev Award | | |
| Jeju Award | | |
| Täuber Award | | |
| IUSS Innovation Award | | |
| IUSS Communication Award | | |



Congress Information

Major Events

Ice-Breaking Event

Sunday, June 7, 2026 | 16:00-19:00 | 3B Entrance Hall, Nanjing International Expo Center

Opening Ceremony

Monday, June 8, 2026 | 08:45-09:55 | Zhonghua Hall, Nanjing International Expo Convention Center

Welcome Reception

Monday, June 8, 2026 | 19:00-21:00 | Zhonghua Hall, Nanjing International Expo Convention Center

Gala Dinner

Thursday, June 11, 2026 | 19:00-21:00 | Zhonghua Hall, Nanjing International Expo Convention Center

Ticket: 100 USD

Closing Ceremony

Friday, June 12, 2026 | 16:30-17:30 | Zhonghua Hall, Nanjing International Expo Convention Center

Exhibition

The exhibition area will be located in Hall 4 and open from June 8 to 12, 2026. Professional visitors may visit the exhibition throughout the event. All conference delegates are cordially invited to attend the Exhibition Day on June 10.

Operating hours are as follows:

| Date | Time |
|---------------------------------------|-------------|
| June 8 (Monday) | 09:00-17:30 |
| June 9 (Tuesday) | |
| June 10 (Wednesday) Exhibition Day | |
| June 11 (Thursday) | |
| June 12 (Friday) | |
| June 12 (Friday) | 09:00-14:00 |

Congress Information

Venue Information

1. Congress Catering

- **Coffee Break**

June 8 | 09:55-10:15 & 15:15-15:30

June 9 | 11:00-11:15 & 15:15-15:30

June 11 | 11:00-11:15 & 15:15-15:30

June 12 | 11:00-11:15 & 14:30-15:00

Location: **Corridors outside the conference rooms**

Coffee breaks will be held in conjunction with poster exhibitions, enabling participants to interact with presenters and view the latest research.

- **Lunch**

June 8 | 12:15-13:15

June 9-12 | 12:30-13:30

Location: **Hall 4 Dining Area, NIEC**

Note:



1. **Vegetarian** and **Halal food options** will be available during meal services.
2. If you have any **food allergies**, please carry a card to inform the staff.

2. Parking

Please park at **Parking Lot P1** of Nanjing International Expo Center (NIEC).

3. Toilets

Toilets are available on **every floor of NIEC and the Convention Center**. Please follow directional signs.



Congress Information

4. Nursing Room

A nursing Room is available on **the east side of the 1st floor of the Convention Center, adjacent to River View Café.**

5. Medical Services

Emergency medical assistance will be available to registered participants during the Congress. Two medical service points are available on site.

Location: **Inside Hall 4 Service Center, NIEC & 1st floor of the Convention Center**

6. Foreign Currency Exchange & SIM Card Services

A service point for international attendees might be available inside NIEC, offering the following services (not finalized):

- Foreign currency exchange (to CNY cash);
- Local SIM card purchase (**passport required for registration**).

Location: **Convention Center, 1st Floor**

Staff at the service point provide basic English support.

7. Smoking Policy

Please note that **smoking is not permitted anywhere indoors at the venue.**

Designated Smoking Areas in **the Convention Center:**

- **1st floor: Outdoor smoking area**
- **2nd-4th floors: Small terraces for smoking**

8. Photography

Photographers will be on site during part of the event. Images taken may be used for promotional purposes. If you have any questions or concerns, please contact the Registration Desk.



Contacts

General Information

Email: WCSS2026@issas.ac.cn

Registration

Email: WCSS2026.reg@issas.ac.cn

Exhibition/Sponsorship

Email: WCSS2026.sponsor@issas.ac.cn

Visa Application

Email: WCSS2026.visa@issas.ac.cn

Transportation/Accommodation

Email: WCSS2026.hotel@issas.ac.cn

Tour/Field Trip

Email: WCSS2026.tour@issas.ac.cn

Emergency Numbers

Police Emergency: 110

Ambulance: 120

Fire Emergency: 119



Sponsors



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全国重点实验室**
State Key Laboratory of Soil &
Sustainable Agriculture



THANK YOU TO OUR SPONSORS!

ONGOING UPDATES...



Venue Map



- i Information Desk
- R Registration Desk
- Service Center
- Nursing Room
- Smoking Area
- + Medical Station
- Quiet Room
- Metro
- 4 Gate
- Information Sign
- Dining Area
- Conference Area
- Exhibition Area
- Entrepreneur Area
- SIM Card Services
- Poster Area
- Foreign Currency Exchange Services

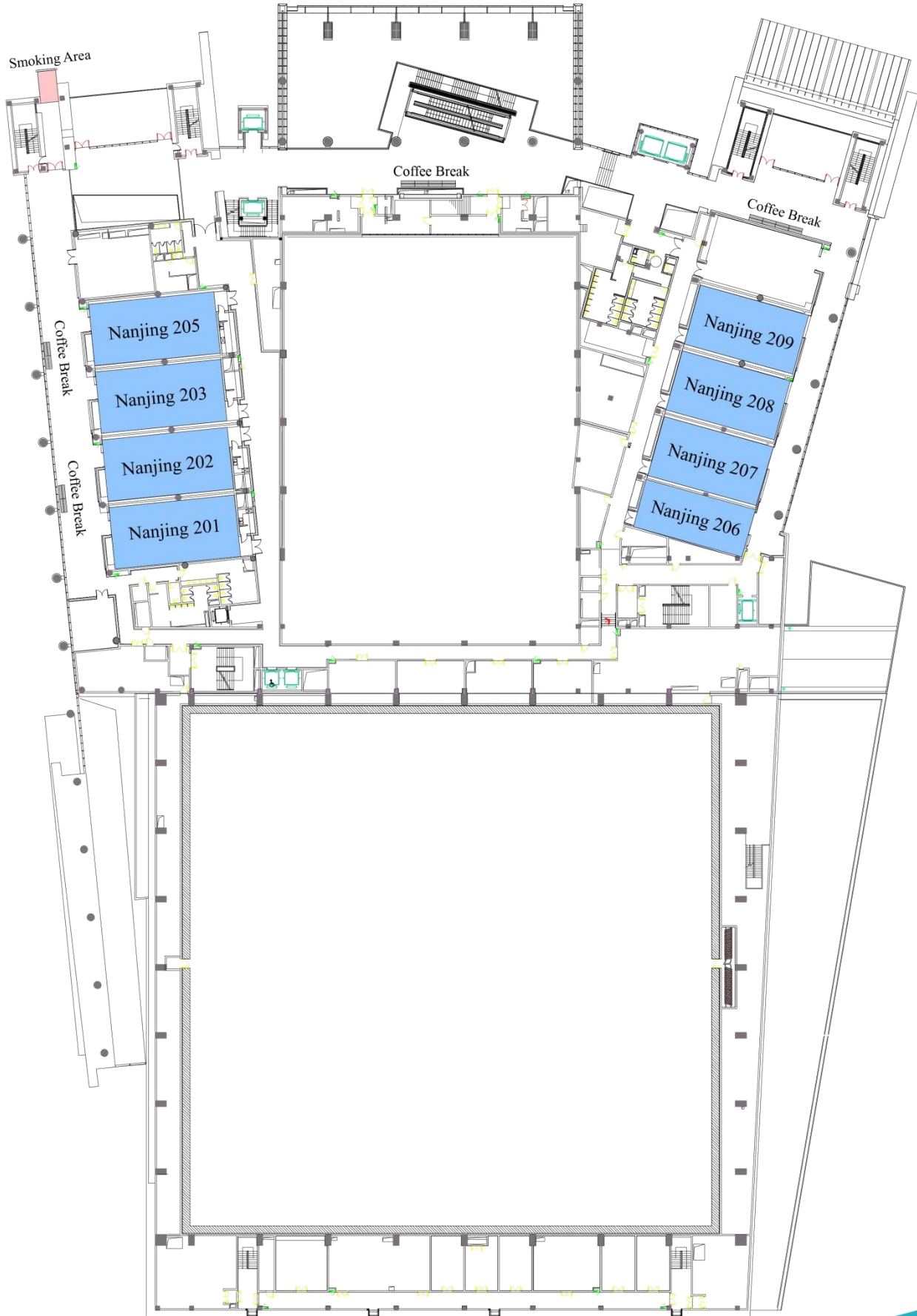
Meeting Rooms Plan

Convention Center, 1st level



Meeting Rooms Plan

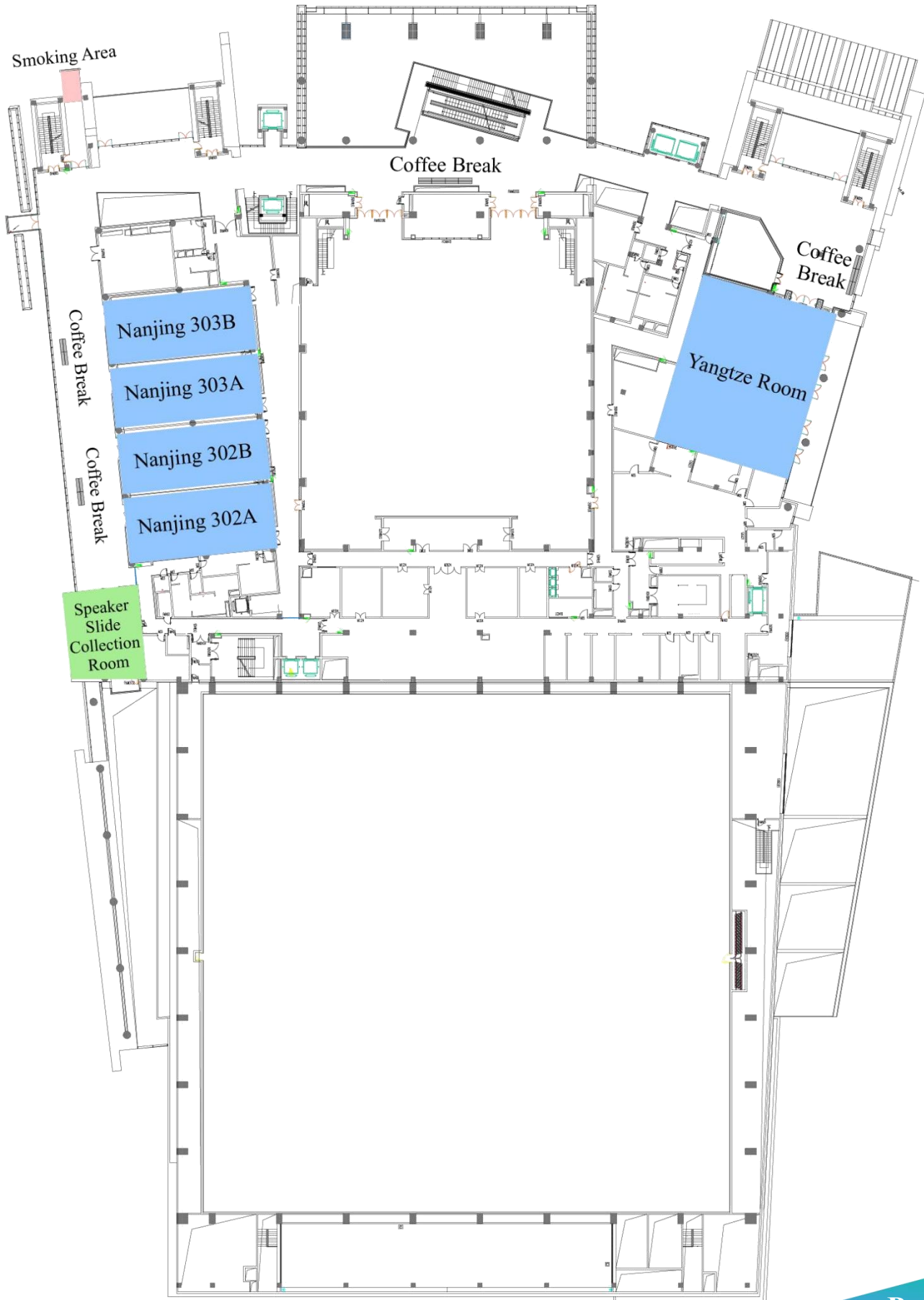
Convention Center, 2nd level



Meeting Rooms Plan

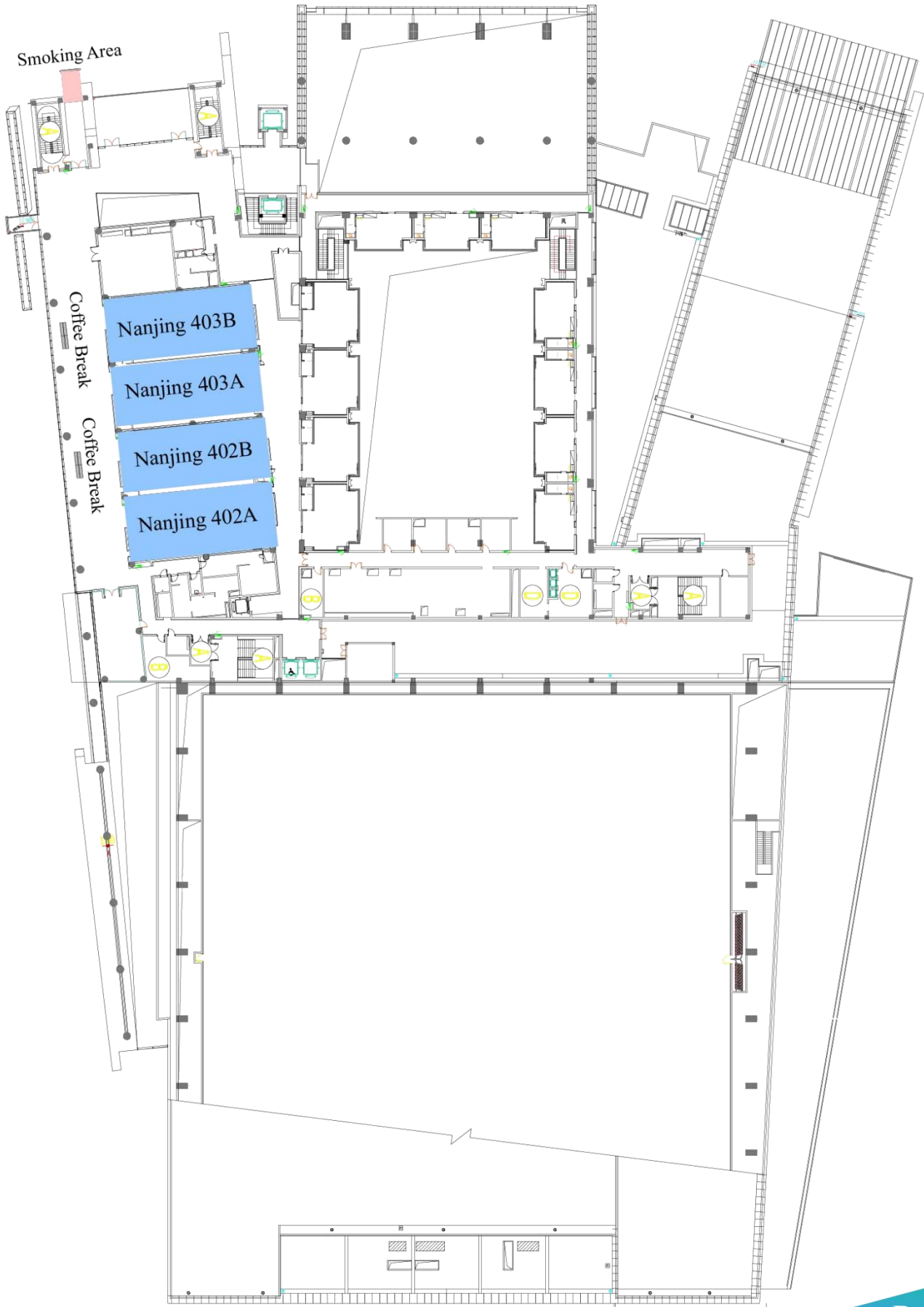
Convention Center, 3rd level

Speaker Slide Collection Room is located here



Meeting Rooms Plan

Convention Center, 4th level



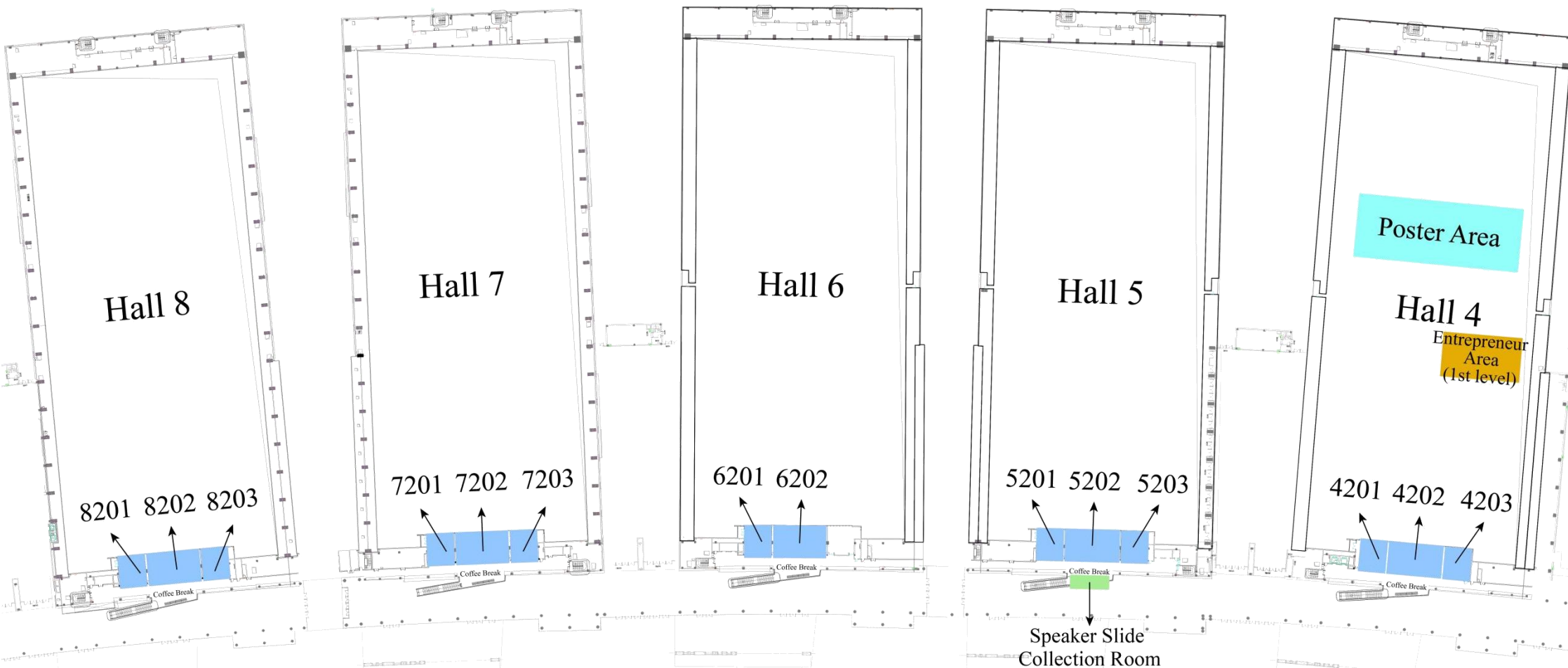


Meeting Rooms & Poster Plan

Meeting Rooms: Expo Center, Hall 4-8, 2nd level

Poster Area: Expo Center, Hall 4, 1st level

Speaker Slide Collection Room: Expo Center, Hall 5, 1st level Lobby





Information for Oral Presenters

I. Requirements for Presentation Files

1. File Format

The Congress accepts presentation files in the following formats (the slide template is attached to this email):

- Standard Microsoft PowerPoint format, preferably .pptx;
- PDF format.

Other file formats are not supported by the on-site presentation system. To avoid any issues during your presentation, please make sure your file format meets the above requirements in advance.

2. Video Playback

During the presentation, the on-site system only supports playback of standalone PowerPoint or PDF files. It does not support external links that redirect to browsers, webpages, online video platforms, or other independent media players.

If your presentation includes video content, please embed the video into your PowerPoint file in advance and play it using PowerPoint's built-in video controls.

The slide Management system supports the following video playback methods:

- Videos embedded directly in the PowerPoint file;
- Local video files linked within the PowerPoint file.

We recommend using common mainstream video formats such as MP4 or WMV. If you are unsure whether your video format is supported, please visit the Slide Collection Room as early as possible, where professional on-site staff will assist you with testing and troubleshooting.

3. Presenter View

The on-site presentation system does not support PowerPoint Presenter View.

During your presentation, the display on the computer and the projection screen will be the same. If you need speaker notes, prompts, or a presentation script, please print a hard copy in advance and bring it with you.



Information for Oral Presenters

4. PowerPoint Layout Ratio

All session rooms are equipped with display and projection devices using a **16:9** aspect ratio. Please prepare your presentation file in 16:9 format whenever possible.

If your file is prepared in another aspect ratio, black bars may appear on the sides or at the top and bottom during playback. However, the content will not be stretched or distorted.

II. How to Bring Your Presentation File

After preparing your final presentation file, please save and bring it to the venue using one or more of the following methods:

- USB flash drive, portable hard drive, or other storage device;
- Cloud storage download;
- Email attachment or downloadable link.

We recommend preparing at least one backup method in case of file damage, device recognition issues, or unstable network access.

III. Slide Testing and Upload Requirements

The Congress will use a unified slide Management system to manage all presentation files. To ensure smooth playback, please make sure to arrive at the Slide Collection Room corresponding to your session room area **at least 2 hours before your scheduled presentation** to complete file upload and playback testing.

Please check the exact time, session room, and area of your presentation in advance. Then, according to the official room-area layout map provided by the Congress, proceed to the corresponding Slide Collection Room.

The venue is divided into two session room areas, and each area will have one Slide Collection Room. Please go to the Slide Collection Room assigned to the area where your session room is located, so as to avoid delays caused by going to the wrong area.

Location:

Speaker Slide Collection Room 1: Conference Center, 3rd Floor

Speaker Slide Collection Room 2: Expo Center, Hall 5, 1st level Lobby



Information for Poster Presenters

Please be informed that posters will be printed and exhibited by the committee - please refrain from printing them on your own. You may go to the designated area at the scheduled time and locate your poster by its number.

Location:

Expo Center, Hall 4, 1st level, Poster Area

Time:

Poster session: June 8-11 15:30-16:30, June 12 15:00-16:30

Here is the floor plan of the Poster Area. Please locate your poster by its number.

You may check your poster number in the poster session section on pages 351-415.

Information for Poster Presenters

Expo Center, Hall 4, 1st level, Poster Area

Row 4 No. 353 - No. 372
Row 3 No. 333 - No. 352
Row 2 No. 313 - No. 332
Row 1 No. 293 - No. 312

Zone 5

Row 4 No. 273 - No. 292
Row 3 No. 253 - No. 272
Row 2 No. 233 - No. 252
Row 1 No. 213 - No. 232

Zone 4

Row 4 No. 193 - No. 212
Row 3 No. 173 - No. 192
Row 2 No. 153 - No. 172
Row 1 No. 133 - No. 152

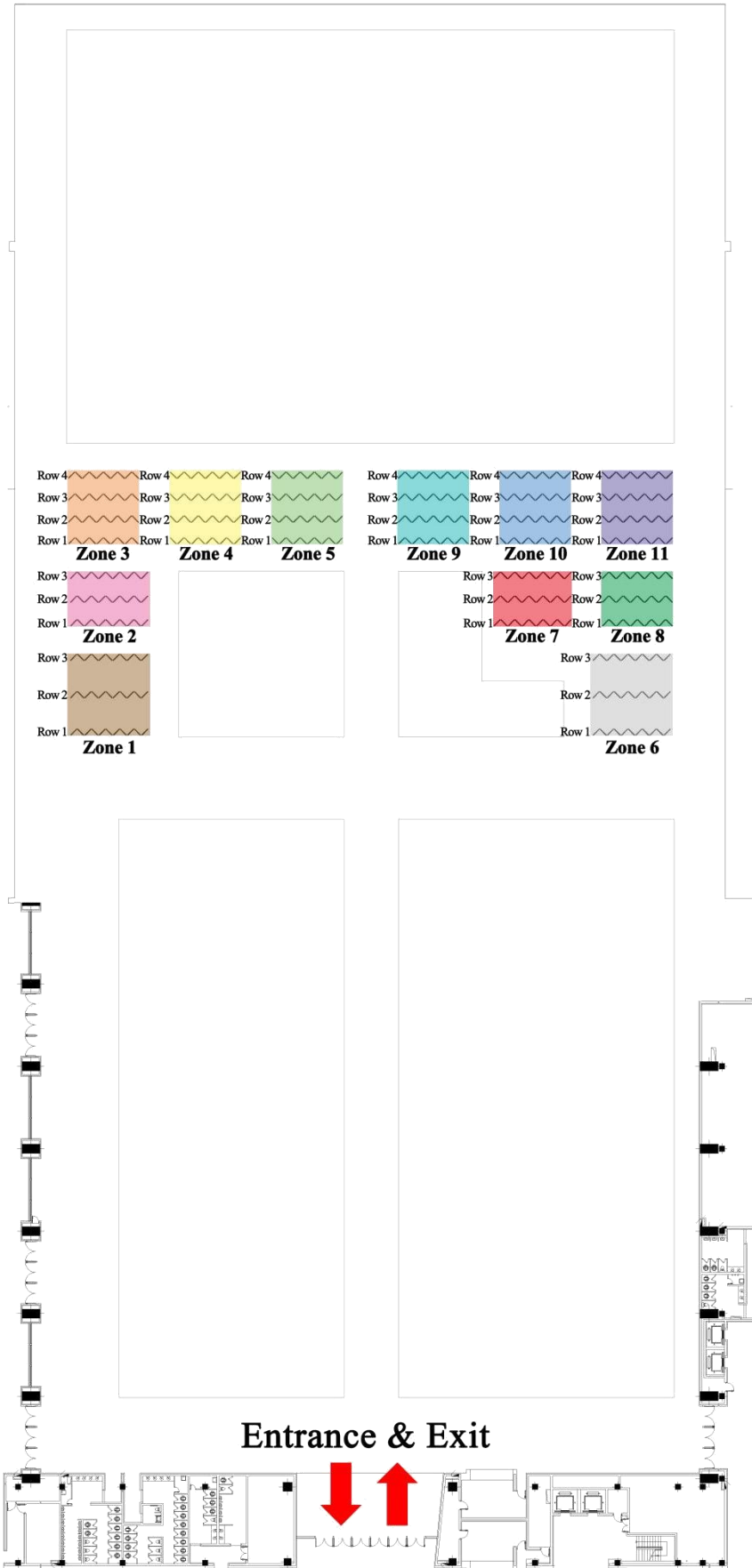
Zone 3

Row 3 No. 111 - No. 132
Row 2 No. 089 - No. 110
Row 1 No. 067 - No. 088

Zone 2

Row 3 No. 045 - No. 066
Row 2 No. 023 - No. 044
Row 1 No. 001 - No. 022

Zone 1



Row 4 No. 785 - No. 804
Row 3 No. 765 - No. 784
Row 2 No. 745 - No. 764
Row 1 No. 725 - No. 744

Zone 11

Row 4 No. 705 - No. 724
Row 3 No. 685 - No. 704
Row 2 No. 665 - No. 684
Row 1 No. 645 - No. 664

Zone 10

Row 4 No. 625 - No. 644
Row 3 No. 605 - No. 624
Row 2 No. 585 - No. 604
Row 1 No. 565 - No. 584

Zone 9

Row 3 No. 545 - No. 564
Row 2 No. 525 - No. 544
Row 1 No. 505 - No. 524

Zone 8

Row 3 No. 483 - No. 504
Row 2 No. 461 - No. 482
Row 1 No. 439 - No. 460

Zone 7

Row 3 No. 417 - No. 438
Row 2 No. 395 - No. 416
Row 1 No. 373 - No. 394

Zone 6

Entrance & Exit



Sessions Overview

The congress will feature 8 Plenary Speeches and 15 Featured Talks.

Over 2,000 oral presentations to be delivered, along with around 800 poster presentations.

These will comprehensively showcase the latest research achievements and cutting-edge developments in soil science.

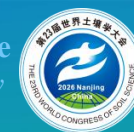
Plenary Speeches will be held during three time slots:

- June 8 | 10:15-12:15
- June 11 | 09:00-11:00
- June 12 | 13:30-14:30

Poster sessions will be held during four time slots:

- June 8 | 15:30-16:30
- June 9 | 15:30-16:30
- June 11 | 15:30-16:30
- June 12 | 15:00-16:30

To encourage active participation and enhance the quality of poster presentations, and to elevate their significance in academic communication, the congress will introduce a Best Poster Award, with a total of 120 awards. The list of winners will be announced at the closing ceremony, and electronic certificates will be sent via email to the awardees after the event.



Sessions Schedule

Monday, June 8

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------------|----------------|----------------|-------------|---------------------|-------------|-------------|--|----------------|----------------|----------------|----------------|--|----------------|----------------|----------------|----------------|
| 08:45-09:55 | | | | | | | | | | | | | | | | | | Opening Ceremony (Convention Center, Zhonghua Hall, 1 st Floor) | | | | | | | | | | | | | | | | | |
| 09:55-10:15 | | | | | | | | | | | | | | | | | | Coffee Break | | | | | | | | | | | | | | | | | |
| 10:15-12:15 | | | | | | | | | | | | | | | | | | Plenary Sessions (Convention Center, Zhonghua Hall, 1 st Floor) | | | | | | | | | | | | | | | | | |
| 12:15-13:15 | | | | | | | | | | | | | | | | | | Lunch (Expo Center Hall 4, Dining Area) | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | Convention Center, 2 nd Floor | | | | | | | | Convention Center, 3 rd Floor | | | | | Convention Center, 4 th Floor | | | | |
| | | | | | | | | | | | | | | | | | | Nanjing 201 | Nanjing 202 | Nanjing 203 | Nanjing 205 | Nanjing 206 | Nanjing 207 | Nanjing 208 | Nanjing 209 | Nanjing 302A | Nanjing 302B | Nanjing 303A | Nanjing 303B | Yangtze Room | Nanjing 402A | Nanjing 402B | Nanjing 403A | Nanjing 403B | |
| 13:15-15:15 | | | | | | | | | | | | | | | | | | Session 407001 | Session 409011 | Session 403002 | Session 409006 | Workshop 01 | Panel Discussion 01 | | | Session 101001 | Session 305009 | Session 305006 | Session 305005 | Session 303001 | Session 505005 | | Session 203005 | Session 203003 | Session 308001 |
| 15:15-15:30 | | | | | | | | | | | | | | | | | | Coffee Break | | | | | | | | | | | | | | | | | |
| 16:30-18:30 | | | | | | | | | | | | | | | | | | Session 407001 | Session 409011 | Session 403002 | Session 409008 | Workshop 02 | Session 301002 | | | | Session 305009 | Session 305006 | Session 305005 | Session 303001 | Session 505005 | Session 202001 | Session 203005 | Session 203003 | Session 204003 |



Sessions Schedule

Monday, June 8

| Monday, June 8 | | | | | | | | | | | | | | | |
|----------------|---|----------------|----------------|----------------|---------------------|----------------|----------------|---------------------|----------------|---------------------|----------------|----------------|---------------------|----------------|----------------|
| | Expo Center, Hall 4 | | | | Expo Center, Hall 5 | | | Expo Center, Hall 6 | | Expo Center, Hall 7 | | | Expo Center, Hall 8 | | |
| | Entrepreneur Area | 4201 | 4202 | 4203 | 5201 | 5202 | 5203 | 6201 | 6202 | 7201 | 7202 | 7203 | 8201 | 8202 | 8203 |
| 13:15-15:15 | 13:30-15:00 Entrepreneur Sessions | Session 102005 | Session 102001 | Session 106003 | Session 402005 | Session 408001 | Session 110003 | Session 310005 | Session 306003 | Session 203002 | Session 201001 | Session 302007 | Session 309001 | Session 307001 | Session 302004 |
| | | | | | | | | | | | | | | | |
| 15:15-15:30 | Coffee Break | | | | | | | | | | | | | | |
| 15:30-16:30 | Poster Session (Expo Center, Hall 4, Poster Area) | | | | | | | | | | | | | | |
| 16:30-18:30 | 15:30-17:00 Entrepreneur Sessions | Session 102005 | | Session 106003 | Session 402005 | Session 408001 | Session 110003 | Session 310005 | Session 306003 | Session 203002 | Session 201001 | Session 302007 | Session 309001 | Session 307001 | Session 302004 |
| | | | | | | | | | | | | | | | |



Sessions Schedule

Tuesday, June 9

| Tuesday, June 9 | | | | | | | | | | | | | | | | | | |
|-----------------|--|--|-------------------|-------------------|-------------------|-------------------|---------------------------|-------------------|-------------------|--|-------------------|---------------------------|-------------------|-------------------|--|-------------------|-------------------|-------------------|
| | Convention Center 1 st Floor | Convention Center, 2 nd Floor | | | | | | | | Convention Center, 3 rd Floor | | | | | Convention Center, 4 th Floor | | | |
| | Zhonghua Hall | Nanjing 201 | Nanjing 202 | Nanjing 203 | Nanjing 205 | Nanjing 206 | Nanjing 207 | Nanjing 208 | Nanjing 209 | Nanjing 302A | Nanjing 302B | Nanjing 303A | Nanjing 303B | Yangtze Room | Nanjing 402A | Nanjing 402B | Nanjing 403A | Nanjing 403B |
| 09:00-11:00 | Featured Talks | Session 407001 | Session 409011 | Session 403002 | Session 409008 | Session 305007 | Session 303002 | Session 309004 | Session 310002 | Session 305009 | Session 305006 | Session 305005 | Session 303001 | Session 505005 | Session 202001 | Session 203005 | Session 203003 | Session 202002 |
| 11:00-11:15 | Coffee Break | | | | | | | | | | | | | | | | | |
| 11:15-12:30 | Featured Talks | Session 407001 | Session 409011 | Session 403002 | Session 409008 | Session 305007 | Session 303002 | Session 309004 | Session 310002 | Session 305009 | Session 305006 | Session 305005 | Session 303001 | Session 505005 | | Session 203005 | Session 203003 | Session 202002 |
| 12:30-13:30 | Lunch (Expo Center Hall 4, Dining Area) | | | | | | | | | | | | | | | | | |
| 13:30-15:15 | | Session 407001 | Session 409011 | Session 403002 | Session 409008 | Session 305007 | Panel Discussion 04 | Session 304003 | Session 308002 | Session 305009 | Session 305006 | Session 305005 | Session 303001 | Session 505005 | Session 202001 | Session 203005 | Session 203003 | Session 202002 |
| 15:15-15:30 | Coffee Break | | | | | | | | | | | | | | | | | |
| 16:30-18:30 | | Session 407001 | Session 409011 | Session 403002 | Session 409008 | Session 305007 | | Session 304003 | Session 308002 | Session 305009 | Session 305006 | Panel Discussion 05 | Session 303001 | Session 505005 | Session 202001 | Session 203005 | Session 203003 | Session 202002 |



Sessions Schedule

Tuesday, June 9

| Tuesday, June 9 | | | | | | | | | | | | | | | |
|-----------------|---|---|----------------|----------------|---------------------|---------------------|----------------|---------------------|----------------|---------------------|----------------|----------------|---------------------|----------------|----------------|
| | Expo Center, Hall 4 | | | | Expo Center, Hall 5 | | | Expo Center, Hall 6 | | Expo Center, Hall 7 | | | Expo Center, Hall 8 | | |
| | Entrepreneur Area | 4201 | 4202 | 4203 | 5201 | 5202 | 5203 | 6201 | 6202 | 7201 | 7202 | 7203 | 8201 | 8202 | 8203 |
| 09:00-11:00 | 09:00-12:30 Entrepreneur Sessions | Session 108002 | Session 107001 | | Session 409002 | Panel Discussion 02 | | Session 503005 | | Session 203007 | Session 201001 | Session 402006 | Session 305002 | Session 302005 | |
| 11:00-11:15 | | Coffee Break | | | | | | | | | | | | | |
| 11:15-12:30 | | Session 108002 | Session 107001 | | Session 409002 | Panel Discussion 03 | Session 104002 | Session 503005 | | Session 203007 | Session 201001 | Session 402006 | Session 305002 | Session 302005 | |
| 12:30-13:30 | Lunch (Expo Center Hall 4, Dining Area) | | | | | | | | | | | | | | |
| 13:30-15:15 | 13:30-17:30 Entrepreneur Sessions | Session 108001 | Session 107001 | Session 108003 | Session 409002 | Session 401002 | Session 104002 | Session 310004 | Session 306003 | Session 203007 | Session 201001 | Session 402006 | Session 305002 | Session 302005 | Session 304007 |
| 15:15-15:30 | | Coffee Break | | | | | | | | | | | | | |
| 15:30-16:30 | | Poster Session (Expo Center, Hall 4, Poster Area) | | | | | | | | | | | | | |
| 16:30-18:30 | | Session 108001 | Session 107001 | Session 108003 | Session 409002 | Session 401002 | Session 104002 | Session 310004 | Session 306003 | Session 203007 | Session 203001 | Session 402006 | Session 305002 | Session 302005 | Session 304007 |

Sessions Schedule



Wednesday, June 10

| Wednesday, June 10 | | |
|--------------------|---|-----------------|
| | Expo Center, Hall 4 | |
| | Entrepreneur Area | Exhibition Area |
| 09:00-12:00 | 10:30-12:00 Workshop 03 | Exhibition |
| 12:00-13:30 | Lunch (Expo Center Hall 4, Dining Area) | |
| 13:30-17:30 | | Exhibition |



Sessions Schedule

Thursday, June 11

| Thursday, June 11 | | | | | | | | | | | | | | | | | |
|-------------------|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--|----------------|----------------|----------------|----------------|--|----------------|----------------|--------------|
| 9:00-11:00 | Plenary Sessions (Convention Center, Zhonghua Hall, 1 st Floor) | | | | | | | | | | | | | | | | |
| | Convention Center, 2 nd Floor | | | | | | | | Convention Center, 3 rd Floor | | | | | Convention Center, 4 th Floor | | | |
| | Nanjing 201 | Nanjing 202 | Nanjing 203 | Nanjing 205 | Nanjing 206 | Nanjing 207 | Nanjing 208 | Nanjing 209 | Nanjing 302A | Nanjing 302B | Nanjing 303A | Nanjing 303B | Yangtze Room | Nanjing 402A | Nanjing 402B | Nanjing 403A | Nanjing 403B |
| 11:00-11:15 | Coffee Break | | | | | | | | | | | | | | | | |
| 11:15-12:30 | | Session 408004 | Session 409003 | | Session 305012 | Session 305001 | Session 309005 | Session 301001 | Session 303004 | Session 303007 | Session 303005 | Session 303003 | Session 302005 | Session 409010 | Session 409012 | Session 409001 | |
| 12:30-13:30 | Lunch (Expo Center Hall 4, Dining Area) | | | | | | | | | | | | | | | | |
| 13:30-15:15 | Session 402001 | Session 408004 | Session 409003 | Session 409007 | Session 305012 | Session 305001 | Session 309005 | Session 301001 | Session 303004 | Session 303007 | Session 303005 | Session 303003 | Session 302005 | Session 409010 | Session 409012 | Session 409001 | |
| 15:15-15:30 | Coffee Break | | | | | | | | | | | | | | | | |
| 16:30-18:30 | Session 402001 | Session 408004 | Session 409003 | Session 409007 | Session 305012 | Session 305001 | Session 309005 | Session 301001 | Session 303004 | Session 303007 | Session 408003 | Session 303003 | Session 302005 | Session 409010 | Session 409012 | Session 409001 | |



Sessions Schedule

Thursday, June 11

| Thursday, June 11 | | | | | | | | | | | | | | | |
|-------------------|-------------------------|---|----------------|----------------|---------------------|----------------|----------------|---------------------|----------------|---------------------|----------------|----------------|---------------------|---------------------|----------------|
| | Expo Center, Hall 4 | | | | Expo Center, Hall 5 | | | Expo Center, Hall 6 | | Expo Center, Hall 7 | | | Expo Center, Hall 8 | | |
| | Entrepreneur Area | 4201 | 4202 | 4203 | 5201 | 5202 | 5203 | 6201 | 6202 | 7201 | 7202 | 7203 | 8201 | 8202 | 8203 |
| 10:30-11:00 | | | | | | | | | | | | | | | |
| 11:00-11:15 | 10:30-12:00 | Coffee Break | | | | | | | | | | | | | |
| 11:15-12:30 | Entrepreneur Sessions | Session 102003 | Session 110001 | Session 108005 | Session 404002 | Session 409004 | Session 409014 | Session 502002 | Session 406003 | Session 203004 | Session 201002 | Session 207001 | Session 309002 | Panel Discussion 06 | |
| 12:30-13:30 | | Lunch (Expo Center Hall 4, Dining Area) | | | | | | | | | | | | | |
| 13:30-15:15 | 13:30-15:00 Workshop 04 | Session 102003 | Session 110001 | Session 108005 | Session 404002 | Session 409004 | Session 409014 | Session 502002 | Session 406003 | Session 203004 | Session 201002 | Session 207001 | Session 309002 | Panel Discussion 06 | Session 305003 |
| 15:15-15:30 | | Coffee Break | | | | | | | | | | | | | |
| 15:30-16:30 | 15:30-17:00 | Poster Session (Expo Center, Hall 4, Poster Area) | | | | | | | | | | | | | |
| 16:30-18:30 | Entrepreneur Sessions | Session 102003 | Session 110001 | Session 108005 | Session 404002 | Session 409004 | Session 409014 | Workshop 05 | Session 406003 | Session 203004 | Session 201002 | Session 207001 | Session 309002 | Panel Discussion 06 | Session 304004 |



Sessions Schedule

Friday, June 12

| | Convention Center 1 st Floor | Convention Center, 2 nd Floor | | | | | | | | Convention Center, 3 rd Floor | | | | | Convention Center, 4 th Floor | | | |
|-------------|---|--|-------------------|-------------------|-------------------|---------------------------|-------------------|-------------------|-------------------|--|-------------------|-------------------|-----------------|-------------------|--|-------------------|-------------------|-------------------|
| | Zhonghua Hall | Nanjing 201 | Nanjing 202 | Nanjing 203 | Nanjing 205 | Nanjing 206 | Nanjing 207 | Nanjing 208 | Nanjing 209 | Nanjing 302A | Nanjing 302B | Nanjing 303A | Nanjing 303B | Yangtze Room | Nanjing 402A | Nanjing 402B | Nanjing 403A | Nanjing 403B |
| 9:00-11:00 | Featured Talks | Session 402001 | Session 408004 | Session 409003 | Session 409007 | Panel Discussion 07 | Session 305001 | Session 305011 | Session 303006 | Session 303004 | Session 303007 | Session 303005 | | Session 302005 | Session 409010 | Session 409012 | Session 409001 | |
| 11:00-11:15 | Coffee Break | | | | | | | | | | | | | | | | | |
| 11:15-12:30 | Featured Talks | Session 402001 | Session 408004 | | | Panel Discussion 07 | Session 305001 | Session 305011 | Session 303006 | Session 303004 | Session 303007 | Session 303005 | | Session 302005 | Session 409010 | Session 409012 | Session 409001 | Session 401003 |
| 12:30-13:30 | Lunch (Expo Center Hall 4, Dining Area) | | | | | | | | | | | | | | | | | |
| 13:30-14:30 | Plenary Sessions (Zhonghua Hall, 1 st Floor) | | | | | | | | | | | | | | | | | |
| 14:30-15:00 | Coffee Break | | | | | | | | | | | | | | | | | |
| 16:30-17:30 | Closing Ceremony (Zhonghua Hall, 1 st Floor) | | | | | | | | | | | | | | | | | |



Sessions Schedule

Friday, June 12

| | Expo Center, Hall 4 | | | Expo Center, Hall 5 | | | Expo Center, Hall 6 | | Expo Center, Hall 7 | | | Expo Center, Hall 8 | | |
|-------------|---|-------------------|-------------------|---------------------|-------------------|-------------------|---------------------------|-------------------|---------------------|-------------------|-------------------|---------------------|---------------------------|-------------------|
| | 4201 | 4202 | 4203 | 5201 | 5202 | 5203 | 6201 | 6202 | 7201 | 7202 | 7203 | 8201 | 8202 | 8203 |
| 9:00-11:00 | Session 108004 | Session 110001 | Session 105001 | Session 404002 | Session 409009 | Session 402004 | Panel Discussion 08 | Session 406003 | Session 206001 | Session 201002 | Session 207002 | Session 401001 | Panel Discussion 09 | Session 101002 |
| 11:00-11:15 | Coffee Break | | | | | | | | | | | | | |
| 11:15-12:30 | Session 108004 | Session 110001 | Session 112001 | | Session 409009 | Session 402004 | Panel Discussion 08 | Session 406003 | Session 206001 | Session 201002 | Session 207002 | Session 401001 | Panel Discussion 09 | Session 101002 |
| 12:30-13:30 | Lunch (Expo Center Hall 4, Dining Area) | | | | | | | | | | | | | |
| 15:00-16:30 | Poster Session (Expo Center, Hall 4, Poster Area) | | | | | | | | | | | | | |

Plenary Sessions

Room: Convention Center, Zhonghua Hall

| Date | Time | Name & Affiliation | Title |
|---------|-------------|--|---|
| June 8 | 10:15-10:45 |  Renfang Shen Institute of Soil Science, Chinese Academy of Sciences | Sustainable Utilization of Acid Soils: Chinese Innovations and Field Practices Offering Insights for Global Prospects |
| June 8 | 10:45-11:15 |  Joann Whalen McGill University | Rhizobiome Partners to Optimize Nutrient Transfers from Soil to Plants |
| June 8 | 11:15-11:45 |  Pete Smith University of Aberdeen | Looking after Soils so that They Can Look after Us |
| June 11 | 09:00-09:30 |  Deli Chen University of Melbourne | Sustainable Nitrogen Management-Bridging Soil Science, Policy, and Practice |
| June 11 | 09:30-10:00 |  Olufunmilayo Ande Soil Science Society of Nigeria | Soil Wealth for Global Security: Harnessing Regenerative Agriculture and Soil's Multifunctional Role for Climate and Environmental Resilience |
| June 11 | 10:00-10:30 |  Panos Panagos The Joint Research Center (JRC) of the European Commission | Soil Health in Europe: Challenges and Opportunities for Soil Science and Policy |
| June 12 | 13:30-14:00 |  Yongguan Zhu Research Center for Eco-environmental Sciences, Chinese Academy of Sciences | Harness Soil Microbiome for One Health |
| June 12 | 14:00-14:30 |  Jiří (Jirka) Šimůnek University of California, Riverside | Numerical Modeling of the Fate and Transport of Contaminants in the Soil-plant Continuum at Various Scales Using HYDRUS |



Featured Talks

Room: Convention Center, Zhonghua Hall

| Date | Time | Name & Affiliation | Title |
|--------|-------------|---|--|
| 9 June | 09:00-09:25 | Ganlin Zhang Institute of Soil Science, Chinese Academy of Sciences | No Free Carbon: Rethinking the Global Potential of Soil Carbon Sequestration |
| 9 June | 09:25-09:50 | Chris Freeman School of Environmental & Natural Sciences, Bangor University | From Enzymes to Ecosystems: Peatlands and the Hidden Carbon Flows Shaping Our Climate |
| 9 June | 09:50-10:15 | Fang-Jie Zhao Nanjing Agricultural University | Mitigating soil heavy metal pollution to protect human health |
| 9 June | 10:15-10:40 | Edoardo A.C. Costantini IUSS, CNR-IBE | The Research Forum of the IUSS |
| 9 June | 10:40-11:05 | Fangbai Li Institute of Eco-environmental and Soil Sciences, Guangdong Academy of Sciences | Nature-Based Solutions for Heavy Metal(loid) Pollution in Acid Reddish Soils: From Biogeochemistry to Applications |
| 9 June | 11:15-11:40 | Xiaoyuan Yan Institute of Soil Science, Chinese Academy of Sciences | Three Decades of Diffuse Pollution Control in Lake Taihu: Lessons for the Global Soil – Water Community |
| 9 June | 11:40-12:05 | Zhongjun Jia Northeast Institute of Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences (CAS) | China Black Soils Initiative: New Paradigm and New Breakthrough |
| 9 June | 12:05-12:30 | Jagdish Kumar Ladha University of California, Davis | Cultivating Resilient Crops: Nitrogen Management for Climate and SDG Benefits |



Featured Talks

| Date | Time | Name & Affiliation | Title |
|---------|-------------|--|--|
| 12 June | 09:00-09:25 | Jizhong Zhou Institute for Environmental Genomics, School of Biological Sciences, University of Oklahoma | Microbial Responses to Climate Warming: Impacts, Feedbacks, and Predictive Modeling |
| 12 June | 09:25-09:50 | Frank Löffler University of Tennessee, Knoxville | Reducing nitrous oxide emissions |
| 12 June | 09:50-10:15 | Rongliang Qiu South China Agricultural University | Theories and Practices of Heavy Metal Contaminated Soil Remediation in China |
| 12 June | 10:15-10:40 | Jianming Xu College of Environmental and Resource Sciences, Zhejiang University | Soil Viruses and Elemental Cycling |
| 12 June | 10:40-11:05 | Baoyuan Liu Beijing Normal University | Bottlenecks and Solutions of Global Soil Erosion Mapping |
| 12 June | 11:15-11:30 | Ganlin Zhang Institute of Soil Science, Chinese Academy of Sciences | 2026 World Soil of the Year Celebration Activities |
| 12 June | 11:30-11:55 | Tingzhao Li Amway (Shanghai) Innovation & Science Co., Ltd | Healthy Soil, Premium Crops: Nutrilite Organic Innovation and Evidence from Long-Term Field Trials |



Panel Discussions

| Date | Time | Topic | Room |
|---------|---|--|---------------------------------|
| 8 June | 13:15-15:15 | Panel Discussion 01: Bridging the Soil Science Gap: Global Collaboration of National Soil Science Societies | Convention Center, Nanjing 207 |
| 9 June | 09:00-11:00 | Panel Discussion 02: Women in Soil Science: Closing Gaps and Strengthening Collaboration | Expo Center, Hall 5, 5202 |
| 9 June | 11:15-12:30 | Panel Discussion 03: Fostering International Collaboration in Soil Science | Expo Center, Hall 5, 5202 |
| 9 June | 13:30-16:00 | Panel Discussion 04: A 35-Year Journey of Pedosphere: Promoting Soil Sciences across the World | Convention Center, Nanjing 207 |
| 9 June | 16:30-18:30 | Panel Discussion 05: Climate-friendly and sustainable agricultural practices with plateau-specific characteristics and multi-dimensional symbiosis in Yunnan under climate change | Convention Center, Nanjing 303A |
| 11 June | 11:15-12:30 13:30-15:15 16:30-18:30 | Panel Discussion 06: Open discussion session on observed phenomena in soils and their underlying pedogenic processes: bring and share photos of your macro- and micromorphological observations and join the discussion on debated phenomena! | Expo Center, Hall 8, 8202 |
| 12 June | 9:00-11:00 11:15-12:30 | Panel Discussion 07: Opportunities and challenges for the development of soil science journals | Convention Center, Nanjing 206 |
| 12 June | 9:00-11:00 11:15-12:30 | Panel Discussion 08: China-Spain Summer School on Soil Health and Sustainability | Expo Center, Hall 6, 6201 |
| 12 June | 9:00-11:00 11:15-12:30 | Panel Discussion 09: Elsevier Journal Editors Symposium | Expo Center, Hall 8, 8202 |



Panel Discussions

| Monday, June 8 | Room: Convention Center, Nanjing 207 | |
|--|--|--|
| Panel Discussion 01 | Bridging the Soil Science Gap: Global Collaboration of National Soil Science Societies | |
| | Conveners: Bruce Lascelles, British Society of Soil Science (BSSS) Xin Song, Soil Science Society of China (SSSC) | |
| Schedule | Topic | Presenter |
| 13:15-15:15 | Classic Collaboration Model Summary: Review successful cases of cross-national cooperation among soil science societies, and summarize feasible cooperation frameworks and operational mechanisms. | Rainer Horn, Honorary member Renfang Shen, Honorary President, Soil Science Society of China Paul Hallett, Academic Chair, British Society of Soil Science; Council Member of Multiple National Soil Science Societies |
| | Actionable Collaborative Strategies: Discuss the implementation path of innovative cooperation modes such as long-term society twinning, global virtual academies for soil science, open sharing of academic resources, technical training and talent exchange programs. | Andrew Morris, British Society of Soil Science Michael Thompson, Former Chair, American Society of Soil Science |
| | Future Global Cooperation Layout: Propose standardized, sustainable and inclusive development suggestions for the long-term collaborative development of the global soil science community. | Additional representatives from global national soil science societies (to be confirmed) |



Panel Discussions

| Tuesday, June 9 | | Room: Expo Center, Hall 5, 5202 |
|--|--|--|
| Panel Discussion 02 | Women in Soil Science: Closing Gaps and Strengthening Collaboration | |
| | <p>Convener: Wang Fang, Institute of Soil Science, Chinese Academy of Sciences</p> <p>Co-Conveners: Daniela Sauer, University of Göttingen Sabine Grunwald, University of Florida Laura Bertha Reyes Sánchez, National Autonomous University of Mexico</p> | |
| Schedule | Topic | Presenter |
| 09:00-09:10 | Welcome and Introduction | <p>Panelist:</p> <p>Joann Whalen, McGill University, Canada</p> <p>Daniela Sauer, Soil Science Society of Germany</p> <p>Fang Wang, International Atomic Energy Agency; Soil Science Society of China</p> |
| 09:10-10:10 | Guided Panel Discussion | <p>Jaroslava Sobocká, Soil Science and Conservation Research Institute, Slovakia</p> <p>He Yan, Zhejiang University, China</p> <p>Olufunmilayo Ande, Soil Science Society of Nigeria</p> <p>Tatiana Minkina, Southern federal university, Russia</p> <p>Christine Morgan, Soil Science Society of American</p> |
| 10:10-10:40 | Audience Questions and Interactive Discussion | <p>Jussara Borges Regitano, Universidade de Sao Paulo, Brazil</p> <p>Cristina Siebe, National Autonomous University of Mexico</p> <p>Ha Anh, Soil Science Society of Vietnam</p> <p>Lucia Helena Cunha dos Anjos, Federal Rural University of Rio de Janeiro, Brazil</p> |
| 10:40-10:50 | Closing Remarks | <p>Lilit Pogosyan, Institute of Ecology (INECOL), Mexico/Armenia</p> <p>Nkosinomusa Nomfundo Dube, University of KwaZulu-Natal, South Africa</p> <p>Zhi Mei, Catalan Institute for Water Research, Spain</p> |



Panel Discussions

| Tuesday, June 9 | | Room: Expo Center, Hall 5, 5202 |
|--|---|--|
| Panel Discussion 03 | Fostering International Collaboration in Soil Science | |
| | Convener: Wang Fang, Institute of Soil Science, Chinese Academy of Sciences; IAEA | |
| | Co-Conveners: Wei Zhang, Michigan State University Martin Elsner, Technical University of Munich Carlos Bezuidenhout, North-West University | |
| Schedule | Topic | Presenter |
| 11:15-11:20 | Welcome and Introduction | Panelist: Yongguan Zhu, Research Center for Eco-environmental Sciences, Chinese Academy of Sciences, China Deli Chen, University of Melbourne, Australia Joann Whalen, McGill University, Canada Bruce Lascelles, Soil Science Society of United Kingdom Daniela Sauer, Soil Science Society of Germany |
| 11:20-12:05 | Guided Panel Discussion | Fang Wang, International Atomic Energy Agency; Soil Science Society of China Panos Panagos, European Commission Joint Research Centre (JRC) Martin Elsner, Technical University of Munich, Germany |
| 12:05-12:25 | Audience Questions and Interactive Discussion | Olufunmilayo Ande, Soil Science Society of Nigeria Maxine J. Levin, Soil Science Society of America Takuro Shinano, Hokkaido University, Japan Wei Zhang, Soil Science Society of America Tatiana Minkina, Southern federal university, Russia |
| 12:25-12:30 | Closing Remarks | Yi Peng, Food and Agriculture Organization of the United Nations (FAO) Francisco S. B. Ladeira, University of Campinas, Brazil Anton Boman, Geological Survey of Finland, Finland Cornelius Bezuidenhout, North-West University, South Africa Axel Cerón, Soil Science Society of Mexico |



Panel Discussions

| Tuesday, June 9 | | Room: Convention Center, Nanjing 207 | |
|--|--|--|--|
| Panel Discussion 04 | A 35-Year Journey of Pedosphere: Promoting Soil Sciences across the World | | |
| | <p>Convener: RenFang Shen, Institute of Soil Science, Chinese Academy of Sciences (CAS)</p> <p>Co-Conveners: Zhongjun Jia, Institute of Soil Science, Chinese Academy of Sciences (CAS) Fenxiang Meng, Institute of Soil Science, Chinese Academy of Sciences (CAS)</p> | | |
| Schedule | Topic | Presenter | |
| 13:30-13:45 | A 35-Year Journey of Pedosphere: advancing with soil science | Renfang Shen Institute of Soil Science, Chinese Academy of Sciences | |
| 13:45-15:20 | <p>Panel Discussion Topics</p> <ol style="list-style-type: none"> 1. Soil fertility and Pedosphere 2. Soil organic matter and Pedosphere 3. Pedosphere and its contribution to soil science development 4. Old Journals and Young Scientists: How Journals Can Help Create the New Science 5. Nanotechnology in agriculture and our experience with Pedosphere 6. Soil biochemistry and my experience with Pedosphere 7. Black Soils and My Experience with Pedosphere 8. My Experiences with Pedosphere and Future Research Priorities 9. Soil acidification and my experience with Pedosphere 10. Frontiers in Pedosphere Research 11. Others... | <p>Editorial board members/ Highly cited paper authors/ Hot paper authros (Listed in registration order) Minggang Xu Pete Smith Scott X Chang Alex McBratney Andres Rodriguez Seijo Tida Ge Wenyou Hu Fenli Zheng Renkou Xu Donald L. Sparks Others with interest are welcomed...</p> | |
| 15:30-16:00 | <p>Panel Discussion Topics</p> <ol style="list-style-type: none"> 1. Soil science journals as the foundation for agronomy, ecosystem and climate sciences 2. Pedosphere past, present and future 3. Promoting journal impact while advancing soil science 4. Research Frontiers & Soil Science Journals 5. Publishers for advancing both soil science and journals 6. Others... | <p>Invited Editor-in-Chiefs/ Invited Editors and Experts / Publishers (Listed in registration order) Joann k. Whalen Denny Rigby William R Horwath Evgenia Blagodatskaya Fang Wang Zhongjun Jia Liudmila Orlova Zicheng YU Fenxiang Meng Others with interest are welcomed...</p> | |



Panel Discussions

| Tuesday, June 9 | | Room: Convention Center, Nanjing 303A | |
|--|---|---|--|
| Panel Discussion 05 | Climate-friendly and sustainable agricultural practices with plateau-specific characteristics and multi-dimensional symbiosis in Yunnan under climate change | | |
| | <p>Convener: Zhi Zuo, Pesticide Eco-Alternatives Center</p> <p>Co-Conveners: Chunliang Li, Pesticide Eco-Alternatives Center Xurui Dai, Pesticide Eco-Alternatives Center</p> | | |
| Schedule | Topic | Presenter | |
| 16:30-16:35 | Opening Remarks | Zuo Zhi Executive Director of Pesticide Eco-Alternatives Center, Yunnan | |
| 16:35-16:50 | Effects of Dry Direct-Seeded Rice and No-Till Soybean Cropping After Rice on Soil Health and Nutrient Utilization in the Puer Region | Xiaohua Li Deputy Director of Agricultural Science Research Institute of Pu'er City, Senior Agronomist | |
| 16:50-17:05 | An Ecological Farming Model for Climate Adaptation: Synergizing Soil Health and Community Resilience in Yunnan's Rice Paddies | Chonglie Xu Owner of Ecological Farm in Eryuan, Dali | |
| 17:05-17:20 | Jingmai Mountain's Ancient Tea Forests: A Model of Forest- Tea Symbiosis, Biodiversity, and Cultural Heritage | Kang Nan Blang ethnicity, inheritor of the traditional handmade tea of Jingmai Mountain. | |
| 17:20-17:35 | Building Climate-Resilient Agriculture through Multi-Stakeholder Engagement: The PEAC Model | Hao Zhao Agriculture Technical Director of Pesticide Eco-Alternatives Center, Yunnan | |
| 17:35-17:47 | Video Case Share: A Documentary on Climate-Friendly Rice Cultivation in the Hani Terraces: Where Ancient Wisdom Meets Modern Science | Zuo Zhi Executive Director of Pesticide Eco-Alternatives Center, Yunnan | |
| 17:47-18:10 | Panel Discussion: A Climate Change Perspective on Yunnan's Diverse Response Strategies | Zuo Zhi Executive Director of Pesticide Eco-Alternatives Center, Yunnan | |
| 18:10-18:30 | Closing Remarks | Zuo Zhi Executive Director of Pesticide Eco-Alternatives Center, Yunnan | |



Panel Discussions

| Thursday, June 11 | | Room: Expo Center, Hall 8, 8202 | |
|--|---|---|--|
| Panel Discussion 06 | Open discussion session on observed phenomena in soils and their underlying pedogenic processes: bring and share photos of your macro- and micromorphological observations and join the discussion on debated phenomena! | | |
| | <p>Convener: Daniela Sauer, University of Göttingen, Germany</p> <p>Co-Conveners: Cezary Kabala, Wroclaw University of Environmental and Life Sciences, Poland John Galbraith, Virginia Tech, USA</p> | | |
| Schedule | Topic | Presenter | |
| 11:15-12:30 | Moderator: Cezary Kabala | | |
| | Still Soil or Already Sediments: Boundary Cases with Ferrugination in Russian Nature Reserves (Smolensk Lakelike and Geyzer Valley) | Ivan N. Semenov Isaev Centre for Problems of Forest Ecology and Productivity | |
| | Discussion on problems of distinguishing soil from sediment | - | |
| 13:30-15:15 | Moderator: John Galbraith | | |
| | The Umbrisol problem | Michele E. D'Amico DISAA - Universit of Milano | |
| | Discussion on formation mechanisms of Umbrisols | - | |
| | Mattic epipedon: living skin of the Tibetan Plateau | Fei Yang Institute of Soil Science, Chinese Academy of Sciences | |
| | Discussion on formation mechanisms of the "mattic epipedon" in mountain grassland ecosystems | - | |
| 16:30-18:30 | Moderator: Daniela Sauer | | |
| | Luvisols, Retisols and accompanying 'glossic' soils | Cezary Kabala Wroclaw University of Environmental and Life Sciences | |
| | Discussion on the distribution and formation mechanisms of Retisols with tongues and with other morphologies of the E/Bt horizon | - | |
| | What Are Skeletans and How Do They Form? | John Galbraith School of Plant and Environmental Sciences, Virginia Tech | |
| | Discussion on the formation mechanisms of skeletans | - | |



Panel Discussions

| Friday, June 12 | Room: Convention Center, Nanjing 206 | |
|--------------------------------|--|--|
| Panel Discussion 07 | Opportunities and challenges for the development of soil science journals | |
| | <p>Convener: Renkou Xu, Institute of Soil Science, Chinese Academy of Sciences</p> <p>Co-Conveners: Xinhua Peng, Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences</p> | |
| Schedule | Topic | Presenter |
| 09:00-09:15 | The Role of Scientific Societies and Their Journals to Foster Trust in Science | Michael L. Thompson Agronomy Department, Iowa State University, USA |
| 09:15-09:30 | Authors and Editors | Roland Bol Editor-in-chief of European Journal of Soil Science, Institute of Bio- and Geosciences, Agrosphere (IBG-3), Forschungszentrum Jülich GmbH, Germany |
| 09:30-09:45 | Development and Journey of Journal of Soils and Sediment in the Last 20 Years in the Context of Soil, Forestry and Environmental Sciences | Zhihong Xu Editor-in-chief of Journal of Soils and Sediments, School of Environment and Science, Griffith University, Australia |
| 09:45-10:15 | Panel Discussions or Questions from Audience for Speakers Above | - |
| 10:15-10:30 | Barriers and enablers for publishing soil science content in broad-scope, high-impact journals | Abel Barral Cuesta Deputy Editor of Advanced Science |
| 10:30-10:45 | BIOCHAR: Navigating Opportunities and Challenges in a Rapidly Evolving Publishing Landscape | Hailong Wang Executive Editor-in-Chief of Biochar, School of Environment and Chemical Engineering, Foshan University |
| 10:45-11:00 | Expanding Frontiers: Journals, AI, and Open Science Initiatives | Xinji Li, Journal Manager, Frontiers Media SA |
| 11:15-12:30 | Panel Discussions or Questions from Audience for Speakers Above | - |



Panel Discussions

| Friday, June 12 | Room: Expo Center, Hall 6, 6201 | |
|---|---|---------------------------|
| Panel Discussion 08 | China-Spain Summer School on Soil Health and Sustainability | |
| | Convener: Jing Che, Institute of Soil Science, Chinese Academy of Sciences, China Co-Convener: Arabela Vega-Aguilar, Autonomous University of Barcelona, Spain | |
| Schedule | Topic | Presenter |
| Chair: Jinlong Dong, Institute of Soil Science, Chinese Academy of Sciences, China | | |
| 09:00-09:15 | Ice Nucleating Particle Contributions and Potential Climate Effects of Chinese Agriculture | Siyuan Jing |
| 09:15-09:30 | Vineyard management matters: organic practices enhance soil entomopathogens | Jorge Dueñas Hernani |
| 09:30-09:45 | Cultivar-Specific Differences in Growth and Rhizosphere Microbial Responses to Soil Acidity Gradients | Xiaorui Jiang |
| 09:45-10:00 | Before You Measure: How Sampling Strategies Shape Microplastics Quantification in Soils | Samuel Cusworth |
| 10:00-10:15 | Bacteriophages assisted bacteria to facilitate soil multifunctionality under organochlorine pesticide contamination | Zhouzhou Shen |
| 10:15-10:30 | Inorganic and Organic Carbon Stocks in Semi-Arid Perennial Systems: The Role of Cover Crops | Cristina Fernández Soler |
| 10:30-10:45 | Balancing Fire Recurrence and Soil Recovery: Keys to Maintaining Mediterranean Soil Health | Luis D. Olivares-Martínez |
| 11:15-12:30 | Panel discussion | |



Panel Discussions

| Friday, June 12 | Room: Expo Center, Hall 8, 8202 | |
|--|---|---|
| Panel Discussion 09 | Elsevier Journal Editors Symposium | |
| Schedule | Topic | Presenter |
| 09:00–09:15 | Opening Remarks | Yong-Guan Zhu Research Center for Eco-environmental Sciences, Chinese Academy of Sciences, China |
| 09:15–09:30 | Introduction to Elsevier Journals | Adriaan Klinkenberg Publishing Director, Elsevier |
| 09:30–11:00 | AI in Scholarly Publishing | - |
| 11:15-12:30 | Author Workshop & Panel Discussion | Joann Whalen McGill University |



Entrepreneur Sessions

Area: Expo Center, Hall 4, Entrepreneur Area

| Date | Time | Topic |
|---------|-------------|--|
| 8 June | 13:30-15:00 | Introduction to Center Environmental Business Operations |
| 8 June | 15:00-15:30 | Congress Commemorative Book Launch |
| 8 June | 15:30-17:30 | Soil2Soul: From Soil Crisis to Hopeful Futures- A Photo Contest |
| 9 June | 09:00-17:30 | Biofertilizers, Biocontrol & Biostimulants: From Science to Technology and Commercialisation |
| 10 June | 10:30-12:00 | The Soil Lexicon - Co-shaping Memory, Culture, and Future |
| 11 June | 10:30-12:00 | New Book Launch |
| 11 June | 13:30-15:00 | Soil Profile Simulation Workshop with Recyclable Cartons |



Entrepreneur Sessions

Monday, June 8

Expo Center, Hall 4, Entrepreneur Area

Congress Commemorative Book Launch

| Schedule | Topic | Presenter |
|-------------|---|---|
| 15:00-15:30 | Join Kuikui the panda on a fascinating journey through ancient China's farming wisdom! This beautifully illustrated book named "Green Fingers on Ancient Farmland: Wisdom of Traditional Chinese Land Use" reveals how ancestors grew abundant food without tractors or chemicals—using harmony, sustainability, and recycling. From terraced fields to mulberry-fish ponds, from crop rotation to natural fertilizers, every page brings timeless land-care secrets to life. Perfect for children and adults alike, it's the official companion of the 23rd World Congress of Soil Science. Discover how to keep soil ever fresh and strong—and fall in love with the earth beneath your feet. | Zucong Cai Nanjing Normal University |



Entrepreneur Sessions

Monday, June 8

Expo Center, Hall 4, Entrepreneur Area

Soil2Soul: From Soil Crisis to Hopeful Futures- A Photo Contest

Organizers:

The Organizing Committee of the 23rd World Congress of Soil Science

International Union of Soil Sciences Young and Early Career Scientists Working Group

| Schedule | Title | Presenter |
|--|--|--|
| Chair: Longlong Xia, Institute of Soil Science, CAS | | |
| 15:30-15:40 | Introduction | |
| 15:40-15:45 | From Cracks to Flow: Restoring Soil–Water Pathways | Ana C. M. Avila University of Tasmania, Australia |
| 15:45-15:50 | Microbial Rescue: Turning the Tide on Cotton Wilt | Aqsa Hafeez Western Sydney University, Australia |
| 15:50-15:55 | Taming the Gullies: Building Resilient Urban Soils in Africa | Arabela Vega ECOSUR CHETUMAL, Mexico |
| 15:55-16:00 | The Invisible Crisis: Reclaiming Salinized Greenhouse Soils | Yin Yin Zhangjiagang Bureau of Agriculture and Rural Affairs, China |
| 16:00-16:05 | Abandoned & Impacted: Managing Soil Carbon and Contamination Risks | Ivan Semenov (Presented by Chair) Isaev Centre for Problems of Forest Ecology and Productivity of the RAS, Russia |
| 16:05-16:10 | Photographing Mexico's Indigenous Agricultural Heritage | Javier Leonardo Toxqui Roldan Colegio de Postgraduados, México |
| 16:10-16:15 | From Plastic Waste to Prosperity: Rebuilding Soil and Rural Life | Jinlong Dong Institute of Soil Science, CAS |



Entrepreneur Sessions

Chair: Axel Ceron Gonzalez, Vrije Universiteit Brussel, Belgium

| | | |
|-------------|--|---|
| 16:30-16:35 | Turning Red to Green: Remediating Acidified Soils for Crop Recovery | Kailou Liu Jiangxi Institute of Red Soil and Germplasm Resources, China |
| 16:35-16:40 | From Silent Soil to Living Soul: Regenerating Mediterranean Vineyards | Mukkaram Ejaz Institute of Physics - Centre for Science and Education, Silesian University of Technology, Poland |
| 16:40-16:45 | From Degraded Hillside to Restored Watershed: Enclosure as a Path to Soil Recovery in Ethiopia | Muleta Gadissa Gonfa Ethiopian Institute of Agricultural Research |
| 16:45-16:50 | The Finite Skin: Saving Black Soil from Erosion and Depletion | Shunhua Yang Institute of Soil Science, CAS |
| 16:50-16:55 | Soil Education | Adriana Ribon Universidade Estadual de Goiás, Câmpus Palmeiras de Goiás, Brazil |
| 16:55-17:00 | Guardian Steps: Reviving Ancient Terraces in Southeast Spain | Xavier Agulló Máñez University of Alicante, Spain |
| 17:00-17:05 | Healing the Burdened Soil: Science-Backed Restoration in the Spreča Valley | Emina Sijahović University of Sarajevo, Bosnia |
| 17:05-17:30 | Discussion Chair: Jinlong Dong, Institute of Soil Science, CAS | |



Entrepreneur Sessions

Tuesday, June 9

Expo Center, Hall 4, Entrepreneur Area

Biofertilizers, Biocontrol & Biostimulants: From Science to Technology and Commercialisation

Organizers:

Deli Chen, Redmond Barry Distinguished Professor, The University of Melbourne; Director, ARC Research Hub for Smart Fertilisers

Qirong Shen, Chair, Academic Committee, Nanjing Agricultural University; Member, Chinese Academy of Engineering

Yuk Shing Cheng, Director, Centre for Sustainable Development Studies, Hong Kong Baptist University

Enjiang Cheng, Director-General, Global South Network for Sustainable Agriculture

Xia (Emma) Liang, Senior Researcher, The University of Melbourne

Dandan Wang, Senior Advisor, Global South Network for Sustainable Agriculture

Ella Williams, Administration, The University of Melbourne

| Schedule | Title | Presenter |
|--------------|--|--|
| 09:00 -09:30 | Trichoderma Biofertilizer: From Mechanisms to Products | Qirong Shen Chair of Academic Committee, Nanjing Agricultural University |
| 09:30-10:00 | Recovery of Nitrogen from Livestock Waste— A Tale of Lignite | Deli Chen Redmond Barry Distinguished Professor, The University of Melbourne |
| 10:00-10:20 | Optimizing Nitrogen and Carbon Recovery from Livestock Wastes for Multiple Production and Environmental Benefits | Clayton Butterly Senior Lecturer; Dr. Brendon Costello, Research Fellow School of Agriculture, Food and Ecosystem Sciences, The University of Melbourne |



Entrepreneur Sessions

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|--------------|---|---|
| 10:20-10:40 | Pricing Nitrogen Pollution to Move Sustainable Agriculture from Rhetoric to Accountability | Emma Liang Senior Research Fellow, The University of Melbourne |
| 10:40-11:00 | How Microbe-Organic Fertilizer Promotes Soil and Crop Health | Yan Ma Director of Institute of Agricultural Resources and Environment, Jiangsu Academy of Agricultural Sciences |
| 11:30-11:50 | Circular Agriculture: Waste to Value Solutions (Black Soldier Fly) | Xiaomei Ye Director of Circular Agriculture Research Center, Jiangsu Academy of Agricultural Sciences |
| 11:50-12:10 | Converting Food Waste Digestate into Value-Added Fertilizer Products | Jonathan Wong, Director of Research Center for Eco-Environmental Engineering, Dongguan University of Technology |
| 12:10-12:30 | Biochar-Based Organic Fertilizer: From Lab to Field | Lihong Xue Jiangsu Academy of Agricultural Sciences |
| 13:30- 13:50 | Advancing South-South Cooperation Through Agricultural Technology Cooperation for Sustainable Agriculture | Enjiang Cheng, Senior Advisor, Global South Network for Sustainable Agriculture |
| 13:50-14:10 | Government Policy & Farmer Behavior Change: Enabling Technology Adoption Through Institutional Frameworks | Yuk Shing Cheng Director of Center for Sustainable Development Studies, Hong Kong Baptist University |
| 14:10-14:30 | Development of Biological Control Solutions for Sustainable Pest Management in Digital Era | Feng Zhang Regional Director, CAB International (CABI) |



Entrepreneur Sessions

| | | |
|--------------|--|--|
| 14:30-14:50 | Development of Biocontrol Agents for Horticulture Crops | Jiang Lu Director of Center for Viticulture and Enology, Shanghai Jiao Tong University |
| 14:50-15:10 | The Assistance of Functional Microorganisms on High Quality Development of Tropical Crops | Qingyun Zhao Researcher, Spice and Beverage Research Institute, Chinese Academy of Tropical Agricultural Sciences |
| 15:10-15:30 | Enhancing Drought and Salinity Resilience in Tomato Plants Using Plant Growth-Promoting Bacillus Species | Erandi Herath Researcher, The University of Melbourne |
| 16:00-16:20 | Introduction to Center's R&D in Environmental Technologies and Achievements Commercialization | Gu Ailiang Center Soil Remediation Research Institute (Shenzhen) Co., Ltd. |
| 16:20-16:40 | Healthy Soil, Premium Crops: Nutrilite Organic Innovation and Evidence from Long-Term Field Trials | Tingzhao Li Amway (Shanghai) Innovation & Science Co., Ltd |
| 16:40-17:20 | Case Study of Commercializing & Scaling Biological Products in China | Xianghe Agriculture Technology Group & Nanjing Woyou Biological Company |
| 17:20- 17:30 | Regional Peer Learning: ASEAN CONTEXT & TECHNOLOGY FIT | - |



Entrepreneur Sessions

| Thursday, June 11 | | Expo Center, Hall 4, Entrepreneur Area | |
|------------------------|--|---|--|
| New Book Launch | | | |
| Schedule | | Topic | |
| 10:30–11:00 | | The IUSS Presidents Throughout One Hundred Years of Its History | |
| 11:00–11:30 | | Green Fingers on Ancient Farmland: Wisdom of Traditional Chinese Land Use | |
| 11:30–12:00 | | Frontiers in Soil Science | |



Workshops

| Date | Time | Topic | Room/Area |
|---------|-------------|---|--|
| 8 June | 13:15-15:15 | Workshop 01: Author Workshop & Editorial Q&A: How to Publish Successfully in Soil Science Journals | Convention Center, Nanjing 206 |
| 8 June | 16:30-18:00 | Workshop 02: Advancing Research Integrity: Best Practices in Peer Review and Artificial Intelligence | Convention Center, Nanjing 206 |
| 10 June | 10:30-12:00 | Workshop 03: The Soil Lexicon - Co-shaping Memory, Culture, and Future | Expo Center, Hall 4, Entrepreneur Area |
| 11 June | 13:30-15:00 | Workshop 04: Soil Profile Simulation Workshop with Recyclable Cartons | Expo Center, Hall 4, Entrepreneur Area |
| 11 June | 16:30-18:30 | Workshop 05: Chinese Community-Supported Agriculture Networks and Participatory Guarantee Systems | Expo Center, Hall 6, 6201 |



Workshops

| Monday, June 8 | | Room: Convention Center, Nanjing 206 | |
|----------------|--|---|---|
| Workshop 01 | | Author Workshop & Editorial Q&A: How to Publish Successfully in Soil Science Journals | |
| Schedule | Topic | Presenter | Abstract |
| 13:15-15:15 | How to Strengthen Your Manuscript: Editorial Insights from Soil Biology & Biochemistry | Joann K. Whalen McGill University; Editor-in-Chief, Soil Biology & Biochemistry | This workshop, led by Prof. Joann Whalen (Editor-in-Chief of Soil Biology & Biochemistry), provides practical, transparent guidance on improving manuscript quality and increasing publication success in leading soil science journals like SBB. Topics include what editors look for, common reasons for early rejection and how to avoid them, how to present methods and results effectively, and strategies for navigating peer review comments. Following the presentation, an interactive Q&A/panel discussion (with invited panel from Elsevier editors: TBC - Kees Jan van Groenigen of Geoderma; Cezary Kabala of Catena; Felipe Bastida of Applied Soil Ecology; Xinhua Peng of Soil & Tillage Research; Brent Clothier of Agricultural Water Management; Lena Ma of Soil & Environmental Health) will allow participants to engage directly with the Editors-in-Chief for tailored advice. |
| | How to publish soil science research in top-tier journals? | Abel Barral Cuesta, Wiley; Deputy Editor of Ecology & Environment, Advanced Science | In this workshop, Abel Barral Cuesta – former editor at Nature Plants, Nature Ecology & Evolution and One Earth, and currently Deputy Editor for Ecology & Environment at Wiley's Advanced Science – will provide insight into what broad scope, high-impact journals seek in soil science papers. He will provide a view of current trends in soil science content in top-tier journals, shed light on elements that improve impact and retention of papers in them, and explain paper selection criteria by their editors. He will also reflect on the opportunity that different article formats bring, and provide some advice on how to write them. Lastly, he will share hints on how to shape submissions to make a strong case for interest in top-tier journals. After his presentation, the workshop will move forward to a Q&A session with Abel and other Wiley editors that will help attendees to better understand how editors think of papers and unveil the editorial blackbox in submission handling. |



Workshops

| Monday, June 8 | | Room: Convention Center, Nanjing 206 |
|----------------|--------------------------|---|
| Workshop 02 | | Advancing Research Integrity: Best Practices in Peer Review and Artificial Intelligence |
| Schedule | Presenter | Abstract |
| 16:30-18:00 | Boris Kuzmanovic MDPI | <p>This workshop explores two key aspects of modern scholarly communication: best practices in peer review and the growing role of artificial intelligence (AI) in scientific publishing. As research and publishing continue to evolve, maintaining quality, transparency, and integrity requires both rigorous peer-review standards and the responsible adoption of emerging technologies.</p> <p>The first session, Peer Review Guidelines: Best Practices for Authors and Reviewers, will provide practical guidance on conducting fair, transparent, and constructive peer review. Participants will learn how to prepare high-quality manuscripts, respond effectively to reviewer comments, and deliver objective, ethical, and actionable reviews. Common challenges in the review process and strategies for improving publication quality will also be discussed.</p> <p>The second session, AI in the Scientific Publishing Industry, will examine the impact of AI on manuscript preparation, editorial workflows, reviewer selection, plagiarism detection, language enhancement, and research discovery. The session will highlight both the opportunities and limitations of AI-driven tools, with a particular focus on ethics, transparency, and responsible use.</p> <p>Special attention will be given to how these practices support research quality, reproducibility, and scientific impact within the soil science community. The workshop aims to equip researchers, reviewers, and editors with practical knowledge to navigate the evolving publishing landscape while upholding the highest standards of research integrity.</p> <p>The workshop will be delivered by Boris Kuzmanovic, an author and publishing professional with more than six years of experience in scientific publishing and research integrity.</p> |



Workshops

| Wednesday, June 10 | | Room: Expo Center, Hall 4, Entrepreneur Area |
|--------------------|--|--|
| Workshop 03 | | The Soil Lexicon - Co-shaping Memory, Culture, and Future |
| Schedule | Presenter | Abstract |
| 10:30-12:00 | Jin Lipeng Associate Professor at Sichuan Fine Arts Institute | This workshop invites scientists, educators, and the public to come together and explore the many meanings of soil—not only as a scientific object, but as a living archive of memory, culture, and shared future. Through dialogue, sensory experience, and collective creation, participants will share personal stories of the land and engage in conversations around soil health, climate change, and local knowledge. Moving beyond data and disciplinary boundaries, we will co-create a collective artwork that reflects the deep connection between soil and humanity. Everyone is a co-creator of the soil lexicon. Join us in shaping a shared language for the future of soil. |



Workshops

| Thursday, June 11 | | Room: Expo Center, Hall 4, Entrepreneur Area |
|--------------------|---|---|
| Workshop 04 | | Soil Profile Simulation Workshop with Recyclable Cartons |
| Schedule | Presenter | Abstract |
| 13:30-15:00 | Adriana Ribon Goiás University in Brazil | <ol style="list-style-type: none">1. Using empty milk or juice cartons to simulate a soil body;2. Drawing soil horizons on the cartons;3. Applying glue and selecting different soil colors to illustrate the horizons. |



Workshops

| Thursday, June 11 | | Room: Expo Center, Hall 6, 6201 | |
|-------------------|---|---|--|
| Workshop 05 | | Chinese Community-Supported Agriculture Networks and Participatory Guarantee Systems | |
| Schedule | Topic | Presenter | Abstract |
| 16:30-18:30 | EcoHowFun: The Practice of Chinese Community-Supported Agriculture Networks and Participatory Guarantee Systems | Yan Shi EcoHowFun | <p>Agroecology and Community-Supported Agriculture (CSA) are gaining prominence as critical pathways to mitigate soil degradation, ensure food security, and promote sustainable agricultural development. In China, indigenized CSA networks, exemplified by initiatives such as EcoHowFun, utilize Participatory Guarantee Systems (PGS) to establish a trust-based mechanism. This approach not only reconfigures producer-consumer relationships but also elevates soil health cultivation into a collaborative community practice. These initiatives provide verifiable socio-economic models for agroecological implementation and resonate with core soil science research on soil microbiology, carbon sequestration, and agroecosystem diversity. As part of Session #504004 of the 23rd World Congress of Soil Science, this panel bridges cutting-edge soil science and grassroots agricultural innovation. The core discussion will focus on how Chinese CSA networks, through PGS, guide farmers in improving soil properties. Furthermore, The session will also assess how these community-based practices contribute to the "One Health" vision, exploring actionable pathways to synergistically advance ecological integrity and human well-being.</p> |
| | | Yi Zhu Natural Mulching and No-Tillage Empirical Laboratory, Hechuren Agro-culture Heritage & Development Center | |
| | | Lipeng Jin Experimental Art School, Sichuan Fine Arts Institute | |



Parallel Sessions

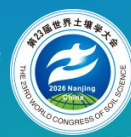
| Monday, June 8 | | Room: Convention Center, Nanjing 209 | |
|-----------------------|-------|---|---|
| Session 101001 | | Advances in Soil Morphology and Micromorphology: Unveiling the Earth's Hidden Resource | |
| | | <p>Convener: Fabio Terribile, Università di Napoli Federico II, Italy</p> <p>Co-Convener: Richard J Heck, University of Guelph, Canada</p> | |
| Schedule | ID | Title | Presenter |
| 13:15-13:18 | - | Presentation of the session | Fabio Terribile |
| 13:18-13:31 | 34521 | IUSS Digital Soil Thin Section Collections Working Group | Richard J. Heck School of Environmental Sciences, University of Guelph, Guelph, Canada |
| 13:31-13:44 | 33476 | SEM-EDS and Micromorphological Evidence of Kaolinite Hematite Interactions in Ferruginous Duricrusts from Devonian Sediments of the Parnaíba Basin (Central North Brazil) | Daniela Schievano de Campos University of São Paulo |
| 13:44-13:57 | 32975 | Preferential spatial co-location of organic matter with identified mineral phases in intact soil microstructures | Yahan Hu TUM School of Life Sciences, Technical University of Munich |



Parallel Sessions

Monday, June 8 (Session 101001)

| | | | |
|-------------|-------|---|--|
| 13:57-14:10 | 34240 | Proto-soils of extreme environments: understanding chemical composition at a microscale with the use of Raman spectroscopy | Nikita Mergelov Department of Soil Geography and Evolution, Institute of Geography RAS, Moscow, Russia |
| 14:10-14:23 | 34168 | Segmentation-Guided Conditional Diffusion with Optical Flow Constraints for 3D Interpolative Super-Resolution of Soil CT Images | Meihui Song Beijing Forestry University |
| 14:23-14:36 | 36293 | Micropedology and Artificial Intelligence - evolution of quantitative approaches | Lilit Pogosyan Red de Ecología Funcional, Instituto de Ecología AC INECOL |
| 14:36-14:49 | 33018 | Morphological Characterization and Mapping-Based Classification of Soils in Two Locations in Southwest Nigeria | Temitope S. Babalola Department of Soil Science and Land Resources Management, Federal University Oye-Ekiti |
| 14:49-15:02 | 30532 | The Comparative Investigation of Soil Morphological Organization in Polar Urals (Yamal, Russia) and Qilian Mountains (Qinghai-Tibet Plateau, China) | Evgeny Abakumov Saint-Petersburg State University |
| 15:02-15:15 | 31881 | Quantitative analysis of soil erosion crack dimensions caused by wind-driven rainfall using image processing | Seyed Hamidreza Sadeghi Professor (Corresponding Author), Department of Watershed Management Engineering, Faculty of Natural Resources, Tarbiat Modares Resources University |



Parallel Sessions

| Friday, June 12 | | Room: Expo Center, Hall 8, 8203 | |
|-----------------------|-------|---|--|
| Session 101002 | | Micromorphology as a Tool for Understanding the Evolution of Soils and Environments in Natural and Human-Impacted Landscapes | |
| | | <p>Convener: Daniela Sauer Georg-August-University Göttingen, Germany</p> <p>Co-Conveners: Fabio Terribile University of Naples Federico II, Italy Maria Bronnikova, Texas Tech University, USA; Institute of Geography Russian Academy of Sciences, Russia</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:15 | 34148 | Quaternary landscape dynamics of the Venetian Pre-Alps (NE Italy) revealed through paleosols micromorphology | Laura Fracasetti Department of Geosciences, University of Padova, Padua, Italy |
| 09:15-09:30 | 32380 | Final stage of loess accumulation in the periglacial zone of the Northern Caspian region. | Marina Lebedeva V.V. Dokuchaev Soil Science Institute |
| 09:30-09:45 | 34548 | Formation and Evolution of Volcanic Soils in Central Apennine Mountains (Molise, Italy) | Alessio Manzo University of Molise |
| 09:45-10:00 | 32913 | Micromorphological Insights into Intra-Urban Spatial Dynamics: A Case Study from Oudenaarde (Belgium) | Meihui Li Vrije Univeriteit Brussel |



Parallel Sessions

Friday, June 12 (Session 101002)

| | | | |
|-------------|-------|--|---|
| 10:00-10:15 | 32717 | Stepped Canal and Levigation Pools in Teotihuacan, a study through their micromorphological and hydraulic relationships | Ma. del Carmen Gutiérrez Castorena Programa de Edafología. Colegio de Postgraduados. |
| 10:15-10:30 | 36107 | Species-Specific Impact of Earthworm Ecological Groups on Soil Coprolite Physico-Chemical Properties and Microstructure | Agnieszka Józefowska Department of Soil Science and Agrophysics, University of Agriculture in Krakow, Krakow, Poland |
| 10:30-10:45 | 32402 | The Micromorphology of Brazilian Oxisols (Latosolos): variability and fertility connections of the most representative agricultural soil in the tropics | Carlos Schaefer Federal University of Rio de Janeiro, Geography Department |
| 11:15-11:30 | 36376 | Microscopic Morphological Characteristics of the Albic Layer in the Black Soil Region of Northeast China | Xin-Yu Liu; Zhong-Xiu Sun; Si-Yi Duan; Wei-Wen Qiu; Ying-Ying Jiang Shenyang Agricultural University |
| 11:30-11:45 | 34561 | Micromorphological mechanisms reveal 45-year Anthropogenic barrier layer formation in Northeast China's Black Soil Region: pore connectivity collapse drives sustainable management imperative | Xiao-Miao Yu Shenyang Agricultural University |
| 11:45-12:00 | 32224 | Integrating Micro- and Submicromorphological Data for Diagnosing Redoximorphic Conditions in Soils of Topographic Depressions in the Oka-Don Lowland | Kornilova Anastasiia Lomonosov Moscow State University; Dokuchaev Soil Science Institute |



Parallel Sessions

| Monday, June 8 | | Room: Expo Center, Hall 4, 4202 | |
|-----------------------|-------|--|---|
| Session 102001 | | Magnetic Enhancement of the Soils in Urban/Industrial Areas: Sources and Properties of Anthropogenic Magnetic Particles and Its Influences on Soil Genesis | |
| | | <p>Convener: Xue-Feng Hu, School of Environmental and Chemical Engineering, Shanghai University, Shanghai 200444, China</p> <p>Co-Convener: Ying Lu, South China Agricultural University</p> | |
| Schedule | ID | Title | Presenter |
| 13:15-13:30 | 36346 | Vertical distribution of magnetic property of urban soil profiles in Shanghai and its environmental implications | Kokyo Oh Center for Environmental Science in Saitama |
| 13:30-13:45 | 34998 | Magnetic Characteristics of Typical Soils in Guangdong Province and Their Responses to Parent Materials and Land Use | Ying Lu South China Agricultural University |
| 13:45-14:00 | 31629 | Magnetic properties and geochemical elements, climate change in loess/paleosol from the eastern Chinese Loess Plateau | Pingguo Yang Shanxi Normal University |
| 14:00-14:15 | 33712 | Mineral magnetic characterization of surface soil in an industrial area within Guangzhou city: Implications for heavy metal pollution monitoring | Tingping Ouyang South China Normal University |
| 14:15-14:30 | 34285 | Study on Optically Stimulated Luminescence Dating and developmental model of alpine meadow soil in ThreeRiver Headwater Region | Xianba Ji Qinghai Normal University |
| 14:30-14:45 | 35069 | Impacts of Vehicular Non-Exhaust Emissions on Magnetic Enhancement and Heavy Metal Accumulation in Urban Road Dust | Xin-Ming Ying Shanghai University |



Parallel Sessions

| Thursday, June 11 | | Room: Expo Center, Hall 4, 4201 | |
|-----------------------|-------|--|---|
| Session 102003 | | Soil Structure and Ecosystem Functioning in Earth's Critical Zone | |
| | | <p>Convener: Gary Feng, USDA-ARS, Genetics and Sustainable Agricultural Research Unit</p> <p>Co-Conveners: Wei Dai, Louisiana State University-Agricultural Center, 262 Research Station Dr., Bossier City, LA 71112. Xi Zhang, Department of Biosystems Engineering and Soil Science, University of Tennessee, Knoxville, TN 37996.</p> | |
| Schedule | ID | Title | Presenter |
| 11:15-11:30 | 31887 | Redefining soil structural vulnerability to enhance ecosystem services in a changing world | Wei Hu New Zealand Institute for Bioeconomy Science Limited, Plant & Food Research Group |
| 11:30-11:45 | 32728 | Silicon cycling model and its roles on soil evolution in a subtropical critical zone | Jin-Ling Yang Institute of Soil Science, Chinese Academy of Sciences |
| 11:45-12:00 | 32818 | Implications of land uses and land cover conversion on soil quality in the Lower Alwero watershed Gambela Region Western Ethiopia | Shimeles Damene School of Development Studies, College of Social Sciences, Arts, and Humanities (CSS-ArTH), Addis Ababa University |
| 12:00-12:15 | 33153 | Microstructural controls on carbon cycling and nematode communities across land-use agroecosystems and climate scenarios | Mengqi Wu Department of Soil System Science, Helmholtz-Centre for Environmental Research - UFZ, Halle, Germany |



Parallel Sessions

Thursday, June 11 (Session 102003)

| | | | |
|-------------|-------|--|---|
| 12:15-12:30 | 34180 | Effects of Increased Temperature, Elevated CO ₂ Concentrations and Drought on Soil Structure and Gas Diffusion in a Submontane Grassland Soil | Vincent Felde Leibniz University Hannover |
| 13:30-13:45 | 33196 | Straw incorporation mitigates polyethylene residual film-induced suppression of fungal necromass | Conghui Liu Northwest Agricultural and Forest University |
| 13:45-14:00 | 33678 | Geodiversity-Driven Patterns of <i>Prunus ledebouriana</i> in Tarbagatay Mountain Landscapes of SE Kazakhstan | Malgorzata Suska-Malawska Faculty of Biology, University of Warsaw |
| 14:00-14:15 | 34037 | Continuous ¹³ C-CO ₂ labelling reveals mechanisms of SOC stabilization in constrained, poorly structured soil | Katherine Weigh Department of Primary Industries and Regional Development, NSW |
| 14:15-14:30 | 34084 | Size - Specific Effects of Intra-Aggregate Pore Size Distribution on Soil Aggregate Stability | Chaonan Liu Northeast Forestry University |
| 14:30-14:45 | 34268 | Evolution of SRO Fe oxides in soils along a paddy field chronosequence: A Fe isotope perspective | Zhao Wang Institute of Soil Science, Chinese Academy of Sciences |



Parallel Sessions

Thursday, June 11 (Session 102003)

| | | | |
|-------------|-------|--|--|
| 16:30-16:45 | 34574 | Assessing Soil Function Loss in Traditional Gold Mining Landscapes Using Function-Based Soil Quality Indicator Models | Meaza Zenebe Gerehans Raya University, Tigray, Ethiopia; Mekelle University, Tigray, Ethiopia |
| 16:45-17:00 | 35005 | Nonstationary response evolutionary mechanisms of aggregate binding agents in Quaternary red soils during 400 years of cultivation | Si-Yi Duan Shenyang Agricultural University |
| 17:00-17:15 | 35256 | Deep soil nitrate accumulation depends on the regolith structure and surface land management | Shunhua Yang State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences |
| 17:15-17:30 | 35358 | Pore-Scale Structural Regulation of Soil Carbon Mineralization during the Corn Growing Season in a Yellow-Brown Soil | Tian Tian Anqing Normal University |
| 17:30-17:45 | 35901 | Stabilizing Soil Aggregates with Synthetic Polymers: A Wet Adhesion Perspective | Gang Li TheHongKongPolytechnicUniversity |
| 17:45-18:00 | 36116 | Spatial distribution and influencing factors of the argillic horizon in the Northeast Black Soil Region | Xi-Ting zhang Shenyang Agricultural University |



Parallel Sessions

| Monday, June 8 | | Room: Expo Center, Hall 4, 4201 | |
|-----------------------|-------|---|--|
| Session 102005 | | Soil Survey Technology and Spectral Database | |
| | | <p>Conveners: Yuguo Zhao, Institute of Soil Science, Chinese Academy of Sciences Jianping Qian, Chinese Academy of Agricultural Sciences</p> <p>Co-Conveners: Ganlin Zhang, Nanjing Institute of Geography & limnology, Chinese Academy of Sciences Wenbin Wu, Institute of Agriculture Resources and Regional Planning, Chinese Academy of Agriculture Sciences Changbao Ma, Cultivated land quality monitoring and protection center, Ministry of Agriculture and Rural Affairs, People's Republic of China Eyal Ben-Dor, Tel Aviv University Yijian Zeng, University of Twente in Enschede Zhou Shi, Zhejiang University</p> | |
| Schedule | ID | Title | Presenter |
| 13:15-13:30 | 35624 | The 3rd National Soil Survey of China: Integrating the Past and the Future | Ganlin Zhang Institute of Soil Science, Chinese Academy of Sciences |
| 13:30-13:45 | 33387 | Technical Approaches and Practices for Assessing Agricultural Suitability of Soils in China | Ke-ning Wu China University of Geosciences, Beijing |
| 13:45-14:00 | 35633 | Uncovering the spatial heterogeneity and drivers of grassland soil quality in Northwest China | Laiming Huang Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences |
| 14:00-14:15 | 31712 | Environmental factors influencing soil particle size distribution and their spatial distribution characteristics in the Tarim River Basin | Yang Hu Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 14:15-14:30 | 35191 | A Novel Soil Type Inference Method Using AI Large Language Models | Jie Liu Institute of Soil Science, Chinese Academy of Sciences |



Parallel Sessions

Monday, June 8 (Session 102005)

| | | | |
|-------------|-------|--|---|
| 14:30-14:45 | 33774 | The National Soil Archive of China | Zhiying Guo, Yuguo Zhao Institute of soil science, Chinese Academy of Sciences |
| 16:30-16:45 | 33475 | Standards and Protocols for Soil Spectral Reflectance to Enable Remote and Precision Soil Mapping | Eyal Ben Dor Tel Aviv University |
| 16:45-17:00 | 33761 | Building a National Soil Spectral Library from China's Third Soil Survey | Changkun Wang; Yuguo Zhao Institute of Soil Science, Chinese Academy of Sciences |
| 17:00-17:15 | 35155 | A Global Transformer Framework for Aligned Soil Spectral Analysis Across Sensors and Continents | Nikolaos Tziolas University of Florida |
| 17:15-17:30 | 35186 | Toward Global Soil Spectral Interoperability: Domain-Invariant Latent Embeddings with Federated Learning | Nikolaos Tziolas University of Florida |
| 17:30-17:45 | 34451 | Construction of Hainan Soil Spectral Library Driven by Large Model and Mapping of Organic Matter at 30m Resolution | Zhen Wang Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 17:45-18:00 | 34589 | Effects of Soil pH on Spectral Inversion of Soil Organic Matter in Survey-Based Soil Spectral Libraries | Tianqi Lv State Key Laboratory of Efficient Utilization of Arid and Semi-arid Arable Land / Key Laboratory of Agricultural Remote Sensing, Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 5, 5203 | |
|-----------------------|-------|--|--|
| Session 104002 | | Classification Systems for the Anthropocene and Human-Made Soils | |
| | | <p>Conveners: Cornie van Huyssteen; Chair - Commission 1.4: Soil Classification, University of the Free State, South Africa</p> <p>Cezary Kabala, chair of the IUSS Working Group WRB, Wroclaw University of Environmental and Life Sciences, Poland</p> <p>Co-Conveners: David Badia-Villas; Vice-chair - Commission 1.4: Soil Classification, Universidad Zaragoza, Spain</p> <p>Lúcia Anjos; Universidade Federal Rural do Rio de Janeiro, Brazil</p> <p>Joey Shaw; USDA-NRCS, USA</p> <p>Stephan Mantel, vice-chair of the IUSS Working Group WRB, ISRIC World Soil Information, Wageningen, The Netherlands</p> | |
| Schedule | ID | Title | Presenter |
| 11:15-11:30 | 31827 | The definitions of field characteristics in the WRB Field Guide | Peter Schad Technical University of Munich |
| 11:30-11:45 | 34472 | Towards a simplified key and groupings of the World Resource Base for Soil Resources (WRB) | Stephan Mantel ISRIC World Soil Information, Wageningen, the Netherlands |
| 11:45-12:00 | 33935 | Soil classification as a carrier of functional information in viticultural terroir: linking pedogenesis and wine metabolomics | Paola Bambina University of Palermo |



Parallel Sessions

Tuesday, June 9 (Session 104002)

| | | | |
|-------------|-------|--|--|
| 13:30-13:45 | 32395 | History of the concept of Technosols, and other soils in urban areas | Wolfgang Burghardt Soil Technology, Faculty of Biology, University Duisburg-Essen |
| 13:45-14:00 | 32640 | Extending Technosols? The status of human-transported materials in soil classification | Marcin Świtoniak Nicolaus Copernicus University in Toruń, Faculty of Earth Sciences and Spatial Management, Department of Soil Science and Landscape Ecology |
| 14:00-14:15 | 31943 | Soils constructed and transformed by different cultures in the Mexico Basin: from the Teotihuacans to the Aztecs | Ma. del Carmen Gutierrez-Castorena Colegio de Postgraduados |
| 14:15-14:30 | 34517 | Soils of stone-wall bench terraced anthrosapes: A proposal for their classification | Jaime Boixadera Lleida University |
| 14:30-14:45 | 33014 | Proposals for Urbic Technosols in World Reference Base | Tatiana V. Prokof'eva Faculty of Soil Science, Lomonosov Moscow State University |
| 14:45-15:00 | 33150 | Towards better classification of human-altered soils In WRB: A systematic framework and new qualifiers | Stefaan Dondeyne Department of Geography, Ghent University; Gembloux Agro-Bio Tech, Université de Liège; Dep. of Soil Science and Land Resources, Universitas Padjadjaran |
| 15:00-15:15 | 33692 | The rationale behind the revision of the German Soil Systematics | Einar Eberhardt Dep. Groundwater and Soil, Bundesanstalt für Geowissenschaften und Rohstoffe (BGR) |
| 16:30-18:30 | - | Commission 1.4 WRB Business Meetings | - |



Parallel Sessions

| Friday, June 12 | | Room: Expo Center, Hall 4, 4203 | |
|-----------------------|-------|--|---|
| Session 105001 | | Advancing Pedometrics | |
| | | Convener: Alessandro Samuel-Rosa, Federal Technological University of Paraná, Brazil | |
| Schedule | ID | Title | Presenter |
| 09:00-09:15 | 35352 | The Uncertainty of the Carbon Sequestration Potential of Arable Soils in European Russia at different scales | Joulia L. Meshalkina Soil Science Faculty, Lomonosov Moscow State University, Moscow, Russia |
| 09:15-09:30 | 35272 | Exploring the controlling factors of soil spatial heterogeneity with high-resolution environmental covariates: A case study of wildfire-affected and reclaimed artificial forests in Japan | Takuya O. Takahashi Department of Geography, Tokyo Metropolitan University |
| 09:30-09:45 | 35181 | Use of Geophysical Methods for Mapping Eucalyptus Root Systems | Marcio Rocha Francelino Universidade Federal de Viçosa |
| 09:45-10:00 | 34586 | Pedological controls reshape global projections of soil respiration and soil carbon-climate feedbacks under climate change scenarios | Carlos Schaefer GeoCiS (Geotechnologies in Soil Science Research Group), Department of Soil Science, Luiz de Queiroz College of Agriculture (ESALQ), University of São Paulo, Piracicaba, Brazil |
| 10:00-10:15 | 32442 | Climate and Land Use Independent Modelling of Soil Carbon Stocks | Yuting Dai Institute of Subtropical Agriculture Chinese Academy of Sciences |
| 10:15-10:30 | 32253 | AI Multiagent Systems as Partners in Discovery and Knowledge Synthesis for Soil Science Research | Budiman Minasny The University of Sydney |



Parallel Sessions

| Monday, June 8 | | Room: Expo Center, Hall 4, 4203 | |
|-----------------------|-------|---|--|
| Session 106003 | | Reading Soil Memory Across Geological Timescales: Traditional Insights and Novel Approaches | |
| | | Conveners: Francisco Sérgio Bernardes Ladeira, Institute of Geosciences, State University of Campinas (UNICAMP), Brazil Maria Bronnikova, Texas Tech University, USA; Institute of Geography Russian Academy of Sciences, Russia | |
| | | Co-Conveners: Brad Sion, Desert Research Institute, USA Xue-Feng Hu, Shanghai University, China | |
| | | | |
| Schedule | ID | Title | Presenter |
| 13:15-13:30 | 33430 | New findings from the Baix loess profile (Rhône Rift Valley, southern France) in the climatic transition zone between Central and Southern Europe | Daniela Sauer Department of Physical Geography, Institute of Geography, University of Göttingen, Germany |
| 13:30-13:45 | 35185 | The basalt - laterite sequences in the Leizhou Peninsula, South China: Indicating multiple alternations between volcanic eruption and laterite formation in the tropical region since the Middle Pleistocene | Xue-Feng Hu Shanghai University |
| 13:45-14:00 | 34992 | Distribution, characteristics, and formation mechanism of siliceous restrictive layers in the black soil region of Northeast China | Zhong-Xiu Sun Shenyang Agricultural University |
| 14:00-14:15 | 34408 | Paleosols as a key for piecing together the past climates and the intricacies of soil processes | Andrey Alekseev Institute of Physicochemical and Biological Problems in Soil Science of Russian Academy of Sciences |
| 14:15-14:30 | 34243 | Acid sulphate pedogenesis of the geological past of the Earth and beyond it | Tatiana Alekseeva Institute of Physicochemical and Biological Problems in Soil Science of Russian Academy of Sciences, Pushchino, Russia |



Parallel Sessions

Monday, June 8 (Session 106003)

| | | | |
|-------------|-------|--|---|
| 14:30-14:45 | 32900 | Informational role of buried Podzols in reconstruction of Holocene pyrogenic activity: a case study of Northern European Russia | Dmitriy Petrov Department of Soil Geography and Evolution and Radiocarbon Laboratory, Institute of Geography, Russian Academy of Sciences |
| 14:45-15:00 | 33601 | Earthen archaeological sites as archives of information on the evolution of soils and paleoclimate of the second half of the Holocene, dry steppe zone, Southern Cis-Urals, Russia | Alyona Sverchkova Institute of Geography, Russian Academy of Sciences |
| 15:00-15:15 | 33073 | Deciphering the Construction of the Ancient City of Palenque and its Effects on the Landscape | Laurin Reim Chair of Soil Sciences, School of Life Sciences, Technical University of Munich; Soil Biophysics and Environmental Systems, School of Life Sciences, Technical University of Munich; MITIGATE GmbH |
| 16:30-16:45 | 33013 | Paleosols and Their Classification in US Soil Taxonomy | John M. Galbraith School of Plant and Environmental Sciences, Virginia Tech |
| 16:45-17:00 | 36611 | Radiocarbon dating: new approaches in soils and paleosols - are these new opportunities or problems? | Elya Zazovskaya Center for Applied Isotope Studies, University of Georgia |
| 17:00-17:15 | 34502 | Paleoenvironmental significance of earthworm aestivation chambers from Cretaceous paleosols of Araripe Basin, Brazil | Francisco Sérgio Bernardes Ladeira Unicamp |
| 17:15-17:30 | 35485 | Palaeobotanical records from soil infill of rodent burrows reveal Mid- to Late-Holocene environmental dynamics: A case study from the central chernozem region of Russia | Valerii Pimenov Lomonosov Moscow State University; Belgorod State National Research University |
| 17:30-17:45 | 35098 | Revisiting krotovina formation using luminescence dating - a case study from NE China | Aimin Zhang Institute of Soil Science, Chinese Academy of Sciences |
| 17:45-18:00 | 34874 | Testing the Transferability of Paleosol Geochemical Proxies in Tropical Maastrichtian Climates: Evidence from India | Anjali Kumari Panjab University, Chandigarh, India; Department of Earth Science, Indian Institute of Technology Bombay, Mumbai |
| 18:00-18:15 | 36111 | Climate-driven silicate weathering and biogeochemical coupling in black soils | Cheng-Cheng Zhang Shenyang Agricultural University |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 4, 4202 | |
|-----------------------|-------|--|---|
| Session 107001 | | Permafrost-Affected Soils of the Changing High-Latitude and High-Altitude Environments | |
| | | <p>Convener: Alexey V. Lupachev, PhD in Biology (Soil Science), Senior research scientist in the Institute of physico-chemical and biological problems in soil science RAS, Pushchino, Russian Federation. Chair, Commission 1.7/3.8: Permafrost Affected Soils IUSS</p> <p>Co-Conveners: Adrian Unc, PhD in Soil Science, University of Guelph, Agronomist, soil scientist and environmental microbiologist, Professor at the Memorial University of Newfoundland and affiliated with the McGill University; Co-chair, Commission 1.7/3.8: Permafrost Affected Soils IUSS</p> <p>Alexander P. Ginzburg, PhD student in Biology (Soil Science) in the Institute of physico-chemical and biological problems in soil science RAS, Pushchino, Russian Federation</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:15 | 34431 | Climate-Induced Changes in Soil-Forming Factors and Processes in Permafrost-Affected Areas: Positive and Negative Trends (A Review) | Sergey Goryachkin Institute of Geography, Russian Academy of Sciences |
| 09:15-09:30 | 31549 | Soil-Permafrost Complexes of the Russian North-East Arctic Accumulative Sea Coasts: Structure, Properties, Diagnostics, Ecological Functions | Aleksei Lupachev Institute of Physicochemical and Biological Problems of Soil Science, Russian Academy of Sciences |
| 09:30-09:45 | 33690 | Heterogeneity of cryogenic soil cover related to development of patterned ground of Kolguyev Island (Barents Sea) | Anastasia Shmatova Institute of Geography, Russian Academy of Sciences |



Parallel Sessions

Tuesday, June 9 (Session 107001)

| | | | |
|-------------|-------|---|--|
| 09:45-10:00 | 32531 | Features of Soil Formation in Khasyreys (Tundra Thermokarst Depressions) | Alexandr Pastukhov Institute of Biology Komi SC UB RAS (Syktyvkar, Russia) |
| 10:00-10:15 | 32526 | Landscape Conditions of Soil Formation in Drained Lake Basins of the Russian European North | Dmitry Kaverin Institute of Biology Komi SC RAS |
| 10:15-10:30 | 31822 | Structural Features of Soils and Upper Permafrost of Eastern Chukotka Coastal Plains | Nikita D. Samokhvalov Lomonosov Moscow State University |
| 10:30-10:45 | 31795 | Suggestions for Classifying Soils of the Retrogressive Thaw Slumps Impact Zone in Future Russian and International Soil Taxonomies | Alexander P. Ginzburg Institute of Physico-Chemical and Biological Problems in Soil Science RAS |
| 10:45-11:00 | 36166 | Organic-matter rich soils hidden inside alpine periglacial blockfields: paleosols or aeolian deposits? | Michele E. D'Amico DISAA - University of Milano |
| 11:15-11:30 | 35940 | Soil structural transformation under multiple freeze-thaw cycles with comprehensive morphological and topological analysis: the hypothesis of periodicity | Tolstygin Kirill D. Laboratory of digital twins of agricultural landscapes, Dokuchaev Soil Science Institute, Moscow, Russia |
| 11:30-11:45 | 34740 | Characterizing Pan-Arctic Soil Organic Carbon: A Comprehensive Database of Particulate and Mineral-Associated Fractions | You Jin Kim Kyung Hee University |
| 11:45-12:00 | 32320 | Enzymatic activity in podzols of the north of Yamalo-Nenets Autonomous Okrug | Marina Rozanova Faculty of Soil Science, Lomonosov Moscow State University |



Parallel Sessions

Tuesday, June 9 (Session 107001)

| | | | |
|-------------|-------|--|--|
| 13:30-13:45 | 33459 | Minerals and Peroxidases Regulate Soil Carbon Stability in Permafrost | Guanghui Yu Tianjin University |
| 13:45-14:00 | 31913 | Wildfires accelerate permafrost area loss via reducing soil organic matter | Dan Zhu College of Urban and Environmental Sciences, Peking University |
| 14:00-14:15 | 34401 | Assessment of Carbon Stocks in Soils of the Western Siberian North | Maria Strizhakova Lomonosov Moscow State University, Faculty of Soil Science, Moscow, Russia |
| 14:15-14:30 | 36617 | Soil organic carbon stock assessment in cryoturbated turf/grass mounds in Kobresia Meadows, Qinghai-Tibetan Plateau | Chien-Lu Ping University of Alaska Fairbanks |
| 14:30-14:45 | 33389 | Environmental controls on soil organic matter composition across a glacial-landscape gradient: A case study of debris-covered glaciers in Gongga Mountain, southwest China | Wenjing Mao Institute of Mountain Hazards and Environment, Chinese Academy of Sciences; University of Chinese Academy of Sciences |
| 14:45-15:00 | 32539 | Freeze-Thaw-Driven Soil Moisture Return Significantly Contributes to Spring Phenology on the Warming Qinghai-Tibet Plateau | Hanrui Zhao State Key Laboratory of Hydraulics and Mountain River Engineering, College of Water Resource and Hydropower, Sichuan University |
| 15:00-15:15 | 36618 | Mattic layer ruptures in the Third pole: mechanisms, distribution, consequences, and monitoring | Zhuodong Jiang Shenyang Agricultural University |



Parallel Sessions

Tuesday, June 9 (Session 107001)

| | | | |
|-------------|-------|---|---|
| 16:30-16:45 | 34886 | Vertical Distribution of Methane Concentration in Permafrost-Affected Soils of Central Yakutia | Nikita I. Tananaev North-Eastern Federal University, Yakutsk, Russia; Vítus Bering Kamchatka State University, Petropavlovsk-Kamchatsky, Russia |
| 16:45-17:00 | 32894 | Greenhouse Gas Fluxes from Different Species of Epigeic Lichen Species on Arctic Tundra Cryosols | Anastasia I. Matvienko Sukachev Institute of Forest SB RAS, Federal Research Center “Krasnoyarsk Science Center SB RAS” |
| 17:00-17:15 | 32014 | Greenhouse gas fluxes by the epiphytic lichen Bryoria in response to projected moisture increase in boreal forests underlain by thawed permafrost soils | Oxana V. Masyagina Sukachev Institute of Forest SB RAS, Federal Research Center “Krasnoyarsk Science Center SB RAS” |
| 17:15-17:30 | 32000 | The CO ₂ and CH ₄ fluxes from the epiphytic lichen Evernia mesomorpha collected in boreal forest underlain by cryosols | Svetlana Y. Evgrafova Sukachev Institute of Forest SB RAS, Federal Research Center “Krasnoyarsk Science Center SB RAS” |
| 17:30-17:45 | 34352 | Soils of European Arctic cities under climate change | Andrey Dolgikh Institute of Geography, Russian Academy of Sciences |
| 17:45-18:15 | - | Closing of the session, overall conclusions, statements and resolution | Alexey Lupachev, Aleksandr Ginzburg |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 4, 4201 | |
|-----------------------|-------|---|---|
| Session 108001 | | Advances in Remote Sensing for Soil Property Mapping | |
| | | <p>Convener: Miao Lu, State Key Laboratory of Efficient Utilization of Arid and Semi-arid Arable Land in Northern China, Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, Beijing 100081, China</p> <p>Co-Conveners: Qiangyi Yu, State Key Laboratory of Efficient Utilization of Arid and Semi-arid Arable Land in Northern China, Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, Beijing 100081, China Xiaolin Sun, College of Agriculture, Guangxi University, Nanning 520004, China Xianli Xie, State Key Laboratory of Soil & Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, No.298 Chuangyou Road, Jiangning District, Nanjing, China</p> | |
| Schedule | ID | Title | Presenter |
| 13:30-13:45 | 35457 | Mapping Soil Salinity with Satellite Embeddings and Environmental Covariates | Peng Fu Louisiana State University AgCenter, Louisiana State University |
| 13:45-14:00 | 35192 | A Meta Learning Framework for Spatio-temporal Mapping of Cropland Topsoil pH in Southern China | Nuo-Xi Qiu University of Chinese Academy of Sciences; Institute of Soil Science, Chinese Academy of Sciences |
| 14:00-14:15 | 32592 | Intelligent Monitoring of Soil Salinization by Integrating Agronomic Features | Miao Lu Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 14:15-14:30 | 36597 | A Property-Dependent Strategy for Digital Soil Mapping: Optimizing Sentinel-2 Time-Series for Stable and Dynamic Soil Attributes | Kriuchkov Nikita Faculty of Biology, Shenzhen MSU-BIT University, Shenzhen, China |



Parallel Sessions

Tuesday, June 9 (Session 108001)

| | | | |
|-------------|-------|---|---|
| 14:30-14:45 | 34214 | Multi-view hyperspectral feature can improve soil property retrieval | Lixia Ma Institute of Soil Science, Chinese Academy of Sciences |
| 14:45-15:00 | 33557 | Accurate Time-Series Retrieval of Soil Salinity from CYGNSS Data by Physics-Based Surface Correction and Semi-Empirical Model | Li Wang The Institute of Agricultural Resources and Regional Planning Chinese Academy of Agricultural Science |
| 15:00-15:15 | 35156 | Physically supervised harmonic framework for spatial characterization of apparent soil thermal diffusivity between 5 and 10 cm | Martín Francia Department of Soils and Water, Faculty of Agronomy, Universidad de la República, Montevideo, Uruguay |
| 16:30-16:45 | 33135 | Soil Reflectance Composite and Terrain Attributes for Digital Soil Mapping in a Mediterranean Cropland District | Simone Priori University of Tuscia, Department of Agriculture and Forest Sciences |
| 16:45-17:00 | 32778 | Integrating UAV-Mounted Gamma-Ray Spectrometry and Soil Laboratory Analysis to Characterize Sediment Erosion, Composition, and Pollution in Vineyards | Liam Delaney Stellenbosch University |
| 17:00-17:15 | 32228 | Geostatistical fusion of field and remote sensing data for assessing soil salinity in southern region of Morocco | Mohamed Ghassan Center for Sustainable Soil Sciences,UM6P, Mohammed VI Polytechnic University |
| 17:15-17:30 | 31944 | Integrating Remote Sensing and Soil Drainage Mapping to Predict Salinization Risk | Grace Gowera University of Saskatchewan |
| 17:30-17:45 | 31841 | Study on the coupling relationship between agricultural water and soil resources carrying capacity and grain production capacity in typical black soil regions of Northeast China | Sidi Wang Shenyang Agricultural University |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 4, 4201 | |
|-----------------------|-------|---|---|
| Session 108002 | | Democratizing Digital Soil Mapping: Innovative Technologies for Global Soil Services and Solutions | |
| | | <p>Convener: Asim Biswas, University of Guelph</p> <p>Co-Conveners: GanLin Zhang, Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences Zhou Shi, Zhejiang University Songchao Chen, Zhejiang University Lin Yang, Renmin University of China</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:05 | - | Introduction of the Session | Asim Biswas |
| 09:05-09:20 | 33545 | Innovative Technologies for European and Global Soil Services and Solutions -SoilWise Project Achievements | Tomas REZNIK Masaryk University |
| 09:20-09:35 | 35810 | Projected intensification of soil salinization in global drylands under future aridity increase | Dietian Yu Zhejiang University |
| 09:35-09:50 | 32893 | Future Projections of Global Belowground Net Primary Productivity in Response to Climate Change | Menghan Li Central China Normal University |
| 09:50-10:05 | 33001 | A Multi-Source Product Assessment and Uncertainty-Aware Modeling Framework for SOC Mapping in China | Xunjie Ma Sichuan Agricultural University |
| 10:05-10:20 | 32436 | The spatiotemporal variation in soil inorganic carbon | Xiaodong Song Institute of Soil Science, Chinese Academy of Sciences |



Parallel Sessions

Tuesday, June 9 (Session 108002)

| | | | |
|-------------|--------|--|---|
| 10:20-10:35 | 34412 | Integrating Proximal and Remote Sensing to Cross-scale Quantify Soil Organic Carbon and Moisture Dynamics via Multi-model Learning | Sheng Wang Pioneer Center Land-CRAFT, Department of Agroecology, Aarhus University, Aarhus, 8000, Denmark |
| 10:35-10:50 | 36497 | UAV assisted high-resolution mapping of soil organic carbon and nitrogen in the matic layer of the Tibetan alpine meadow | Shuo-Peng Zhang Shenyang Agricultural University |
| 10:50-11:00 | - | General Q&A | Asim Biswas |
| 11:15-11:28 | 35232 | Digital Soil Mapping Plus Complexity Analysis: an Effective Approach to Identify Sensitive Areas of Landscape Evolution | Shuran Gao BeijingNormalUniversity |
| 11:28-11:41 | 34506 | Warming and Drying Patterns across Iran: A Three-Decade Remote Sensing Perspective on Land Surface Temperature, Soil Moisture, and Vegetation Dynamics | Farnaz Ahmadi Soil Science Department, University of Tehran, Karaj, Iran |
| 11:41-11:54 | 319B11 | Innovation in Large-scale Soil Pollution Investigation Driven by Multi-source Data: A Transition from Grid-based to Precision-based Approaches | Guanlin Guo Technical Centre for Soil, Agriculture and Rural Ecology and Environment, Ministry of Ecology and Environment |
| 11:54-12:07 | 33855 | Predicting Textural Classes Using GPR-derived Geophysical Data and Optimized Machine Learning in Subtropical Forests | Jairo Calderari de Oliveira Junior Federal University of Parana (Department of Soil Science) |
| 12:07-12:25 | - | General Q&A | Asim Biswas |
| 12:25-12:30 | - | Closing | Asim Biswas |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 4, 4203 | |
|-----------------------|--------|---|--|
| Session 108003 | | Leveraging Site and Spatial Data for Soil Monitoring | |
| | | <p>Convener: Qiangyi Yu, Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences</p> <p>Co-Conveners: Bingbo Gao, China Agricultural University Songchao Chen, Zhejiang University Wenbin Wu, Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences</p> | |
| Schedule | ID | Title | Presenter |
| 13:30-13:45 | 33045 | Low-Cost Sensors for Monitoring Soil Condition in Landscape Restoration | Vanessa Wong Monash University |
| 13:45-14:00 | 34934 | Step towards a 1:100,000-scale Soil Map of Italy supporting the implementation of a national soil monitoring network and service | Giovanni L'Abate CREA Council for Agricultural Research and Economics |
| 14:00-14:15 | 33548 | Using legacy data and geostatistics for assessing soil organic carbon change in the Sele River Plain (southern Italy) | Gabriele Buttafuoco National Research Council of Italy, Institute for Agricultural and Forest Systems in the Mediterranean, Rende CS. Italy |
| 14:15-14:30 | 32614 | Assessing human activity impacts on soil nutrient condition in Australia. | Ho Jun Jang The University of Sydney |
| 14:30-14:45 | 320B13 | From Mars to Farmland: Next-Generation In-Situ Soil Composition Monitoring Technology for Agricultural Fields | Daming Dong National Research Center of Intelligent Equipment for Agriculture, Beijing Academy of Agriculture and Forestry Sciences |
| 14:45-15:00 | 320B12 | Development and Applications of a Soil Spectral Library in Hainan, China | Zhen Wang Institute of Agricultural Resources and Regional Planning, CAAS |
| 15:00-15:15 | 32118 | Standardized Soil Water Deficit Index for Monitoring Agricultural Drought in India with a Machine Learning Extended Root Zone Soil Moisture Dataset | Alka Rani Division of Soil Physics, ICAR-Indian Institute of Soil Science |



Parallel Sessions

Tuesday, June 9 (Session 108003)

| | | | |
|-------------|-------|--|--|
| 16:30-16:45 | 34851 | A streamlined soil database strengthening near-real-time interoperability for soil monitoring networks and services | Andrea Lachi CREA (Research Centre for Agriculture and Environment) |
| 16:45-17:00 | 31825 | Stacking ensembles with spatial residual correction for improved soil pH mapping in tropical croplands | Zhang Meixuan Hainan University |
| 17:00-17:15 | 32532 | Well-facilitated Farmland Construction enhances soil organic carbon storage in China | Zheng Wang Zhejiang University |
| 17:15-17:30 | 34196 | Modeling of spatiotemporal heterogeneity of agrochemical properties of soils within the territory of testing agricultural crop varieties | Bodalev Konstantin Andreevich Kazan Federal University |
| 17:30-17:45 | 33978 | Quantifying Pan-European Soil Organic Carbon Trends and Associated Uncertainty for Soil Health Monitoring | Ali Sakhae Thünen Institute of Climate-Smart Agriculture |
| 17:45-18:00 | 34646 | Measuring Ephemeral Gully Morphology Using a Portable Gullimeter and Image- based Techniques | Harnoordeep Singh Mann School of Environmental Sciences, University of Guelph, Canada |
| 18:00-18:15 | 32772 | WoSIS: An international effort to share standardised soil data for the world | Laura Poggio ISRIC - World Soil Information |
| 18:15-18:30 | 32319 | Soil Fertility Index and Spatial Variability as Drivers of Site-Specific Fertilizer Management in the Tigray Highlands | Mulugeta Sebhatleab Tesfay Mekelle University; Land Resources Management and Environmental Protection, Mekelle University |



Parallel Sessions

| Friday, June 12 | | Room: Expo Center, Hall 4,4201 | |
|-----------------------|-------|---|--|
| Session 108004 | | Operational Digital Soil Mapping: Fitness for Use of DSM Products: Pitfalls to Avoid and Way Forward | |
| | | <p>Convener: Laura Poggio, ISRIC-World Soil Information</p> <p>Co-Conveners: Feng Liu, Institute of Soil Science, Chinese Academy of Sciences D G Rossiter, ISRIC-World Soil Information, david.rossiter@isric.org; Section of Soil & Crop Sciences, Cornell University (USA) Mercedes Román Dobarco, NEIKER Basque Institute for Agricultural Research and Development (E)</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:10 | - | Welcome and orientation to the session: procedures and themes | Organizers |
| 09:10-09:25 | 31974 | Characterisation of global and continental DSM products: beyond point accuracy and towards user needs | Laura Poggio ISRIC - World Soil Information |
| 09:25-09:40 | 33864 | From Legacy Soil Maps to Fit-for-Use DSM Products: A Case Study from Portugal | Samuel Guerreiro LEAF—Linking Landscape, Environment, Agriculture and Food Research Centre, Instituto Superior de Agronomia, Universidade de Lisboa; Santarém Polytechnic University, School of Agriculture |
| 09:40-09:55 | 34866 | Digital Soil Mapping of pH at European scale: comparing national vs. continental inputs | Maria Fantappiè CREA - Council for Agricultural Research and Economics, Italy |
| 09:55-10:10 | 34271 | Transposability of MUSE (French DSM method for the Evaluation of Soil Multifunctionality) to EU scale in the framework of EU-funded Horizon Europe SPADES project | Amazigh Ouaksel BRGM; IRSTV |
| 10:10-11:00 | - | Discussion: lessons from first session | Organizers, presenters first session |



Parallel Sessions

Friday, June 12 (Session 108004)

| | | | |
|-------------|--------|---|---|
| 11:15-11:30 | 319B12 | Mapping and validating the root zone plant-available water holding capacity in central Ethiopia | Musefa A. Redi Ethiopian Institute of Agricultural Research |
| 11:30-11:45 | 35230 | National soil information grids of China: problems and possible solutions | Feng Liu Institute of Soil Science, Chinese Academy of Science |
| 11:45-12:00 | 36622 | Revealing the landscape with Digital Soil Mapping | David G. Rossiter ISRIC-World Soil Information |
| 12:00-12:15 | 33550 | Beyond uncertainties: making standalone metrics decision-oriented through game theory | Treva Flynn University of Fort Hare |
| 12:15-12:30 | - | Discussion: lessons from second session and overall | Organizers, presenters second section, all |



Parallel Sessions

| Thursday, June 11 | | Room: Expo Center, Hall 4, 4203 | |
|-----------------------|-------|--|---|
| Session 108005 | | Digital Soil Mapping and Assessment: Advances, Applications, and Future Directions | |
| | | <p>Convener: Alessandro Samuel-Rosa, Federal Technological University of Paraná, Brazil Chair of the Digital Soil Mapping Working Group</p> <p>Co-Convener: George Van Zijl, North-West University, South Africa</p> | |
| Schedule | ID | Title | Presenter |
| 11:15-11:30 | 36206 | Distributional Validation of Digital Soil Maps using Aggregated Commercial Data | Alessandro Samuel-Rosa Federal Technological University of Paraná (Department of Agronomy, Santa Helena, Paraná, Brazil) |
| 11:30-11:45 | 35762 | Model Selection for Digital Soil Mapping Using Spatial Structure Indices | Fang-He Zhao Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences |
| 11:45-12:00 | 32826 | Continental-Scale Soil Assessment in Africa: Design, Implementation, and Early Findings from Soils4Africa | Samuel Ayodele Mesele International Institute of Tropical Agriculture |
| 12:00-12:15 | 32926 | Mapping of bundles of soil-based ecosystem services in the European Union and their evolution by 2050 | Nicolas Saby INRAE, Info&Soils |
| 13:30-13:45 | 35340 | Integrating Hierarchical Factor Analysis and Digital Soil Mapping to Update Legacy Maps and Identify Soil Carbon Loss Hotspots for Land-Use Policy | Anna Gorbacheva HSE University, International Laboratory of Landscape Ecology |
| 13:45-14:00 | 34913 | Assessing the carbon sequestration potential and identifying influential factors of cultivated soils in Northeast China | Zicheng Wang Shenyang Agricultural University |



Parallel Sessions

Thursday, June 11 (Session 108005)

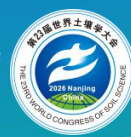
| | | | |
|-------------|-------|---|--|
| 14:00-14:15 | 34917 | Three-dimensional soil organic carbon stocks in Tibet, China: spatial heterogeneity, driving factors, and future Changes | Jiaying Li Shenyang Agricultural University |
| 14:15-14:30 | 34918 | Soil organic carbon in Chinese grassland ecosystems: spatial heterogeneity, driving factors, and future changes | Yi ran Wang Shenyang Agricultural University |
| 14:30-14:45 | 33587 | Intelligent Mapping Paradigm to Overcome Systematic Bias in Remote Sensing SOC Estimation: A Case Study of the Black Soil Region in China and the United States | Chong Luo Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 14:45-15:00 | 35778 | Enhancing Regional Topsoil Total Nitrogen Mapping through Differentiated Fusion of Ground Hyperspectral Data and Satellite Images Under Low Vegetation Cover | Rongpeng He Aerospace Information Research Institute |
| 15:00-15:15 | 34419 | Spatial Variability of Soil Acidity and Mapping of Selected Soil Properties in Chancho Micro Watershed, South western Ethiopia | Abdissa Bekele Sima Oda Bultum University; Chiro; Ethiopia |
| 16:30-16:45 | 35702 | Integrating Digital Soil Mapping and Remote Sensing-Based Soil Moisture for Crop Water Requirement Modelling at the Land Parcel System Scale | Rosario Napoli CREA - Research Centre for Agriculture and Environment |
| 16:45-17:00 | 32261 | Mapping Spatiotemporal Soil Temperature in Real-time using Neural Networks Combined with Heat Transfer Equation | Marliana Widyastuti Sydney Institute of Agriculture & School of Life and Environmental Sciences, The University of Sydney |
| 17:00-17:15 | 34258 | Propose an improved digital mapping method for mountainous soil heavy metals based on spatial structure feature integrated with geographic optimal similarity (SI-GOS) model to explore more effective regional environmental management pathways | Jiakang Liu Center China Normal University |



Parallel Sessions

Thursday, June 11 (Session 108005)

| | | | |
|-------------|-------|---|--|
| 17:15-17:30 | 35317 | Comparative Study on Soil Spatial Provenance Based on Soil Property Similarity Clustering and Pedogenic Environment Inference | Rong Zeng Nanjing University of Information Science and Technology |
| 17:30-17:45 | 35552 | Within-field soil variability in agro-silvo-pastoral systems: a baseline for Precision Agriculture adoption | João Horta Marques MED—Mediterranean Institute for Agriculture, Environment and Development and CHANGE—Global Change and Sustainability Institute, Universidade de Évora, Pólo da Mitra, Ap. 94, 7006-554 Évora, Portugal; CEF-Centro de Estudos Florestais and TERRA - Associate Laboratory, Instituto Superior de Agronomia, Universidade de Lisboa, Tapada da Ajuda, Lisbon 1349-017, Portugal |
| 17:45-18:00 | 31832 | Applying Digital Soil Assessment to Support the Effectiveness Evaluation and Design Optimization of Buffer Strips | Tianying Li University of Guelph |
| 18:00-18:15 | 36202 | Mapping Soil Fine and Coarse Mineral Fractions Using Compositional Methods | Taciara Zborowski Horst Federal Technological University of Paraná (Department of Agronomy, Dois Vizinhos, Paraná, Brazil) |
| 18:15-18:30 | 32459 | New dimensions of farmers' decision making: Demonstration of a 3D web-viewer for erosion mitigation strategies | Marvin Melzer Leibniz Centre for Agricultural Landscape Research (ZALF) |



Parallel Sessions

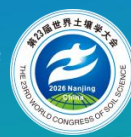
| Thursday, June 11 Friday, June 12 | | Room: Expo Center, Hall 4, 4202 | |
|--------------------------------------|-------|--|--|
| Session 110001 | | Advances in Soil Health Monitoring with Proximal Sensing | |
| | | <p>Convener: Yongsheng Hong, Wuhan University</p> <p>Co-Conveners: Bifeng Hu, Jiangxi University of Finance and Economics Yiyun Chen, Wuhan University Asim Biswas, University of Guelph Zhou Shi, Zhejiang University</p> | |
| Schedule | ID | Title | Presenter |
| Thursday, June 11 | | | |
| 11:15-11:30 | 34398 | Measuring Soil Health Using Technologies Across Scales | Asim Biswas School of Environmental Sciences, University of Guelph, Guelph, ON Canada N1G 2W1 |
| 11:30-11:45 | 33627 | Towards Sustainable Land Use: Soil Health Assessment at a National Scale using Spectral Information | Asa Gholizadeh Department of Soil Science and Soil Protection, Czech University of Life Sciences Prague |
| 11:45-12:00 | 35719 | Monitoring soil arsenic content in densely vegetated agricultural areas using UAV hyperspectral, satellite multispectral and SAR data | Xiao-Lin Sun College of Agriculture, Guangxi University |



Parallel Sessions

Thursday, June 11 (Session 110001)

| | | | |
|-------------|-------|--|--|
| 12:15-12:30 | 34078 | SWRCI: A Novel Remote Sensing Index for Soil Water Retention Capacity | Linghua Meng Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 13:30-13:45 | 35573 | Comparison of mid-infrared and visible/near-infrared spectroscopy of moist-intact cores and dry-ground soils for soil property prediction | Wenjun Ji China Agricultural University |
| 13:45-14:00 | 35314 | A comparative study of four color measurement methods for soil color identification and related properties prediction | Rong Zeng Nanjing University of Information Science and Technology |
| 14:00-14:15 | 33198 | A transferable spatiotemporal deep learning framework integrating soil moisture dynamics for high-resolution cropland Soil Organic Matter Mapping Across Regions | Chong Luo Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun, 130102, China |
| 14:15-14:30 | 32359 | Evaluating Portable X-Ray Fluorescence (pXRF) for Soil Fertility Assessment: Influence of Moisture and Soil Properties | Deepanjan Mridha Washington State University |
| 14:30-14:45 | 33900 | Improving in-situ spectral estimation of wetland soil organic carbon by integrating multiple optimization strategies | Bifeng Hu Jiangxi University of Finance and Economics |
| 14:45-15:00 | 36177 | Hybrid Deep Learning for Soil Property Prediction Using Vis-NIR Spectroscopy | Wang Xiaoqing Chengdu University of Information Technology |



Parallel Sessions

Thursday, June 11 (Session 110001)

| | | | |
|-------------|-------|--|---|
| 16:30-16:45 | 36449 | Advancing Soil Health Monitoring Using Proximal VIS-NIR and MIR Spectroscopy Integrated with Multivariate Modeling | Seema Department of Soil Science and Agricultural Chemistry, College of Agriculture, Agriculture University Jodhpur, Jodhpur, Rajasthan, 342304, India |
| 16:45-17:00 | 35826 | Mapping mollic epipedon thickness via ground-penetrating radar based on the combined method of Variational Mode Decomposition and Average Envelope Amplitude | Xiangming Zhu Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 17:00-17:15 | 34403 | Accuracies and costs of prediction and mapping soil properties using proximal sensors: A systematic review | Carlos Lozano Fondón, Ph.D Research Centre for Agriculture and Environment, Council for Agricultural Research and Economics, via di Lanciola 12VA, 50125 Florence, Italy |
| 17:15-17:30 | 32634 | Sequential indirect modeling of soil properties from spectral data with small sample set | Gretelerika Vindeker Department of soil genesis, geography and classification, V. V. Dokuchaev Soil Science Institute |
| 17:30-17:45 | 31768 | Evaluating Spectroscopy and Chemometrics as Tools to Improve Agricultural Soil Analysis | Gbenga D. Adejumo University of Saskatchewan |
| 17:45-18:00 | 31937 | Evaluating Portable Miniaturized NIR and Vis-NIR Technologies for Soil Spectroscopic Analysis | Reda Mokere Center of Excellence in Soil and Fertilizer Research in Africa, Mohammed VI Polytechnic University (UM6P) |
| 18:00-18:15 | 34642 | Soil drainage survey using Electromagnetic induction Sensing | Harnoordeep Singh Mann School of Environmental Sciences, University of Guelph, Canada |



Parallel Sessions

Friday, June 12 (Session 110001)

| | | | |
|-------------|-------|--|--|
| 09:00-09:15 | 33029 | Deep Learning-Based Similarity Framework for Rapid Soil Organic Matter Assessment from Smartphone Imagery | Asim Biswas University of Guelph |
| 09:15-09:30 | 31995 | Intelligent Soil Monitoring | Yongsheng Hong Wuhan University |
| 09:30-09:45 | 32542 | Low-cost portable near infrared spectroscopy for in-situ and laboratory prediction of soil organic carbon in Ferrosols | Zhengyang Xu Zhejiang University |
| 09:45-10:00 | 33374 | Regional bare soil mapping method integrating multi-source remote sensing data in cloudy environments | Junzhe Fang Zhejiang University |
| 10:00-10:15 | 36483 | Identification of Alkalized Horizons Using Ground Penetrating Radar in Typical Saline-Alkali Areas of the Songnen Plain | Chenyang Gao College of land and environment, Shenyang Agricultural University Shenyang, Liaoning CHINA |
| 10:15-10:30 | 34110 | The Accurate Estimation of Soil Available Nutrients Achieved by Feature Selection Coupled with Preprocessing Based on MIR and pXRF Fusion | Qi Zou China Agricultural University |
| 10:30-10:45 | 34388 | A Dataset-Based Statistical Comparison and Fusion of Gamma-Ray and Visible-Near-Infrared Sensing Technologies for Soil Texture Prediction | Jiang Liu Department of Environment, Faculty of Bioscience Engineering, Ghent University |
| 10:45-11:00 | 33121 | Preprocessing and Optimizing Sensitive Wavelength Enable End-to-End Estimation of Soil Heavy Metals using Hyperspectral Remote Sensing | Chang Meng Inner Mongolia Agricultural University |
| 11:15-11:30 | 34055 | Spatio-temporal fusion-based analysis of soil salinization dynamics in the Ningxia-Inner Mongolia Yellow River Irrigation District (2000-2025) | Qidong Ding Ningxia University |
| 11:30-11:45 | 32887 | Coastal Soil Salinity Inversion Using Resource Satellite Data and Explainable Machine Learning: A Case Study of Southern Laizhou Bay | Rui Ma Liaocheng University |
| 11:45-12:00 | 35670 | Dynamic inversion of soil salinity in farmland across the Hetao Plain of China based on a spatiotemporal fusion algorithm (2000-2024) | Huayu Huang Ningxia University |

Parallel Sessions

| Monday, June 8 | | Room: Expo Center, Hall 5, 5203 | |
|-----------------------|-------|--|--|
| Session 110003 | | Soil Spectroscopy: A Global Solution for Sustainable Soil Management and Food Security | |
| | | <p>Convener: Asim Biswas, Chair of Proximal Soil Sensing Working Group of IUSS, University of Guelph</p> <p>Co-Convener: Yi Peng, Global Soil Partnership, Food and Agriculture Organization of the United Nations (FAO)</p> | |
| Schedule | ID | Title | Presenter |
| 13:15-13:25 | 34889 | Vis-NIR Spectroscopy and Chemometrics for Soil Pollution Assessment: Challenges and Opportunities | Claudio Colombo University of Molise, Department of Agricultural, Environmental and Food Science, Campobasso (CB), Italy |
| 13:30-13:45 | 34993 | Sample Transfer Learning for Improving Field-Scale Soil Organic Matter Inversion via UAV Hyperspectral Remote Sensing | Xian-Li Xie State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, Nanjing |
| 13:50-14:00 | 32206 | The use of low-cost spectrometers to predict key soil properties for digital soil mapping in South Sumatra, Indonesia | Astriana Rahmi Setiawati School of Life and Environmental Sciences & Sydney Institute of Agriculture, The University of Sydney |
| 14:05-14:15 | 32829 | A Vis-NIR penetrometer system for field measurement of soil organic carbon | Yin-Chung Huang School of Life and Environmental Science & Sydney Institute of Agriculture, The University of Sydney |
| 14:20-14:30 | 32625 | Comparison of mid and near infrared spectroscopy in predicting stable isotope values ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) of tropical soils in Madagascar | Ramifehiarivo Nandrianina Laboratoire des Radioisotopes-University of Antananarivo; Ecole Supérieure des Sciences Agronomiques-University of Antananarivo |



Parallel Sessions

Monday, June 8 (Session 110003)

| | | | |
|-------------|-------|---|--|
| 14:35-14:45 | 35947 | Estimation of soil inorganic carbon storage for profiles based on spectroscopy | Guanghui Zheng School of Geographic Sciences, Nanjing University of Information Science and Technology |
| 14:50-15:00 | 33190 | Transferability of Global Spectral Models for Local Soil Organic Carbon Predictions: Effects of Spiking on Model Performance | Anshu Beri School of Environmental Sciences, University of Guelph, 50 Stone Road East, Guelph, ON N1G 2W1, Canada |
| 16:30-16:40 | 35039 | Characterization of soil organic matter regarding both the structure and composition by Fourier transform infrared attenuated reflectance spectroscopy | F. Ma The State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, Nanjing 210008, China; |
| 16:45-16:55 | 33241 | Carbon Assessment in Peat Soils Through Moisture-Corrected Vis-NIR Spectroscopy and Instrument Comparison | Leonardo Pace University of Tuscia |
| 17:00-17:10 | 31906 | Prediction of soil organic matter using visible-near-infrared spectroscopy combined with textural hand-feel determination | Meihua Yang Yuzhang Normal University |
| 17:15-17:25 | 33644 | Comparative analysis of Vis-NIR and MIR spectroscopy for predicting soil properties and identifying minerals at smallholder cocoa farms across Papua New Guinea | Tom Swan University of Sydney |
| 17:30-17:40 | 33379 | Spectroscopic Screening of Soil Extracellular Oxidases and Their Application in Soil Health Monitoring and Carbon Modeling | Jianwei Li Tennessee State University |
| 17:45-17:55 | 33140 | A comparative study of Random Forest and Neural Network with implementation of Boruta algorithm for predicting soil properties from Visible-Near Infrared spectra | Daria Zhulidova V. V. Dokuchaev Soil Science Institute |



Parallel Sessions

| Friday, June 12 | | Room: Expo Center, Hall 4, 4203 | |
|-----------------------|-------|--|---|
| Session 112001 | | Advances in Numerical Soil Classification | |
| | | <p>Convener: Budiman Minasny, The University of Sydney</p> <p>Co-Conveners: Jingyi Huang, The university of Wisconsin, USA Songchao Chen, Zhejiang University, China</p> | |
| Schedule | ID | Title | Presenter |
| 11:15-11:30 | 31820 | Layer-Profile Integration for Numerical Soil Classification | Wartini Ng The University of Sydney |
| 11:30-11:45 | 36456 | Efforts to develop modern objective numerical data sources to support universal approaches of soil classification | Erika Micheli Department of Soil Science, Institute of Environmental Sciences, Hungarian University of Agriculture and Life Sciences, Gödöllő, Hungary |
| 11:45-12:00 | 33222 | Harmonization of Soil Typological Units Across Administrative Regions: A Case Study from Italy | Roberto Barbetti CREA-FL council for agricultural research and economics, Forestry and Wood, Casale Monferrato IT |



Parallel Sessions

| Monday, June 8 Tuesday, June 9 | | Room: Expo Center, Hall 7, 7202 | |
|-----------------------------------|-------|---|--|
| Session 201001 | | Beyond Plant Available Water - New Insights on Soil Water Accessibility | |
| | | <p>Convener: Ying Zhao, Ludong University</p> <p>Co-Conveners: Peth Stephan, LeibnizUniversity Hanover Wei Hu, The New Zealand Institute for Plant and Food Research Limited, New Zealand</p> | |
| Schedule | ID | Title | Presenter |
| Monday, June 8 | | | |
| 13:15-13:35 | 36620 | Pore systems and functions in structured soils- how far affect soilmanagement and environmental impacts an unambiguous assignment? | Rainer Horn Soil Science, CAU Kiel, Germany |
| 13:35-13:50 | 36221 | Soil Pore Size Distribution and Water Retention Curves by Low-Field NMR | Etelvino Henrique Novotny Embrapa Soils, Rio de Janeiro, Brazil |
| 13:50-14:05 | 36121 | Field-scale Assessments of Subsoil Compaction and Soil Structural Functions in Lower Saxony, Germany | Xinjun Huang Henan University of Technology |
| 14:05-14:20 | 34718 | Stress-Strain Mechanism of Salt-affected Soils in the Yellow River Delta | Lidong Ren Modern Agricultural Engineering Laboratory, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences |
| 14:20-14:35 | 33960 | Creating Pathways for Roots: Artificial Macropores through Compacted Subsoils | Elron Wiedermann Thuenen Institute of Climate-Smart Agriculture |



Parallel Sessions

Monday, June 8 (Session 201001)

| | | | |
|-------------|-------|--|---|
| 14:35-14:50 | 33183 | A complete morphological and topological description of soil pore structure dynamics during wetting-drying | Kirill D. Tolstygin Laboratory of digital twins of agricultural landscapes, Dokuchaev Soil Science Institute, Moscow, Russia |
| 14:50-15:05 | 32590 | Development of soil mechanical stability during initial soil formation - from field to rhizosphere scale | Stephan Peth Leibniz University Hannover, Institute of Earth System Sciences, Section Soil Science |
| 15:05-15:15 | 33788 | Trees' Effect on Soil Penetration Resistance Under Livestock-Forestry System in Southern Brazil | Karina Maria Vieira Cavalieri-Polizeli Department of Soil Science and Agr. Eng., Federal University of Paraná |
| 16:30-16:50 | 33760 | A Mechanistic Soil-Plant Model to Assess Soil Water Accessibility | Jan Vanderborght Agrosphere Institute (IBG-3), Forschungszentrum Jülich |
| 16:50-17:05 | 36251 | Mucilage effects on soil-plant hydraulics and stomatal regulation under drought | Gaochao Cai Sun Yat-sen University |
| 17:05-17:20 | 32578 | Defining, monitoring, and utilizing plant available water information as a public good | Tyson E. Ochsner Oklahoma State University |
| 17:20-17:35 | 32479 | A Process-Based Proxy for the Water Availability to Plants | Quirijn de Jong van Lier Universidade de São Paulo |
| 17:35-17:50 | 32368 | Water Balance and Plant Soil Water Availability: Linking Soil Physics and Hydrology | Allen Hunt Wright State University |
| 17:50-18:05 | 31340 | Confronting Water Availability versus Water Accessibility in Plant-Soil Relations | Ying Zhao Ludong University |
| 18:05-18:20 | 32899 | Rhizosphere Hydraulic Regulation Across Soil Textures: Evidence for Texture-Dependent Mucilage Function | Mohsen Zare Professorship for Soil Biophysics and Environmental Systems, Technical University of Munich |
| 18:20-18:30 | - | Summary | - |



Parallel Sessions

Tuesday, June 9 (Session 201001)

| | | | |
|-------------|-------|---|--|
| 09:00-09:20 | 32281 | Impact of Biosolids on Plant Available Water and Beyond | Markus Flury Washington State University |
| 09:20-09:35 | 35458 | Improvement of the Soil Water Retention Model Based on the Additivity Hypothesis | Anatoly Zeyliger Hydroinformatics Laboratory, Water Problems Institute of the Russian Academy of Sciences, Moscow, Russia; Southern Federal University, Rostov-on-Don, Russia; Moscow Institute of Physics and Technology, Moscow, Russia; Russian State Agrarian University-Moscow Timiryazev Agricultural Academy, Moscow, Russia |
| 09:35-09:50 | 34774 | Impact of drought and root excision on root regeneration, xylem hydraulics and leaf physiological characteristics in Robinia Pseudoacacia | Min Li Northwest A&F University |
| 09:50-10:05 | 34251 | Biochar application to soil in agricultural water management | Agnieszka Medynska-Juraszek Institute of Soil Science, Plant Nutrition and Environmental Protection, Wroclaw University of Environmental and Life Sciences |
| 10:05-10:20 | 33062 | A PCB-Based Integrated Measurement System for In Situ Determination of Soil Water Content and Bulk Density | Chao Wang China Agricultural University |



Parallel Sessions

Tuesday, June 9 (Session 201001)

| | | | |
|-------------|--------|---|--|
| 10:20-10:35 | 32321 | Predawn Leaf Water Potential of Grapevines Is Not Necessarily a Good Proxy for Soil Moisture | Yingxue Yu The Pennsylvania State University |
| 10:35-10:50 | 32042 | Modeling Water Movement in Gravity Potential Difference Irrigation Based on Hydraulic Potential Difference-Driven Outflow Mechanism | Su Dandan State Key Laboratory of Efficient Utilization of Arid and Semi-arid Arable Land in Northern China/Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences; College of Natural Resources and Environment, Northwest A&F University |
| 11:15-11:35 | 319B25 | Water-Microbe-Mediated Rhizosphere Microbial Communities Reshaping Agroecosystem Resilience | Gary Y. Gan College of Life and Environmental Science, Zhejiang Provincial Key Lab for Water Environment and Marine Biological Resources Protection, Wenzhou University |
| 11:35-11:50 | 36441 | From Laboratory to Field: Advancing Soil Heat Flux Plate Accuracy through Philip Correction and Field Calibration | Bing Tong Research Center for Eco-environmental Sciences, Chinese Academy of Sciences |
| 11:50-12:05 | 35800 | Evolution of Salt Precipitation: Governing Water and Heat Transport in Saline Soils | Xinhu Li Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences |
| 12:05-12:20 | 31599 | A Complex-Plane Representation of Gas Diffusivity in Variably Saturated and Fractured Porous Media | Chamindu Deepagoda Lincoln University |



Parallel Sessions

Tuesday, June 9 (Session 201001)

| | | | |
|-------------|-------|---|---|
| 13:30-13:50 | 31586 | Soil-water and Groundwater: Connections at the Food-Water-Energy Nexus | Brent Clothier Bioeconomy Science Institute ; Plant & Food Group |
| 13:50-14:05 | 33991 | Modeling plant water and solute uptake by HYDRUS | Jiří (Jirka) Šimůnek Department of Environmental Sciences, University of California |
| 14:05-14:20 | 32306 | Root zone in the Earth system | Hongkai Gao East China Normal University |
| 14:20-14:35 | 35642 | Adaptive water use strategies of artificially revegetated plants in a water-limited desert: Implications for sustainable ecological restoration | Laiming Huang Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences |
| 14:35-14:50 | 36244 | Collaborative roles of soil and plant hydraulic resistances in plant water transport: insights from modeling and data synthesis | Guoqing Lei Wuhan University |
| 14:50-15:05 | 34439 | Assessment of irrigation water consumption in the Yellow River Delta based on GIS and HYDRUS-1D | Zhenghui Lv Shenyang Agricultural University |
| 15:05-15:15 | - | Summary | - |



Parallel Sessions

| Thursday, June 11 Friday, June 12 | | Room: Expo Center, Hall 7, 7202 | |
|--------------------------------------|--------|---|---|
| Session 201002 | | Linking Physical and Hydrological Processes with Soil Health and Functionality in Terrestrial Ecosystems | |
| | | <p>Convener: Gang Wang, China Agricultural University</p> <p>Co-Conveners: Andrea Carminati, ETH Zurich Teamrat A. Ghezzehei, University of California, Merced Ye Deng, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences Samuel Bickel, Graz University of Technology Ying Liu, China Agricultural University Huang Ping, Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences</p> | |
| Schedule | ID | Title | Presenter |
| Thursday, June 11 | | | |
| 11:15-11:35 | 320B20 | Soil physical constraints on plant evolution and ecosystem water limitations | Andrea Carminati ETH Zurich |
| 11:35-11:55 | 33284 | In-situ determining the dynamic of soil bulk density by using the combined soil moisture and thermal property sensors in a Vertisol and its relationship with waterlogging | Xinhua Peng Institute of Agricultural Resources and Regional Planning, CAAS |
| 11:55-12:15 | 35957 | Microscale biophysical interactions determine environmental microbial ecology | Gang Wang China Agricultural University |
| 12:15-12:30 | 35563 | Nitrous oxide emissions in Argiudolls of the Central Pampas Region of Argentina managed with no-tillage and controlled traffic farming | Silvia Imhoff ICiAgro Litoral (Institute of Agricultural Science of Litoral)-CONICET-UNL |



Parallel Sessions

Thursday, June 11 (Session 201002)

| | | | |
|-------------|-------|---|--|
| 13:30-13:45 | 31864 | Optimizing implementation strategies for efficient soil water evaporation measurements with multi-probe heat pulse sensors | Ke Liu China Agricultural University |
| 13:45-14:00 | 32506 | Cover Crops, More Than Crop Rotation Diversity, Improve Soil Porosity, Carbon Storage, and Hydraulic Conductivity in a Long-Term No-Till Field Experiment in South Dakota | Xi Zhang University of Tennessee |
| 14:00-14:15 | 33419 | Quantifying the Impact of Tractor Tire Pressure and Soil Management History on Soil Porosity and Void Morphology | Olatunbosun Ayetan School of Environmental Sciences, University of Guelph, Guelph, ON N1G 2W1, Canada |
| 14:15-14:30 | 34597 | Study on the Evolution of Multi-scale Pore Structure and Hydraulic Properties in the Arable Layer of Paddy Fields | Guiling Wang CentralChinaNormalUniversity |
| 14:30-14:45 | 35616 | Bearing capacity of an Argiudoll under direct seeding and controlled machinery trafficked with soluble calcium | Silvia Imhoff ICiAgro Litoral (Institute of Agricultural Science of Litoral)-CONICET-UNL |
| 14:45-15:00 | 34046 | Hydrodynamic Shear Stress Regulates <i>P. aeruginosa</i> Attachment via Motility Organelles | Chen Song China Agricultural University |
| 15:00-15:15 | 35222 | Transformation of Agro-Physical Soil Properties During Urbanization: A Case Study in the Republic of Adygea | Tazieva A. O. Soil Physics and Melioration, Moscow State University, Moscow, Russia |



Parallel Sessions

Thursday, June 11 (Session 201002)

| | | | |
|-------------|-------|---|---|
| 16:30-16:45 | 33919 | The added value of CoreVESS score, penetration resistance, and geophysical techniques in predicting and characterizing the soil-water retention curve | Lin Lin University of Liège; Ghent University |
| 16:45-17:00 | 32401 | Applicability and transferability of the state-space approach to predict saturated soil hydraulic conductivity at watershed scale | Luis Carlos Timm Rural Engineering Department, Faculty of Agronomy, Federal University of Pelotas |
| 17:00-17:15 | 33844 | Estimation of soil water retention curves by combining thermal conductivity and electrical conductivity curves | Siqi Zhou China Agricultural University |
| 17:15-17:30 | 33351 | Soil moisture, irrigation efficiency, and soil strength interactions under centre pivot irrigation | Ana Carolina De Mattos E Avila Tasmanian Institute of Agriculture; University of Tasmania |
| 17:30-17:45 | 33741 | Causality analysis and prediction of soil saturated hydraulic conductivity by combining empirical modeling and machine learning techniques | Yundong Wang Huazhong Agriculture University |
| 17:45-18:00 | 33076 | Biochar Effects on Soil Hydrophysical and Chemical Properties: Texture and Particle Size Matter | Laurin Reim, M.Sc. mult. Soil Biophysics and Environmental Systems, School of Life Sciences, Technical University of Munich; Chair of Soil Sciences, School of Life Sciences, Technical University of Munich; MITIGATE GmbH |
| 18:00-18:15 | 33740 | Long-term organic fertilizer substitution alleviates the surface soil compaction of a Vertisol by improving soil structure | Liman Ao Huazhong Agricultural University |
| 18:15-18:30 | 32026 | Root-soil interface traits in modern and landrace barley genotypes differ in the lab but not the field | Sean Graham University of Aberdeen; The James Hutton Institute |
| 18:30-18:45 | 33710 | Dry-wet cycles promote microbial interactions and horizontal gene transfer | Xinrui Wei China Agricultural University; University of Delaware |



Parallel Sessions

Friday, June 12 (Session 201002)

| | | | |
|-------------|-------|--|---|
| 09:00-09:15 | 32284 | Modelling the relationship between naturally occurring radionuclides and grain size of sediment of various river basins, South Africa | J Bezuidenhout Stellenbosch University |
| 09:15-09:30 | 32392 | Accurate soil thermal conductivity schemes are crucial for improved earth system modelling skill | Hailong He Northwest A&F University, University of Manitoba |
| 09:30-09:45 | 32202 | Seasonal dynamics of soil structure and water retention of field soils with different long-termendment rates of slurry and compost: measurements and modelling | Utibe E. Utin Department of Soil Science and Land Resources Management, University of Uyo; School of Biological Sciences, University of Aberdeen; School of Geosciences, University of Aberdeen |
| 09:45-10:00 | 36394 | Mechanical Adaptive Feedback Mechanisms of Microbial Colonies to External Physical Pressure | Mingyu Su China Agricultural University |
| 10:00-10:15 | 36275 | Effects of Different Land Uses on Soil Structure and Hydrological Function: Mechanisms and Implications | Heng Liu Northwest A&F University |
| 10:15-10:30 | 31608 | Revisiting soil water retention behavior as influenced by microbial growth under unsaturated conditions | Yili Lu China Agricultural University |
| 10:30-10:45 | 34230 | Controls on near-saturation water retention and structural stability of soils across four climatic regions: long-term land use versus singleendment | Amrakh I. Mamedov Department of Environmental Sciences, Western Caspian University, Baku, Azerbaijan. |
| 11:15-11:30 | 35902 | Pore Structure-Controlled Water and Solute Transport in Agricultural Soils of Plain River Network Areas | Xiaoqin Sun Hohai University |
| 11:30-11:45 | 33349 | Soil structure versus soil life: Microbial resilience to compaction in contrasting soil types | Mariia Timofeeva Department of Soil Physics and Hydrology, V.V. Dokuchaev Soil Science Institute, Moscow, Russia |



Parallel Sessions

| Monday, June 8 Tuesday, June 9 | | Room: Convention Center, Nanjing 402A | |
|-----------------------------------|-------|---|--|
| Session 202001 | | Physicochemical and Biological Processes of Chemicals in Soils | |
| | | Convener: Hanzhong Jia, Northwestern Agricultural and Forestry University | |
| | | Co-Conveners: Ya-Hui Chuang, National Chung Hsing University Hui Li, Michigan State University | |
| Schedule | ID | Title | Presenter |
| Monday, June 8 | | | |
| 16:30-16:48 | 34780 | Effects of Microplastic Pollution on Soil Organic Carbon Turnover | Hanzhong Jia Northwest A&F University |
| 16:48-17:06 | 33926 | Emerging Contaminants in Soil, Water, and Plant Systems: One Health Perspective | Wei Zhang Department of Plant, Soil and Microbial Sciences, Michigan State University |
| 17:06-17:20 | 36063 | Machine learning-based prediction of phenanthrene accumulation and toxicity in earthworms across soils | Guofeng Li Institute of Urban Environment; Institute of Urban Environment, Chinese Academy of Sciences |



Parallel Sessions

Monday, June 8 (Session 202001)

| | | | |
|-------------|--------|---|---|
| 17:20-17:34 | 32792 | Chemical transformation pathways demonstrating elemental sulfur effectiveness in alkaline-sodic soils | Mst Sarmin Akter Ranu School of Agriculture and Food Sustainability, The University of Queensland |
| 17:34-17:48 | 32294 | Using radiogenic and metal stable isotope ratios as new tools to assess nutrient cycling in agricultural systems | Bei Wu Institute of Bio- and Geosciences: Agrosphere (IBG-3), Forschungszentrum Jülich GmbH (FZJ) |
| 17:48-18:02 | 32154 | Effects of repeated wetting and drying cycles on potassium fertiliser behaviour and nutrient dynamics in diverse soils | Yili Zang The University of Queensland |
| 18:02-18:16 | 32145 | The effect of endogenous hydrogen on the soils of the degassing sites of the Central Chernozem region of the Russian Federation | Aleksei Kiriushin Lomonosov Moscow State University |
| 18:16-18:30 | 319B21 | Sea weed contribute enormous number of charges to soil system and enhances massive rice productivity | Sanjib Kar University of Calcutta |



Parallel Sessions

Tuesday, June 9 (Session 202001)

| | | | |
|-------------|-------|--|--|
| 09:00-09:18 | 35807 | Surface-Modified Carbonaceous Media for Enhanced Removal of Short-Chain Per- and Polyfluoroalkyl Substances from Urban Stormwater | Wenqing Xu Department of Civil and Environmental Engineering, Villanova University, 800 E. Lancaster Avenue, Villanova, PA 19085, USA |
| 09:18-09:36 | 32998 | Transformation of PFAA Precursors in Soil Under Environmental Conditions | Jianzhou He Center for Advanced Materials Science, Department of Biochemistry, Chemistry and Physics, Georgia Southern University |
| 09:36-09:51 | 32845 | Persistence, Transport and Transformation of Per- and Polyfluoroalkyl Substances in Soils from repeated Land Application of Biosolids | Zhiliang Xu Department of Plant, Soil and Microbial Sciences, Michigan State University |
| 09:51-10:06 | 32721 | Process-Based Multi-Surface Modeling of Soil Arsenic: Enabling Large-Scale prediction of environmental fate and Guiding Remediation Strategies | Yuhong Huang Nanjing university |
| 10:06-10:21 | 29049 | Floodplain Wetlands as Biogeochemical Filters Following Wildfire | Sean Fettrow Colorado State University |



Parallel Sessions

Tuesday, June 9 (Session 202001)

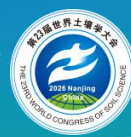
| | | | |
|-------------|-------|---|--|
| 13:30-13:48 | 34527 | The fate of endocrine disruptor compounds in soil. The role of humic substances | Nicola Senesi 1 Dept of Soil, Plant and Food Sciences, University of Bari “Aldo Moro” , Bari, Italy |
| 13:48-14:03 | 35852 | Rice Growth and Yield Formation in Heterogeneous Sodic and Saline-Sodic Soils: Challenges and Management Strategies | Sulaiman Shah Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun 130102, China. |
| 14:03-14:18 | 33839 | A high-resolution map of urban soil pH in the megacity of Xi'an | Shuangshuang Wei Xi'an Jiaotong University |
| 14:18-14:33 | 33301 | Size-dependent colloidal stability and transport behaviors of typical zonal soil colloids | Chen-yang Xu Northwest A&F University |
| 14:33-14:48 | 32260 | Salix acutifolia Willd. as an ecological engineer in the processes of soil formation and plant succession in sandy areas | Rahmonov O., Czajka A. Department of Natural Sciences. Institute of Earth Sciences |
| 14:48-15:03 | 32238 | Impact of Saltwater Intrusion on Phosphorus Speciation and Mobility in an Agricultural Soil | Piyapas Sricharoenvech Department of Soil Science, Kasetsart University |
| 15:03-15:18 | 36478 | Novel Ball-Milled Tourmaline-Biochar Composite: Application in Heavy Metal-Contaminated Groundwater and Bottom Sediment Remediation | Wecheng Wang Nankai University |



Parallel Sessions

Tuesday, June 9 (Session 202001)

| | | | |
|-------------|-------|--|--|
| 16:30-16:43 | 36312 | Ultrasensitive detection of trace Hg(II) in acidic conditions using DMABR loaded on sepiolite: Function, application and mechanism studies | YunCheng Wang State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences; University of Chinese Academy of Sciences |
| 16:43-16:56 | 35123 | Sulfur Dynamics Coupled with Heavy Metal Behavior under Fluctuating Redox Conditions in Paddy Soils | Tomoyuki Makino Tohoku University, Graduate School of Agricultural Science |
| 16:56-17:09 | 33793 | Sorption and Desorption of Phosphorus in Soil: Implications for Water Quality | Jian Liu Norwegian Institute of Bioeconomy Research |
| 17:09-17:22 | 33220 | Molecular modeling of natural organic matter-heavy metal cations interactions | Chi Zhang College of Natural Resources and Environment, Northwest A & F University |
| 17:22-17:35 | 32895 | Fe(II) and Organic Acid Influence Arsenic Sorption by Magnetite | Jertz Vlyn Escala Kasetsart University |
| 17:35-17:48 | 32869 | Evaluation of Corn cob Biochar Application on Soil Fertility, and Nitrogen Cycle in Arabica Coffee Cropping System | Nuttapon Khongdee Department of Plant and Soil Science, Faculty of Agriculture, Chiang Mai University |
| 17:48-18:01 | 32679 | What controls the metallomes of carrot and wheat grown under varying soil water conditions in greenhouse? | Qinyuan Cao Department of Plant, Soil and Microbial Sciences, Michigan State University |
| 18:01-18:14 | 32540 | Mapping Microscale pH Dynamics at Soil-Amendment Interfaces Under Fluctuating Moisture Conditions | Kun Zhu China Agricultural University |
| 18:14-18:27 | 31741 | Potassium mineralization potentials of some soil amendments applied to a degraded tropical Ultisol | Nnaemeka Henry Okoli Federal University of Technology |



Parallel Sessions

| Tuesday, June 9 | | Room: Convention Center, Nanjing 403B | |
|-----------------------|-------|--|---|
| Session 202002 | | Advances in Soil Carbon Dynamics Across Scales: From Molecules to Ecosystems | |
| | | <p>Convener: Karen Vancampenhout, Dpt. of Earth and Environmental Sciences, University of Leuven</p> <p>Co-Conveners: Boris Jansen, Institute for Biodiversity and Ecosystem Dynamics, University of Amsterdam Jianying Shang, China Agricultural University</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:15 | 36457 | Chemical pathways of soil organic carbon stabilization in Mediterranean soils | Matheus Toloto Associated Laboratory for Sustainability and Technology in Inland Regions (La SusTEC), Polytechnic Institute of Bragança; A Coruña University, Centro Interdisciplinar de Química e Biología (CICA) |
| 09:15-09:30 | 36445 | Divergent stabilization controls of lignin phenols and amino sugars as biomarkers for soil organic carbon source | Songyu Yang Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China |
| 09:30-09:45 | 34465 | Molecular-thermal coupling of plant residue-derived organic matter mediated by clay minerals: insights from solid-state ¹³ C NMR | Chen Xiaodong Faculty of Agriculture, Kyushu University, Fukuoka, Japan |
| 09:45-10:00 | 33706 | Abiotic processes dominate short-term carbon emissions in sandy soil after soil rewetting: impact of mineral and reactive oxygen species | Fuhao Liu Yangzhou University |



Parallel Sessions

Tuesday, June 9 (Session 202002)

| | | | |
|-------------|-------|--|--|
| 10:00-10:15 | 31721 | Iron and Manganese Catalyzed Maillard Chemistry: Molecular Characteristics, Evolution Pathways, and Implications for Soil Organic Carbon Formation | Bo Chen Shanghai Jiao Tong University |
| 10:15-10:30 | 36350 | Black Carbon Accelerates Soil Carbon Loss through Coupled Iron Redox Cycling | Jianying Shang and Qirui Li China Agricultural University |
| 10:30-10:45 | 35923 | Arbuscular Mycorrhizal Fungi Strengthen Aggregate Protection and Reactive Fe/Al Pools to Stabilize Soil Organic Carbon in Acidic Soils | Wenqi Zhang Nanjing Forestry University, College of Forestry and Grassland, College of Soil and Water Conservation |
| 10:45-11:00 | 31249 | Carbon Cycling in Soils of Northern Coastal Ecosystems | Pavel Krasilnikov Faculty of Soil Science, M.V. Lomonosov Moscow State University |
| 11:15-11:30 | 33108 | Controlling factors on soil organic matter stability under threat of global warming and drought in central Asian semi-arid mountain ecosystems | Zheng SUN Graduate School of Agriculture, Kyoto University |



Parallel Sessions

Tuesday, June 9 (Session 202002)

| | | | |
|-------------|-------|---|--|
| 13:30-13:45 | 34689 | Soil organic carbon sequestration potential and stability in Solonetzic and Vertisolic soils of the Northern Prairie | Shayeb Shahariar Department of Soil Science, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, Saskatchewan, Canada |
| 13:45-14:00 | 33280 | Impact of active Al and Fe on mineral-associated organic matter in acidic to alkaline tropical to subtropical non-volcanic soils | Han LYU Institute of Agriculture, Tokyo University of Agriculture and Technology, Tokyo, Japan |
| 14:00-14:15 | 34039 | Establishing trees into permanently grazed grassland to increase SOC stocks - scaling results from microbes to landscapes | Sam McNally Bioeconomy Science Institute (Manaaki Whenua Group) |
| 14:15-14:30 | 32229 | SOM stability and energy storage in soil depending on land use change | Ekaterina Filimonenko Shandong Agricultural University ; Sirius University |
| 14:30-14:45 | 35763 | Model Ecosystems as Scalable Pathways for Soil Carbon Sequestration, Productivity and Climate-Smart Land Restoration in Africa | Caleb Melenya Ocansey CSIR - Crops Research Institute; AINAS - African Initiative for Nature-based Solutions |
| 14:45-15:00 | 35163 | Soil Organic Carbon Dynamics During Vegetation Restoration Across Dryland Precipitation Gradients Revealed by Radiocarbon Isotopes and Microbiology | Jinhong Guan Qinghai Normal University |
| 15:00-15:15 | 31785 | Application of Bio-regulation Technology: Protection and Sustainable Utilization of Black Soil | Ying Zhang Northeast Agricultural University |



Parallel Sessions

Tuesday, June 9 (Session 202002)

| | | | |
|-------------|-------|---|---|
| 16:30-16:45 | 33276 | National mapping of cropland soil pH buffer capacity and acidity debt in China | Jun Jiang Chinese Academy of Sciences Institute of Soil Science |
| 16:45-17:00 | 36389 | Effects of Human Land Use Practices on the Binding Patterns of Organic Carbon and Iron Oxides | Ping Lu Shenyang Agricultural University |
| 17:00-17:15 | 33226 | Do cover crops and no-tillage reshape soil biota and organic matter across depth? | Chiara Poesio Department of Agricultural, Food and Environmental Sciences, University of Perugia, Perugia, Italy |
| 17:15-17:30 | 34028 | Carbon sequestration dynamics of MAOC in the tea plantation with different ages: evidence from Fe/Al oxides and organo-mineral interactions | Tiantian Tang Sichuan agricultural university |
| 17:30-17:45 | 34238 | Functional Cover Crop Diversity Enhances Root-Driven Organo-Mineral Associations and Nutrient Efficiency in High-Latitude Agriculture. | Thiago M. Inagaki Department of Biogeochemistry and Soil Quality, Norwegian Institute of Bioeconomy Research, Ås, Norway |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 7, 7202 | |
|-----------------------|-------|--|--|
| Session 203001 | | Diversity and Function of Soil Viromes | |
| | | <p>Convener: Jianming Xu, College of Environmental and Resource Sciences, Zhejiang University, Hangzhou, 310058, China</p> <p>Co-Convener: Jizheng He, University of Melbourne, Melbourne, Australia</p> <p>Bin Ma, College of Environmental and Resource Sciences, Zhejiang University, Hangzhou, 310058, China</p> | |
| Schedule | ID | Title | Presenter |
| 16:30-16:35 | - | Brief introduction of Session 203001 | Jianming Xu |
| 16:35-16:50 | 32285 | Biogeographic patterns and drivers of soil viromes | Bin Ma Zhejiang University |
| 16:50-17:05 | 32464 | Twenty-Year Time Series Reveals Ecological and Evolutionary Dynamics of Viruses in a Freshwater Lake | Zhichao Zhou Shenzhen University |
| 17:05-17:20 | 32211 | Into the Unknown: A Continental Exploration of Viral Diversity in Australian Soils | Peipei Xue The University of Sydney |
| 17:20-17:31 | 32615 | Viral cooling of N ₂ O emissions in long-term acidified soils | Hailin Zhang Southwest University |
| 17:31-17:42 | 33364 | Translational profiles reveal prokaryotic resource allocation to prophages | Kankan Zhao University of California San Diego |
| 17:42-17:53 | 36061 | How do soil viruses exert impacts on the soil carbon cycle under anaerobic? The ubiquitous but neglected part | Di Tong Zhejiang University |
| 17:53-18:04 | 33386 | Virus-prokaryote interactions assist pollutant removal in constructed wetlands | Zhiyuan Yao Ningbo University |
| 18:04-18:15 | 36252 | Rhizosphere phage-host interactions drive crop rotation-enhanced disease suppressiveness | Min Nie Institute of Soil Science, Chinese Academy of Sciences |
| 18:15-18:26 | 33032 | Soil viruses as key regulators of carbon sequestration and plant growth | Yongfeng Wang Institute of Applied Ecology, Chinese Academy of Sciences |



Parallel Sessions

| Monday, June 8 | | Room: Expo Center, Hall 7, 7201 | |
|-----------------------|--------|--|---|
| Session 203002 | | Roles of Extracellular Polymeric Substances in Biogeochemical Cycling and Soil Health | |
| | | <p>Convener: Peng Cai, National Key Laboratory of Agricultural Microbiology, College of Resources and Environment, Huazhong Agricultural University</p> <p>Co-Conveners: Marc A. Redmile-Gordon, Department of Environmental Horticulture, Royal Horticultural Society Yichao Wu, National Key Laboratory of Agricultural Microbiology, College of Resources and Environment, Huazhong Agricultural University Ke-Qing Xiao, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences</p> | |
| Schedule | ID | Title | Presenter |
| 13:15-13:35 | 319B23 | Small fractions, large effects: the role of extracellular polymeric substances in soil function | Marc Redmile-Gordon The Royal Horticultural Society |
| 13:35-13:55 | 319B22 | Extracellular polymeric substances in soil: drivers, functionality and future research directions | Cordula Vogel Institute of Soil Science and Site Ecology, TU Dresden |
| 13:55-14:10 | 33355 | Functional Group Composition and Persistence of Extracellular Polymeric Substances in Soils | Chenchen Qu Huazhong Agricultural University |



Parallel Sessions

Monday, June 8 (Session 203002)

| | | | |
|-------------|-------|---|---|
| 14:10-14:23 | 33996 | Nitrogen deposition reorganizes extracellular polymeric substances production through microbial physiological adjustments in subtropical forest soils | Fengping Lai Institute of Geography, Fujian Normal University; Fujian Sanming Forest Ecosystem National Observation and Research Station; Key Laboratory of Humid Subtropical Eco-geographical Process of Ministry of Education, School of Geographical Sciences, Fujian Normal University |
| 14:23-14:36 | 34033 | Increased microbial extracellular polymeric substances as a key factor in deep soil organic carbon accumulation | Xing Wang College of Agronomy, Northwest A&F University |
| 14:36-14:49 | 32616 | Chemical Speciation of Phosphorus in Farmland Soils and Soil Aggregates Around Mining Areas | Mengxi Feng Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 14:49-15:02 | 33380 | Microbial extracellular residues dominate long-term soil organic carbon storage | Peipei Qian Huazhong Agricultural University |
| 15:02-15:15 | 34102 | Microbial Legacy: The Differential Transformation of Biomass Components into Soil Organic Matter | Yifeng Zhang State Key Laboratory of Black Soils Conservation and Utilization, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |



Parallel Sessions

Monday, June 8 (Session 203002)

| | | | |
|-------------|-------|--|--|
| 16:30-16:50 | 33603 | Plant growth-promotion triggered by poly- γ -glutamic acid is associated with facilitation of bacterial cross-feeding networks of the rhizosphere | Yian Gu Nanjing Tech University |
| 16:50-17:10 | 33595 | Pore-scale spatial heterogeneity of moisture and microbe interactions during moisture evaporation | Rong Li South China University of Technology |
| 17:10-17:25 | 32073 | Seeing the Invisible: Visualizing Enzymatic Processes in Soil Hotspots | Nataliya Bilyera Geo-Biosphere Interactions, Department of Geosciences, University of Tuebingen |
| 17:25-17:35 | 32796 | Characterization of compound-specific extracellular polysaccharide biomarkers across soil organisms and plants | Tao Li Division of Terrestrial Ecosystem Research, Center for Microbiology and Environmental Systems Science, University of Vienna; Doctoral School in Microbiology and Environmental Science, University of Vienna |
| 17:35-17:45 | 33381 | Investigating Microbial Intracellular and Extracellular Carbon Production Efficiency Using ¹³ C and ¹⁸ O Isotope Techniques | Jingyi Ren Huazhong Agricultural University |
| 17:45-17:55 | 33378 | Modeling the Turnover and Stabilization of Soil Extracellular Polymeric Substances (EPS) | Xiaoyu Cheng Huazhong Agricultural University |
| 17:55-18:05 | 35690 | Effect of Humic acid on lysozyme interaction with montmorillonite and kaolinite | Yan Li Institute of Environment Resource and Soil Fertilizer, Zhejiang Academy of Agricultural Sciences |
| 18:05-18:15 | 32896 | Regulatory effects of Mortierella on soil microbial network stability and aggregate structure under saline-alkali stress | Ankang Wang Henan Agricultural University |



Parallel Sessions

| Monday, June 8 Tuesday, June 9 | | Room: Convention Center, Nanjing 403A | |
|-----------------------------------|-------|--|---|
| Session 203003 | | Soil Biodiversity and Soil Health: Interactions, Indicators, and Innovative Approaches | |
| | | Conveners: Haiyan Chu, Institute of Soil Sciences, Chinese Academy of Sciences Qi Li, Institute of Applied Ecology, Chinese Academy of Sciences | |
| | | Co-Convenor: T. Martijn Bezemer, Leiden University, Netherlands. | |
| Schedule | ID | Title | Presenter |
| Monday, June 8 | | | |
| 13:15-13:30 | 32265 | A Next-Generation Approach to Soil Health in Brazil | Glacy Jaqueline da Silva Biotechnology Applied to Agriculture Department, Paranaense University |
| 13:30-13:45 | 32051 | Biochar-Compost Interactions: Impacts on Soil Health and Plant Performance in Regenerative Organic Systems | Dinesh Panday Rodale Institute |
| 13:45-14:00 | 31939 | Carbon Nanoparticles and Biochar–Hydrogel Nanocomposites for Sustainable Agriculture | Xiaoping Xin School of Natural Resources, Division of Plant Science and Technology, University of Missouri |
| 14:00-14:15 | 34687 | Soil Health Under Climate Change Era: Restoration Strategies using Nanobiotechnology and Soil Engineering | Vishnu D. Rajput Southern Federal University, Rostov on Don, Russia |
| 14:15-14:30 | 35096 | A Functional Molecular Framework for Scalable Soil Health Assessment | Rafael Borges da Silva Valadares Vale Institute of Technology - Sustainable Development |



Parallel Sessions

Monday, June 8 (Session 203003)

| | | | |
|-------------|-------|--|---|
| 16:30-16:45 | 33654 | Developing a Framework for Soil Microbial Indicators | Michael Crawford Cooperative Research Centre for High Performance Soils |
| 16:45-17:00 | 33247 | Crop Coexistence Redefines Belowground Microbial Assembly Toward N-Cycling Archaea and Fungal Resource Networks | Angela Roccotelli Department of Agriculture, Food, Environment and Forestry (DAGRI), University of Florence, Piazzale Delle Cascine 28, 50144, Florence, Italy |
| 17:00-17:15 | 31687 | Contrasting global patterns and drivers of soil bacterial and fungal diversity responses to crop rotation | Chong Li University of Alberta |
| 17:15-17:30 | 33043 | Model-Driven Microbiome: Next-Gen Soil Bioremediation | Zhepu Ruan South China Agricultural University |
| 17:30-17:45 | 32588 | The role of microorganisms in changing the properties of eroded soils | Gracheva Tatiana Soil science faculty, Lomonosov Moscow State University |
| 17:45-18:00 | 31942 | Synergistic Effects of Clay, Hay residue, and Fertilizer in Sandy Soil | Linda E. Lindongi UWA School of Agriculture and Environment, The University of Western Australia; Faculty of Agriculture, University of Papua |
| 18:00-18:15 | 35309 | Rhizosphere Compartmentation Reveals Conserved and Divergent CO ₂ Responses Across Wheat Genetic Lineages | Qingyang zhuang Nanjing University |
| 18:15-18:30 | 33400 | Soil Ecological Shifts Following Land Use Conversion to Agriculture in Southern Ethiopia | Emiru Birhane Department of Land Resource Management and Environmental Protection, Mekelle University, P.O. Box 231, Tigray, Ethiopia; |



Parallel Sessions

Tuesday, June 9 (Session 203003)

| | | | |
|-------------|-------|---|---|
| 09:00-09:15 | 31660 | Steering soil microbiomes for healthier crops | T.Martijn Bezemer Institute of Biology, Leiden University |
| 09:15-09:30 | 34946 | The response of soil faunal and biological activities to silvicultural management in a Tuber Magnatum Pico productive area in Tuscany, Italy | Carlos Lozano Fondón Research Centre for Agriculture and Environment, Council for Agricultural Research and Economics, via di Lanciola 12VA, 50125 Florence, Italy |
| 09:30-09:45 | 33734 | Impact of long-term conservation agriculture on soil biota and inter-taxonomic interactions in Andisols, Japan | Soh SUGIHARA Tokyo University of Agriculture and Technology |
| 09:45-10:00 | 33080 | Belowground nutrient transfer between Scots pine and bilberry mediated by ectomycorrhizas | Jie Xu Institute for Atmospheric and Earth System Research (INAR); Department of Forest Sciences, Faculty of Agriculture and Forestry, University of Helsinki |
| 10:00-10:15 | 32511 | Mycorrhizal fungal communities in Sarayaku territory: Impact of traditional agricultural practices | Alex Dahua-Machoa |
| 10:15-10:30 | 32113 | Soil Enzyme Activities and Microbial Biomass Biomarker Associated with the Integration of Cereal Rye to Improve Tomato Soil-Borne Disease Suppression and Yield | Nicola Lorenz The Ohio State University |



Parallel Sessions

Tuesday, June 9 (Session 203003)

| | | | |
|-------------|-------|---|--|
| 11:15-11:30 | 34585 | Predatory protists - crucial drivers of soil antibiotic resistance | Thi Bao-Anh Nguyen School of Agriculture, Food and Ecosystem Sciences, Faculty of Science, The University of Melbourne, Parkville, VIC, 3010, Australia |
| 11:30-11:45 | 33735 | Effects of five-year of conservation agriculture on soil chemistry and soil biological communities in Japan | Shinichi Watanabe Tokyo University of Agriculture and Technology |
| 11:45-12:00 | 32902 | Permanent spontaneous vegetation cover as a strategy to enhance soil multifunctionality in perennial crops in the Mediterranean basin | Alicia Morugán-Coronado Departamento de Ingeniería Agronómica, Unitécnica de Cartagena |
| 12:00-12:15 | 32825 | Harnessing Soil Cyanobacteria for Resilient Agriculture: Evidence from a 20-Year Mediterranean Orchard Trial | Adriano Sofo University of Basilicata |
| 13:30-13:45 | 32047 | A data-driven methodology to identify key biological indicators linked with ecosystem services in agricultural soils | Alberto Garre Universidad Politecnica de Cartagena |
| 13:45-14:00 | 32435 | Soil organisms from multiple trophic levels regulate respiration in dryland purple soil | Zhiyuan Yao Institute of Mountain Hazards and Environment, Chinese Academy of Sciences |
| 14:00-14:15 | 32556 | Auxotrophic bacteria in maize rhizosphere and bulk soil: insights into microbial dependencies | Gabriel de Castro Theodoro University of São Paulo |
| 14:15-14:30 | 31658 | Enzyme-Mediated Nutrient Dynamics in Cover Crop Systems: Temporal and Spatial Optimization Strategies | Oluwasegun J. Olubisi University of Florida IFAS, School of Natural Resources and Environment, Gulf Coast Research and Education Center, Wimauma, FL 33598, USA |
| 14:30-14:45 | 30618 | Evaluating tillage effects on soil biodiversity across functional groups using extracellular eDNA | Philippe Belliard Zoology Department, Universität Innsbruck |



Parallel Sessions

Tuesday, June 9 (Session 203003)

| | | | |
|-------------|--------|--|--|
| 16:30-16:45 | 33842 | Overlooked migration risk of resistomes in mining soil environments | Li Tian Sun Yat-sen University |
| 16:45-17:00 | 32561 | Soil management drives microbial diversity patterns and community structure under Cd and Cr contamination | Jussara Borges Regitano Department of Soil Science, ESALQ/USP |
| 17:00-17:15 | 31678 | Rewiring Micro-Food Webs: How Copper Nanopesticides Can Reshape Nitrogen Fluxes via Trophic Decoupling | Xuchen Yan Shanghai Jiao Tong University |
| 17:15-17:30 | 31585 | Long-Term Effects of Nitrogen and Lime Application on Plant-Microbial Interactions and Soil Carbon Stability in a Semi-Arid Grassland | Kwenama Buthelezi School of Agricultural, Earth and Environmental Sciences, University of KwaZulu-Natal |
| 17:30-17:45 | 319B24 | Biochar effects on soil physicochemical properties and biological activity in Mediterranean agricultural soils | Irene Ortiz-Bernad University of Granada |
| 17:45-18:00 | 36070 | Coupling of Intraspecific Root Traits and Rhizosphere Fungal Communities in <i>Cynodon dactylon</i> across Hydrological Gradients of a Reservoir Drawdown Zone | Xiaoxiao Wang Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences |
| 18:00-18:15 | 31709 | The effect of iron-bound organic carbon on fungal denitrification in regulating upland red soils N ₂ O emission | Huifang Xu Jiangxi Agricultural University |
| 18:15-18:30 | 33338 | Conservation Tillage Reduces Mycotoxin Contamination in Black-Soil Maize Systems | Mengtian Chen China Agricultural University |



Parallel Sessions

| Thursday, June 11 | | Room: Expo Center, Hall 7, 7201 | |
|-----------------------|--------|--|---|
| Session 203004 | | Soil Biogeochemistry in Wetlands: Foundations for Restoration and Climate Resilience | |
| | | Convener: Dominik Zak, Department of Ecoscience, Aarhus University, Aarhus, Denmark | |
| | | Co-Convener: Ying Zhao, College of Hydraulic and Civil Engineering, Ludong University, China | |
| Schedule | ID | Title | Presenter |
| 11:15-11:45 | 319B20 | Enzymatic latch | Chris Freeman School of Environmental & Natural Sciences, Bangor University |
| 11:45-12:00 | 36303 | Redox processes of particular organic matter in mediating carbon emissions in peatlands | Hongyan Wang Nanjing University of Information Science and Technology |
| 12:00-12:15 | 34563 | Role of Iron Minerals in Carbon Stabilization in Redox-Active Ecosystems | Amanda Duim Ferreira University of Sao Paulo |
| 13:30-13:45 | 33833 | Thiol-activated ROS generation by particulate organic matter: The overlooked role of interface-accelerated organic radical chain reaction | Yixuan Wang Nanjing University |
| 13:45-14:00 | 32638 | Millimeter-scale niche differentiation of N-cycling microorganisms across the soil-water interface has implications for N ₂ O emissions from wetlands | Yu-Jia Cai Shenzhen University |
| 14:00-14:15 | 32832 | Nitrogen input regulates soil carbon fixation via microbial-driven mineral-associated organic carbon formation in wetlands | Shouyang Luo Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 14:15-14:30 | 34139 | Impact of Phenolic Additions on Microbial Properties of Peatland | Hojeong Kang North China University of Water Resources and Electric Power |



Parallel Sessions

Thursday, June 11 (Session 203004)

| | | | |
|-------------|-------|--|---|
| 14:30-14:45 | 34418 | Microbially Mediated Mechanisms of PFAS-Induced Soil Carbon Priming Effects in Mangrove Ecosystems | Meiqi Zhao Sun Yat-sen University |
| 14:45-15:00 | 34417 | Soil structure determines dissolved organic carbon release from peat soils | Ji QI Faculty of Agriculture, Civil and Environmental Engineering, University of Rostock, Rostock, Germany |
| 15:00-15:15 | 34937 | Vertical Heterogeneity of Soil Arsenic Distribution and Its Relationship with Iron-Manganese Minerals Geochemical Barrier Combined with Microbial Effects | Shengkai Wang Tohoku University |
| 16:30-16:45 | 35920 | Coupled effects of human activities and river-Lake interactions evolution alter sources and fate of sedimentary organic carbon in a typical river-Lake system | Shilan Wang Hunan Normal University |
| 16:45-17:00 | 32471 | Exploiting Soil Recalcitrant Phosphorus (P) Drives Invasion: Adaptive P-acquisition Strategies of <i>Spartina alterniflora</i> in Chinese Coast | Jinguo Hua XiamenUniversity |
| 17:00-17:15 | 32750 | Climate warming suppresses the preservation of mineral-associated organic carbon in peatlands | Liang Yang Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 17:15-17:30 | 31635 | Nonlinear response of anaerobic methane oxidation to water table drawdown in peatlands under climate warming | Lichao Fan Northwest A&F University |
| 17:30-17:45 | 34010 | Water level regulation for reducing carbon emissions in urban restored wetlands | Kangting Ouyang Sun Yat-sen University |
| 17:45-18:00 | 34770 | Recovery of wetland soil function under passive and active hydrological restoration: evidence from multi-decadal spectral indicators | Christopher Auricht Auricht Projects and Adelaide University |
| 18:00-18:15 | 34138 | Planting density constrains soil organic carbon pools during native plant restoration following <i>Spartina alterniflora</i> removal across invasion chronosequences | Jingfeng Wang Beijing Normal University |



Parallel Sessions

| Monday, June 8 Tuesday, June 9 | | Room: Convention Center, Nanjing 402B | |
|-----------------------------------|-------|--|---|
| Session 203005 | | Soil Microbiomes - Importance For Climate Resilient Future, Degraded Lands Restoration And Plant Health Control | |
| | | <p>Convener: Magdalena Frąc, Institute of Agrophysics, Polish Academy of Sciences, Lublin, Poland</p> <p>Co-Conveners: Alberto Acedo - Biome Makers Inc., USA Ellen Kandeler - University of Hohenheim, Stuttgart, Germany Shamina Imran Pathan - University of Florence, Italy Anna Walkiewicz - Institute of Agrophysics, Polish Academy of Sciences, Poland</p> | |
| Schedule | ID | Title | Presenter |
| Monday, June 8 | | | |
| 13:15-13:30 | 36591 | Contrasting patterns of belowground biodiversity homogenization across urban greenspaces | Francisco Rocha Laboratorio de Biodiversidad y Funcionamiento Ecosistémico, Instituto de Recursos Naturales y Agrobiología de Sevilla (IRNAS), CSIC, Sevilla, Spain |
| 13:30-13:45 | 34163 | Tracing the dynamic life story of soil microbial hotspots | Seyed Sajjad Hosseini Department of Soil Science, Faculty of Agriculture, Ferdowsi University of Mashhad, Mashhad, Iran ; Department of Soil and Plant Microbiome, Institute of Phytopathology, Christian-Albrechts-University of Kiel, Kiel, Germany |
| 13:45-14:00 | 34523 | Establishing Genetic, Phylogenetic and Functional Mechanisms that Shape Acidobacteriota Diversity of Arctic Tundra and Boreal Forest Soils | Max Häggblom Rutgers University - New Brunswick |



Parallel Sessions

Monday, June 8 (Session 203005)

| | | | |
|-------------|-------|--|---|
| 14:00-14:15 | 35857 | Integrated impacts of land use intensification on greenhouse gas emissions and soil microbial communities in the Taihu Lake Region: patterns, mechanisms, and implications | Weishou Shen Nanjing University of Information Science and Technology |
| 14:15-14:30 | 33268 | Long-term soil storage highlights the role of precipitation history in microbial dynamics and CO ₂ emissions | Kirill Bogdanov University of Otago, Department of Microbiology and Immunology, Dunedin, New Zealand |
| 14:30-14:45 | 32477 | Methanotrophic activity as a driver of soil carbon cycling in agricultural soils | Anna Walkiewicz Institute of Agrophysics, Polish Academy of Sciences |
| 14:45-15:00 | 36012 | Fungal community shifts govern microbial carbon use efficiency across an elevation gradient at Qinling mountain, China | Yangquanwei Zhong Northwestern Polytechnical University |
| 16:30-16:45 | 31850 | Shrub-Crop Microbiome and Mycorrhizae Hyphal Interactions: A Novel Rhizosphere Alliance to Mitigate Drought and Promote Beneficial Microorganisms in the Sahel | Richard Dick Ohio State University, USA |
| 16:45-17:00 | 33099 | Beyond plant diversity: plant productivity responses to extreme drought are linked to arbuscular mycorrhizal fungal diversity | Wei Fu Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 17:00-17:15 | 32528 | Mycorrhiza Helper Streptomycetes Strains for Combating Phytophthora Blight | Junli Hu State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences |
| 17:15-17:30 | 35806 | Fungal mutualism in plant growth: dark septate endophytes and arbuscular mycorrhizal colonization in soybean (<i>Glycine max</i>) | Harshi K. Gamage Queensland Alliance for Agriculture and Food Innovation, The University of Queensland, St Lucia, QLD 4072, Australia |
| 17:30-17:45 | 31648 | A Niche-Based Approach of Endemic Cyanobacteria in Soil and Water Conservation in Saline Soils | Sudabeh Gharemahmudl Postdoctoral Fellow, Department of Watershed Management Engineering, Faculty of Natural Resources, Tarbiat Modares University |



Parallel Sessions

Tuesday, June 9 (Session 203005)

| | | | |
|-------------|-------|--|--|
| 09:00-09:15 | 36523 | Soil Bacterial Succession as a Driver of Rhizosphere Function: Wheat-Derived Plant Growth-Promoting Rhizobacteria and Plant Stress Resilience | Asmae Boumezgane School of Animal, Rural and Environmental Sciences, Nottingham Trent University, UK |
| 09:15-09:30 | 34094 | Unraveling the mechanisms of halotolerant plant growth-promoting microbes in saline-alkaline habitats through microbial diversity, functional traits and transcriptomics | Jianrong Huang Henan University |
| 09:30-09:45 | 35991 | Soil microbial communities regulate plant response to drought stress | Tianci Zhao University of Groningen |
| 09:45-10:00 | 33502 | Applying wild (NatCom) soil microbiomes to alleviate primary stressors for peas and wheat | Francois P. Teste Agriculture and Agri-Food Canada (AAFC) and University of Saskatchewan |
| 10:00-10:15 | 31715 | A SWEET Challenge: Less Sugar for Rhizospheric Microbiome Under the Successive Wheat Cultivation | Mehdi Rashtbari Department of Soil and Plant Microbiome, Institute of Phytopathology, Christian-Albrechts-University of Kiel |
| 10:15-10:30 | 31604 | Impacts of soil biostimulants on 'Valencia' sweet orange performance on Flatwoods and Ridge soils in Florida | Duplicate Sambani University of Florida, Soil, Water and Ecosystem Sciences Departments, Institute of Food and Agricultural Sciences, Citrus Research and Education Center |
| 10:30-10:45 | 34361 | Unlocking Multifunctionality: The Interplay Between Legume-Cereal Intercropping, Soil Microbial Communities, and Ecosystem Cycles. | Shamina Imran Pathan Department of Agriculture, Food, Environment and Forestry (DAGRI), University of Florence, Piazzale Delle Cascine 28, 50144, Florence, Italy |



Parallel Sessions

Tuesday, June 9 (Session 203005)

| | | | |
|-------------|-------|---|---|
| 11:15-11:30 | 36352 | Effects of inter-row management and cover crops on vineyard rhizosphere microbial communities | Barnabas Kovacs University of Tokaj |
| 11:30-11:45 | 34867 | Impact of multiple driving factors on soil bacterial community dynamics in a wheat-maize/soybean rotation system in the North China | Ya Huang Nanjing Agricultural University |
| 11:45-12:00 | 32674 | Leguminous Cover Crops Enhance Soil Microbial Communities and Tea Quality via Rhizosphere Microbiome Modulation | Kadarkarai Murugan Department of Zoology, School of Life Sciences, Bharathiar University |
| 12:00-12:15 | 35846 | Synergistic Soil Remediation and Microbial Network Reconstruction: Leguminous Cover Crops and Probiotics in Degraded Dry-Hot Valley Coffee Plantations | Yushuang Yang Southwest Forestry University |
| 13:30-13:45 | 35995 | Assessing the Role of Soil Amendments and Root-Associated Fungi in Anaerobic Soil Disinfestation | James Littrell University of Tennessee, Knoxville |
| 13:45-14:00 | 34311 | Ozonate Irrigation: Soil Microbial Stress, Nematode Suppression and Tomato Brown Rugose Fruit Virus control | Sofia Maria Muscarella Department of Agricultural, Food and Forest Sciences, University of Palermo, Palermo, Italy |
| 14:00-14:15 | 33224 | The stem microbiome assists maize in resisting stalk rot | Da Li Institute of Microbiology, Chinese Academy of Sciences |
| 14:15-14:30 | 32698 | Global Change and Human Activity on Soil Microbial Community and Metabolism | Huaihai Chen Sun Yat-sen University |
| 16:30-16:45 | 32496 | Combined Microbial Inoculation and Reduced Inorganic Fertilization Enhances Diversity and Functionality in Potato Rhizosphere Microbiome at Field Scale | Raul Zornoza Universidad Politecnica de Cartagena |
| 16:45-17:00 | 34414 | Recovery Mechanism of Kobresia humilis in Alpine Meadows | Junxi Li Sichuan University |
| 17:00-17:15 | 34395 | When Plants Choose Their Microbes: Genotype-Driven Assembly of Salt-Adaptive Microbiomes in Wheat | Mahdi Shahabi Rokni Department of Soil and Plant Microbiome, Institute of Phytopathology and Plant Protection, Faculty of Agricultural and Nutritional Sciences, Christian-Albrechts University of Kiel, Germany |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 7, 7201 | |
|-----------------------|--------|--|---|
| Session 203007 | | Diversity Dynamics and Ecosystem Functions in Soil Microbial Ecology | |
| | | <p>Convener: Zhongjun JIA, Northeast Institute of Geography and Agroecology, CAS Institute of Soil Science, CAS</p> <p>Co-Conveners: Xue-Xian Zhang, University of Auckland Makoto Ikenaga, Kagoshima University Junjie Liu, Northeast Institute of Geography and Agroecology, CAS Cécile Gubry-Rangin, University of Aberdeen, UK</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:10 | 319B29 | Challenges and opportunities in interpreting the complex microbial interactions in soil | Xue-Xian Zhang School of Biological Sciences, University of Auckland |
| 09:10-09:30 | 320B21 | Conservational agriculture for achieving soil and human health and enhancing the climate-regulating function of agroecosystems | Liudmila Orlova |
| 09:30-09:50 | 32932 | Carbon monoxide metabolism as a driver of volcanic soil colonisation | Marcela Hernandez University of East Anglia |
| 09:50-10:10 | 319B28 | Does land use conversion from temperate steppe to farmland increase broad scale homogeneity of soil biota and its functional genes? | Junjie Liu State Key Laboratory of Black Soils Conservation and Utilization, Key Laboratory of Mollisols Agroecology, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 10:10-10:25 | 34383 | Cobamide Auxotrophy and Unexpected Cobamide Synthesis Potential in Organohalide-respiring Dehalococcoidia | Yiru Cui Institute of Applied Ecology, Chinese Academy of Sciences |



Parallel Sessions

Tuesday, June 9 (Session 203007)

| | | | |
|-------------|--------|--|--|
| 10:25-10:50 | 35164 | Microbial growth is the key to soil organic carbon cycling | Qing-Fang Bi Max-Planck Institution of Biogeochemistry, Jena, Germany; Martin Luther University Halle-Wittenberg, Halle (Saale), Germany |
| 10:50-11:05 | 34897 | Widespread presence of extraordinary high-affinity of atmospheric methane oxidation by conventional methanotrophs in paddy soils across China | Yan Zheng Northeast Institute of Geography and Agroecology, Chinese Academy of Science, Changchun 130102, PR China |
| 11:15-11:30 | 35733 | Synergistic remediation of desertification and carbon sequestration in extreme environments via region-tailored acclimated microbial-biochar systems | Chao Song Institute of Hydrogeology and Environmental Geology, Chinese Academy of Geological Sciences |
| 11:30-11:45 | 34696 | Effects of Perennial and Annual Plant Life Forms on Rhizosphere Bacterial Communities in Saline-Alkali Desert Soils | Ying Zhu Institute of Biology, Gansu Academy of Sciences |
| 11:45-12:00 | 35990 | Summer drought impacts micropredator abundance and microbial foodweb structure in a rewetted fen peatland | Die Hu Greifswald of University |
| 12:00-12:15 | 33370 | Climatic stability predominates over soil properties in structuring soil antibiotic resistance across Australia | Mingming Du The University of Sydney |
| 12:15-12:30 | 319B27 | Life and death of ammonia oxidizers drives soil organic carbon accumulation in long-term different fertilization soils | Xueru Huang College of Land and Environment, Shenyang Agricultural University |
| 13:30-13:50 | 35298 | Microbial interactions drive microbial succession during soil formation | Kazuo Isobe Peking University |
| 13:50-14:10 | 32886 | Wetland Age and Seasonality Drive the Succession of Active Methanotrophs in Constructed Wetlands | Yo-Jin Shiau Department of Bioenvironmental Systems Engineering, National Taiwan University |
| 14:10-14:30 | 32888 | Leveraging the root economics space: outsourcing rice varieties outperform do-it-self strategies under stress | Fang Li Henan Agricultural University |
| 14:30-14:45 | 32415 | Experimental drought drives divergent succession of soil microbiota | Sihang Deng Tsinghua University |



Parallel Sessions

Tuesday, June 9 (Session 203007)

| | | | |
|-------------|-------|--|---|
| 14:45-15:00 | 34309 | Tropical rubber plantations' expansion alters multiple ecosystem functions and C storage | Ashutosh Kumar Singh Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, Menglun, Yunnan 666303, China |
| 15:00-15:15 | 35051 | Decoding Deep Soil Microbial Response Dynamics to Afforestation in Semiarid Regions: Biotic-Abiotic Trade-offs Under Land-Use Transition | Rongrong Zheng Research Center for Eco-Environmental Sciences |
| 16:30-16:50 | 36045 | Effects of Disturbance Intensity on Soil Microbial Diversity, Composition, and Network Complexity in Coastal Georgia, USA | Tiehang Wu Department of Biology, Georgia Southern University |
| 16:50-17:10 | 33684 | Eco-evolutionary patterns of microbial engine that drives reduction of greenhouse gas | Zhongjun Jia Institute of Soil Science, Chinese Academy of Sciences |
| 17:10-17:25 | 32839 | Analysis of Soil Microbial Community Composition and Diversity Under Different Forest-Medicinal Plant Intercropping Patterns | Shutong SANG Experimental Center of Subtropical Forestry |
| 17:25-17:40 | 34194 | Effects of Different Straw Return Methods on Soil Microbial Community Structure and Diversity | Yuexia Yuan Inner Mongolia Agricultural University |
| 17:40-17:55 | 36085 | The Effect of Nitrogen Enrichment on Soil Fungal and Bacterial Community Assembly Processes and Phylogenetic Diversity in Wetland | Yiting Zhao Key Laboratory of Black Soils Conservation and Utilization, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun 130102, PR China; University of Chinese Academy of Sciences, Beijing 100049, PR China |
| 17:55-18:10 | 35292 | Elucidating Soil Microbial Community Activity Through Sipros-and-Aerith-Assisted Proteomic and Metabolomic Stable Isotope Probing | Yi Xiong The University of Oklahoma |



Parallel Sessions

| Monday, June 8 | | Room: Convention Center, Nanjing 403B | |
|-----------------------|-------|--|--|
| Session 204003 | | Disciplinary Development and Interdisciplinary Frontiers in Soil Mineralogy | |
| | | Convener: Sofia N. Lessovaia, St.-Petersburg State University (SPSU), Russia | |
| | | Co-Convener: Edson Campanhola Bortoluzzi, the University of Passo Fundo (UPF), Brazil | |
| Schedule | ID | Title | Presenter |
| 16:30-16:45 | 33047 | Mineralogical and Geochemical Contributions to the Study of Clays and Clay Minerals in Africa | Georges Ekosse University of Venda |
| 16:45-17:00 | 33046 | Contributions to the Study of Geophagic Clays in Africa | Georges Ekosse University of Venda |
| 17:00-17:15 | 36592 | Mineralogical Composition of Bulk and Clay Fractions in Mongolian Soils: Insights from X-Ray Diffraction Across Arid to Forest-Steppe Gradients | Undrakh-Od Baatar Institute of Soil Science and Land Evaluation, Hohenheim University, Stuttgart, Germany; Mongolia |
| 17:15-17:30 | 32088 | Clays as Therapeutic Agents: A Focus on Mineralogy and Geochemistry of Geophagic Clays at Mfensi-Adankwame in the Ashanti Region of Ghana and their Healing Properties | Rasheed Mohammed Abdul State Key Laboratory of Environmental Geochemistry, Institute of Geochemistry, Chinese Academy of Sciences; University of Chinese Academy of Sciences; Department of Earth Science, School of Physical Sciences, C. K. Tedam University of Technology and Applied Sciences |
| 17:30-17:45 | 32394 | Models of rock weathering in soil environments based on rock fractal geometry | Sofia N. Lessovaia St.-Petersburg State University |
| 17:45-18:15 | - | Workshop | - |



Parallel Sessions

| Friday, June 12 | | Room: Expo Center, Hall 7, 7201 | |
|-----------------------|-------|--|--|
| Session 206001 | | Hydropedology: Addressing Real-World Problems Through Interdisciplinary Science | |
| | | Convener: Johan van Tol, Department Soil, Crop and Climate Sciences, University of the Free State, South Africa | |
| | | Co-Convener: LI Xiaoyan, Department of Geography, Beijing Normal University | |
| Schedule | ID | Title | Presenter |
| 09:00-09:15 | 34921 | Pore Architecture, Water Dynamics, and Climate Sensitivity of Mountain Volcanic Soils: Integrating SEM-DIA and NMR Relaxometry for Hydropedological Assessment | Di Iorio Erika Molise University |
| 09:15-09:30 | 35574 | Infiltration-Runoff Processes in Soil-Epikarst Systems on Karst Hillslope in Southwest China | Hongsong Chen; Jun Zhang Institute of Subtropical Agriculture, Chinese Academy of Sciences |
| 09:30-09:45 | 36355 | Diagnosing Non-Rigid Soil Water Flow through Window-Scale Evolution of Hydraulic Parameters with Physics-Informed Learning | Kai Chang China University of Geosciences, Wuhan |
| 09:45-10:00 | 33294 | Deciphering Soil Water-Carbon Coupling in the Earth's Critical Zone and Its Environmental and Edaphic Controls | Xi Zhang The University of Tennessee |
| 10:00-10:15 | 33676 | Modelling water retention curves for hydrophobic granular soils | Tingting Zhao The University of Edinburgh |



Parallel Sessions

Friday, June 12 (Session 206001)

| | | | |
|-------------|-------|---|--|
| 10:15-10:30 | 32429 | Addressing water security in DOCG vineyards: a hydrogeological framework linking soil water balance, plant stress, and berry quality | Antonello Bonfante National Research Council of Italy (CNR), ISAFOM |
| 10:30-10:45 | 32611 | Runoff and Sediment Response to Rainfall and Vegetation Cover in the Toutun River Basin (Xinjiang, China) | Liu Li Xinjiang Agricultural University |
| 10:45-11:00 | 31653 | Soil aggregate stability along a gradient of flooding intensity in the riparian zone: the role of root functional traits | Ping Huang Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences |
| 11:15-11:30 | 31670 | Evapotranspiration varies across different landscape units, influenced by hillslope position, soil properties and vegetation: An example from the Qinghai-Tibet Plateau | Yurova Alla State Key Laboratory of Cryospheric Science and Frozen Soil Engineering, Northwest Institute of Eco-environment and Resources CAS |
| 11:30-11:45 | 36245 | Development of Environmental Benchmark of Cr(VI) in Soils for the Protection of Groundwater Quality | Jing Song Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China |
| 11:45-12:00 | 36325 | Quantitative Characterization and Prediction Model for the Evolution of Soil Cracks in the Daqing Region | Xin Zheng Heilongjiang Bayi Agricultural University |
| 12:00-12:15 | 34708 | Redistribution of hydrological and dissolved nutrient by self-organized shrubs: strategies to collect rain and nutrient for surviving in drylands | Guangyao Gao Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 12:15-12:30 | 33006 | Spatiotemporal variations and driving factors of groundwater ecosystem service value in a typical arid region: A case study of the Xinjiang, China | Adila Ailaiti Nanjing University |



Parallel Sessions

Thursday, June 11

Room: Expo Center, Hall 7, 7203

Session 207001

Modelling Soil Processes from Ped to Global Scale

Convener:

Yonggen Zhang, School of Earth System Science, Tianjin University, Tianjin, China

Co-Conveners:

Lutz Weihermüller, Institute Agrosphere IBG-3, Forschungszentrum Jülich GmbH, 52428 Jülich, Germany

Martine van der Ploeg, Hydrology and Quantitative Water Management Group, Dept. Environmental Sciences, Wageningen University, Wageningen, the Netherlands

Attila Nemes, Faculty of Environmental Sciences and Natural Resource Management, Norwegian University of Life Sciences, Ås, Norway

Wenhao Shi, School of Earth System Science, Tianjin University, Tianjin, China

Yijian Zeng, Faculty of Geo-Information Science and Earth Observation, University of Twente, 7522 NB Enschede, the Netherlands

| Schedule | ID | Title | Presenter |
|-------------|-------|--|---|
| 11:15-11:30 | 34252 | Multi-scale simulations of soil transport properties with dynamic soil structure: combination of molecular, micro and continuum approaches | Kirill M. Gerke Center for Computational Physics, Landau School for Physics and Research, Moscow Institute of Physics and Technology |
| 11:30-11:45 | 35324 | Predicting soil and macropore hydraulic properties: combination of direct simulations and machine learning | Vladimir N. Dolgushev Center for Computational Physics, Landau School for Physics and Research, Moscow Institute of Physics and Technology (Moscow Region, Russia) |
| 11:45-12:00 | 33321 | Coupling soil biogeochemical processes and structural dynamics in a pore-scale model for an advanced understanding of organic carbon and nitrogen turnover | Maximilian Rötzer Modeling and Numerics, Department of Mathematics, University of Erlangen-Nürnberg, Erlangen, Germany |



Parallel Sessions

Thursday, June 11 (Session 207001)

| | | | |
|-------------|-------|--|--|
| 12:00-12:15 | 34105 | Quantitative Analysis of Pore Scale Factors Effecting Permeability in Porous Media | Wenjing Qin Taiyuan University of Technology |
| 13:30-13:45 | 31450 | Probabilistic and Entropy Models of Soil Properties for Contemporary Processes Assessment | Irina Mikheeva Institute of Soil Science and Agrochemistry of Siberian Branch of Russian Academy of Sciences |
| 13:45-14:00 | 33100 | Modeling on-farm spatial variability of crop yield | Ole Wendroth Department of Plant & Soil Sciences, University of Kentucky |
| 14:00-14:15 | 32369 | Differentiable Hybrid Modeling for Data-Driven Discovery of Hidden Processes in Soil Water Retention | Sarem Norouzi Department of Agroecology, Aarhus University; Department of Earth Sciences and Engineering, Imperial College London |
| 14:15-14:30 | 34621 | Predicting the Impacts of Metal Nanoparticles on Soil Properties: A Machine-Learning-Based Study of Soil Health Dynamics | Yaping Lyu University of Science and Technology of China |
| 14:30-14:45 | 31985 | Advancing Daisy's denitrification function to improve predictions of nitrous oxide emissions from agricultural soils | Tobias Klöffel Department of Plant and Environment, University of Copenhagen |
| 14:45-15:00 | 36222 | Towards predicting plant uptake of trace elements with a mechanistic mass-balance model | Hadee Thompson-Morrison Bioeconomy Science Institute |



Parallel Sessions

Thursday, June 11 (Session 207001)

| | | | |
|-------------|-------|--|---|
| 16:30-16:45 | 36201 | MapBiomass Soil: Soil Information across Four Decades of Land Use and Land Cover Change | Taciara Zborowski Horst Federal Technological University of Paraná (Department of Agronomy, Dois Vizinhos, Paraná, Brazil) |
| 16:45-17:00 | 34977 | Evaluating Conditioned Probabilistic Subsampling for the Validation of 3D Regional Subsurface Models using Legacy Data | Pablo De Weerd Ghent University |
| 17:00-17:15 | 35241 | SoilData: A MapBiomass Initiative for Soil Data Rescue, Curation, and Open Science in Brazil | Alessandro Samuel-Rosa Federal Technological University of Paraná (Department of Agronomy, Santa Helena, Paraná, Brazil) |
| 17:15-17:30 | 35271 | Estimation of Soil Temperature at Depth Using Time Series of Satellite Imagery | Seyed Kazem Alavipanah Department of Remote Sensing and GIS, Faculty of Geography, University of Tehran, Iran |
| 17:30-17:45 | 33826 | Fusing ERA5-Land and SMAP L4 for an Improved Global Soil Moisture Product | Yonggen Zhang Tianjin University |
| 17:45-18:15 | - | Session Wrap-up & Panel Discussion | All Speakers / Convenor |



Parallel Sessions

| Friday, June 12 | | Room: Expo Center, Hall 7, 7203 | |
|-----------------------|-------|---|---|
| Session 207002 | | Soil Erosion Modelling: Global Alliance | |
| | | <p>Convener: Pasquale Borrelli, Department of Science, Roma Tre University, Rome, Italy</p> <p>Co-Convener: Christine Alewell, Department of Environmental Sciences, University of Basel, Basel, Switzerland</p> <p>Panos Panagos, European Commission, Joint Research Centre (JRC), Ispra, Italy</p> <p>Jae E. Yang, Department of Biological Environment, Kangwon National University, Chuncheon, Republic of Korea</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:10 | - | Convenors Message - Ongoing collaborative research activities | Pasquale Borrelli |
| 09:10-09:35 | 32790 | Assessments of Gully Erosion Susceptibility in Typical Thick-Layer Mollisol Region of Northeast China | Fenli Zheng Northwest A & F University |
| 09:35-10:00 | 34859 | Impacts of Soil Erosion on Soil Organic Carbon Dynamics and Carbon Neutrality | Jae Yang Department of Biological Environment, Kangwon National University |
| 10:00-10:15 | 36203 | Mobilizing Legacy Data for Continental-Scale Erosion Modelling: The MapBiomass SoilData Initiative in Brazil | Taciara Zborowski Horst Federal Technological University of Paraná (Department of Agronomy, Dois Vizinhos, Paraná, Brazil) |



Parallel Sessions

Friday, June 12 (Session 207002)

| | | | |
|-------------|-------|--|---|
| 10:15-10:30 | 32393 | InSAR-based Quantitative Remote Sensing of Spatiotemporal Characteristics of Soil Erosion | Hailong He Northwest A&F University, University of Manitoba |
| 10:30-10:45 | 32085 | Spectra-based predictive mapping of soil erosion rates in sloping croplands | Pu Shi Jilin University |
| 10:45-11:00 | 34943 | Impacts of cascading check dams on sediment yield in the middle Yellow River Basin: Insights from 50 years of grid-cell-level simulation | Guangyao Gao Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 11:15-11:30 | 32018 | The influence of the soil cover on the reliability of soil erosion modelling on the Central Russian Upland | Andrey Zhidkin V.V. Dokuchaev Soil Science Institute |
| 11:30-11:45 | 34290 | Pasture Restoration Improves Runoff, Soil loss, and Sediment Sorting in a Brazilian Karst Basin | Henrique Marinho Leite Chaves Watershed Mgt. Lab, University of Brasilia |



Parallel Sessions

| Thursday, June 11 | | Room: Convention Center, Nanjing 209 | |
|-----------------------|-------|---|---|
| Session 301001 | | Better Management of Organic Agro-Waste in Response to Various Global Environmental Issues | |
| | | Convener: Morihiro Maeda, Okayama University, IUSS-Commission 3.1 vice-chair | |
| | | Co-Convener: Masato Nakamura, National Agriculture and Food Research Organization | |
| Schedule | ID | Title | Presenter |
| 11:15-11:30 | 35661 | Global Potential Effects Analysis of Biochar on Crop Yields and Soil Quality | Zhichao Xu College of Resources and Environment, University of Chinese Academy of Sciences |
| 11:30-11:45 | 33693 | Evaluating nutrient dynamics in marginal soils amended with biochar and torrefied biomass with Plant Root Simulator probe | Asfaw Bekele Imperial Oil Resources Limited |
| 11:45-12:00 | 33567 | Silicon Rich Biochar from Crop Residues Reduces Heavy Metals in Soil and Paddy Rice in Central Vietnam | Thi Thai Hoa Hoang University of Agriculture and Forestry, Hue University, Hue city, Vietnam |
| 12:00-12:15 | 32982 | Removal of methylene blue using biochar from compressed rice straw | Yasushi Mori Okayama University |
| 12:15-12:30 | 32877 | Better agro-waste management for soil health | Morihiro Maeda Okayama University |
| 13:30-13:45 | 35073 | Biotic and Abiotic Catalytic Strategies for Accelerated Humic Substance Formation | Mahmoud National Chung Hsing University |
| 13:45-14:00 | 32855 | ¹⁵ N tracing reveals nitrogen uptake dynamics and retention under contrasting irrigation and residue management in paddy soils | Yo-Jin Shiau Department of Bioenvironmental Systems Engineering, National Taiwan University |



Parallel Sessions

Thursday, June 11 (Session 301001)

| | | | |
|-------------|--------|--|--|
| 14:00-14:15 | 32210 | Facultative heap compost effects on soil N ₂ O, CO ₂ , and CH ₄ emissions under aerobic incubation | Tran Thi Minh Chau University of Agriculture and Forestry, Hue University |
| 14:15-14:30 | 32184 | CO ₂ emission from forest soils in Western Japan as affected by water repellency | Dewpura A.L. Leelamanie Faculty of Agriculture, University of Ruuhna |
| 14:30-14:45 | 32170 | Current Situations of Antibiotic Resistance Genes in Compost, Soil, and Sediment in Vietnam | Lingxue Gao Graduate School of Environmental, Life, Natural Science and Technology, Okayama University |
| 14:45-15:00 | 33344 | Anaerobic fermentation of food waste to connect fork to farm and minimize greenhouse gas emissions | Samantha Kehoe University of Reading |
| 16:30-16:45 | 34604 | Effects of repeated application of horse dung manure on the accumulation of the elements in topsoil of paddy fields -A case of newly reclaimed paddy fields in Kyoto University Farm, Japan- | Nirmala Juita Life Environment Conservation Science, The United Graduate School of Agricultural Science, Ehime University, Matsuyama, Japan |
| 16:45-17:00 | 33985 | Assessment of the effects of cocoa pod husk and cattle manure on old cocoa plantation soil chemistry under tropical lowland agroclimatic conditions in Papua New Guinea | Shirleyna Aipa The PNG University of Natural Resources and Environment |
| 17:00-17:15 | 30292 | Reconciling carbon sequestration value and soil health benefit of organic amendments | Nanthi Bolan UWA School of Agriculture and Environment; The University of Western Australia |
| 17:15-17:30 | 319B31 | An Evaluation of the Quantity-Intensity Relationship of Potassium (K) on Some Lowland Rice-Growing Soils | Sanjib Kar University of Calcutta |
| 17:30-17:45 | 33854 | Effects of Application of Ferment Solution Produced from Discarded Vegetable Leaves on Soil Microbial Community and Celery Growth | Zi-Yue Zhang Shanghai University |



Parallel Sessions

| Monday, June 8 | | Room: Convention Center, Nanjing 207 | |
|-----------------------|-------|--|---|
| Session 301002 | | Soil Evaluation and Land Use Planning for Sustaining Productivity | |
| | | <p>Convener: Jagdish Prasad, Former Principal Scientist and Head, Division of Soil Resource Studies, ICAR-National Bureau of Soil Survey and Land Use Planning, Nagpur- 440 033 India</p> <p>Co-Convener: Morihiro Maeda, Professor Department of Rural and Environmental Sciences Graduate School of Environmental, Life, Natural Science and Technology Okayama University, 3-1-1, Tsushima-Naka, Kita-Ku, Okayama 700-8530, Japan</p> | |
| Schedule | ID | Title | Presenter |
| 16:30-16:45 | 35286 | Soil multifunctionality assessment in Grenoble Alpes metropolis using the MUSE method for sustainable land use planning | Amazigh Ouaksel BRGM; IRSTV |
| 16:45-17:00 | 35118 | Soil-Geochemical Controls of NDVI Seasonality in Steppe ecosystems of the Turano-Uyuk Intramontane Depression (Tuva, South Siberia) | Natalia Ilinova Lomonosov Moscow State University |
| 17:00-17:15 | 33600 | Spatial heterogeneity and driving factors of five global arable land datasets in China under a 'single cropland map' framework | Surina College of Resources and Environmental Sciences, Inner Mongolia Agricultural University, Hohhot, 010011, China |
| 17:15-17:30 | 32984 | WRB-Harmonised Soil Mapping to Support Sustainable Land Use Planning in Mediterranean Regions | Samuel Guerreiro LEAF—Linking Landscape, Environment, Agriculture and Food Research Centre, Instituto Superior de Agronomia, Universidade de Lisboa, Tapada da Ajuda, 1349-017 Lisboa, Portugal; 2Santarém Polytechnic University, School of Agriculture |



Parallel Sessions

Monday, June 8 (Session 301002)

| | | | |
|-------------|-------|--|---|
| 17:30-17:45 | 33736 | Long-term soil multifunctionality under climate trajectories, land-use transitions, and management practices | C. Walter SAS, Institut Agro Rennes-Angers, INRAE |
| 17:45-18:00 | 36587 | Assessing the Physico-Chemical Properties and Fertility Status of Selected South African Wetland Soils Using XRF, SEM, and Soil Fertility Index | FR Kutu School of Agricultural Sciences, Faculty of Agriculture and Natural Sciences, University of Mpumalanga, Mbombela, 1200, South Africa |
| 18:00-18:15 | 33685 | Background concentration and range of potentially toxic elements in Lebanese soils for land suitability assessment | Talal Darwish National Council for Scientific Research-CNRS Lebanon |
| 18:15-18:30 | 32873 | An interactive land suitability tool for Queensland, Australia | Ben Harms Department of the Environment, Tourism, Science and Innovation |
| 18:30-18:45 | 32462 | Preliminary Study on a Method for Evaluating the Basic Soil Fertility of Medium and Low-Yielding Land in Anhui Province Based on Natural Soil Properties | Shunmeng Dou Chinese Academy of Agricultural Sciences, Institute of Agricultural Resources and Regional Planning |
| 18:45-19:00 | 31889 | Integrated Assessment of soil security | Amin Sharififar the University of sydney |



Parallel Sessions

| Monday, June 8 | | Room: Expo Center, Hall 8, 8203 | |
|-----------------------|-------|---|--|
| Session 302004 | | Rethinking the Planning of Soil and Water Management Under Climate Change | |
| | | Convener: Lillian Øygarden. Chair of IUSS commission 3.2 Soil and water conservation | |
| | | Co-Convener: Dorota Dec. Vice chair of commission 3.2 Soil and water conservation | |
| Schedule | ID | Title | Presenter |
| 13:15-13:45 | 35560 | Cross scale assessment of agricultural conservation practices for future erosion, soil carbon and crop yield in the Yangtze River Basin | Jichen Zhou China Agricultural University |
| 13:45-14:00 | 31601 | Soil Under Stress: Climate Change, Water Dynamics and Agricultural Resilience in Finland. | Kateryna Yuhai Doctorate Researcher; Department of Economics and Management; University of Helsinki |
| 14:00-14:15 | 34185 | Sustainability challenges of vegetation restoration on the Loess Plateau | Lei Han Chang'an University |
| 14:15-14:30 | 32649 | Mapping Gully Erosion Across the European Union | Pasquale Borrelli Department of Science, Roma Tre University |
| 14:30-14:45 | 32535 | Climate-change-induced Increase in Rain Erosivity in Germany | Karl Auerswald Technical University of Munich, School of Life Sciences |



Parallel Sessions

Monday, June 8 (Session 302004)

| | | | |
|-------------|-------|--|--|
| 14:45-15:00 | 34484 | From Free- Draining to Flood-Forming: How Compaction and Slaking Generate Runoff in Sandy Soils Under Extreme Rainfall | Paul Henry Lunt Faculty of Science and Engineering, School of Geography, Earth and Environmental Sciences, University of Plymouth, Plymouth PL4 8AA, UK |
| 15:00-15:15 | - | Discussion and questions | - |
| 16:30-16:45 | 32036 | Effects of testing non-AI autonomous precision deficit irrigation scheduling onto potato and raspberry crops in Poland | Rafal Wawer Institute of Soil Science and Plant Cultivation - State Research Institute |
| 16:45-17:00 | 31808 | Will supplemental fertigation benefit potato productions with a changing climate in Atlantic Canada? | Sheng Li Agriculture and Agri-Food Canada |
| 17:00-17:15 | 34086 | Theory and Demonstration of Smart Water and Soil Management Technologies for Black Soil Cropland | Huanjun Liu Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 17:15-17:30 | - | Discussion and questions | - |



Parallel Sessions

| | |
|--------------------------------------|---------------------------------------|
| Tuesday, June 9 | Room: Expo Center, Hall 8, 8202 |
| Thursday, June 11 Friday, June 12 | Room: Convention Center, Yangtze Room |

| | |
|-----------------------|---|
| Session 302005 | Soil Erosion and Conservation |
| | <p>Convener: Fengbao Zhang</p> <p>Co-Conveners: Fang Nufang, Northwest A&F University, China Seyed Hamidreza Sadeghi, Tarbiat Modares University, IRAN Paolo Tarolli, University of Padova, Italy Shi Zhihua, Huazhong Agricultural University, China</p> |

| Schedule | ID | Title | Presenter |
|----------|----|-------|-----------|
|----------|----|-------|-----------|

Tuesday, June 9

| | | | |
|-------------|--------|---|---|
| 09:00-09:15 | 319B96 | Paleo-landscape features and their role for soil erosion initiation | Michael Maerker Working group on Soil Erosion and Feedbacks, Leibniz Centre for Agricultural Landscape Research (ZALF) |
| 09:15-09:30 | 32789 | Long slope erosion-deposition patterns under different tillage systems driven by multiple erosion forces in the Chinese Mollisol region | Fenli Zheng Northwest A & F University |
| 09:30-09:45 | 31643 | Porous Biochar Produced from Rice Waste Inhibits Soil Loss | Shr Sadeghi Tarbiat Modares University |
| 09:45-10:00 | 32379 | Development Characteristics and Influencing Factors of Gullies in Typical Region on the Qinghai-Xizang Plateau from 1970 to 2025 | Juying Jiao Northwest A&F University |



Parallel Sessions

Tuesday, June 9 (Session 302005)

| | | | |
|-------------|--------|--|--|
| 10:00-10:15 | 36363 | Study on the dynamic changes in soil erosion and the stability of the soil organic carbon pool in the surface layer of purple soil on the slopes implemented the Grain-for-Green project | Zhengan Su Institute of Mountain Hazards and Environment, Chinese Academy of Sciences |
| 10:15-10:30 | 35111 | Soil and Water Conservation Planning by Estimating Complex Soil Properties from Easily Measurable Soil Properties | Manmohanjit Singh Punjab Agricultural University, India |
| 10:30-10:45 | 320B39 | Risk assessment of soil erosion in Central Asia under global warming via NPV cover | Chengyi Zhao, Xin Dou, Zongwen Shi School of Geographical Sciences, Nanjing University of Information Science and Technology, Nanjing 210044, China |
| 11:15-11:30 | 32575 | Tillage erosion - the blind spot in soil conservation | Peter Fiener University of Augsburg |
| 11:30-11:45 | 31900 | Setting tolerable soil loss and land management targets across New South Wales, Australia | Xihua Yang University of Technology Sydney; Northwest A&F University |
| 11:45-12:00 | 33522 | Check dams as a major terrestrial sink for eroded sediment and organic carbon on the Chinese Loess Plateau | Yi Zeng Northwest A&F University |
| 12:00-12:15 | 34032 | Temporal Dynamics and Mechanism Evolution of Biochar in Regulating Erosion Processes in China's Loess Plateau | Yuanyuan Li Zhengzhou University |
| 12:15-12:30 | 32304 | From regional to global tillage erosion mapping: challenges, solutions and a demonstration in Canada | Fengbao Zhang (Sheng Li) Fredericton Research and Development Center, Agriculture and Agri-Food Canada |
| 13:30-13:45 | 34007 | A Framework for Global Soil Erosion Mapping (GSERmap) | Rui Li Northwest A&F University |
| 13:45-14:00 | 32648 | Global Soil Erosion Dynamics and Drivers | Pasquale Borrelli Environmental Geosciences, University of Basel |



Parallel Sessions

Tuesday, June 9 (Session 302005)

| | | | |
|-------------|-------|---|---|
| 14:00-14:15 | 33937 | Regional Soil Erosion Survey and Mapping in the Pre-GIS Era | Qinke Yang Northwest University |
| 14:15-14:30 | 33090 | Soil Erosion in the European Union: A major threat for EU agriculture | Panos Panagos European Commission - Joint Research Centre |
| 14:30-14:45 | 33589 | Research on key algorithms for global erosion topographic factor extraction | Hongming Zhang Northwest A&F University |
| 14:45-15:00 | 34785 | Practical-measures investigation to achieve global soil erosion map by using sampling method | Xiaoping Zhang Northwest A&F University, Yangling, Shaanxi, 712100, China. |
| 16:30-16:45 | 35137 | Simulation of Wind Erosion under the Influence of Topography in a Temperate Grassland Landscape | Zhuodong Zhang Beijing Normal University |
| 16:45-17:00 | 34019 | Global-Scale Mapping of the Non-Agricultural Cover-Management Factor (Cnon-crop) for Soil Erosion Modelling | Haijing Shi Northwest A&F University |
| 17:00-17:15 | 34427 | A Methodological Framework for Large-Scale Gully Erosion Assessment: Insights from Contrasting Landscapes of China | Chunmei Wang College of Urban and Environmental Sciences, Northwest University, Xi'an, 710127, China |
| 17:15-17:30 | 34015 | Improving Global Rainfall Erosivity by Using Regional Achievements | Bing Yin (Yun Xie) Beijing Normal University at Zhuhai |
| 17:30-17:45 | 33673 | Mapping and Analysis of the Global Soil Erodibility Factor (K) | Miaomiao Yang Ningxia University |
| 17:45-18:00 | 33591 | A topographic relief fitting mosaic method for eliminating seamlines of the SRTM and additional quasi-global DEM mosaics at 60°N latitude | Songyuan Li Northwest A&F University |
| 18:00-18:15 | 34126 | A Novel High-Resolution DEM Synthesis Method for Terraced Watersheds in the Loess Plateau | Xiaotian Yuan Northwest University |



Parallel Sessions

Thursday, June 11 (Session 302005)

| | | | |
|-------------|-------|--|--|
| 11:15-11:30 | 34503 | Influence of Soil Cover Properties on Shallow Landslides: insights from a Pilot Basin in Southern Italy | Simona Vingiani University of Naples Federico II, Department of Agricultural Sciences Portici (NA), Italy |
| 11:30-11:45 | 32470 | Comparative Erodibility of UK Soils Under Different Climate Change Scenarios | Johnson Oluwaseun Odukoya Faculty of Engineering and Applied Sciences, Cranfield University |
| 11:45-12:00 | 33314 | A Half-Century Intensification of Lateral Carbon Transfer along the Congo Basin's Land-Ocean Aquatic Continuum | Pengzhi Zhao Earth and Life Institute, Université catholique de Louvain, 1348 Louvain-la-Neuve, Belgium.; Department Geoscience, Environment and Society-BGEOSYS, Université libre de Bruxelles, 1050 Brussels, Belgiume |
| 12:00-12:15 | 36373 | A Dynamic Gully Erosion Risk Assessment Framework Considering Rainfall Regime Shift in the Songnen Typical Black Soil Region | Dengnan Luo Beijing Normal University |
| 13:30-13:45 | 35365 | From Aerosols to Soils: A Novel Pedological Framework for Identifying Aeolian Dust Hotspots in Dried Saline Lakebeds | Hesam Ahmady-Birgani Faculty of Natural Resources Urmia University, Urmia, Iran |



Parallel Sessions

Thursday, June 11 (Session 302005)

| | | | |
|-------------|-------|--|---|
| 13:45-14:00 | 35415 | Hydrologic regime determines catchment-scale dissolved carbon export patterns | Jian Wang Huazhong Agricultural University |
| 14:00-14:15 | 33795 | Hydromechanical Drivers at Raindrop Scale Underpin Soil Erosion Resistance Driven by Carbon | Abdul Walid Salik School of Biological Sciences, University of Aberdeen |
| 14:15-14:30 | 32492 | Evaluation of Silt Socks and Wollastonite-Enhanced Socks in Sediment and Phosphorous Management | Emily Chiang University of Guelph |
| 14:30-14:45 | 31883 | Decoding impacts of slope length on sheet erosion based on calculus method | Zhongxuan Cao University of Chinese Academy of Sciences (UCAS); Institute of Soil and Water Conservation, Chinese Academy of Sciences and Ministry of Water Resources; Research Center of Soil and Water Conservation and Ecological Environment, Chinese Academy of Sciences and Ministry of Education; State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau |
| 14:45-15:00 | 32830 | Exploration of Multi-Scale Spatiotemporal Differentiation and Influencing Factors in Yuanmou County Based on SBAS-InSAR | Xuan Yang Yunnan University |
| 15:00-15:15 | 36027 | Response of soil erosion resistance to incorporated straw affected by different microbial inoculants in the black soil region of Northeast China | Yatong Zhang Beijing Normal University |



Parallel Sessions

Thursday, June 11 (Session 302005)

| | | | |
|-------------|-------|--|---|
| 16:30-16:45 | 34468 | Regional-Scale Variability and Environmental Drivers of Soil Erodibility factor (K) in the NW Italian Alps | Valeria Cesarini University School for Advanced Studies IUSS, Piazza della Vittoria 15, 27100 Pavia, PV, Italy |
| 16:45-17:00 | 34496 | Spatial Distribution and Erosional Significance of Hollows in Agricultural Landscapes of the European Russia | Andrei A. Stepanov Institute of Geography, Russian Academy of Sciences, Moscow, Russia |
| 17:00-17:15 | 33998 | The response mechanism of organic carbon loss on loess slopes to the process of soil erosion | Xuantian Li College of Soil and Water Conservation Science and Engineering, Northwest A&F University |
| 17:15-17:30 | 32231 | Early detection of runoff erosion as gully prevention strategy in sandy tropical soils, Kananga, Democratic Republic of Congo (DRC) | Arabela Vega-Aguilar Universitat Autònoma de Barcelona |
| 17:30-17:45 | 32704 | Effects of Straw Mulch in Hillslope Longitudinal Furrows on Soil Physicochemical Properties and Erosion Resistance in the Black Soil Region of Northeast China | Jialong Wu Jilin Agricultural University |
| 17:45-18:00 | 32174 | A study on soil erodibility and the applicability of estimation methods in Robinia pseudoacacia L. mixed forests on the Loess Plateau, China | Jinlong Ma Northwest A&F University |
| 18:00-18:15 | 36032 | Spatial variation of soil erosion resistance impacted by ephemeral gully on long gentle sloping cropland in the Mollisol region of China | Jun Jing Beijing Normal University |



Parallel Sessions

Friday, June 12 (Session 302005)

| | | | |
|-------------|-------|---|---|
| 09:00-09:15 | 32705 | Yield decline across soil types under progressive soil erosion: Basis for soil conservation criteria in the Sudan Savanna | Tomohiro Nishigaki Japan International Research Center for Agricultural Sciences |
| 09:15-09:30 | 32939 | Measuring tillage and water erosion under different tillage systems in a commercial potato farm in Atlantic Canada | Fangzhou Zheng Agriculture and Agri-Food Canada (Fredericton) |
| 09:30-09:45 | 33101 | Drainage network connectivity controls phosphorus transport and export | Ehsan Zarrinabadi Postdoctoral Research Fellow, Department of Soil Science, University of Manitoba |
| 09:45-10:00 | 31774 | A systematic identification of multi-scale relationship between sediment load and environmental factors in the Ten Tributaries region of the Yellow River Basin | Jian Luo Inner Mongolia University |
| 10:00-10:15 | 36451 | Effects of Farmland Shelterbelt Distribution on Wind-Water Compound Erosion in the Northeast Black Soil Region of China | Hanquan Cheng Beijing Normal University |
| 10:15-10:30 | 36103 | Morphological Development and Hydraulic Characteristics of Plunge Pools in the Gully Beds of Dry Red Soil in Yuanmou Dry-hot Valley | Jie Feng Yunnan University |



Parallel Sessions

Friday, June 12 (Session 302005)

| | | | |
|-------------|-------|---|---|
| 10:30-10:45 | 33773 | Gully runoff is the primary factor triggering gravity erosion: A case study in the Top Ten Tributaries Watershed, China | Taoyan Dai Dalian University of Technology |
| 10:45-11:00 | 35862 | Influence of land use change and increased rainstorm on shallow landslide sediment connectivity in a small watershed of the Chinese Loess Plateau based on remote sensing | Bingzhe Tang Xi'an University of Science and Technology |
| 11:15-11:30 | 34075 | Tracing soil redistribution rates following deforestation in Northern Hardwood Forests using ²³⁹ + ²⁴⁰ Pu isotopes | Raquel Portes University of Northern British Columbia |
| 11:30-11:45 | 33966 | Coupled Wind-Rain Forcing Alters Runoff Generation and Soil Loss Dynamics Across Soil Surface Conditions | Sophia Bahddou Mohammed VI Polytechnic University (UM6P) |
| 11:45-12:00 | 34803 | Weakened role of check dams in reducing erosion-induced soil organic carbon transport in the Middle Yellow River Basin due to vegetation restoration | Yanzhang Huang Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 12:00-12:15 | 35171 | Effects of grass structure on wind erosion using a wind tunnel simulation | Ahmad Sohail State Key Laboratory of Soil and Water Conservation and Desertification Control, Institute of Soil and Water Conservation, Northwest A&F University |
| 12:15-12:30 | 31671 | Slope aspect affects soil quality and its response to soil erosion on temperate gently sloping farmlands | Ziyi Gu Beijing Normal University |



Parallel Sessions

| Monday, June 8 | | Room: Expo Center, Hall 7, 7203 | |
|-----------------------|-------|--|--|
| Session 302007 | | Soil-Water Interactions: From Saturation to Repellency, From Processes to Management | |
| | | <p>Conveners: Daniela Reineke, Soil Science Section, University of Kassel, Germany Stefania Cocco, Department of Agricultural, Food and Environmental Sciences, Università Politecnica delle Marche, Italy Lillian Øygarden. Chair of IUSS commission 3.2 Soil and water conservation Jiefei Mao, Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences</p> <p>Co-Conveners: Giuseppe Corti, Department of Agricultural, Food and Environmental Sciences, Università Politecnica delle Marche & Council for Agricultural Research and Economics, Centre of Agriculture and Environment, Italy Livia Vittori Antisari Department of Agricultural and Food Sciences University of Bologna, Bologna, Italy Giuseppe Lo Papa Department of Agricultural, Food and Forestry Sciences, University of Palermo, Palermo, Italy Dorota Dec. Vice chair of commission 3.2 Soil and water conservation D.A.L. Leelamanie, Faculty of Agriculture, University of Ruhuna Tobias K. D. Weber, Soil Science Section, University of Kassel, Germany</p> | |
| Schedule | ID | Title | Presenter |
| 13:15-13:30 | 31466 | Changes in soil aggregates, pore characteristics, and their relationships with soil erodibility in periodically submerged soils. A case of the Water Level Fluctuation Zone in the Three Gorges Reservoir, China | Gratien Nsabimana Key Laboratory of Mountain Surface Processes and Ecological Regulation, Institute of Mountain Hazards and Environment, Chinese Academy of Sciences; University of Chinese Academy of Sciences |
| 13:30-13:45 | 32472 | Leptosols of Subarctic barrier islands: land - sea interface | Nikolay S. Sobolev M. V. Lomonosov Moscow State University (Faculty of Geography) |



Parallel Sessions

Monday, June 8 (Session 302007)

| | | | |
|-------------|-------|---|--|
| 13:45-14:00 | 34911 | Occurrence and assessment of water repellency in biochar and biochar-amended soils | Jiefei Mao Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences |
| 14:00-14:15 | 32134 | Management-Induced Changes in SOM Composition Control Soil Wettability and Hydrological Function | Felix Ogunmokun Tennessee State University |
| 14:15-14:30 | 32485 | Tree parasitism as a microclimatic amplifier: implications of <i>Viscum album</i> infection for soil moisture and repellency dynamics | Anna Klamerus-Iwan University of Agriculture in Krakow, Faculty of Forestry |
| 14:30-14:45 | 32296 | Sensor-Based Modeling of Soil-Water Dynamics for Irrigation and Subsurface Hydrology | Tejinder Singh Department of Plants, Soils and Climate, Utah State University |



Parallel Sessions

Monday, June 8 (Session 302007)

| | | | |
|-------------|-------|--|---|
| 16:30-16:45 | 32225 | From Soil Morphology to Depression Hydrology: Diagnostic Criteria and Predictive Patterns in the Oka-Don Lowland | Smirnova M.A. Dokuchaev Soil Science Institute; Faculty of Geography, Lomonosov Moscow State University |
| 16:45-17:00 | 32476 | A challenging prediction: The heterogeneous nature of preferential flow masked by homogeneous moisture sensor responses | Sebastián Bravo-Peña Department of Soil Physics and Land Management, Wageningen University; Institute of Agricultural Engineering and Soils, Austral University of Chile |
| 17:00-17:15 | 32455 | Leveraging Multi-Temporal Environmental Data in a Long Short-Term Memory Model for Groundwater Nitrate Prediction | Elysia Lewis Department of Agronomy, Food, Natural Resources, Animals and Environment, University of Padova |
| 17:15-17:30 | 36550 | Transport Pathways of Nitrate in Stormwater Runoff Inferred from High-frequency Sampling and Stable Water Isotopes | Jian Wang Huazhong Agricultural University |
| 17:30-17:45 | 32821 | Salinity-Tile Drainage Linkages and their Impacts on Soil Health in the Red River Valley (United States) | Kang Liang North Dakota State University |
| 17:45-18:00 | 35756 | Tracing Water Use Sources in Rubber Monoculture and Rubber-Alpinia Oxyphylla Agroforestry Systems Using Hydrogen and Oxygen Isotopes | Weiqing Lin Hainan University |
| 18:00-18:15 | 36436 | Optimizing and Validating a Correction Formula for Xylem Water Deuterium Offsets in Field-Grown Apple Trees | Yining Liu Ludong University |



Parallel Sessions

| Monday, June 8 Tuesday, June 9 | | Room: Convention Center, Nanjing 303B | |
|-----------------------------------|-------|---|--|
| Session 303001 | | Advances in Soil Fertility Management Through the Utilization of Organic Waste | |
| | | Convener: William R Horwath, Distinguished Professor of Soil Biogeochemistry, Department of Land, Air and Water Resources, University of California, Davis, Davis, 95616 | |
| | | Co-Convener: Ji Li, Dean of Organic Recycling Research Institute at China Agricultural University, College of Resources and Environmental Science, Beijing Key Laboratory of Biodiversity and Organic Farming, China Agricultural University, Beijing 100193, China | |
| Schedule | ID | Title | Presenter |
| Monday, June 8 | | | |
| 13:15-13:30 | 36198 | The potential of organic waste recycling to replace mineral fertilizers in EU Member States | Donghao Xu Earth Systems and Global Change Group, Wageningen University and Research, PO Box 47, 6700AA Wageningen, the Netherlands |
| 13:30-13:45 | 36167 | Safeguarding global nitrogen sustainability by managing organic waste throughout the food supply chain | Zhan Jingfang Zhejiang University |
| 13:45-14:00 | 32646 | Partial organic substitution enhances ecosystem services in agricultural soils | Quan Tang Yangzhou university |



Parallel Sessions

Monday, June 8 (Session 303001)

| | | | |
|-------------|-------|---|--|
| 14:00-14:15 | 33065 | Agronomic and Environmental Effects of Straw Incorporation in the Rice-Wheat Rotation Region of the Yangtze River Delta: Research and Application Demonstration | Yan Ma Institute of Agricultural Resources and Environment, Jiangsu Academy of Agricultural Sciences; Liuhe Agro-Environment Field Scientific Observation and Research Station, Ministry of Agriculture and Rural Affairs |
| 14:15-14:30 | 32656 | Optimizing management of organic inputs to improve biomass production and nitrogen efficiency in Danish organic cropping systems | Yiwei Shang Department of Agroecology, Aarhus University; CBIO Aarhus University Centre for Circular Bioeconomy |
| 14:30-14:45 | 31545 | Optimizing nutrient balance in livestock waste to enhance soil organic fertilization and reduce environmental losses | Alice Boarino Department of Agricultural, Forest and Food Sciences, University of Turin |
| 14:45-15:00 | 31907 | Conservation Agriculture Impacts Soil Organic Carbon Sequestration, GHG reduction and Sustainable Crop Production | M. Jahiruddin Department of Soil Science, Bangladesh Agricultural University |
| 15:00-15:15 | 34773 | Closing the Loop in Agriculture: Biochar for Soil Restoration and Productivity | Binh Thanh Nguyen Industrial University of Ho Chi Minh City |



Parallel Sessions

Monday, June 8 (Session 303001)

| | | | |
|-------------|-------|--|---|
| 16:30-16:45 | 34690 | Beyond Porosity: Dual-Mode Nitrogen Fertilizers from Metal-Modified Biochar | Ettore Madonia Monash University / University of Palermo |
| 16:45-17:00 | 34584 | Nutrient enriched biochar reduces chemical fertiliser requirements for forestry seedling growth | Bianca Das Tasmanian Institute of Agriculture, Launceston |
| 17:00-17:15 | 32730 | Torrefied biomass (biotorr) as soil amendment: insights from multivariate and temporal analysis | Julia Queiros Vieira AGHYLE UP 2018- C101, UniLaSalle; Avril SCA |
| 17:15-17:30 | 33448 | Development of sisal seedlings with solid organic substrates, based on sisal residues, in Brazil | Risely Ferraz Almeida Universidade do Estado da Bahia |
| 17:30-17:45 | 31938 | Short-term interaction between earthworms, compost and biochar on GHG emissions and N mineralization | Thiago M. Inagaki Norwegian Institute of Bioeconomy Research |



Parallel Sessions

Tuesday, June 9 (Session 303001)

| | | | |
|-------------|-------|---|--|
| 09:00-09:15 | 34614 | Organic Waste Recycling in paddy:Enhancing Soil Health and Crop Quality - A case in Suzhou | Ji Li China Agricultural University |
| 09:15-09:30 | 34135 | Comparison of organic and inorganic amendments for conserving soil moisture and increasing crop yield in wheat under water limited conditions | Amara Khan Department of Biosciences Sciences, COMSATS University Islamabad |
| 09:30-09:45 | 34317 | Decomposition characteristics of different organic materials and their effects on the carbon fractions of soil organic carbon in arable black soils | Wanying Lei Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Harbin, China |
| 09:45-10:00 | 33649 | Biogeochemical and Isotopic Responses on Soil Health Following Dairy Manure Compost Application in an Almond Orchard | Adolfo Coyotl University of California |
| 10:00-10:15 | 33510 | Use of organic viticulture wastes as soil amendments to improve the function of clay soil in the Waipara region, New Zealand | Phuc Nguyen (preferred name Luna) Department of Soils and Physics Sciences, Lincoln University, Lincoln, New Zealand |
| 10:15-10:30 | 34375 | The soil rhizosphere metabolome's regulating mechanism on microbial communities depending on straw application depths | Xiaoyu Li Shenyang Agricultural University |
| 10:30-10:45 | 32515 | Soil Biogeochemical Responses to Composting and Organic Waste Application Across Agricultural Systems | Xia Zhu-Barker University of Wisconsin-Madison |



Parallel Sessions

Tuesday, June 9 (Session 303001)

| | | | |
|-------------|--------|--|---|
| 11:15-11:30 | 31996 | Innovative Nutrient Recycling through Black Soldier Fly (<i>Hermetia illucens</i>) Rearing: Comparison of three Organic Waste Substrates—Food Waste, Bread, and their Mixture. | Moussa Bouray Mohammed 6 Polytechnic University |
| 11:30-11:45 | 33509 | Fermentation Characteristics of Sawdust-Bokashi and its Effect on Soil Fertility and Pepper (<i>Capsicum spp.</i>) Performance. | Ahukaemere, Chioma Mildred Department of Soil Science and Technology, Federal University of Technology Owerri, Imo State, Nigeria |
| 11:45-12:00 | 35132 | Soil Nutrient Management in Oil Palm Plantation: The Application of Palm Oil Mill Effluent (POME) for Sustainable Agriculture | Fransisca Simanjuntak Astra Agro Lestari Tbk |
| 12:00-12:15 | 35023 | From Waste to Resource: Stabilizing Nitrogen in Broiler Litter Using Granulated Lignite | Clayton R Butterly The University of Melbourne |
| 12:15-12:30 | 34754 | In-Vessel Composting of Poultry Litter with Lignite Granules: A Strategy for Emission Mitigation | Zelong Liu School of Agriculture, Food & Ecosystem Sciences, Faculty of Science, The University of Melbourne, Parkville, Victoria, 3010, Australia |
| 13:30-13:45 | 33534 | Nitrogen waste in cropping and livestock systems of Darusa village, Bangladesh | Md. Mahmoodol Hasan Department of Agronomy and Agricultural Extension, University of Rajshahi, Rajshahi-6205, Bangladesh |
| 13:45-14:00 | 32191 | Straw return facilitates the availability of soil nitrogen by altering the metabolic distribution and nitrogen cycling processes | Chao Yan Northeast Agricultural University |
| 14:00-14:15 | 319B32 | Integrated NP Management for Sustainable Soil Fertility and Crop Productivity | Muhammad Adnan Department of Agriculture, University of Swabi |



Parallel Sessions

Tuesday, June 9 (Session 303001)

| | | | |
|-------------|-------|--|---|
| 14:15-14:30 | 32164 | Clay-stabilised Composts to Enhance Soil Health and Carbon Storage in Sandy Soils. | Zahra Nizbat UWA School of Agriculture and Environment, The University of Western Australia |
| 14:30-14:45 | 33083 | The Influence of Organomineral Fertilizers and Biopreparations on Yield, Fruit Quality, and Soil Microbiological Properties under Golden Delicious Apple Orchards in Irrigated Light Chestnut Soils of Southeastern Kazakhstan | Maira Kussainova Kazakh National Agrarian Research University; Kazakh-German University (DKU); Kyoto University, Graduate School of Agriculture |
| 14:45-15:00 | 32376 | Organic management effect on soil characteristics: a comparison between vineyard and field crop rotation | Maria Giordano University of Padua-Department of Agronomy, Food, Natural Resources, Animals and Environment - DAFNAE |
| 16:30-16:45 | 36488 | Repurposing Lake Sediments as a Sustainable Phosphorus Source for Spring Barley: A Case Study in Denmark | Andressa Morato Freitas University of Florida (Agronomy Department, Institute of Food and Agricultural Sciences, Gainesville, United States) ; University of Southern Denmark |
| 16:45-17:00 | 35508 | Plant Available Nutrient Contributions from Steer Manure Compost in Semi-Arid Agricultural Systems | Jeanette M. Norton Dept. Plants, Soils and Climate, Utah State University, Logan UT USA |
| 17:00-17:15 | 32456 | Regulation of Aggregate Nutrients and Microbial Processes by Organic Materials Incorporation to Enhance Soil Quality and Crop Yield | Wenxiu Zou Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 17:15-17:30 | 32416 | Organic Waste Amendments as Drivers of Soil Fertility and Microbial Activity in the Strawberry Rhizosphere | Mohammed Gamal College of Natural Resources and Environment, Northwest A&F University, Key Laboratory of Green and Low Carbon Agriculture on Dryland in Northwest China, Ministry of Agriculture and Rural Affairs; Department of Soil Science and Plant Nutrition, Ondokuz Mayıs University; Department of Soil and Agricultural Chemistry, Alexandria University, Faculty of Agriculture |
| 17:30-17:45 | 34547 | Revitalizing Sandy Soils: Organo-Mineral Inputs Enhance Drought Resilience in Wheat and Microbes | Muhammad Kamran The School of Agriculture, Food and Wine, Adelaide University, Waite Campus, Glen Osmond, SA, 5064, Australia |
| 17:45-18:00 | 34202 | Long-term field trials as a tool to evaluate the potential of compost to maintain grain yield and soil carbon persistence | JiLi China agricultural university |



Parallel Sessions

| Tuesday, June 9 | | Room: Convention Center, Nanjing 207 | |
|-----------------------|-------|--|--|
| Session 303002 | | Global and Regional Trends in Cropland Nutrient Balance and Use Efficiency | |
| | | <p>Convener: Achim Dobermann, International Fertilizer Association (IFA), Paris, France</p> <p>Co-Convener: Francesco N. Tubiello, Statistics Division, Food and Agriculture Organization of the United Nations (FAO), Rome, Italy</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:25 | 33177 | Cropland nutrient use efficiency: recent trends and targets for sustainable agriculture | Achim Dobermann International Fertilizer Association |
| 09:25-09:40 | 32541 | The role of fertilizers for feeding the world | Renske Hijbeek Wageningen University & Research |
| 09:40-09:55 | 32594 | Emerging soil nutrient limitations for global crop production | Walter D. Carciochi University of Nebraska-Lincoln |
| 09:55-10:10 | 32525 | Fertilizer Use and Nutrient Management in Indian Agriculture | Suresh Kumar Chaudhari The Fertiliser Association of India |
| 10:10-10:25 | 33994 | A meta-analysis and monte carlo simulation of nitrogen management strategies on balancing yield and environmental impact | Pongsathorn Sukdanont School of Agriculture, Food and Ecosystem Sciences, Faculty of Science, The University of Melbourne |



Parallel Sessions

Tuesday, June 9 (Session 303002)

| | | | |
|-------------|-------|---|---|
| 10:25-10:40 | 36366 | Trends and geographic variation in adverse impacts of nitrogen use in Europe on human health, climate, and ecosystem | Gerard Ros Wageningen University, the Netherlands |
| 11:15-11:30 | 35242 | Modelling the effect of soil nutrient and carbon mitigation measures in European agriculture | Chantal Hendriks Wageningen Environmental Research |
| 11:30-11:45 | 31862 | Precision Nitrogen Management in Rice: Appraising Smartphone-Based Fertilizer Apps and Evaluating the Efficacy of Selected Nitrogen Management Strategies | Md. Mizanur Rahman Department of Soil Science, Gazipur Agricultural University |
| 11:45-12:00 | 32006 | Effects of Annual Co-ordinated Phosphorus Fertilization under Wheat/Maize Rotation on Crop Phosphorus Uptake and Soil Phosphorus Content | Pingping Zhu Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 12:00-12:15 | 32367 | Organic Fertilizer Substitution Boosts Maize Yield in Upland Acidic Red Soils by Enhancing Soil Quality and Nutrient Availability: Insights from a 7-Year Study | Xinmei Zhao Agricultural Environment and Resources Institute, Yunnan Academy of Agricultural Sciences |
| 12:15-12:30 | 33340 | Calcium in peanut production | Rui Yang Institute of Urban Agriculture, Chinese Academy of Agricultural Sciences |



Parallel Sessions

| Thursday, June 11 | | Room: Convention Center, Nanjing 303B | |
|--------------------------|-------|--|--|
| Session 303003 | | Global Phosphorus Stewardship: Innovations and Strategies for Sustainable Soil Systems and Food Security | |
| | | Convener: Mohamed EL MAZLOUZI, Global Phosphorus Institute (GPI) | |
| | | Co-Conveners: Mamou EHUI, Global Phosphorus Institute (GPI) Terry ROBERT, Global Phosphorus Institute (GPI) | |
| Schedule | ID | Title | Presenter |
| Thursday, June 11 | | | |
| 11:15-11:35 | 33695 | An insight on best management practices for phosphorus fertilization in cereal-based cropping systems | Robert Michael Norton National University of Mar del Plata |
| 11:35-11:50 | 33762 | Managing Legacy Phosphorus for Sustainable Soil Fertility | Mohamed EL MAZLOUZI The Global Phosphorus Institute |
| 11:50-12:05 | 33219 | Soybean-cotton rotation and soil phosphorus dynamics under long-term management and cover crops | Paulo Sergio Pavinato 1 Department of Soil Science, “Luiz de Queiroz” College of Agriculture, University of Sao Paulo, Piracicaba, SP, Brazil.; 2 “SLC Agrícola SA”, Porto Alegre, RS, Brazil |
| 12:05-12:20 | 32234 | Blended Amendments to Reduce Soil Phosphorus Solubility and Mitigate Phosphorus Loss with Snowmelt Flooding | D. Kumaragamage University of Winnipeg; University of Manitoba |



Parallel Sessions

Thursday, June 11 (Session 303003)

| | | | |
|-------------|-------|---|---|
| 13:30-13:45 | 33498 | Tracking of residual soil phosphorus pools using phosphate oxygen isotopes | Deb Jaisi University of Delaware |
| 13:45-14:00 | 32338 | Soil Phosphorus dynamics in a Vertosol with a long cropping history | Sushila Joshi School of Agriculture and Food Sustainability (The University of Queensland) |
| 14:00-14:15 | 33899 | Domestication of intercropping soil microorganisms: Legacies from a Long-Term Field Experiment | Yuhong Lin Yunnan Agricultural University |
| 14:15-14:30 | 34950 | Phosphorus Status and Management Implications for Sustainable Crop Production in Nigeria | AHMAD Abba Hussain Ahmadu Bello University, Zaria |
| 14:30-14:45 | 34857 | Phosphorus acquisition and pathogen defense: synergies versus trade-offs | Wenli Ding Beijing Forestry University |
| 14:45-15:00 | 32958 | Scale-dependent limitation of the Mehlich-3 method for evaluating soil phosphorus across heterogeneous paddy soils in Japan | Miku Ikeda Graduate School of Life and Environmental Sciences, Kyoto Prefectural University |
| 15:00-15:15 | 33413 | Phosphorus sorption in acidic soils following the application of Calciprill and sodium silicate | Ng Ji Feng Department of Crop Science, Faculty of Agricultural Science and Forestry, Universiti Putra Malaysia Sarawak, Nyabau Road, 97008 Bintulu, Sarawak, Malaysia |



Parallel Sessions

Thursday, June 11 (Session 303003)

| | | | |
|-------------|-------|---|--|
| 16:30-16:45 | 34615 | Higher leaf phosphorus and nitrogen concentrations and greater allocation of phosphorus to lipids in <i>Helicia</i> and <i>Heliciopsis</i> than in other genera within the Proteaceae | Patrick Finnegan Xishuangbanna Tropical Botanical Garden, Yunnan, China; Key Laboratory for Improving Quality and Productivity of Arable Land of Yunnan Province, College of Resources and Environment, Yunnan Agricultural University, Kunming, 650201, China; School of Biological Sciences, University of Western Australia, Perth, Western Australia, Australia |
| 16:45-17:00 | 32922 | Differential contributions of rare and abundant phosphate-solubilizing bacteria to organic phosphorus mineralization under long-term fertilization | Tongyu Feng Institute of Soil Science, Chinese Academy of Science |
| 17:00-17:15 | 34514 | Sustainable Phosphorus Recovery Using Modified Olive Pomace Biochar | Moussa Bouray Mohammed 6 Polytechnic University (UM6P) |
| 17:15-17:30 | 34301 | Acidic Phosphorus-Rich Biochars Promote the Growth of Okra in Coastal Salt-Affected Soil: The Critical Role of Phosphorus-Transforming Bacteria | Qiang Liu Ocean University of China |
| 17:30-17:45 | 35045 | Endophytic fungi as a biotechnological approach to increase phosphorus use efficiency | Sofia Maria Muscarella Department of Agricultural, Food and Forest Sciences, University of Palermo, Palermo, Italy |
| 17:45-18:00 | 31361 | Simultaneous aerobic stabilisation of sewage sludge and chelator-assisted removal of toxic metals in a closed-loop process | Barbara Fojkar University of Ljubljana |



Parallel Sessions

| Thursday, June 11 Friday, June 12 | | Room: Convention Center, Nanjing 302A | |
|--------------------------------------|--------|--|--|
| Session 303004 | | Novel Fertilizer Research and Industrial Development | |
| | | Convener: Yuechao Yang, Shandong Agricultural University | |
| | | Co-Conveners: Changwen Du, Institute of Soil Science, Chinese Academy of Sciences Lili Zhang, Institute of Applied Ecology, Chinese Academy of Sciences | |
| Schedule | ID | Title | Presenter |
| Thursday, June 11 | | | |
| 11:15-11:20 | - | Opening speech | Yuechao Yang |
| Chair: Antonio F Patti | | | |
| 11:20-11:40 | 320B30 | Innovative Approaches to Sustainable Nutrient Management | Ping He Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 11:40-12:00 | 33229 | Chemical Gradients in the Fertosphere: Rethinking Fertiliser-Soil Interactions | Enzo Lombi Adelaide University |
| 12:00-12:20 | 320B31 | Controlled-release fertilizer application: Coupling with an AI-designed maize system for more grain and lower emission | Xinping Chen Affiliation of the C. Author (Department, Institute, City, Country) 1 State Key Laboratory of Nutrient Use and Management, China Agricultural University |



Parallel Sessions

Thursday, June 11 (Session 303004)

Chair: Ping He

| | | | |
|-------------|--------|---|---|
| 13:30-13:50 | 34926 | Improving Nitrogen Use Efficiency: Novel Enhanced Efficiency Urea Fertilisers | Antonio F Patti Monash University; School of Chemistry; Clayton 3800; Victoria; Australia |
| 13:50-14:10 | 320B34 | Research Progress and application of Slow/Controlled-Release Fertilizers | Yuechao Yang Shandong Agricultural University |
| 14:10-14:30 | 34440 | Unravelling the dissolution pathways and transformation of polyhalite fertilisers in contrasting soils through multi-scale imaging and elemental analysis | Rodrigo Coqui da Silva Adelaide University |
| 14:30-14:50 | 320B35 | Development and application of rapeseed specific fertilizer based on soil nutrient supply and crop nutrient demand | Jianwei Lu |
| 14:50-15:10 | 34558 | A Co-granulated Urea and Sulphur Fertilizer Reduces Soil N ₂ O Emissions while Increasing Crop Yields | Min Yuan Department of Renewable Resources, Faculty of Agricultural, Life and Environmental Sciences, University of Alberta, Edmonton, AB T6G 2E3, Canada; China-New Zealand Belt and Road Joint Laboratory on Kiwifruit, Sichuan Provincial Academy of Natural Resources Sciences, Chengdu, Sichuan 610015, China |
| 15:10-15:30 | 320B36 | Development and Application of NBPT Slow-Release Suspension (Urease Inhibitor) for Tower Compound Fertilizer | Qiang Gao |
| 15:30-15:50 | 32468 | Dissolution of Ca-Mg-K Based Mineral Fertilisers at the Immediate Soil Surface and Impacts on Soil Erodibility and Soil Surface Crusting | Robert Simmons/Johnson Oluwaseun Odukoya Faculty of Engineering and Applied Sciences, Cranfield University |



Parallel Sessions

Thursday, June 11 (Session 303004)

Chair: Changwen Du

| | | | |
|-------------|--------|---|---|
| 16:30-16:50 | 320B33 | Research on Creation and Application of Microbial Inoculants for Soil Conservation in Protected Tomato Production | Hongtao Zou/Bin Liu College of Land and Environment, Shenyang Agricultural University |
| 16:50-17:10 | 33851 | Synthesis of N-Zn Composite Synthetic Controlled Release Fertilizers | Abhinav Aditya Das Division of Soil Science, ICAR - Indian Agricultural Research Institute - Hyderabad Hub, ICAR - Central Research Institute for Dryland Agriculture (Nodal Institute) |
| 17:10-17:30 | 320B32 | Carbon-Based Functional Fertilizers: Effective Strategies for Decreasing Antibiotics and Antibiotic Resistance Genes During the Aerobic Treatment Process of Livestock Manure and Controlling Their Spread in Soil-Cucumber Systems | Fenwu Liu College of Resources and Environment, Shanxi Agricultural University |
| 17:30-17:50 | 34903 | Comparison Evaluation of Nitrogen and Sulfur Release from Sulfur- and Polymer-Coated Controlled-Release Fertilizers | Pragyan Gautam Graduate School of Agricultural Science, Tohoku University, Miyagi, Japan |
| 17:50-18:10 | 33810 | Microwave-assisted Synthesis of Multi-metal MOFs as Controlled-released Fertilizers | Changwen Du/Lianjie Wan Institute of Soil Science Chinese Academy of Sciences |
| 18:10-18:30 | 32029 | Integrated Biofertilizer and NPK Application Enhances Soil Quality and Productivity of Onion and wheat in semi-arid Environment | Garba Aliyu Abubakar Department of Soil Science and Land Resources Management, Faculty of Agriculture, Usmanu Danfodiyo University |



Parallel Sessions

Friday, June 12 (Session 303004)

Chair: Olga Yakimenko

| | | | |
|-------------|-------|--|---|
| 09:00-09:20 | 32851 | Nitrogen Release and Greenhouse Gas Emission From soils Treated with Biodegradable Polymer-Coated Urea Fertilizer | Ye-Eun Lee Chungbuk National University |
| 09:20-09:40 | 36125 | Technological Breakthroughs for Enhancing Nutrient Use Efficiency in Bio-based Coated Controlled-Release Fertilizers | Shugang Zhang Shandong Agricultural University |
| 09:40-10:00 | 34204 | Exudate pulses throughout the entire growth period trigger the increase in maize phosphorus use efficiency by modifying soil keystone microbial taxa | Yuying Yan Shandong Agricultural University |
| 10:00-10:20 | 35063 | Binary Polymer-Humic Soil Amendments as a Tool to Remediate Degraded Soils | Olga Yakimenko Soil Science Faculty, Lomonosov Moscow State University, Moscow, Russia |



Parallel Sessions

Friday, June 12 (Session 303004)

Chair: Lili Zhang

| | | | |
|-------------|-------|---|---|
| 10:40-11:00 | 36274 | Potential of Mg-Fe Layered Double Hydroxide as a Slow-Release Phosphorus Fertilizer Compared with Commercial Recycled Sources | Roselle E. Madayag Division of Soil Science, Agricultural Systems Institute, College of Agriculture and Food Science, University of the Philippines Los Baños, College, Laguna, Philippines 4031; Division of Soil and Water Management, Department of Earth and Environmental Science, Belgium |
| 11:15-11:35 | 32399 | Nanotechnology-based strategies for enhancing phosphorus and nitrogen delivery and utilization efficiency by crop species | Jason C. White The Connecticut Agricultural Experiment Station |
| 11:35-11:40 | - | Closing speech | Yuechao Yang |



Parallel Sessions

| Thursday, June 11 Friday, June 12 | | Room: Convention Center, Nanjing 303A | |
|--------------------------------------|-------|---|--|
| Session 303005 | | Plant nitrogen utilization: from cell to field | |
| | | <p>Convener: Weiming Shi, Institute of Soil Science, Chinese Academy of Sciences</p> <p>Co-Convener: Yufang Lu, Institute of Soil Science, Chinese Academy of Sciences Toru Fujiwara, The University of Tokyo Herbert J. Kronzucker, The University of Melbourne Eiko Kuramae, Netherlands Institute of Ecology</p> | |
| Schedule | ID | Title | Presenter |
| Thursday, June 11 | | | |
| 11:15-11:20 | - | Opening Remarks | Weiming SHI, Eiko KURAMAE |
| 11:20-11:40 | 36507 | Crop improvement for nitrogen and phosphorus use efficiency in rice | Nandula Raghuram Guru Gobind Singh Indraprastha University, New Delhi |
| 11:40-11:55 | 32313 | Responses of Rice Production, NH ₃ and N ₂ O Losses to Biochar Application at Different Growth Season of Rice-Wheat Rotation | Haijun Sun Nanjing Forestry University |
| 11:55-12:10 | 34106 | Short term impacts of biochar on vine tissues total carbon and nitrogen and their stable isotope compositions as well as berry yield in two vineyards in Southeast Queensland of subtropical Australia | Kate Kingston School of Environment and Science, Griffith University (Nathan campus, Brisbane, Australia); Australian Research Centre for Human Evolution, Griffith University (Nathan campus, Brisbane, Australia) |



Parallel Sessions

Thursday, June 11 (Session 303005)

| | | | |
|-------------|--------|--|--|
| 12:10-12:25 | 31481 | Fertilizer- Driven Nitrate Availability and Waterlogging Resilience in Canola: Benefits and Micronutrient Trade- offs | Haochen Zhao Tasmanian Institute of Agriculture, University of Tasmania |
| 13:30-13:50 | 32749 | Harnessing Biological Nitrification Inhibitors from Rice for Sustainable Nitrogen Management | Lu Yufang Institute of Soil Science, Chinese Academy of Sciences; University of Chinese Academy of Sciences |
| 13:50-14:10 | 34504 | Temporal dynamics of biological nitrification inhibition efficiency in wheat under varying degrees of plant growth realism | Cecile Gubry-Rangin Aberdeen University |
| 14:10-14:25 | 35663 | Discovery of iron-reducing diazotrophs in rice paddy soil and enhancement of nitrogen fixation by iron application | Yoko Masuda Graduate School of Agricultural and Life Sciences, The University of Tokyo |
| 14:25-14:40 | 36259 | Effects of plant hormone on microbial community in soil under conservation tillage | Jingjing Ma Northeast Institute of Geography and Agroecology, CAS |
| 14:40-14:55 | 32618 | Phenolic BNIs suppress nitrification by steering the nitrifier community toward enhanced nitrogen retention in contrasting soils | Zedong Chen Institute of Soil Science, Chinese Academy of Sciences; University of Chinese Academy of Sciences |
| 14:55-15:15 | 320B64 | Soil Health-Driven: Sustainable Cultivation and Global Industrialization of <i>Cistanche tubulosa</i> | Gangqiang Dong Amway (China) Botanical R&D Center |



Parallel Sessions

Friday, June 12 (Session 303005)

| | | | |
|-------------|--------|---|--|
| 09:00-09:20 | 32971 | Rice promotes abundance of nitrogen fixing bacteria in paddy field soils | Toru Fujiwara The University of Tokyo |
| 09:20-09:35 | 32454 | MGP1-mediated Mitochondrial ROS Homeostasis Couples Carbon Metabolic Switching with Nitrate Adaptation | Baohai Li Zhejiang University |
| 09:35-09:50 | 32220 | Rapid induction of NH ₄ ⁺ efflux in rice roots under high-ammonium stress and its association with varietal differences in ammonium tolerance and ammonium-utilization efficiency | Dongwei Di Institute of Soil Science, Chinese Academy of Sciences |
| 09:50-10:05 | 32286 | Regulation of the GS-GOGAT-GDH Pathway under Ammonium Nutrition: Mechanistic Insights into Nitrogen Assimilation and Utilisation Efficiency in Oil Palm Seedlings | Muhammad Syafiq bin Mohd Zaludin Plantation Research & Advisory, SD Guthrie Research |
| 10:05-10:20 | 319B33 | Soil nitrogen deficiency and heat stress drive tissue-specific metabolic reprogramming governing nitrogen utilization in soybean | Hamza Tariq Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences |
| 10:20-10:35 | 35879 | Nitrogen-induced modulation of whole-plant transpiration under atmospheric drought | Qiushi Ning Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |



Parallel Sessions

Friday, June 12 (Session 303005)

| | | | |
|-------------|-------|--|---|
| 10:35-10:50 | 33758 | Functional Complementarity in Cover Crop Mixtures Shapes Subsoil Carbon-Nitrogen Partitioning via Maize Reuse of Root Channel Legacies | Yijie Shi Institute of Plant Nutrition and Soil Science, Christian-Albrechts-University Kiel |
| 10:50-11:05 | 35539 | Variation Patterns and Influencing Factors of Fine Root Uptake of Different Nitrogen Forms with Stand Age in <i>Cunninghamia lanceolata</i> | Xiaodong Yao, Zhengyi Huang, and Guangshui Chen School of Geographical Science, Fujian Normal University, Fuzhou, China; Fujian Sanming Forest Ecosystem National Observation and Research Station, Sanming, China |
| 11:20-11:40 | 36502 | Towards Smart Fertilization: Building a Dynamic Rhizosphere $\text{NH}_4^+/\text{NO}_3^-$ Model under the GiP Framework for Drastically Improved NUE | Yue Jeff Xu Zhongguancun Xuyue Non-invasive Micro-test Technology Industrial Alliance; Xuyue (Beijing) Sci. &Tech. Co.,Ltd.; YoungerUSA, LLC |
| 11:40-11:55 | 31122 | Enhancing Nitrogen Utilization and Profitable Corn Production While Minimizing Environmental Impact | Fabian G. Fernandez University of Minnesota |
| 11:55-12:10 | 36049 | Developing an AI-based Precision Nitrogen Management Strategy for Corn | Yuxin Miao University of Minnesota |
| 12:10-12:25 | 33435 | Developing Machine Learning Protocol for Optimizing Nitrogen Nutrition in Rice | P. Kannan Professor (Soil Science) Centre for Agricultural Nanotechnology, Tamil Nadu Agricultural University, Coimbatore, India |



Parallel Sessions

| Friday, June 12 | | Room: Convention Center, Nanjing 209 | |
|-----------------------|-------|---|---|
| Session 303006 | | Rhizobiont for High Nutrient Use Efficiency | |
| | | Convener: Fusuo Zhang, China Agricultural University | |
| | | Co-Conveners: Jianbo Shen, China Agricultural University Lin Zhang, China Agricultural University Oene Oenema, Wageningen University & Research | |
| | | | |
| Schedule | ID | Title | Presenter |
| 09:00-09:15 | 34550 | Rhizobiome Partners to Optimize Nutrient Transfers from Soil to Plants | Joann K. Whalen McGill University |
| 09:15-09:30 | 32158 | Maintaining sulfur supply to rhizobia delays nodule senescence in soybean | Zhichang Chen Institute of Soil Science, Chinese Academy of Sciences |
| 09:30-09:45 | 33008 | Genotype-Specific Rhizosphere Strategies for Phosphorus Acquisition in Tea Plants under Organic Substitution | Lizhi LONG Tea Research Institute, Chinese Academy of Agriculture Sciences |
| 09:45-10:00 | 31978 | The power of the less productive: understanding the links between diversity and belowground traits of wild, landrace and modern crops | Llorenç Cerdà IRTA (Sustainability in Biosystems) |
| 10:00-10:10 | 33204 | Diversified cropping systems with complementary root growth strategies improve crop adaptation to and remediation of hostile soils | Wei-Ping Zhang China Agricultural University |
| 10:10-10:20 | 35008 | Bioprospecting soil bacteria to increase sulfate release from elemental sulfur in tropical soil | Fernanda Miotti Department of Soil Science, Luiz de Queiroz College of Agriculture, University of São Paulo, São Paulo, Brazil |



Parallel Sessions

Friday, June 12 (Session 303006)

| | | | |
|-------------|-------|--|--|
| 10:20-10:30 | 34927 | Mycorrhizal solubilization of phosphate rock increases arsenic accumulation in <i>Pteris vittata</i> : Trade-off root strategies and dual P-transporter pathways | Songge Deng Zhejiang University |
| 10:30-10:40 | 36182 | Soil C:P stoichiometry regulating microbial-mediated phosphorus turnover fluxes in calcareous soil | Yi Peng Xinjiang Agricultural University |
| 10:40-10:50 | 35813 | Nitrogen use efficiency of intercropping and its drivers: a global meta-analysis | Yalin Liu Ningbo University |
| 10:50-11:00 | 34652 | Screening groundnut genotypes for their nutrient efficiency in calcareous soils | Chitdeshwari Professor (SS&AC), Department of Soil Science and Agricultural Chemistry, DNRM Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India |
| 11:15-11:30 | 33519 | Cross-kingdom nutrient exchanges in the plant-arbuscular mycorrhizal fungi-bacteria continuum | Lin Zhang China Agricultural University |
| 11:30-11:45 | 34705 | Drivers of Potassium Efficiency in Sweet Potato: Genotypic Variation, Partitioning Dynamics, and AMF-Mediated Rhizosphere Optimization | Jidong Wang Jiangsu Academy of Agricultural Sciences |
| 11:45-12:00 | 35544 | Nitrogen form-induced spatiotemporal coupling of root growth and phosphorus uptake | Lidong Qi China Agriculture University |



Parallel Sessions

| Thursday, June 11 Friday, June 12 | | Room: Convention Center, Nanjing 302B | |
|--------------------------------------|----|---|-----------|
| Session 303007 | | Sustainable Phosphorus Use in Agroecosystems: New Approaches to Optimizing Nutrient Management and Ecosystem Functionality | |
| | | <p>Convener: Klaus Jarosch, Agroscope, Agroecology and Environment, Zurich, Switzerland</p> <p>Co-Conveners: Hao Chen, Sun Yat-sen University, School of Agriculture and Biotechnology, Shenzhen, China Owen Fenton, Teagasc, Environmental research Centre, Wexford, Ireland Wenxuan Shi, Teagasc, Environmental research Centre, Wexford, Ireland</p> | |
| Schedule | ID | Title | Presenter |

Thursday, June 11

| | | | |
|-------------|-------|--|---|
| 11:15-11:30 | 34012 | Phosphorus in agricultural soils: status and dynamics | Enqing Hou South China Botanical Garden, Chinese Academy of Sciences |
| 11:30-11:45 | 34045 | Optimizing global cropland management to advance phosphorus sustainability | Yishen Sun Institute of Soil Science, Chinese Academy of Sciences |
| 11:45-12:00 | 32348 | Rainfall thresholds and scale-dependent hydrological dynamics of phosphorus speciation in nested purple soil catchments | Xinyu Liu Institute of Mountain Hazards and Environment, Chinese Academy of Sciences; Key Laboratory of Mountain Surface Processes and Ecological Regulation, Chinese Academy of Sciences |
| 13:30-13:45 | 34158 | Impact of Combined Manure and Mineral Fertilizer on Phosphorus Dynamics in Paddy and Drained Paddy Systems: Transitioning to Soybean Cultivation | Lakmini T. Godagedara Division of Applied Life Science (BK21 Four), Gyeongsang National University, Jinju 52828, Korea |



Parallel Sessions

Thursday, June 11 (Session 303007)

| | | | |
|-------------|-------|---|---|
| 13:45-14:00 | 35790 | Exploring characterization methods and thresholds of carbon-phosphorus ratio for promoting crop growth and microbial phosphorus activation | Qiaoling Pu Xinjiang Agricultural University |
| 14:00-14:15 | 33215 | Enhancing the functionality of agricultural soils in Mediterranean regions with biobased P fertilizers: nutrient cycling and soil microbial communities | Antonio Rafael Sánchez-Rodríguez University of Córdoba (Spain) |
| 14:15-14:30 | 36353 | Recycling lake sediment for use in agriculture: insights from laboratory and field experiments | Antonio M. M. Silva University of Southern Denmark |
| 14:30-14:45 | 36290 | Phosphorus cycling in paddy soils | Yu Wang Institute of Soil Science, Chinese Academy of Sciences |
| 16:30-16:45 | 33776 | Effects of organic fertilizer substitution on soil inorganic phosphorus (P) fractions and dynamics at the aggregate level: evidence from P fractionation and ³³ P isotopic exchange kinetics | Hao Chen Sun Yat-Sen University |
| 16:45-17:00 | 34807 | Molecular-level understanding transformation mechanisms of P in the calcareous agricultural soils | Jianjun Yang Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 17:00-17:15 | 34725 | Land use controls soil phosphorus pools but not sorption mechanisms: insights from piecewise structural equation modelling | Gilles Colinet Water Soil Plant exchanges Department, TERRA, University of Liege, Belgium |
| 17:15-17:30 | 34769 | Long-term biochar application influences phosphorus and associated iron and sulfur transformations in the rhizosphere | Jiahui Yuan Institute of Soil Science |
| 17:30-17:45 | 34905 | Sulphur Impregnated Biochar Synchronizes Phosphorus Release from Occluded Pools while Enhancing Carbon Stabilization | Muhammad Ahmed Key Laboratory of Plant Nutrition and the Agri-environment in Northwest China, Ministry of Agriculture and Rural Affairs, Northwest A&F University, Yangling 712100, China; Key Laboratory of Low-carbon Green Agriculture in Northwestern China, Ministry of Agriculture and Rural Affairs, P. R. China, Yangling 712100, China; College of Natural Resources and Environment, Northwest A & F University, Yangling 712100, Yangling, China |
| 17:45-18:00 | 35928 | Long-term Biochar Application Enhances Carbon-Phosphorus Co-stabilization and Mitigates Methane Emissions in Flooded Rice Systems | Hao Chen Institute of Soil Science, Chinese Academy of Sciences |



Parallel Sessions

Friday, June 12 (Session 303007)

| | | | |
|-------------|-------|--|---|
| 09:00-09:15 | 35662 | Seabirds Bearing Light | Roland Bol Institute of Bio- and Geosciences, Agrosphere Institute (IBG-3), Forschungszentrum Jülich, Germany |
| 09:15-09:30 | 34868 | An innovative approach for measuring soil microbial biomass P | Vito Armando Laudicina Department of Agricultural, Food and Forest Sciences, University of Palermo, Palermo, Italy |
| 09:30-09:45 | 32675 | The Art of Breeding Microbial Communities: Unlocking Soil Phosphorus through Artificial Selection | Lena Faller Netherlands Institute of Ecology (NIOO-KNAW); Utrecht University |
| 09:45-10:00 | 31931 | Phosphate rock and microorganisms as a sustainable alternative to soluble P fertilizers in tropical soil | Fernanda Miotti Luiz de Queiroz College of Agriculture, University of São Paulo |
| 10:00-10:15 | 31857 | Enhancing soil phosphorus activation and microbial phosphorus cycling via increasing soil moisture stability in maize production | Mengze Xu Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 10:15-10:30 | 35886 | Long-term green manuring increases phosphorus availability in soil by modifying microbial functional genes and enzyme activities | Xiaodong Chen Zhejiang Academy of Agricultural Sciences |



Parallel Sessions

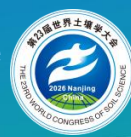
| Tuesday, June 9 | | Room: Convention Center, Nanjing 208 | |
|-----------------------|-------|---|--|
| Session 304003 | | Can Enhanced Rock Weathering Capture and Store Atmospheric CO₂? Its Expectations and Limitations | |
| | | <p>Convener: Taku Nishimura, Professor, Laboratory of Soil Physics and Soil Hydrology, The University of Tokyo</p> <p>Co-Convener: Songlin Wu, Professor, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences</p> | |
| Schedule | ID | Title | Presenter |
| 13:30-13:45 | 36629 | Constraints in Measuring Carbon Sequestration by Enhanced Rock Weathering and the Way Forward | Balwant Singh The University of Sydney |
| 13:45-14:00 | 32103 | Reframing Carbon Accounting in Enhanced Rock Weathering: Counterfactuals, stoichiometry, and MRV implications | Rafael M. Santos Department of Civil, Environmental, and Water Resources Engineering, University of Guelph |
| 14:00-14:15 | 33796 | The Impact of Enhanced Rock Weathering on Soil Carbon Dynamics: A Global Meta-Analysis of Environmental and Soil Factors | Yunsi Duan Northeastern University |
| 14:15-14:30 | 33040 | Reconnecting geology and soil science for a broader One Health framework: Insights from Enhanced Rock Weathering | Atsushi Nakao Kyoto Prefectural University |
| 14:30-14:45 | 31991 | Direct evidence for basaltic mineral weathering in cropland revealed by X-ray powder diffraction analysis | Kohei Kurokawa Graduate School of Life and Environmental Sciences, Kyoto Prefectural University, Kyoto, Japan; Environmental and Biochemical Sciences, The James Hutton Institute |



Parallel Sessions

Tuesday, June 9 (Session 304003)

| | | | |
|-------------|-------|--|---|
| 14:45-15:00 | 32693 | Can Silicate Rock Powder Replace Agricultural Lime and Sequester Carbon in Acid Soils? - Field and Lab Studies | Ray R Weil Department of Environmental Science and Technology, University of Maryland, College Park |
| 16:30-16:45 | 33238 | Exploring Basalt Weathering for Mitigating Greenhouse Gas Emissions in Rice Paddy System | Chia-Yu Yang Life and Environmental Sciences, Kyoto Prefectural University |
| 16:45-17:00 | 33263 | Impact of soybean cultivation on basalt weathering in agricultural system | Hiroshi Uchibayashi Plant Imaging Research Unit, Fukushima Institute for Research, Education and Innovation, Takasaki, Japan |
| 17:00-17:15 | 33794 | Wollastonite reshapes soil organic carbon fraction dynamics and enhances carbon sequestration potential | Zhifang Zhao Northeastern University |
| 17:15-17:30 | 35858 | Mechanisms of Carbon Sequestration through Bacillus-Enhanced Basalt Weathering on the Soil Priming Effect | Gaoyang Qiu Zhejiang Academy of Agricultural Sciences |
| 17:30-17:45 | 32255 | Subsurface and surface transport of crushed basalt | Taku Nishimura The University of Tokyo |



Parallel Sessions

| Thursday, June 11 | | Room: Expo Center, Hall 8, 8203 | |
|-----------------------|-------|---|---|
| Session 304004 | | Engineering Technology System for Efficient Quality Improvement of Obstructed Soil | |
| | | <p>Convener: Yuanfang Huang, China Agricultural University</p> <p>Co-Conveners: Qiuju Wang, Heilongjiang Academy of Black Soil Conservation and Utilization, China Taku Nishimura, University of Tokyo, Japan Xiaogang Li, Nanjing Forestry University, China Yunjia Liu, China Agricultural University Yun Liu, Institute of Soil Science, Chinese Academy of Sciences</p> | |
| Schedule | ID | Title | Presenter |
| 16:30-16:45 | 32056 | Soil Re-engineering - A New Approach to Improve Crop Productivity on Constrained Sandy Soils in Water-Limited Environments in Western Australia | Gausul Azam Principal Research Scientist |
| 16:45-17:00 | 34087 | Engineering Technology and Practice of Microbial-Synergized Organic Material Amelioration in Albic Soil | Jie Liu Heilongjiang Agricultural Academy of Sciences Heilongjiang University |
| 17:00-17:15 | 34592 | Ecological Prevention and Control of Early-Stage Gully Erosion in Black Soils: Concepts, Mechanisms, and Integrated Technologies | Enheng Wang Northeast Forestry University |
| 17:15-17:30 | 34729 | Bacterial richness enhances the thermostability of soil organic matter: long-term perspective | Meng Wu Institute of Soil Science, Chinese Academy of Sciences |
| 17:30-17:45 | 34658 | Tillage and straw return alleviate soil compaction in Northeast China: From pore structure to root development and crop productivity | Jing An Shenyang Agricultural University |
| 17:45-18:00 | 34123 | Subsoil Mixed Profile Reconstruction Technology | Qingying Meng Heilongjiang Academy of Agricultural Sciences |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 8, 8203 | |
|-----------------------|-------|---|--|
| Session 304007 | | Frontier Technologies for Soil Analysis: From Single-Cell to Nanosensors | |
| | | <p>Conveners: Jian Xu, Qingdao Institute of Bioenergy and Bioprocess Technology Haoye TANG, Institute of Soil Science, Chinese Academy of Sciences Yasin Orooji, Distinguished Professor, College of Geography and Environmental Sciences, Zhejiang Normal University</p> <p>Co-Conveners: Yuting Liang, Institute of Soil Science, Chinese Academy of Sciences Wei Huang, University of Oxford Li Cui, Institute of Urban Environment, Chinese Academy of Sciences Hailin ZHANG, Department of Plant and Soil Sciences, Oklahoma State University Youzhi Feng, Nanjing Forestry University Hassan Karimi-Maleh, Professor in Biosensing Technologies, affiliated with multiple collaborative institutions</p> | |
| Schedule | ID | Title | Presenter |
| 13:30-13:45 | 32737 | The Soil iMAPS Initiative: a global network to map the single-cell in-situ metabolic atlas for soil | Xu Jian Qingdao Institute of Bioenergy and Bioprocess Technology, Chinese Academy of Sciences |
| 13:45-14:00 | 32712 | Single-cell exploration of the microbiota driving soil phosphorus mobilization: from single-cell Raman to high-throughput fluorescence profiling | Li Cui Institute of Urban Environment (IUE), Chinese Academy of Sciences (CAS) |
| 14:00-14:15 | 32944 | Raman-based flow cytometry for single-cell microbial phenotyping | Kang Soo Lee Department of Mechanical Engineering, UNIST |



Parallel Sessions

Tuesday, June 9 (Session 304007)

| | | | |
|-------------|-------|---|--|
| 14:15-14:30 | 33717 | Designing drought-resilient plant microbiomes using single-cell Raman spectroscopy | Qinglin Chen Institute of Urban Environment, Chinese Academy of Sciences |
| 14:30-14:45 | 34324 | Quinolone-mediated metabolic cross-feeding develops aluminium tolerance in soil microbial consortia | Zhiyuan Ma Institute of Soil Science, Chinese Academy of Sciences |
| 1 min | - | Part 2 Introduction & Housekeeping | Feng Youzhi |
| 16:30-16:45 | 36424 | Nitrogen-fixing seed endophytes synergize with soil functional microbiota to enhance rice nitrogen supply | Kai Sun Nanjing Normal University |
| 16:45-17:00 | 31570 | Monitoring Ecological Rehabilitation of Degraded Soils by Human Activities Using Thermal Indicators of Soil Organic Matter | Maria-Fernanda Romero-Sarmiento IFP Energies Nouvelles |
| 17:00-17:15 | 32360 | Developing a diffusive gradients in thin films (DGT) technique for large-scale and high-resolution mapping of labile potassium in soils | Jianyin Huang The University of Queensland, School of Agriculture and Food Sustainability |



Parallel Sessions

Tuesday, June 9 (Session 304007)

| | | | |
|-------------|-------|--|--|
| 17:15-17:30 | 32891 | Loosely bound mobile metal ions distribution across arid landscapes | Silaev Makar Aramco Innovations LLC |
| 17:30-17:45 | 33157 | Evaluation of ion selective electrodes for monitoring plant nutrients | Ayodele Oluseyi Fabiyi University of Lincoln, Lincoln, United Kingdom |
| 17:45-18:00 | 33730 | Micro-CT scanning as a tool for analysing comparative root architecture of pasture species | Haoran Fan School of Agriculture, Food and Ecosystem Sciences (Faculty of Science, The University of Melbourne) |
| 18:00-18:15 | 36484 | In situ Non-destructive Imaging of Roots from GFP-Expressing Plants Using a Novel Fluorescence Minirhizotron with Automated Intensity Measurement and CNN-based TRL Estimation | Xinze Xu French Associates Institute for Agriculture and Biotechnology of Drylands, The Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Sede Boqer, Israel |
| 18:15-18:30 | 34528 | From lab to field: An open-source, low-cost toolkit for soil CO ₂ respiration research | Thuc T. Nguyen The Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, 84990, Israel |



Parallel Sessions

| Thursday, June 11 Friday, June 12 | | Room: Convention Center, Nanjing 207 | |
|--------------------------------------|-------|--|---|
| Session 305001 | | Deciphering the Soil-Pollutant Nexus: Biogeochemical Frontiers for Soil Health and Sustainable Ecosystems | |
| | | <p>Convener: Yan He, Zhejiang University</p> <p>Co-Conveners: Yurong Liu, Huazhong Agricultural University Guodong Fang, Institute of Soil Science, Chinese Academy of Sciences Cheng-Hua Liu, Feng Chia University Ashley Edwin Franks, La Trobe University Guofang Xu, Zhejiang University</p> | |
| Schedule | ID | Title | Presenter |
| Thursday, June 11 | | | |
| 11:15-11:30 | 33058 | Rethinking Restoration: Functional Trajectories of Soil-Vegetation Systems in Restored vs. Spontaneously Colonized Metalliferous Mine Tailings under a Changing Climate | M. Nazaret González-Alcaraz Universidad Politécnica de Cartagena |
| 11:30-11:45 | 34924 | Speciation Distribution, Transformation, and Interfacial Interaction Mechanisms of Heavy Metals and Phosphate in Contaminated Farmland Soils | Xiaoming Wang Huazhong Agricultural University |
| 11:45-12:00 | 31431 | Contrasting soil functional responses to climate change in restored and spontaneously colonized mine tailings | Ceacero-Moreno, Matías Department of Agricultural Engineering of the E.T.S.I.A., Technical University of Cartagena member of European University of Technology EUT+, 30203 Cartagena, Spain. |
| 12:00-12:15 | 34031 | The genesis of nano-colloid-bound Cd and As: from climatic and pedogenic controls to global projections | Kengbo Ding Sun Yat-sen University |



Parallel Sessions

Thursday, June 11 (Session 305001)

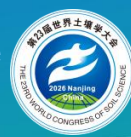
| | | | |
|-------------|-------|---|--|
| 13:30-13:50 | 32204 | Microbial Methylation of Mercury Mediated by Soil Organic Matter: Progress and Prospects | Xujun Liang Northwest A&F University |
| 13:50-14:10 | 34355 | Response and functional restructuring of micro-food webs in heavy metal-contaminated soil | Xiuli Hao Huazhong Agricultural University |
| 14:10-14:25 | 34404 | Effects of methane oxidation on microbial mercury methylation in typical paddy soils | Kanghua Chen Northwest A&F University |
| 14:25-14:40 | 33830 | Long-Term Ecological consequences of the Proton Launch Vehicle First Stage Falling: Preliminary Results of the Comprehensive Case Study in Central Kazakhstan | Ivan Semenov Lomonosov Moscow State University |
| 14:40-14:55 | 33832 | Analysis of Traits and Prediction of Angiosperm Species of Plant-Hyperaccumulators of 17 Heavy Metals and Metalloids: Initial Results | Galya V. Klink Isaev Centre for Problems of Forest Ecology and Productivity of the Russian Academy of Sciences ; Higher School of Education |



Parallel Sessions

Thursday, June 11 (Session 305001)

| | | | |
|-------------|-------|--|---|
| 16:30-16:50 | 33764 | The Passivation Remediation of Weakly Alkaline Cadmium-Contaminated Farmland Soil | Yanhong Lou Shandong Agricultural University |
| 16:50-17:10 | 31988 | From Collieries to Continents: Deciphering the Soil-Pollutant Nexus in Coal Mine Landscapes | Alexey V. Alekseenko United Nations University |
| 17:10-17:25 | 34645 | Microbial Refugee under Shrubs Limits Soil Copper Contamination Effects | Pedro Mondaca Institute of Ecology & Biodiversity, Chile; Facultad de Medicina Veterinaria y Agronomía, Universidad de Las Américas, Santiago, Chile |
| 17:25-17:40 | 31683 | Intensified Production of Hydroxyl Radical from Iron-Manganese Synergistic Coupling during Soil Oxygenation: Driven by Iron-Induced Manganese Redox Cycling and Peroxo Complex Formation | Kexin Chen Shanghai Jiao Tong University |
| 17:40-17:55 | 35408 | One Health Implications of Treated and Untreated Wastewater Irrigation: Evidence from farmer-managed systems in Northern India | Sumita Chandel Department of Soil Science, Punjab Agricultural University, Ludhiana, Punjab |
| 17:55-18:10 | 32722 | Elucidating Arsenic-Soil Mineral Interactions at the Microscopic Interface: Insights into Arsenic Geochemistry based on mechanistic speciation | Yuhong Huang Nanjing university |
| 18:10-18:25 | 32714 | Micro-scale redox heterogeneity governs chromium mobility and reoxidation in flooded industrial soils with contrasting properties | Danxing Yang Hunan Agricultural University |



Parallel Sessions

Friday, June 12 (Session 305001)

| | | | |
|-------------|-------|--|--|
| 09:00-09:20 | 34878 | Specific metabolites modulate core microbes and microbial interactions to drive fomesafen dissipation in the soybean rhizosphere | Wenjie Ren Institute of Soil Science, Chinese Academy of Sciences |
| 09:20-09:40 | 34353 | Inhibition mechanism of hexachlorocyclohexane isomers on different methanogen metabolism | Yaqing Liu Guangxi University |
| 09:40-09:55 | 35550 | Coupling Pollution Screening with Ecotoxicological Response: Critical Thresholds, Aromatic Stress, and Dominant Degraders in the Loess Plateau | Min Hu Xi'an University of Architecture and Technology |
| 09:55-10:05 | 32527 | Overlooked Ecological Risks of Chlorinated Pollutants in Anaerobic Soils: Coupling Microbial Dehalogenation with Methanogenesis | Shuyao Li, Yan He State Key Laboratory of Soil Pollution Control and Safety, College of Environmental and Resource Sciences, Zhejiang University; Zhejiang Provincial Key Laboratory of Agricultural Resources and Environment, Zhejiang University |
| 10:05-10:15 | 32433 | From Pollution to Solution: Microbial Insights and Novel Bacteria for Biodegradation of Organochlorine in Coastal Wetland Soil | Meng Liu Zhejiang University |
| 10:15-10:25 | 32504 | Mapping soil deposition of antibiotics at municipality-scale in Brazil | Ricardo Canal Filho Laboratory of Precision Agriculture - Luiz de Queiroz College of Agriculture, University of São Paulo |



Parallel Sessions

Friday, June 12 (Session 305001)

| | | | |
|-------------|-------|---|---|
| 10:25-10:35 | 32915 | Neglected contributions of residual herbicides at various levels on soybean root rot: links with time-series changes in non-target soil microbial communities and functions | Yuxuan Chen Zhejiang University |
| 10:35-10:45 | 32791 | Multi-Omics Metabolic Models of Coupled Dechlorination and Methanogenesis Enhance Pollution and Carbon Reduction in Anaerobic Soils | Yifan Song Zhejiang University |
| 10:45-10:55 | 32624 | Enhanced Fomesafen Microbial Degradation in Anaerobic Soils by Glucose: Degradation Characteristics Under Different Redox Conditions | Shixiang Dai State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences; University of Chinese Academy of Sciences |
| 11:15-11:35 | 33888 | Environmental Prevalence and Application of Organohalide-respiring Bacteria in Remediation | Guofang Xu Zhejiang University |
| 11:35-11:50 | 33449 | Photochemical characterization of paddy water: Formation of reactive intermediates for micropollutant degradation | Yu Zeng Institute of Soil Science, Chinese Academy of Sciences |
| 11:50-12:05 | 32647 | Elevated CO ₂ enhanced PFOA removal and reduced N ₂ O emissions in soil: evidence from a FACE experiment | Jiixin Li Zhejiang University |
| 12:05-12:20 | 34178 | Divergent responses of alfalfa-soil nitrogen cycling to PE and PLA microplastics: A metabolic and microbial perspective | Zhanling Wang Nanjing University |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 8, 8201 | |
|-----------------------|-------|--|---|
| Session 305002 | | Enhanced In Situ Bioremediation for Contaminated Sites | |
| | | <p>Conveners: He-Ping Zhao, State Key Laboratory of Soil Pollution Control and Safety, Zhejiang University Chunling Luo, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences</p> <p>Co-Convenor: Timothy M. Vogel, Université de Lyon</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:15 | 32628 | Nitrogen Transfer and Cross-feeding Between Azotobacter chroococcum and Paracoccus aminovorans Promotes Pyrene Degradation | Ying Teng Institute of Soil Science Chinese Academy of Sciences |
| 09:15-09:30 | 36019 | Effects of Amendments on the Anaerobic Bioremediation of Organohalides in Contaminated Soil and Groundwater | Sydney Kennedy-Flynn University of Alberta |
| 09:30-09:45 | 36057 | In Situ Enhanced Reductive Dechlorination for Chlorinated Aliphatic Hydrocarbon Contaminated Sites | Liu Wuxing Institute of Soil Science, Chinese Academy of Sciences |
| 09:45-10:00 | 35466 | Sequential Causal Machine Learning Assisted Design of Biochar for Laccase Immobilization | Yin Lu Beijing University of Civil Engineering and Architecture |
| 10:00-10:15 | 36064 | Dual inhibition mechanisms drive antagonistic effects during phenanthrene and pyrene co-degradation by Pseudoxanthomonas: Pathway competition and substrate preference | Chao Cai Institute of Urban Environment, Chinese Academy of Sciences |
| 10:15-10:30 | 34534 | Remediation potential of oil-contaminated soils, under biochar and mineral salts influence | N.Manucharova Lomonosov State University; Lomonosov Moscow State University |



Parallel Sessions

Tuesday, June 9 (Session 305002)

| | | | |
|-------------|--------|---|---|
| 10:30-10:45 | 33829 | Thermally Enhanced Biodegradation Mechanisms of Chloroethenes and BTEX Co-Contaminants in Groundwater: Insights into Microbial Functional Gene Enrichment and Biogeochemistry | Zhuanxia Zhang Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment of China |
| 10:45-11:00 | 320B60 | Opportunities, Challenges, and Practices of Soil Remediation in the AI Era | Li Yanxi Center Environmental Protection Technology Co., Ltd. |
| 11:00-11:15 | 33890 | Estimating Petroleum Hydrocarbon Plume Volume and Mass from Sparse and Zero-Inflated Soil Data Using INLA-SPDE | Lulu Peng The University of Saskatchewan |
| 13:30-13:45 | 33290 | Sulfate-Amended In Situ Bioremediation of Chloroethene-Heavy Metal Co-Contamination: Mechanisms, Microbial Responses, and Pilot-Scale Validation | Zheng-Tao Li Zhejiang Gongshang University; Zhejiang University |
| 13:45-14:00 | 33117 | Root foraging for metals as a key trait of hyperaccumulators may be obscured in soil systems: Evidence from experiments and a meta-analysis | Lanfang Hu Sun Yat-sen University |
| 14:00-14:15 | 32903 | Transforming Spent Coffee Grounds (SCG) into an Environmental Asset- Its Characterization and Optimization for Soil Amendment and Remediation Applications | Mhlophe, Prudence University of Glasgow |



Parallel Sessions

Tuesday, June 9 (Session 305002)

| | | | |
|-------------|--------|--|---|
| 14:15-14:30 | 32833 | Phytoremediation of heavy metals in soils of the Christchurch Red Zone | Mingyuan Liu University of Canterbury |
| 14:30-14:45 | 32795 | Variations in root functional traits facilitate the adaptation of pioneer plants to rare earth element mine tailings | Shi-Chen Zhu Guangdong Academy of Forestry |
| 14:45-15:00 | 32072 | Earthworms and Crop Varieties Mediate the Effects of Nano-Hydroxyapatite on Soil Biochemical Characteristics and Cadmium Uptake by Plant | Cevin Tibihenda South China Agricultural University |
| 16:30-16:45 | 33917 | Potential bacterial resource for bioremediation of organochlorine pesticides and flame retardants recognized from forest soil across China | Jiayu Liu South China University of Technology |
| 16:45-17:00 | 32557 | Root acid phosphatases and microbial biomass phosphorus induced Cd tolerance and P acquisition in wheat inoculated with P solubilizing bacteria. | Ammar Ibyasser College of Agriculture and Environmental Sciences, Mohammed 6 Polytechnic University |
| 17:00-17:15 | 32977 | Metabolic complementary Between Cupriavidus and Pseudomonas Facilitates 2,4,6-Trichlorophenol Degradation | Lei Zhang Shanghai Jiao Tong University |
| 17:15-17:30 | 320B38 | Methane-dependent arsenate reduction in paddy soil | Xianjin Tang Zhejiang University |



Parallel Sessions

| Thursday, June 11 | | Room: Expo Center, Hall 8, 8203 | |
|-----------------------|-------|---|--|
| Session 305003 | | Integrated Remediation and Utilization Strategies for Degraded Soils in Mined Lands | |
| | | <p>Convener: Yuanfang Huang, China Agricultural University</p> <p>Co-Convener: Qiuju Wang, Heilongjiang Academy of Black Soil Conservation and Utilization, China Taku Nishimura, University of Tokyo, Japan Hongtao Zou, Shenyang Agricultural University, China Enheng Wang, Northeast Agricultural University, China</p> | |
| Schedule | ID | Title | Presenter |
| 13:30-13:45 | 35636 | Root acquisition-defense strategies of pioneer plants in heavy metal contaminated mining areas | De-Xiang Xu Sun Yat-sen University |
| 13:45-14:00 | 34932 | Vetiver Grass Induced Changes in Soil Acidity, Electrical Conductivity and Soil Organic Carbon in Mine-Affected Soils over two Rehabilitation Periods | Ntimbane Patience Department of Plant Production, Soil Science and Agricultural Engineering; University of Limpopo; Private Bag X 1106, Sovenga, 0727; South Africa |
| 14:00-14:15 | 32929 | The dependency of spontaneous vegetation growth on soil and tailing material properties of mine residue deposits at different climates in Namibia | Stefan Norra Potsdam University |
| 14:15-14:30 | 32182 | Comparison for physico-chemical properties of restored soil with two types of vegetation at abandoned coal mine in Gangwon province, South Korea | Kitae Jo Department of Agriculture, Forestry and Bioresources, Seoul National University |
| 14:30-14:45 | 31754 | Ecological restoration of semi-arid, PTE-enriched toxic mine tailings through organic amendments and microclimatic regulation via fascines | Antonio Aguilar-Garrido Department of Agricultural Engineering of the ETSIA, Technical University of Cartagena member of European University of Technology EUT+ |
| 14:45-15:00 | 32086 | Ultrafast and high-capacity gold retrieval via cascade reduction | Yilin Lu Nanjing University |



Parallel Sessions

| Monday, June 8 Tuesday, June 9 | | Room: Convention Center, Nanjing 303A | |
|-----------------------------------|--------|---|---|
| Session 305005 | | Micro-and Nano-Plastics in the Soil: From Pollution to Solution | |
| | | <p>Convener: Rong Ji, Nanjing University, China</p> <p>Co-Conveners: Thilo Hofmann, University of Vienna, Austria Yongming Luo, Institute of Soil Science, Chinese Academy of Sciences Matthias C. Rillig, Free University of Berlin, Germany Chen Tu, Institute of Soil Science, Chinese Academy of Sciences Yuanyuan Tang, Southern University of Science and Technology Fei Dang, Institute of Soil Science, Chinese Academy of Sciences Cheng Peng, East China University of Science and Technology</p> | |
| Schedule | ID | Title | Presenter |
| Monday, June 8 | | | |
| 13:15-13:30 | 319B64 | High-Throughput Detection Method for Microplastics Based on Fluorescence Spectroscopy and Machine Learning | Cheng Gu State Key Laboratory of Water Pollution Control and Green Resource Recycling, School of Environment, Nanjing University |
| 13:30-13:45 | 36146 | Before You Measure: How Sampling Strategies Shape Microplastics Quantification in Soils | Samuel J. Cusworth ETH Zurich |
| 13:45-13:57 | 35243 | Development of a protocol for the extraction and quantification of nanoplastics in agricultural soils | Quynh Nhu Phan Le Laboratory for inorganic and organic analysis, Flemish Institute for Technological Research, Mol, Belgium |



Parallel Sessions

Monday, June 8 (Session 305005)

| | | | |
|-------------|-------|---|--|
| 13:57-14:09 | 32850 | Characterization of microplastics using pyr-GC/MS and their leaching and runoff behavior in soil | Jeong Yeon Kim Chungbuk National University |
| 14:09-14:21 | 33507 | Temporal Dynamics of Microplastic Accumulation and Soil Quality under Plastic Mulching in Mediterranean Soils | Muhittin Onur Akca Ankara University (Department of Soil Science and Plant Nutrition, Faculty of Agriculture, Ankara, Turkey) |
| 14:21-14:33 | 32178 | From snowpack to soil: microplastic pathways in alpine ecosystems | Benech Andrea University of Turin, Department of Agricultural, Forest and Food Sciences |
| 14:33-14:45 | 34963 | Ten years of microplastics in the soil-plant system research-what have I learned? | Yueling Qi Anhui University |
| 14:45-14:57 | 34526 | Impact of Microplastic Pollution in U.K. Woodland Soil: Evidence from a Long-Term Soil Burial Experiment | Abbie Rogers Northumbria University |
| 14:57-15:09 | 31769 | Migration Behaviors of Typical Microplastics in Soil with Different Textures by Rainfall Induced Surface Runoff | Hui Liu Hohai University |



Parallel Sessions

Monday, June 8 (Session 305005)

| | | | |
|-------------|--------|--|--|
| 16:30-16:45 | 36009 | Interfacial Colloidal Behavior of Microplastic-Pollutant Complexes and Its Regulation by Environmental Conditions | Jie Han Xi'an Jiaotong University |
| 16:45-17:00 | 319B93 | Weathered microplastics trigger metal transformation | Fei Dang State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences |
| 17:00-17:15 | 32196 | Mineralization determines microplastic effects on soil organic carbon | Jie Wang China Agricultural University |
| 17:15-17:30 | 32844 | Mineralization and transfer of polymer-derived carbon from biodegradable mulch into the soil microbial biomass and organic matter pool | Fan Ding Shenyang agricultural university |
| 17:30-17:45 | 31885 | Microplastic transport in soil by nematodes | Yin Liu Department of Environment, Faculty of Bioscience Engineering, Ghent University, 9000 Ghent, Belgium. |
| 17:45-18:00 | 34520 | Changes in the dispersivity of soil substrates after contamination with microplastic polystyrene | Svetlana Klushina Faculty of Soil Science, Lomonosov Moscow State University, Moscow, Russia |
| 18:00-18:15 | 34961 | Oxidized Residues Accelerate Phosphorus Immobilization via Enhanced Surface-induced Nucleation | Hang Zhai Southwest University |



Parallel Sessions

Tuesday, June 9 (Session 305005)

| | | | |
|-------------|--------|---|--|
| 09:00-09:15 | 32400 | Micro-nanoscale polystyrene and polyvinyl chloride co-exposure impacts the uptake and translocation of toxic elements and pesticides by lettuce and wheat | Jason Christopher White The Connecticut Agricultural Experiment Station |
| 09:15-09:30 | 319B94 | Precise tracking of nanoparticles in plant roots | Xian-Zheng Yuan School of Environmental Science & Engineering, Shandong University |
| 09:30-09:45 | 36500 | How does plastic pollution influence soils and soil fungal communities in temperate alluvial forests | Žaklina Marjanović University of Belgrade - Institute for Multidisciplinary Research, National Institute of the Republic of Serbia, Belgrade, Serbia |
| 09:45-10:00 | 319B95 | Impact of microplastics on nitrate reduction in agricultural soils | Xiaofang Ma State Key Laboratory of Soil and Sustainable Agriculture, Changshu National Agro-Ecosystem Observation and Research Station, Institute of Soil Science, Chinese Academy of Sciences |
| 10:00-10:15 | 33184 | Harnessing Trichoderma spp. to Enhance Foliage Yield and Quality of Lettuce (<i>Lactuca sativa</i> L.) in Microplastic-Contaminated Soils: A Sustainable Strategy for Global Soil Health and Food Security | P. K. SHARMA Banaras Hindu University, Varanasi-221005, India |
| 10:15-10:30 | 36123 | Soil microplastic risk from microcosms to field surveys: nematode bioindicators across scales from individuals to micro-food webs | Xuchao Zhang Humboldt-Universität zu Berlin |



Parallel Sessions

Tuesday, June 9 (Session 305005)

| | | | |
|-------------|-------|---|--|
| 10:30-10:45 | 34491 | Ecological risk and machine-learning prediction of microplastic pollution in peatlands | Huu-Tuan Tran Kansas State University |
| 10:45-11:00 | 33399 | Short-Term Exposure to Polystyrene Micro- and Nanoplastics modifies Soil Nutrient Availability without affecting Lettuce Productivity in Tropical Climate | Meththa Gimhani School of Environmental and Natural Sciences, Bangor University, Bangor, Gwynedd, LL57 2UW, UK; Sri Lanka Institute of Nanotechnology, Nanotechnology and Science Park, Mahenwatta, Pitipana, Homagama, Sri Lanka |
| 11:15-11:30 | 32797 | Microplastics disrupt nitrogen-fixing bacterial community with consequences for plant growth | Tingting Zhao Freie Universität Berlin |
| 11:30-11:45 | 34103 | Earthworms Mediated Fate of Microplastics in Soil | Ke Meng Wageningen University & Research; Nanjing University |
| 11:45-12:00 | 35665 | Soil metabolome impacts the formation of the eco-corona and adsorption processes on microplastic surfaces | Yang Song Institute of Soil Science, Chinese Academy of Sciences |
| 12:00-12:15 | 31979 | From field to greenhouse: evaluating microplastics pollution and its potential impact on Mediterranean agricultural soils | Irene Mandrini IRTA (Sustainability in Biosystems) |



Parallel Sessions

Tuesday, June 9 (Session 305005)

| | | | |
|-------------|--------|--|--|
| 13:30-13:45 | 32237 | Environmental Microplastics: Occurrence, Surface Changes and Bioaccumulation | Chen Tu Institute of Soil Science, Chinese Academy of Sciences |
| 13:45-14:00 | 32671 | Impacts and degradation of microplastics (MPs) in agricultural soil | Xiao-San Luo Nanjing University of Information Science & Technology |
| 14:00-14:15 | 319B92 | Beyond Detection: An Intelligent Raman-Based Exploration of the Microplastic Full-Lifecycle | Bei Li State Key Laboratory of Advanced Manufacturing for Optical Systems, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences |
| 14:15-14:30 | 32733 | Ecological Risk Assessment of Microplastics in Soil Based on Probability Distribution and Machine Learning | Cheng Peng East China University of Science and Technology |
| 14:30-14:45 | 32093 | Comparative Degradation and Environmental Impacts of Biodegradable Mulch Films in Agricultural Soils of the United States and China: Toward Sustainable Plastic Management | Xueyu Zhou Washington State University |
| 14:45-15:00 | 33415 | Determining a Carbon Mass Balance and Active Degradation of Isotopically Labeled Polylactic Acid (PLA) in Soil | Jacob W. Clements University of Tennessee-Knoxville |
| 15:00-15:15 | 31918 | A first classification of the effects of microplastics on soil | Julia Feeth University of Sydney |



Parallel Sessions

| Monday, June 8 Tuesday, June 9 | | Room: Convention Center, Nanjing 302B | |
|-----------------------------------|-------|---|---|
| Session 305006 | | New Pollutants in Soils & Agro-Environmental Health | |
| | | Convener: Yanzheng Gao, Nanjing Agricultural University, China | |
| | | Co-Conveners: Hui Li, Michigan State University, USA Dongqiang Zhu, Peking University, China | |
| Schedule | ID | Title | Presenter |
| Monday, June 8 | | | |
| 13:30-13:45 | 32236 | Phototransformation of New Organic Contaminants and Associated Biological Effects as Mediated by Smectite Clays | Dongqiang Zhu College of Urban and Environmental Sciences, Peking University |
| 13:45-14:00 | 32627 | Spatial Compartmentalization Overrides Antibiotic Effects in Shaping Plant-Associated Bacterial Communities: Insights from the Lettuce Microbiome | Oluwaseyi Samuel Olanrewaju Unit for Environmental Sciences and Management, North-West University, Potchefstroom Campus |
| 14:00-14:15 | 34944 | Legacy Phosphorus and the Environmental Health of Agricultural Soils in South Korea | Benjamin L. Turner College of Resources and Environment, Shandong Agricultural University, Tai'an, China; Institute of Agriculture and Life Sciences, Gyeongsang National University, Jinju, South Korea |
| 14:15-14:25 | 35196 | Isotopic Techniques to Assess the Fate of Antimicrobials and Implications for Antimicrobial Resistance in Agricultural Systems | Leilei Xiang Institute of Soil Science, Chinese Academy of Sciences; University of Chinese Academy of Sciences |



Parallel Sessions

Monday, June 8 (Session 305006)

| | | | |
|-------------|-------|--|--|
| 14:25-14:35 | 32682 | Distribution and Fate of Per- and polyfluoroalkyl Substances in Sludge and Biosolids from Municipal Wastewater Treatment Plants across the United States | Zhiliang Xu Department of Plant, Soil and Microbial Sciences, Michigan State University |
| 14:35-14:45 | 32585 | Can Machine Learning Predict Plant Uptake of Per- and Polyfluoroalkyl Substances from Soils? | Rui Li Michigan State University |
| 14:45-14:55 | 32549 | Global ecological and health risks of PFAS in surface soil | Min Wei Zhejiang University |
| 16:30-16:45 | 31854 | Boron in Soil: Linking Microbial Responses and Plant Performance | Felipe Bastida CEBAS-CSIC |
| 16:45-16:55 | 33910 | Adsorption of antibiotics by natural clay minerals | Leonid Perelomov Tula State Lev Tolstoy Pedagogical University |
| 16:55-17:05 | 35827 | Remediation of Prometryn-Contaminated Soil through Microbial-Phytoremediation Synergy: An Integrated Strategy for Soil Degradation Control and Sustainable Reclamation | Yunpeng Wu Southwest Forestry University |
| 17:05-17:15 | 32884 | Soil Biogeochemical Responses to Acid Mine Pollutants in Coal-Mined Inceptisols of Assam, India | Lumbini Kalita PhD scholar, Department of Soil Science, Assam Agricultural University |
| 17:15-17:25 | 36381 | Contrasting effects of arsenic and cadmium on PFAS sorption and transport in soils: Mechanistic insights and mathematical models | Wei Zhang Nanjing University |



Parallel Sessions

Tuesday, June 9 (Session 305006)

| | | | |
|-------------|--------|--|--|
| 09:00-09:15 | 32068 | Advanced Diagnostics and Remediation Technologies for Highly Contaminated Soils | Minkina Tatiana Southern Federal University |
| 09:15-09:30 | 34958 | Ligand-to-Metal Charge Transfer Driven Transformation of Ferrihydrite and its Effect on Arsenic Repartitioning | Xionghan Feng College of Resources and Environment, Huazhong Agricultural University |
| 09:30-09:40 | 32032 | Environmental risk of geoaccumulation and transmission of heavy metals in tailing dams with radioactive elements | Inom Normatov Tajik National University |
| 09:40-09:50 | 320B62 | Nanotoxicomics: Cellular-subcellular impact of nanoparticles in plants | Vishnu D. Rajput |
| 11:15-11:30 | 32254 | Biochar downsizing: From bulk to nanoscale solution in soil remediation and contaminants immobilization | Patryk Oleszczuk Maria Curie-Skłodowska University in Lublin |
| 11:30-11:45 | 31886 | Chemical characterization, fluorescence properties, and photochemical reactivity of natural dissolved organic matter | Davide Vione University of Turin |
| 11:45-11:55 | 33397 | Occurrence of pesticide residues under different land uses across Europe | Andres Rodriguez Seijo Department of Plant Biology and Soil Science, Area of Soil Science and Agricultural Chemistry, Faculty of Sciences, University of Vigo |
| 11:55-12:05 | 36156 | Persulfate activation by Schwertmannite degrading phenanthrene in soil | Yanyan Wang Shanxi Agricultural University |
| 12:05-12:15 | 33309 | Biotransformation of tire-derived 6PPD and 6PPD-Q and metabolism alteration in rice plants under different exposure routes | Jinlin Jiang Nanjing Institute of Environmental Science of the Ministry of Ecology and Environment |



Parallel Sessions

Tuesday, June 9 (Session 305006)

| | | | |
|-------------|-------|---|--|
| 13:30-13:45 | 32428 | Risk Ranking of Antimicrobial Resistance Across One Health Sectors: Leveraging Long-Read Sequencing and Methylation Analysis | Antti Karkman Department of Microbiology, University of Helsinki |
| 13:45-14:00 | 33901 | Antibiotic Residues, Microbial Ecology, and Greenhouse Gas Production in Manure: An Integrated One Health Perspective | Fredrick Gudda International Livestock Research Institute (ILRI); Department of Population Health, Aga Khan University |
| 14:00-14:10 | 34605 | Ecological Risks of Antibiotic Residues and Bioremediation in Agricultural Soils | Lixia Zhao Agro-Environmental Protection Institute, Ministry of Agriculture and Rural Affairs |
| 14:10-14:20 | 34159 | Effects of predator-prey interactions on driving the evolution of bacterial antibiotic resistance | Hangwei HU The University of Melbourne |
| 14:20-14:30 | 33318 | From active antibiotic degraders to resistome-risk mitigation in agricultural soils | Zhi Mei Catalan Institute for Water Research |
| 14:30-14:40 | 34257 | Mitigation of antibiotic resistance genes in agricultural soil by Fe/Mn oxides functionalized biochars via suppressing horizontal gene transfer | Yuxin Li Ocean University of China |



Parallel Sessions

Tuesday, June 9 (Session 305006)

| | | | |
|-------------|-------|--|---|
| 16:30-16:45 | 35081 | Advancing Microplastics Research and Mitigation through Nuclear Science and Case Studies | Fang Wang Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture, Department of Nuclear Sciences and Applications, International Atomic Energy Agency |
| 16:45-17:00 | 33521 | Sulfamethoxazole Transformation by Heat-Activated Persulfate: Linking Transformation Products Patterns with Compound-Specific Isotope Analysis | Xiao Liu Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 17:00-17:15 | 35334 | Synthesis and isotope analysis of labelled sulfamethoxazole to trace persistence and natural degradation in the field | Martin Elsner Technical University of Munich (TUM) |
| 17:15-17:25 | 34757 | Climate-Driven Soil Processes Controlling the Fate of Sulfamethoxazole and Environmental Antimicrobial Resistance in Tropical Agro-Riverine Systems of Vietnam | Ha Lan Anh Isotope Hydrology Laboratory, Institute for Nuclear Science and Technology, VINATOM, Hanoi, Vietnam |
| 17:25-17:35 | 34677 | Adsorption Study of Sulfamethoxazole and Ciprofloxacin on Soil and Biochar Composite | Santanu Mukherjee MS Swaminathan School of Agriculture, Shoolini University of Biotechnology and Management Sciences, Solan 173229, India |
| 17:35-17:45 | 36238 | Fate of Di(2-ethylhexyl) Phthalate (DEHP) in Agricultural Soil: The Role of Environmentally Characteristic Microplastics | Lili Tian Jiangsu Academy of Agricultural Sciences |
| 17:45-17:55 | 34400 | Plastic and Non-Plastic Microfibre Biodegradation in Soil: Monitoring the Impact | Emily Patricia Donaghy Northumbria University |
| 17:55-18:05 | 34127 | Nationwide Screening and Priority Ranking of Plastic Additives in Agricultural Soils of China | Jiamin Zeng Institute of Tibetan Plateau Research, Chinese Academy of Sciences |



Parallel Sessions

| Tuesday, June 9 | | Room: Convention Center, Nanjing 206 | |
|-----------------------|-------|--|---|
| Session 305007 | | Organohalide Biogeochemical Cycling and Remediation in Soil | |
| | | <p>Convener: Shanquan Wang, Sun Yat-Sen University</p> <p>Co-Conveners: Jun Yan, Institute of Applied Ecology, Chinese Academy of Sciences Lorenz Adrian, Helmholtz Centre for Environmental Research (UFZ) Michael Manefield, University of New South Wales (UNSW Sydney)</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:20 | 35546 | Microbial Processes Impacting Fate and Transport of PFASs | Frank Löffler The University of Tennessee |
| 09:20-09:40 | 33962 | Interactions of Zero-Valent Iron with Groundwater Environmental Components and Their Effects on Dechlorination | Feng He Jiangnan University |
| 09:40-10:00 | 35622 | Combined Processes for the Remediation of Trichloroethylene-Contaminated Groundwater: Biological Reductive Dechlorination Coupled with Biochar Adsorption and Supported by Polyhydroxyalkanoates from Organic Wastes | Marco Petrangeli papini University of Rome |
| 10:00-10:15 | 33884 | Community Diversity Determines Colonization and Performance of Organohalide-respiring Bacteria | Guofang Xu Zhejiang University |
| 10:15-10:30 | 34356 | Applying Compound Specific Stable Isotope Analysis for Characterizing the Biotransformation of Hexachlorocyclohexane Isomers by Different Methanogens | Yaqing Liu Guangxi University |
| 10:30-10:45 | 34035 | Anaerobic degradation of chloromethane by "Candidatus Chloromethanibacter formatiformans" strain JHJ | Huijuan Jin Institute of Applied Ecology, Chinese Academy of Sciences |
| 10:45-11:00 | 33889 | Hotspots for Microbial Dehalogenation of Persistent Organohalide Pollutants | Jingting Liu National University of Singapore |



Parallel Sessions

Tuesday, June 9 (Session 305007)

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|-------------|-------|---|--|
| 11:15-11:35 | 33472 | Mapping the Co-Occurrence of Organohalides and Microbial Dehalogenation: A Microbial Biochemistry Framework for One Health | Yan He Zhejiang University |
| 11:35-11:50 | 34315 | Enhancing Electrochemical Reductive Defluorination of PFASs Using ZIF-67 Modified Cathode: Mechanistic Insights and Performance Optimization | Zhuobiao Ni South China Agricultural University |
| 11:50-12:05 | 33791 | Organic Carbon Availability for Sulfate-Reducing Bacteria Governs the Dechlorination Reactivity of Biogenic Sulfidated Nanoscale Zero-Valent Iron | Binbin Wang Zhejiang University of Technology |
| 13:30-13:50 | 33457 | Microbial defluorination of PFASs by native consortia enriched from PFASs and CAHs co-contaminated sites | Xin Song Institute of Soil Science, Chinese Academy of Sciences |
| 13:50-14:10 | 33297 | The Marine Environment as a Rich Source of Diverse Anaerobic Organohalide-Respiring Bacteria | Max Häggblom Rutgers University - New Brunswick |
| 14:10-14:30 | 33086 | Design of effective materials to collaborate with microorganisms in reductive remediation of chlorinated organic pollutants | Jingchun Tang Nankai University |
| 14:30-14:45 | 33579 | N-enriched biochar-iron cobalt mineral system for biomimetic reductive dehalogenation | Weizhao Yin Jinan University (Guangzhou) |
| 14:45-15:00 | 33611 | Demonstration Verification of Characterization Technology for DNAPLs in Typical Chemical Sites | Le Yu Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment of China |



Parallel Sessions

Tuesday, June 9 (Session 305007)

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| 16:30-16:50 | 33175 | Anaerobic biochemistry at the core of reductive dehalogenation in soil and groundwater | Lorenz Adrian Helmholtz Centre for Environmental Research - UFZ; Chair of Geobiotechnology, Technische Universität Berlin, Berlin, Germany |
| 16:50-17:10 | 32843 | Microbial reductive dehalogenation of emerging organohalides and its application in bioremediation | Qihong Lu Sun Yat-sen University |
| 17:10-17:25 | 34147 | Concerted microbial synergy and syntrophy facilitates anaerobic mineralization of 2,4-dichlorophenoxyacetic acid | Xiuying Li Institute of Applied Ecology, Chinese Academy of Sciences |
| 17:25-17:40 | 32966 | Soil Organic Carbon Prediction Based on Vis-NIR Spectral Classification Data Using GWPCA-FCM Algorithm | Haoyu Wang Shandong Agricultural University |
| 17:40-17:55 | 31610 | Amendment of Organic Acids Significantly Enhanced Hydroxyl Radical Production during Oxygenation of Paddy Soil Slurries | Yixuan Wang State Key Laboratory of Pollution Control and Resource Reuse, School of the Environment, Nanjing University |
| 17:55-18:10 | 32969 | A Novel Sample Selection Strategy for Instance-based Transfer Learning in Local Soil Organic Carbon Estimation | Jiayi Zhang Shandong Agricultural University |



Parallel Sessions

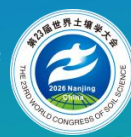
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|-----------------------------------|---------------------------------------|
| Monday, June 8 Tuesday, June 9 | Room: Convention Center, Nanjing 302A |
|-----------------------------------|---------------------------------------|

| | |
|------------------------------|--|
| <p>Session 305009</p> | <p>Soil Pollution by Heavy Metals and Risk Control</p> <p>Convener: Peng Wang, Nanjing Agricultural University, China</p> <p>Co-Conveners: Longhua Wu, Institute of Soil Science, Chinese Academy of Sciences Peter Kopittke, The University of Queensland, Australia Enzo Lombi, University of South Australia</p> |
|------------------------------|--|

| Schedule | ID | Title | Presenter |
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Monday, June 8

| | | | |
|-------------|--------|---|--|
| 13:15-13:30 | 320B37 | Novel approaches for examination of traceelements in the soil-plant continuum | Peter Kopittke The University of Queensland |
| 13:30-13:45 | 32156 | Soil and human health | Peng Wang Nanjing Agricultural University |
| 13:45-14:00 | 36590 | Continental-Scale Soil Mercury Mapping in Australia to Refine Global Frameworks | Larissa Schneider Australian National University |
| 14:00-14:15 | 36584 | Eco-Restoration and Phytoremediation of Metal-Contaminated Soils in Arid Landscapes Using Mycorrhized <i>Lygeum spartum</i> | Ines Terwayet Bayouli Key Laboratory of Soil, Environment and Pollution Remediation, Institute of Soil Science, Chinese Academy of Sciences, No. 298, Chuangyou Road, Qilin Street, Jiangning District, Nanjing, Jiangsu, 211135, China |



Parallel Sessions

Monday, June 8 (Session 305009)

| | | | |
|-------------|-------|---|--|
| 14:15-14:30 | 36115 | Arbuscular mycorrhiza orchestrates phenotypic plasticity of a critical suite of functional traits in plants under vanadium stress | Ziwei Cao Nanjing Tech University, Nanjing |
| 14:30-14:45 | 36022 | Mechanism informed soil washing strategy for synchronized remediation of As, Cd, and Pb | Zhao Liu Institute of Urban Environment, Chinese Academy of Sciences |
| 14:45-15:00 | 35877 | Restricting roles of arbuscular mycorrhizal fungi in cadmium uptake and translocation in rice | Junli Liu Zhejiang Academy of Agricultural Sciences |
| 15:00-15:15 | 35613 | Electrochemical and molecular mechanisms underlying aluminum-enhanced copper homeostasis in maize roots within acidic copper-contaminated soils | Linyu Guo Institute of Soil Science, Nanjing |
| 16:30-16:45 | 35170 | Core microbiomes of Cd-hyperaccumulators and its contribution to plant performance | Tingqiang Li Zhejiang University |
| 16:45-17:00 | 35337 | Content of trace elements and polycyclic aromatic hydrocarbons in soils of polar regions: variability across landscapes | Ivan Alekseev Karelian Research Centre RAS |
| 17:00-17:15 | 35252 | Aqueous and colloidal dynamics in size-fractionated paddy soil aggregates with multiple metals contaminants under redox alternations | Ming Zhou Sinopec Research Institute of Petroleum Processing |
| 17:15-17:30 | 35095 | Dual Roles of Corticiaceae Sp. ZJ 06 In Synergetic Soil Heavy Metal Immobilization and Soil Fertility Enhancement | Lixun Zhang Tsinghua University |
| 17:30-17:45 | 34951 | Efficacy of Agricultural Waste-Derived Engineered Biochar on Arsenic/Iron Dynamics and Alleviating Arsenic Risk in Waterlogged Paddy Soil | Saha Shatabdi Graduate School of Agricultural Science, Tohoku University, Sendai, Japan |
| 17:45-18:00 | 34892 | Iron (hydr)oxide-enriched Biochar for Arsenic Immobilization under Microbial Iron Reduction and Fluctuating Redox Conditions | Yihao Wang Institute of Agricultural Resources and Regional Planning |
| 18:00-18:15 | 34747 | Impact of human activities on soil heavy metal pollution and its potential ecological risks of hills within Guangzhou | Miao Wang South China Normal University |



Parallel Sessions

Tuesday, June 9 (Session 305009)

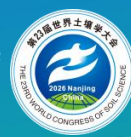
| | | | |
|-------------|-------|--|--|
| 09:00-09:15 | 35913 | Tracing Cadmium Migration and Transformation from Atmospheric Deposition to Rice via Isotopic Fingerprinting | Jun Zhou Institute of Soil Science, Chinese Academy of Sciences |
| 09:15-09:28 | 33255 | Spatial Patterns and Predictive Controls of Heavy Metals in Agricultural Ditch Network Across China | Waqas Mohy-Ud-Din Tianjin University |
| 09:28-09:41 | 34316 | Quantitative Analysis of Heavy Metal Pollution Sources, Influencing Factors, and Delineation of Pollution Risk Areas in Mining Area Soil: A Combined machine learning and Application of Receptor Models | Jia Guo South China Agricultural University |
| 09:41-09:54 | 34153 | Colloidal Cd Mobilization During Reductive Dissolution of Cd-Birnessite by Organic Matter: Role of pH-Dependent Mineral Transformation and Organic Fractionation | Jiangyanjun Sun Yat-sen University |
| 09:54-10:07 | 34133 | Source-risk-driver analysis of heavy metal pollution in karst soils: An integrated assessment in eastern Yunnan, China | Li Bao Yunnan Agricultural University |
| 10:07-10:20 | 34128 | Distinct assembly processes and ecological strategies of bacterial and fungal communities during the aging of Cd and As in soils: Fungi play a predominant role in microbial resistance | Ting Yang Minzu University of China |
| 10:20-10:33 | 34062 | Bioavailability and Mobilization of Colloidal Cd in Alkaline Soils of Wheat Field | Chang Liu Sun Yat-sen University |
| 10:33-10:46 | 34021 | Accumulation characteristics and risk prediction of Cu and Zn contents in typical facility soils in China | Zhang Naiming Yunnan Agricultural University |
| 10:46-10:59 | 33990 | Strategy to Reduce Cadmium Accumulation in Rice via Regulating Root Barrier Formation | Qi Tao Sichuan Agricultural University |



Parallel Sessions

Tuesday, June 9 (Session 305009)

| | | | |
|-------------|-------|--|---|
| 11:15-11:30 | 33916 | Metallomes in Soil-Crop Systems: Integrating Nutrition and Food Safety | Wei Zhang Department of Plant, Soil and Microbial Sciences, Michigan State University |
| 11:30-11:45 | 33819 | Mechanism of Auxin Regulation on Cadmium Uptake in Roots of Different Cadmium-Accumulating Rice Lines | Yan Zhou sichuan agricultural university |
| 11:45-12:00 | 33643 | Phytoremediation of Multi-Metal Contaminated Mine Soils: Native Species Screening and Chelate-Assisted Phytoextraction | Ngoc Son Hai Nguyen Faculty of Resource Management, Thai Nguyen University of Agriculture and Forestry |
| 12:00-12:15 | 33500 | Simultaneous immobilization of arsenic and cadmium in paddy soil with co-application of birnessite and lime | Jianyu Lin Nanjing University |
| 12:15-12:30 | 33358 | Organic Matter Regulates Soil Cadmium Bioavailability | Chenchen Qu Huazhong Agricultural University |
| 13:30-13:45 | 32745 | IAA-producing and Cd-tolerant endophyte <i>Bacillus</i> sp. RE35 enhance Cd trap in rice roots via root cell wall remodeling during colonization | Yan Gao Jiangsu Academy of Agricultural Sciences |
| 13:45-13:57 | 33246 | Reduction of lead bioavailability and phytotoxicity in Pb-slag contaminated soil using soil mixing and compost-modified biochar | Sifau A. Adejumo University of Ibadan, Ibadan, Nigeria |
| 13:57-14:09 | 33096 | Microbial Induced Carbonate Precipitation (MICP) for Cadmium Contamination Remediation coupled with Life Cycle Carbon Sequestration | Mingping Sheng Nanjing University |



Parallel Sessions

Tuesday, June 9 (Session 305009)

| | | | |
|-------------|-------|---|---|
| 14:09-14:21 | 32942 | Stabilizing Urban Soil Lead: Long-Term Effects of Soil Amendments on Bioaccessibility and Speciation | Ganga Hettiarachchi Kansas State University |
| 14:21-14:33 | 32906 | Chemical Remediation of Multi metal Contaminated Inceptisol by Valorizing Calcitic and Lignocellulosic Wastes | Puspita Mookerjee Department of Soil Science & Agricultural Chemistry, Palli Siksha Bhavana Visva-Bharati |
| 14:33-14:45 | 32752 | A Basin-Scale Synthesis of Inorganic Contamination Across Slovenia's Major Floodplains | Nejc Golob University of Ljubljana, Biotechnical faculty, Department of Agronomy |
| 14:45-14:57 | 32715 | Combining multiple high-resolution in-situ techniques to understand the metals mobilization at anoxic-oxic interfaces in flooded industrial soils | Danxing Yang Hunan Agricultural University |
| 14:57-15:09 | 32312 | Quantification of chromium and nickel lateral migration in serpentine soils via ion, colloid and particulate pathways | Shengsheng Sun Institute of Quality Standard and Monitoring Technology for Agro-products of Guangdong Academy of Agricultural Sciences |
| 16:30-16:41 | 34685 | Mining-induced arsenic contamination: cascading effects on soil biogeochemistry, microbial community structure and human health risks | Shreya Chakraborty Agricultural and ecological research Unit, Indian Statistical Institute, Giridih, India |
| 16:41-16:52 | 34402 | Machine learning-supported determination for site-specific natural background values of soil heavy metals | Jian Wu Sichuan University |
| 16:52-17:03 | 34396 | Land use shapes air-surface Hg ⁰ exchange in karst areas | Jicheng Xia Guizhou University |



Parallel Sessions

Tuesday, June 9 (Session 305009)

| | | | |
|-------------|--------|--|--|
| 17:14-17:25 | 32137 | Particle-nanoparticle transformations in metal-contaminated soils | Michael Schindler University of Manitoba |
| 17:25-17:36 | 31946 | Atmospheric Deposition and Trace Element Contamination in Urban Garden Soils and Vegetables in Kingston, New York (US) | Salvatore Engel-Di Mauro SUNY New Paltz |
| 17:36-17:47 | 31912 | Flavonoid Steering Bacterial-Fungal-Soybean Tripartite Symbiosis: Facilitating Cadmium Stress Defense and Growth Enhancement in Soybean | Qingliang Cui Wuhan University of Technology; University of Chinese Academy of Sciences |
| 17:47-17:58 | 31697 | The Effect and Mechanism of Large-Scale Polymer Materials in the Remediation of Soil Chromium Pollution | Jia Wen Hunan University |
| 17:58-18:09 | 31127 | Mineral-organic matter association controls colloidal arsenic mobility from soil to lake | Xinyang Li Department of Earth Sciences, University of Manitoba |
| 18:09-18:20 | 319B36 | Comprehensive Assessment of Soil Heavy Metal Pollution in the Historic Center of Krakow, Poland: Geostatistical and Machine Learning Study | Michał Gąsiorek University of Agriculture in Krakow |
| 18:20-18:31 | 34935 | Large-scale nutrient management strategies shape acidification-induced risks for crop yields and food quality by cadmium | Donghao Xu Wageningen University and Research, Earth Systems and Global Change Group, PO Box 47, 6700AA Wageningen, the Netherlands |



Parallel Sessions

| Friday, June 12 | | Room: Convention Center, Nanjing 208 | |
|-----------------------|-------|---|---|
| Session 305011 | | Novel Techniques in Molecular Environmental Soil Science | |
| | | <p>Convener: Yujun, Wang Institute of Soil Science, Chinese Academy of Sciences</p> <p>Co-Convener: Dongmei Zhou, Nanjing University Wei Li, Nanjing University Mengqiang Zhu, University of Maryland</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:25 | 35881 | Role of Molecular Environmental Science in Addressing a Changing Climate | Donald L. Sparks University of Delaware |
| 09:25-09:40 | 34688 | Visualization of Organic Carbon Distribution in Soil Minerals | Zhenqing Shi School of Environment and Energy, South China University of Technology, Guangzhou, Guangdong 510006, People's Republic of China |
| 09:40-09:55 | 34638 | Iron, sulfur, and carbon dynamics collectively regulate the fate of cadmium over the sulfidation-reoxidation cycle | Yujun Wang Institute of Soil Science, Chinese Academy of Sciences |
| 09:55-10:10 | 34612 | Interaction mechanisms of Cr with organo-mineral complexes : Past achievements and future perspective | Jianjun Yang Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 10:10-10:25 | 34464 | Influence of Soil Properties on the Extraction of Active Contaminant-Degrading Enzymes | Justin M. Hutchison University of Kansas |



Parallel Sessions

Friday, June 12 (Session 305011)

| | | | |
|-------------|-------|--|--|
| 10:25-10:40 | 34697 | Freeze-thaw driven colloid release from soils: Roles of aggregate turnover and pore network | Quanying Wang Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 10:40-10:55 | 35011 | Elucidating the Molecular Mechanisms of Microplastics in Heavy Metal Transformation | Fei Dang Institute of Soil Science, Chinese Academy of Sciences |
| 11:15-11:30 | 33490 | Sample preparation and characterize of soil dissolved organic matter | Qing-Long Fu China University of Geosciences, Wuhan |
| 11:30-11:45 | 34906 | Molecular Mechanism of Mn Oxides driven Oxidative Decomposition and Polymerization of Litter-Derived DOM at Different pH Revealed by FT-IC | Xionghan Feng College of Resources and Environment, Huazhong Agricultural University |
| 11:45-12:00 | 35667 | Solid Phase Molecular Diversity Enhances Soil Organic Matter Persistence | Zhen Yang Research Center for Eco-environmental Sciences, Chinese Academy of Sciences |
| 12:00-12:15 | 35615 | Using an inexpensive RGB color sensor for field quantitative assessment of soil accessible Cu(II) | Guo Linyu Institute of Soil Science, Nanjing |
| 12:15-12:30 | 36236 | Application of liquid chromatography coupled with FT-ICR MS for analysis of soil dissolved organic matter | Xiudi Lv China University of Geosciences |



Parallel Sessions

Thursday, June 11

Room: Convention Center, Nanjing 206

Session 305012

Soil Pollution and Remediation: Investigation, Mechanisms, and Remediation

Conveners:

Hua, ZHANG, Institute of Geochemistry, Chinese Academy of Sciences

Jing Song, ISSCAS

Yasin Orooji, Distinguished Professor, College of Geography and Environmental Sciences, Zhejiang Normal University

Co-Conveners:

Huan ZHONG, School of Environment, Nanjing University

Ruyi YANG, School of Ecology and Environment, Anhui Normal University

Xuefeng YANG, Institute of Geochemistry, Chinese Academy of Sciences

Roger Brewer, TOS Environmental, tosbrewer

Xinyi Cui, Nanjing University

Asif Hayat, Researcher in Materials Science, Lishui University

| Schedule | ID | Title | Presenter |
|-------------|-------|---|---|
| 11:15-11:30 | 32827 | Methods for Assessment of Risk Posed to Agricultural Lands and Food Crops by PFAS-Contaminated Sludges and Irrigation Water | Roger Brewer TOS Environmental, CAS Institute of Soil Science |
| 11:30-11:45 | 33874 | Arbuscular mycorrhizal fungi suffer from perfluorooctanoic acid in soil but ameliorate negative effects on plant performance | Tingting Zhao Freie Universität Berlin |
| 11:45-12:00 | 36242 | PFAS Composition in Irrigation Water Dictates PFAS Uptake by Lettuce: Evidenced by Field Sampling and Laboratory Simulation | Rui Liu Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China |
| 12:00-12:15 | 35075 | Spatial Differentiation Pattern and Driving Mechanisms of Co-enrichment of Selenium and Cadmium in Soils from a Typical Indigenous Zinc Smelting Area | Chaobo Wang College of Agriculture, Guizhou University, Guiyang, 550025, China; Key Laboratory of Karst Georesources and Environment of Ministry of Education, Guizhou University, Guiyang, 550025, China |
| 12:15-12:30 | 32935 | From Enrichment to Digestion: Risk-Benefit Evaluation of Selenium-Enriched Foods Under Arsenic Co-Exposure | Hind BELARBI UM6P & UGent |



Parallel Sessions

Thursday, June 11 (Session 305012)

| | | | |
|-------------|-------|---|---|
| 13:30-13:45 | 33744 | Soil Cadmium Immobilization and Selenium Activation: A Strategy to Enhance Health in High Geological Background Areas | Xingmei Liu Zhejiang University |
| 13:45-14:00 | 34097 | Occurrence and Transformation of Selenium and Cadmium in Porewater During Flood and Drainage: Implications for Safe Production of Rice in Cadmium-Contaminated Seleniferous Paddy Soils | Xin Liang Sun Yat-sen University |
| 14:00-14:15 | 34218 | Selenium-Based Rapid Health Risk Diagnosis and Green Remediation of Heavy Metal Pollution | Hua Zhang Institute of Geochemistry, Chinese Academy of Sciences |
| 14:15-14:30 | 31753 | Interactions of selenium and heavy metals in paddy systems: Mechanisms and risk assessment | Xuefeng Yang Institute of Geochemistry, Chinese Academy of Sciences |
| 14:30-14:45 | 35856 | Recent Strategies in Cadmium Translocation Control in Rice Plants: Mechanisms and Integrated Model | Bin Guo Zhejiang Academy of Agricultural Sciences |



Parallel Sessions

Thursday, June 11 (Session 305012)

| | | | |
|-------------|-------|--|---|
| 16:30-16:45 | 34806 | In Situ Removal of Heavy Metals from Farmland Using Lignin Hydrogel-Based Nanocomposites: A Sustainable Strategy for Simultaneous Crop Production and Soil Remediation | Jianbin Deng South China Agricultural University |
| 16:45-17:00 | 32192 | Model-based Rescue: Phytotoxicity Threshold and Control Strategy of Fluridone Residue on Herbicide-sensitive Rotation Maize | Chi Wu Institute of Plant Protection, Chinese Academy of Agricultural Sciences |
| 17:00-17:15 | 34054 | Engineering Iron-Microbe Interfaces on Biochar to Regulate Phosphate Fixation and Ibuprofen Retention across Soil-Water Continua | Selly Maisyarah National Chung Hsing University |
| 17:15-17:30 | 31675 | Enhanced Remediation of Herbicide-Contaminated Soils Using Phosphate-Modified Biochar | Xingang Liu Institute of Plant Protection, Chinese Academy of Agricultural Sciences |



Parallel Sessions

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| Monday, June 8 Tuesday, June 9 | Room: Convention Center, 6202 |
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|-----------------------|---|
| Session 306003 | Understanding, Managing, and Innovating for Salt-Affected Soils |
| | <p>Conveners: Rongjiang Yao, State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, Nanjing 210008, China Maria Konyushkova, FAO, Global Soil Partnership secretariat Jorge Batlle-Sales. President Commission 3.6 IUSS. University of Valencia</p> <p>Co-Conveners: Elia Scudiero, Department of Environmental Sciences, University of California Riverside, Riverside, California 92521, USA Xuan Yu, State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, Nanjing 210008, China Sanjay Arora, Vice-President Commission 3.6 IUSS. ICAR-Central Soil Salinity Research Institute. Lucknow 226002 (UP) India</p> |

| Schedule | ID | Title | Presenter |
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Monday, June 8

Chair: Rongjiang Yao

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|-------------|-------|--|--|
| 13:15-13:28 | 31575 | “Reshaping soil structure”: A systems engineering mode for ecological management of Salt-Affected Land | Shuwen Hu China Agricultural University |
| 13:28-13:41 | 31614 | Reclamation of saline-alkali soils using fulvic acid: mechanisms and field effects | Wentai Zhang Xinjiang Agricultural University |
| 13:41-13:54 | 31686 | Salinity management when irrigating with non-conventional water sources | Alon Ben-Gal Agricultural Research Organization - Volcani Institute |



Parallel Sessions

Monday, June 8 (Session 306003)

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|-------------|-------|--|--|
| 13:54-14:07 | 32366 | Managing saline soil to boost crop yield and halve nitrogen losses | Wen Wen Zhejiang University |
| 14:07-14:20 | 32664 | Hybrid CNN-LSTM Model for Predicting Nitrogen, Phosphorus, and Potassium (NPK) Fertilization Requirements: Integrating Satellite Spectral Indices with Field Microclimate Data | Abdellatif Moussaid Center for Sustainable Soil Sciences (C3S), College of Agriculture and Environmental Sciences (CAES), University Mohammed VI Polytechnic (UM6P) |
| 14:20-14:33 | 33414 | Soil salinization reduces belowground multifunctionality and crop yield at large spatial scale | Shang Wang Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences; Department of Ecology of Agroecosystems, Helmholtz Centre for Environmental Research - UFZ |
| 14:33-14:46 | 32292 | Phosphorus Dynamics in Salt-Affected Drylands Soils: Influence of Parent Material and Agricultural Management | Andrea Salvucci Department of Agriculture, Food and Environmental Sciences, Polytechnic University of Marche |
| 14:46-14:59 | 34760 | Effect of salinity on soil water vapor sorption and associated hysteresis | Fangjin Dong China Agricultural University |
| 14:59-15:12 | 32199 | Impact of neglected and underutilized species (NUS) on marginal lands: a potential tool for the recovery of soil functionality | Tiziana Danise Department of Environmental, Biological, Pharmaceutical Sciences and Technologies, University of Campania "Luigi Vanvitelli" |



Parallel Sessions

Monday, June 8 (Session 306003)

Chair: Maria Konyushkova

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|-------------|--------|--|---|
| 16:30-16:42 | 36135 | Research on Salt-Alkali Tolerance Mechanisms of Characteristic Plants and Saline-Alkali Land Agriculture in Hetao-Ningxia Irrigation District | Xing Xu Ningxia University |
| 16:42-16:54 | 31977 | Quinoa as a Food Security Crop for Salt-affected and Dry Land Farming Systems | Ghulam Abbas COMSATS University Islamabad |
| 16:54-17:06 | 319B69 | Effects of Organic Materials on Nitrification Process in Saline-Alkali Farmland Soil | Ju Zhao Inner Mongolia Academy of Agricultural and Animal Husbandry Sciences |
| 17:06-17:18 | 35657 | Application of biochar in saline soils enhances soil resilience and reduces greenhouse gas emissions in arid irrigation areas | Qin'ge Dong Northwest A&F University |
| 17:18-17:30 | 32071 | Identification of Salt-Tolerant Barley Genotypes Using Multiple Traits Index and Nutritional Performance at Early Growth Stages | Saira Azmat School of agriculture and environment, University of Western Australia |
| 17:30-17:42 | 33956 | Spatial Distribution, Underlying Mechanisms, and Management Strategies of Soil Salinity in North China Cultivated land: A Soil Profile Perspective | Enyi Xie China Agricultural University |



Parallel Sessions

Monday, June 8 (Session 306003)

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|-------------|-------|--|--|
| 17:42-17:54 | 35339 | Saltwater intrusion impact on coastal agricultural soils of Los Lagos Region, Chile | Oswaldo Salazar Universidad de Chile |
| 17:54-18:06 | 33524 | Coupling relationship between soil salinity, nutrients, and yield during reclaiming for planting rice in saline-sodic soils | Lihua Huang Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 18:06-18:18 | 35907 | Advances in Amelioration Technologies for Sodic and Saline-Sodic Rice Paddy Fields with emphasis on the Songnen Plain of Northeast China | Mingming Wang National Key Laboratory of Black Land Protection and Utilization (Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun, China); Jilin Da'an Farmland Ecosystem National Field Scientific Observation and Research Station (Da'an, China); Northeast Saline-Alkali Land Sub-Center (National Saline-Alkali Land Comprehensive Utilization Technology Innovation Center, Dongying, China) |
| 18:18-18:30 | 35284 | Determination of Irrigation Depth for Tomato considering the Cost for Water under a Saline Condition | Haruyuki Fujimaki Tottori University |



Parallel Sessions

Tuesday, June 9 (Session 306003)

Chair: Jorge Batlle-Sales

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|-------------|--------|--|--|
| 13:30-13:40 | 31897 | Enhancement of Organic Matter in Saline-Alkali Soils: Mechanisms and Technologies | Yuping Zhuge Shandong Agricultural University |
| 13:40-13:50 | 33858 | Spatial Synergies and Trade-offs between Soil Salinity and Organic Carbon in the Yellow River Delta | Xinyu Liu Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences |
| 13:50-14:02 | 35927 | Rice Reclamation Activates Mineral Phosphorus and Alleviates Phosphorus Limitation in Saline-Alkali Soils | Qilin Lv Beijing Academy of Agriculture and Forestry Sciences |
| 14:02-14:14 | 33850 | Soil Nitrogen Transformation under Organic Residue Management in Salt-Affected Soils of the Vietnamese Mekong Delta | Nguyen Thi Kim Phuong Soil Science Department, Can Tho University |
| 14:14-14:26 | 36014 | Halophyte Salt Absorption Characteristics and Biological Remediation Pathways for Saline-Alkali Lands | Yuan Su Ningxia Institute of Water Resources Research (Yinchuan, Ningxia, China) |
| 14:26-14:38 | 36055 | Wenyao: A Domain-Specific Large Language Model for AI-Driven Saline-Alkali Land Reclamation | Congcong Zheng Institute of Computing Technology, Chinese Academy of Sciences |
| 14:38-14:50 | 36448 | Identification of the major constraint factors in sodic saline-alkali paddy soils | XueQingMeng Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 14:50-15:02 | 33520 | Formation Mechanism of Salt Patches and Quantitative Relationship Between Water and Salt in Coastal Salinized Farmland | Wei Zhu Institute of Soil Science Chinese Academy of Sciences; Chuzhou University |
| 15:02-15:14 | 319B68 | Removal Mechanism and Process Application of Soil Washing Technology for Heavy Metals and Salt Ions in Contaminated Soil | Congyanghui Wu Zhengzhou Desen Environmental Technology Co., Ltd.. |



Parallel Sessions

Tuesday, June 9 (Session 306003)

Chair: Xuan Yu

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|-------------|-------|---|---|
| 16:30-16:42 | 33792 | Desalination of sabkha soils as potential source of strategic metals | Makar Silaev Aramco Innovations LLC |
| 16:42-16:54 | 31929 | Escaping Salinity, Cyclone and other Coastal Hazards for Crop Production through Early Sowing in Wet Soils with Strip Tillage | Mohammad Asadul Haque Patuakhali Science and Technology University |
| 16:54-17:06 | 36512 | Global Salt-affected Soils Crisis: FAO's Latest Report and Strategic Responses | Peirou Zhen Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 17:06-17:18 | 35020 | Construction of an Integrated Improvement Technology Model of "Top Promotion, Middle Modification, and Bottom Drainage" for Severe Saline-Alkaline Land in Arid Areas | Jianjun Han Macau University of Science and Technology; Research Institute for Environmental Innovation (Suzhou), Tsinghua |
| 17:18-17:30 | 33737 | The improvement of yield potential through amendment of saline-alkali soils in China: from plot to regional scales | Wenjiao Shi Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences |



Parallel Sessions

Tuesday, June 9 (Session 306003)

| | | | |
|-------------|-------|---|---|
| 17:30-17:42 | 35953 | Synergistic Effect of the Compound Conditioner of Humic Acid, Zeolite and Phosphate Rock Powder on Soil Quality and Rice Yield of Coastal Saline Soil | Junbo Zhang Zhejiang Academy of Agricultural Sciences |
| 17:42-17:54 | 36621 | Biologically Driven Remediation of Saline-Alkali Soils Using Soil Bio-activation Technology in Arid Regions | Abdul Sami GreenTech (Shanghai) Agricultural Technology Co., Ltd |
| 17:54-18:06 | 33871 | The spatial variation of soil quality across land-use and depth in salt-affected coastal soils: evidence from the former Go Cong Dong, Vietnam | Tung Xuan Tan Nguyen Department of Informatics, Natural Resources and Environment (DINRE), Institute for Environment and Resources (IER), Vietnam National University Ho Chi Minh City (VNU-HCM) |
| 18:06-18:18 | 34478 | Aquaculture impoundment reduces salt leaching efficiency of subsurface drainage systems in neighboring farms | Shuangshuang Yu State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China |
| 18:18-18:30 | 34449 | Effects of Different Amendment Measures on the Properties of Coastal Saline-Alkali Soil and Cotton Growth in the Yellow River Delta | Jinyi Yu Shandong Normal University |



Parallel Sessions

| Monday, June 8 | | Room: Expo Center, Hall 8, 8202 | |
|-----------------------|-------|--|--|
| Session 307001 | | Past, Present, and Future of SUITMA (Soils of Urban, Industrial, Traffic, Mining and Military Areas) | |
| | | Convener: Kye-Hoon John Kim, The University of Seoul | |
| | | Co-Convener: Przemysław Charzyński, Nicolaus Copernicus University | |
| Schedule | ID | Title | Presenter |
| 13:15-13:30 | 33636 | Challenges for SUITMA posed by the 2025-2034 Decade of Soil Sciences for Sustainable Development | Edoardo A.C. Costantini CNR-IBE; Academy of Geogofili; National Academy of Agriculture |
| 13:30-13:45 | 35549 | Urban Soils of Nanjing City | Jin-Ling Yang Institute of Soil Science, Chinese Academy of Sciences |
| 13:45-14:00 | 32222 | Urban environmentally sensitive areas (U-ESA) in the city of Bratislava | Jaroslava Sobocka National Agricultural and Food Centre, Soil Science and Conservation Research Institute |
| 14:00-14:15 | 36358 | Effect of solar panel installation on past agricultural soils | Masayuki Kawahigashi Tokyo Metropolitan University |
| 14:15-14:30 | 31869 | Cultural layer in urban soils of Saint Petersburg, Russia | Anastasia Sheshukova Saint Petersburg State University |
| 14:30-14:45 | 32923 | Do local non-statutory habitat designations reflect differences in below-ground biodiversity and functioning in urban green space? | Peng Huang University of Manchester |
| 14:45-15:00 | 35160 | Characterization, hazards assessment and remediation of heavy metals-explosives contaminated soil in military training ranges | Yongbing Zhu, Sanping Zhao, Mengwei Han, Songhao Luo, Bin Dong, Bin Xing State Key Laboratory of Chemistry for NBC Hazards Protection |
| 15:00-15:15 | 35905 | Underestimation of soil organic carbon by global spatially explicit soil datasets in Chinese urban greenspaces | Yiming Xu School of Grassland Science, Beijing Forestry University, Beijing, China |



Parallel Sessions

Monday, June 8 (Session 307001)

| | | | |
|-------------|-------|--|---|
| 16:30-16:45 | 35139 | Environmental behavior of rare earth elements (REEs) in mining area: Occurrence, release, and transport | Miaoyue Zhang Sun Yat-sen University |
| 16:45-17:00 | 33174 | Assessment of trace elements mobility in Technosols developed on heaps of historical polymetallic ore mining in the Sudety Mts., SW Poland | Damian Murach Department of Soil Science, Institute of Agriculture, Warsaw University of Life Sciences - SGGW, Warsaw, Poland |
| 17:00-17:15 | 33434 | Who Bears the Burden? Trace Element Contamination and Environmental Justice in Chicago's Urban Parks | Anna Paltseva Purdue University |
| 17:15-17:30 | 32273 | Soil Diversity in the City of Moscow as a Mirror of Evolutionary Trends in Urban Pedogenesis | Prokofeva T. V. Lomonosov Moscow State University |
| 17:30-17:45 | 32676 | Healthy Soils for Healthy Communities - A Community-based Urban Soil Initiative from Los Angeles | Yujuan Chen Tennessee State University |
| 17:45-18:00 | 36189 | Metabolic resilience of <i>Allium cepa</i> L. in urban technosols: the role of soil sealing and compaction on raffinose family oligosaccharides accumulation | Sara Di Lonardo Research Institute on Terrestrial Ecosystems (IRET), National Research Council (CNR), Via Madonna del Piano 10, 50019 Sesto Fiorentino, Italy; National Biodiversity Future Center (NBFC), Piazza Marina 61, 90133 Palermo, Italy |
| 18:00-18:15 | 36272 | Realising the value of urban soils | Hadee Thompson-Morrison Bioeconomy Science Institute |



Parallel Sessions

| Monday, June 8 | | Room: Convention Center, Nanjing 403B | |
|-----------------------|-------|---|--|
| Session 308001 | | Health Maintenance and Sustainable Management of Acidified Soils | |
| | | <p>Convener: Renfang Shen, Institute of Soil Science, Chinese Academy of Sciences</p> <p>Co-Conveners: Zhihong Xu, Griffith University Ying Teng, Institute of Soil Science, Chinese Academy of Sciences Wenju Zhang, Institute of Agricultural Resources and Regional Planning CAAS Jiuyu Li, Institute of Soil Science, Chinese Academy of Sciences Xueqiang Zhao, Institute of Soil Science, Chinese Academy of Sciences Jing Che, Institute of Soil Science, Chinese Academy of Sciences Ming Liu, Institute of Soil Science, Chinese Academy of Sciences</p> | |
| Schedule | ID | Title | Presenter |
| 13:15-13:28 | 35551 | Rice Husk Biochar-based Fertilizers in Sustainable Management of Acid Soils | Nagabovanalli B. Prakash Department of Soil Science and Agricultural Chemistry, University of Agricultural Science, Bangalore, India |
| 13:28-13:41 | 33454 | Mechanisms for Plants to Adapt to Toxicities of Aluminum and Manganese in Acidic Soil/Root Interfaces | Renkou Xu Institute of Soil Science Chinese Academy of Sciences |
| 13:41-13:54 | 32559 | Diverse organic amendments mitigate soil acidification and enhance crop productivity in acid soil area over four decades | Wenju Zhang Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 13:54-14:07 | 35010 | Mechanisms of periphyton-induced carbonate precipitation and its role in regulating soil acidity in paddy soils | Jiuyu Li Institute of Soil Science, Chinese Academy of Sciences |



Parallel Sessions

Monday, June 8 (Session 308001)

| | | | |
|-------------|-------|--|---|
| 14:07-14:20 | 35028 | Synergistic Amelioration Effects of Dolomite-Based Composite Conditioner on Soil Acidification: Mechanisms and Long-Term Buffering Performance | Chunhui Zhou Research Group for Advanced Materials & Sustainable Catalysis (AMSC), State Key Laboratory of Green Chemical Synthesis and Conversion, College of Chemical Engineering, Zhejiang University of Technology, Hangzhou 310032, China; Anhui International Exchange and Cooperation Base, Qing Yang Institute for Industrial Minerals, Youhua, Qingyang, Anhui 242804, China. |
| 14:20-14:33 | 31935 | The contribution of natural and anthropogenic causes to soil acidification rates under different fertilization practices and site conditions in southern China | Xingjuan Zhu, State Key Laboratory of Nutrient Use and Management, Institute of Agricultural Resources and Environment, Shandong Academy of Agricultural Sciences |
| 14:33-14:46 | 32534 | Biochar Mitigates the Kinetic Release of Aluminum from Soil Driven by Exogenous Acid | Renyong Shi Institute of Soil Science, Chinese Academy of Sciences |
| 14:46-14:59 | 34369 | Spatio-temporal Variation Characteristics and Driving Mechanisms of Soil pH in Farmland of the Changbai Mountain-Liaodong Region | Runxue Bi Shenyang Agricultural University |
| 14:59-15:12 | 32814 | Co-application of lignosulfonate and calcium-magnesium phosphate fertilizer, an effective liming strategy for acidic purple soils in southwest China | Debo He Institute of Mountain Hazards and Environment. CAS |



Parallel Sessions

| Tuesday, June 9 | | Room: Convention Center, Nanjing 209 | |
|-----------------------|-------|--|---|
| Session 308002 | | Wetland Soils, Acid Sulfate Soils and Sulfidic Materials | |
| | | <p>Convener: Anton Boman, Geological Survey of Finland</p> <p>Co-Conveners: Vanessa Wong, Monash University Chaolei Yuan, Sun Yat-sen University</p> | |
| Schedule | ID | Title | Presenter |
| 13:30-13:45 | 34972 | Improved sampling and laboratory methods using chip-trays for assessment and classification of acid sulfate soils | Robert Fitzpatrick Acid Sulfate Soils Centre, Adelaide University, Urrbrae, South Australia, Australia |
| 13:45-14:00 | 33055 | Peat in Australia - Diversity, Values, Risks and the Universal Occurrence of Acid Sulfate Soils in South Australia | Christopher Auricht Auricht Projects and Adelaide University |
| 14:00-14:15 | 33042 | The Effects of Pyrite on Soil Organic Carbon Storage in a Temperate Wetland Coastal Acid Sulfate Soil | Vanessa Wong Monash University |
| 14:15-14:30 | 31916 | Differences in life history strategies of bacteria between paddy and upland soils and implications for carbon sequestration | Chaolei Yuan Sun Yat-sen University |



Parallel Sessions

Monday, June 8 (Session 308002)

| | | | |
|-------------|-------|---|--|
| 14:30-14:45 | 35261 | Iron oxyhydroxides, oxyhydroxysulfates and efflorescent sulfate salts as indicators of biogeochemical processes at low pH in acid sulfate weathering environments | Robert Fitzpatrick Acid Sulfate Soils Centre, Adelaide University, South Australia, Australia |
| 14:45-15:00 | 34157 | Neutralisation of Acid Sulfate Soils with Industrial Side Streams | Thomas Kronberg Åbo Akademi University |
| 15:00-15:15 | 34262 | Geophysical Methods for Mapping Acid Sulfate Soil Properties | Anton Boman Geological Survey of Finland (GTK), P.O. Box 97, FI-67101 Kokkola, Finland |
| 15:15-15:30 | 31994 | Cross-regional transfer learning to predict acid sulfate soils in Finland using Random Forest | Virginia Estévez Arcada University of Applied Sciences |
| 15:30-15:45 | 32241 | The Acid Sulfate Soil Distribution Mapping in The Buffer Area of Nusantara Capital City, Kalimantan, Indonesia | Wirastuti Widyatmanti Universitas Gadjah Mada |
| 16:30-18:30 | - | Acid Sulfate Soils Working Group Business Meeting | Anton Boman |



Parallel Sessions

| Monday, June 8 | | Room: Expo Center, Hall 8, 8201 | |
|-----------------------|-------|---|--|
| Session 309001 | | Forest and Grassland Soil Functions and Sustainable Utilization under Global Change | |
| | | <p>Convener: Qiwu Sun, Research Institute of Forestry Chinese Academy of Forestry</p> <p>Co-Conveners: Yunting Fang, Institute of Applied Ecology, Chinese Academy of Sciences Yongfu Li, Zhejiang A&F University Zhihong Xu, Griffith University</p> | |
| Schedule | ID | Title | Presenter |
| 13:15-13:30 | 31681 | The regulation of soil microbial diversity and life-history strategies on ecosystem functions | Zhenghu Zhou Northeast Forestry University |
| 13:30-13:45 | 35414 | Tree functional diversity enhances forest carbon and nitrogen storage across gradients | Xinli Chen Zhejiang A&F University |
| 13:45-14:00 | 33329 | Forest methane sink under climate change | Xiaoqi Zhou East China Normal University |
| 14:00-14:15 | 35580 | Microbial intra- and extracellular phosphorus recycling in response to global imbalanced soil nutrient changes | Jie Chen Research Institute of Tropical Forestry, Chinese Academy of Forestry |
| 14:15-14:30 | 34014 | Phosphorus in (semi-)natural soils: concentration, stock, dynamics, and drivers | Enqing Hou South China Botanical Garden, Chinese Academy of Sciences |
| 14:30-14:45 | 32098 | Coupling and decoupling of soil carbon, nitrogen, phosphorus and potassium stocks along a 6000 km northeast-southwest temperature gradient in China | Qiqi Tan China Agricultural University |
| 14:45-15:00 | 35481 | Soil-plant silicon cycle and climate change | Zhihao Pang Beijing Forestry University |
| 15:00-15:15 | 32054 | Heatwaves increase greenhouse gas emissions from different ecosystems | Scott X Chang Department of Renewable Resources, University of Alberta |



Parallel Sessions

Monday, June 8 (Session 309001)

| | | | |
|-------------|--------|--|--|
| 16:30-16:45 | 35430 | Biochar mitigates the effects of nitrogen deposition on soil greenhouse gas emissions via microbial regulation in a subtropical forest | Yongfu Li Zhejiang A&F University |
| 16:45-17:00 | 35524 | Land-use change mediated associations among soil environmental factors, microbial networks, and soil multifunctionality: A case study of the Changchong River small watershed in Chaohu Lake | Lingyu Hou Research Institute of Forestry, Chinese Academy of Forestry |
| 17:00-17:15 | 35202 | Southern urban forest converted from orchard abandonment: a potentially important N ₂ O source driven by warm-humid climate | Lifang Wu Tsinghua university |
| 17:15-17:30 | 319B97 | Why the Effects of Vegetation Restoration on Soil Properties May Be Overestimated: Evidence from 30 Years of Long-Term Monitoring on the Loess Plateau, China | Tonggang Zha College of Soil and Water Conservation, Beijing Forestry University |
| 17:30-17:45 | 34960 | Influence of Forest Stand Age on Soil Water Dynamics in Semi-Arid Forests of the Loess Plateau | Muhammad Waseem Rasheed Research center for Eco environmental sciences, CAS, China; University of Chinese Academy of Sciences, Beijing, 100049, China |
| 17:45-18:00 | 34699 | Study on the Influencing Mechanisms of Mercury Accumulation Characteristics in Grassland Soils of Guizhou Province Under the Context of Ecological Restoration | Yanmei Zhou GuizhouUniversity |
| 18:00-18:15 | 34407 | Grazing Modulates the Allelopathic Impact of an Invasive Shrub on Soil Seed Bank Diversity and Function: Implications for Grassland Soil Health | Qiqi Li Lanzhou University; Lanzhou University |
| 18:15-18:30 | 34213 | Effects of nitrogen deposition on plant community structure and niche characteristics in typical steppe | SiYuan Bao Inner Mongolia Agricultural University |



Parallel Sessions

| Thursday, June 11 | | Room: Expo Center, Hall 8, 8201 | |
|-----------------------|-------|---|--|
| Session 309002 | | Forest Soil Management: Processes, Challenges, and Sustainable Production | |
| | | <p>Convener: Wenfa Xiao, Distinguished Professor of Forest Ecology, Deputy Dean of the Chinese Academy of Forestry, Ecology and Nature Conservation Institute, Chinese Academy of Forestry</p> <p>Co-Convener: William R. Horwath, Distinguished Professor of Soil Biogeochemistry, Dept. of Land, Air and Water Resources, University of California, Davis</p> | |
| Schedule | ID | Title | Presenter |
| 11:15-11:30 | 35996 | Soil Carbon Sequestration in forest soils: Limits and Potential versus Potential | William Horwath Department of Land, Air and Water Resources, University of California, Davis, USA |
| 11:30-11:45 | 35399 | Cessation of nitrogen addition increased organic matter stability by decoupling carbon input and stabilization in a subtropical forest soil | Xinzhang Song Zhejiang A&F University |
| 11:45-12:00 | 35404 | The effects of N deposition on the decomposition of C rhizodeposits and its underlying microbial mechanism in Moso bamboo forest | Shi Man Zhejiang A&F University |
| 12:00-12:15 | 31735 | Aggregate-mediated mechanisms of soil carbon and greenhouse gas emission under green manure cover in citrus orchard | Lei Lei Ecology and Nature Conservation Institute, Chinese Academy of Forestry |



Parallel Sessions

Thursday, June 11 (Session 309002)

| | | | |
|-------------|-------|--|---|
| 13:30-13:45 | 33540 | Managing Forest Soil Carbon to Preserve Climate and Biodiversity | Lydie-Stella KOUTIKA Soil Care and Environmental Studies (SCES) |
| 13:45-14:00 | 32065 | Multi-trophic biodiversity regulates decomposition and mitigates drought effect | Junwei Luan International Centre for Bamboo and Rattan |
| 14:00-14:15 | 31902 | Sensitivity of biochar-root interaction on the subtropical forest increase of sink and reduction of emission | Xiaogai Ge; Benzhi Zhou Chinese Academy of Forestry (Research Institute of Subtropical Forestry) |
| 14:15-14:30 | 35364 | Burn history and residue solubility influence the transformation of pine litter in forest soils | Andrew J. Curtright University of California, Davis |
| 14:30-14:45 | 31689 | Mechanisms of soil organic carbon accumulation under green manure cover in citrus orchard | Jiajia Zhang Ecology and Nature Conservation Institute, Chinese Academy of Forestry |
| 14:45-15:00 | 35519 | Compartmentalized Homeostasis Drives High Bamboo Forest Productivity Under Nutrient Imbalance | Zhikang Wang Zhejiang A&F University |



Parallel Sessions

Thursday, June 11 (Session 309002)

| | | | |
|-------------|--------|--|--|
| 16:30-16:45 | 31688 | Spatial Characteristics of Soil Organic Carbon in Forests of China | Wenfa Xiao Ecology and Nature Conservation Institute, Chinese Academy of Forestry |
| 16:45-17:00 | 34442 | Responses of selected soil physical properties to early stages of active ecological restoration in the Mistbelt forest of South Africa | Alen Manyevere Department of Agronomy, University of Fort Hare |
| 17:00-17:15 | 31706 | Fire-derived charcoal enhances soil ecological functions and recovery in subtropical forest plantations | Yuzhe Wang Fujian Agriculture and Forestry University |
| 17:15-17:30 | 36505 | Forest Development Determines the Compositions and Structures of Soil Invertebrate Communities in Reclaimed Coastal Lands | Lili Cao Nanjing Forestry University |
| 17:30-17:45 | 34833 | Resistance and Resilience of Soil Microbial Communities to Forest Degradation and Their Role in Carbon Sequestration in Dry Tropical Forests | Luis Merino Martín Departamento de Biología y Geología, Física y Química Inorgánica, Universidad Rey Juan Carlos (URJC), Móstoles, Spain.; Instituto de Investigación en Cambio Global (IICG-URJC), Universidad Rey Juan Carlos, Móstoles, Spain. |
| 17:45-18:00 | 319B91 | Geographic variations and multiple drivers of soil organic carbon stability in larch plantations | Haiyan Wang State Key Laboratory of Efficient Production of Forest Resources, Key Laboratory of Forest Cultivation and Protection, Ministry of Education, College of Forestry, Beijing Forestry University |



Parallel Sessions

| Tuesday, June 9 | | Room: Convention Center, Nanjing 208 | |
|-----------------------|-------|--|---|
| Session 309004 | | Soil Microbial Diversity and Functions in Carbon and Nitrogen Cycling in Response to Tree Diversity, Wildfires and Climate Change | |
| | | Convener: Zhihong Xu, School of Environment and Science, Griffith University, Brisbane, Queensland 4111, Australia | |
| | | Co-Conveners: Zhiqun Huang, Fujian Normal University, China | |
| | | Chirs Johnson, Department of Civil & Environmental Engineering, Syracuse University, Syracuse, New York, USA | |
| Schedule | ID | Title | Presenter |
| 09:00-09:30 | 34595 | Nitrogen enrichment weakens tree diversity effects on productivity | Zhiqun Huang Fujian Normal University |
| 09:30-09:45 | 32386 | Forest plant community and fire control on soil microbial diversity and functions related to C and N cycling and GHG fluxes | Castaldi Simona Department of Environmental, Biological and Pharmaceutical Science and Technologies, University of Campania Luigi Vanvitelli |
| 09:45-10:00 | 33739 | Global wildfire effects on soil bacteriome and recovery trajectories | Yuying Jiang Sun yat-sen University |
| 10:00-10:15 | 33642 | The Resilience to Climate Change and Human Activities of the Forest Ecosystems in Central Africa, South America, Southeast Asia and European Union | Lydie-Stella KOUTIKA Soil Care and Environmental Studies (SCES) |



Parallel Sessions

Tuesday, June 9 (Session 309004)

| | | | |
|-------------|-------|--|---|
| 10:15-10:30 | 33341 | Functional Sensitivity to Environmental Conditions Exceeds Community Composition in Forest Soils | Guoting Shen Helmholtz-Centre for Environmental Research - UFZ |
| 10:30-10:45 | 35704 | Shifts in soil microbial resource limitation along a natural gradient of ECM tree dominance in a subtropical montane forest | Qiuxiang Tian Wuhan Botanical Garden, Chinese Academy of Sciences |
| 10:45-11:00 | 31905 | Long-term throughfall exclusion decreased soil organic carbon components by higher soil CUE and lower microbial enzyme activities on <i>Phyllostachys edulis</i> | Xiaogai Ge Research Institute of Subtropical Forestry, Chinese Academy of Forestry |
| 11:15-11:30 | 35440 | Effects of dead lying trunks of deciduous and coniferous trees on soil microbial communities in old-growth broadleaved forests after windthrows | Kristina Ivashchenko IMPB RAS, branch of the Keldysh IAM RAS |
| 11:30-11:45 | 34692 | Soil depth outweighs environmental change in shaping microbial diversity-multifunctionality relationships | Kaikai Min Institute of Applied Ecology, Chinese Academy of Sciences |
| 11:45-12:00 | 34649 | Microbial Recolonization Dynamics and Ecological Succession in Post-Fire Soils | Pedro Mondaca Institute of Ecology & Biodiversity, Chile; Facultad de Medicina Veterinaria y Agronomía, Universidad de Las Américas, Santiago, Chile |



Parallel Sessions

| Thursday, June 11 | | Room: Convention Center, Nanjing 208 | |
|-----------------------|-------|--|---|
| Session 309005 | | Soil Organic Matter Dynamics and Nutrient Cycling in Global Forests under Climate Change | |
| | | Convener: Zhihong Xu, School of Environment and Science, Griffith University, Brisbane, Queensland 4111, Australia | |
| | | Co-Conveners: Scott Chang, University of Alberta Chirs Johnson, Department of Civil & Environmental Engineering, Syracuse University, Syracuse, New York, USA | |
| | | | |
| Schedule | ID | Title | Presenter |
| 11:15-11:45 | 34023 | Nature-based solutions for mitigating climate change: from rangelands to forests | Scott X Chang Department of Renewable Resources, University of Alberta |
| 11:45-12:00 | 33892 | Resolving Organic-Inorganic Carbon Overlap: Comparing Soil Organic Carbon (SOC) Measurement Methods to Improve Accuracy in Calcareous Soils | Nastaran Chalabianlou University of Guelph |
| 12:00-12:15 | 35482 | Nitrogen deposition enhances microbial carbon pump-mediated soil organic carbon formation and stabilization | Huihui Han Northwest A&F University |
| 12:15-12:30 | 35331 | Optical Properties of Dissolved Organic Matter of Albic Retisols (Middle Taiga, Komi Republic, Russia) | Sofia A. Ogorodniaia Federal Research Centre V.V. Dokuchaev Soil Science Institute, Moscow, Russia |
| 13:30-13:45 | 34829 | Global-Scale Land Use Change Will Become a Huge Potential Carbon “Source” in the Future: Mechanism Analysis and Spatial Projections to 2100 | Youbin Liu Central South University of Forestry and Technology |
| 13:45-14:00 | 33630 | Icelandic old birch woodlands have valuable soil carbon reserves | Solveig Sanchez Land and Forest, Iceland |
| 14:00-14:15 | 34783 | Deciphering the key role of core microbe in the decomposition of eucalyptus harvest residue | Lijun Chen Central South University of Forestry and Technology |



Parallel Sessions

Thursday, June 11 (Session 309005)

| | | | |
|-------------|-------|--|---|
| 14:15-14:30 | 34372 | Depth-resolved controls on phosphorus bioavailability across forest soil profiles in Northeast China | Yaqi Zhang Northeast Forestry University |
| 14:30-14:45 | 32577 | Impacts of Mistletoe Infection on Soil Hydrology and Chemistry in Abies and Pinus Ecosystems | Lizardo Reyna-Bowen Faculty of Forestry, University of Agriculture in Kraków |
| 14:45-15:00 | 33925 | Rubber-Based Agroforestry Ecosystems Enhance Soil Enzyme Activity but Exacerbate Microbial Nutrient Limitations | Wenxian Xu Rubber Research Institute, Chinese Academy of Tropical Agricultural Sciences; Yunnan Institute of Tropical Crops |
| 15:00-15:15 | 35804 | Contrasting effects of roots and arbuscular mycorrhizal fungi on soil carbon storage reveal divergent pathways in forest carbon cycling | Xin Guan Nanjing Forestry University |
| 16:30-16:45 | 32948 | Subsequent Fire Alters Jack Pine Pyrogenic Organic Matter Persistence | Mengmeng Luo Department of Soil and Environmental Sciences, University of Wisconsin-Madison |
| 16:45-17:00 | 33671 | Ecological Stoichiometry of Plant-Soil Systems in Pinus sylvestris var. mongolica Plantations in the Semi-Arid Region of Northeast China | Yi Yang Shenyang Agricultural University |
| 17:00-17:15 | 34872 | Soil Organic Carbon Stocks and Controlling Factors in Planted and Natural Mangrove Forests Developed on Acid Sulfate Soils | Nghia Van Nguyen Faculty of Technology, Dong Nai Technology University, Bien Hoa City, Vietnam |
| 17:15-17:30 | 33022 | The decomposition and stabilization of microbial residues in forest soil | Chao Wang Institute of Applied Ecology, Chinese Academy of Sciences |
| 17:30-17:45 | 35308 | Elevated CO ₂ levels promotes the global forest phosphorus cycle | Yijin Lu Zhejiang University |



Parallel Sessions

| Tuesday, June 9 | | Room: Convention Center, Nanjing 209 | |
|-----------------------|-------|--|--|
| Session 310002 | | Soil Health-Water-GHG Nexus for Sustainable Crop Production in Paddy Soils | |
| | | <p>Convener: Mizuhiko NISHIDA, Chair, Paddy Soils Working Group, Tohoku University, Japan</p> <p>Co-Convener: Kazumichi FUJII, Fukushima Institute for Research, Education and Innovation, Japan</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:15 | 33271 | Persistence and controls of soil organic carbon in paddy fields across Asian countries: a soil physicochemical fractionation approach | Junta YANAI Kyoto Prefectural University |
| 09:15-09:30 | 33431 | Decades of intensive rice cropping alter tropical soil fertility | Kazuki Saito International Rice Research Institute (IRRI) |
| 09:30-09:45 | 32747 | The Effects of Paddy-Upland Rotation on the Six-Year Nitrogen Dynamics of ¹⁵ N-labeled Cow Manure Compost | Sota Kojima Tohoku University |
| 09:45-10:00 | 34816 | Feeding the world while mitigating climate change: a global meta-synthesis of agronomic pathways for low-emission rice | Jean-Martial Johnson International Rice Research Institute (IRRI) |
| 10:00-10:15 | 31716 | Effects of Alternate Wetting and Drying (AWD) on Driving Factors Controlling CH ₄ Emissions from Rice Paddy Soils | Lucia Crosetto Department of Agricultural, Forest and Food Sciences, University of Torino |



Parallel Sessions

Tuesday, June 9 (Session 310002)

| | | | |
|-------------|-------|---|--|
| 10:15-10:30 | 35625 | Pedogenesis Shapes the Basis of Sustainability of Paddy Soils | Ganlin Zhang Institute of Soil Science, Chinese Academy of Sciences |
| 10:30-10:45 | 35001 | Alternate Irrigation Reduces Methane Emissions in Malaysian Rice Paddies | Muhammad Firdaus Sulaiman Faculty of Agriculture, Universiti Putra Malaysia; Institute of Tropical Agriculture and Food Security, Universiti Putra Malaysia |
| 10:45-11:00 | 33955 | Dry direct seeding rice and water saving irrigation reduce root exudation of organic acids and methane emission from paddy soils | Kazumichi Fujii Fukushima institute for Research, Education and Innovation |
| 11:15-11:30 | 34741 | Transplanting Date Potentially Modulates Post-Season Methane Emissions via Residual Root Carbon Inputs in a Mono-Rice Paddy Field | Sang Yoon Kim Department of Agricultural Chemistry & Interdisciplinary Program in IT-Bio Convergence System, Suncheon National University, Suncheon 57922, Republic of Korea; Department of Agricultural Life Sciences, Suncheon National University, Suncheon 57922, Republic of Korea |



Parallel Sessions

Tuesday, June 9 (Session 310002)

| | | | |
|-------------|-------|---|--|
| 11:30-11:45 | 32053 | Impact of Rising Tropospheric Ozone Concentrations on Rhizospheric Carbon Pools vis-à-vis Methane Emission in Tropical Rice Soil | Ziom Adam Michael Department of Soil Science and Agricultural Chemistry, Institute of Agricultural Sciences, Faculty of Agriculture, Banaras Hindu University; Department of Soil Science and Agricultural Chemistry, College of Agriculture, Odisha University of Agriculture and Technology; Division of Crop Production, ICAR-Central Rice Research Institute |
| 11:45-12:00 | 35220 | Soil carbon budgets under three different fertilizer management in paddy fields, Japan. | Chie Hayakawa Graduate School of Regional Development and Creativity Utsunomiya University, Utsunomiya, Japan; School of Agriculture, Utsunomiya University, Utsunomiya, Japan |
| 12:00-12:15 | 31594 | Effect of Iron Materials on Methane Emission from Paddy Field | Kazuuki INUBUSHI Tokyo University of Agriculture |
| 12:15-12:30 | 35409 | Hybrid machine-learning and process-based regional crop modelling to improve rice production strategies in data-limited conditions: a case study of Lao PDR | Qiang Li State Key Laboratory of Efficient Utilization of Arid and Semi-arid Arable Land in Northern China, Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, Beijing 100081, China; School of Agriculture, Food and Ecosystem Sciences, The University of Melbourne, Victoria 3010, Australia; National Agriculture and Forestry Research Institute, Ministry of Agriculture and Environment, Lao PDR |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 6, 6201 | | | |
|-----------------------|-------|--|---|---|---|
| Session 310004 | | Understanding Paddy Soil Microbiomes for Food and Climate Security | | | |
| | | Convener: Yahai Lu, Peking University | | | |
| | | Co-Conveners: ASAKAWA Susumu, Nagoya University, Japan NISHIDA Mizuhiko, Chair, Paddy Soils Working Group, IUSS. Tohoku University, Japan MURASE Jun, Nagoya University, Japan BOWATTE Saman, AgResearch, Grasslands Research Centre, New Zealand WANG Guanghua, Northeast Institute of Geography and Agroecology, CAS | | | |
| | | Schedule | ID | Title | Presenter |
| | | 13:30-13:50 | 34860 | Microbial background for mitigating methane emission from rice fields | Ralf Conrad Max-Planck-Institute for Terrestrial Microbiology, Department of Biogeochemistry, 35043 Marburg, Germany |
| 13:50-14:05 | 33675 | Isolation, characterization and identification of culturable methane-oxidizing bacteria inhabiting paddy field ecosystem | Susumu Asakawa Graduate School of Bioagricultural Sciences, Nagoya University | | |
| 14:05-14:20 | 34619 | Impact of microbial interactions on aerobic methanotrophs and methane oxidation activity in soils | Yong Li Zhejiang Provincial Key Laboratory of Agricultural Resources and Environment, Zhejiang University, Hangzhou 310058, China | | |
| 14:20-14:35 | 34713 | From Genes to Gas: Dynamics of Active Methanogenic Food Webs in Rice Paddies | Jingjing Peng College of Resources and Environmental Sciences, State Key Laboratory of Nutrient Use and Management; Key Laboratory of Plant-Soil Interactions; National Academy of Agricultural Green Development, China Agricultural University, Beijing, China | | |



Parallel Sessions

Tuesday, June 9 (Session 310004)

| | | | |
|-------------|-------|--|---|
| 14:35-14:50 | 34957 | Effects of light on microbial community in the surface soil of a paddy field | Jun Murase Nagoya University |
| 14:50-15:05 | 34968 | Beyond Nutrients: Minerals as Evolutionary Architects and Signaling Hubs in Soil Microbial Communities | Jianchao Zhang Tianjin University |
| 15:05-15:20 | 32788 | Response of Rhizosphere Sulfur Utilization Microbiome to Rice Domestication | Changji Wang Netherlands Institute of Ecology (NIOO-KNAW); Utrecht University |
| 15:20-15:30 | 33503 | Rare earth elements reshape the methanotrophs community to enhance the CH ₄ oxidation in paddy fields | Yalin Yin Sun Yat-sen university |
| 16:30-16:45 | 33954 | Coordinated Action of Firmicutes and Bacteroidetes in Rice Straw Decomposition | Yahai Lu Peking University |
| 16:45-17:00 | 36509 | Rice root iron plaque as a mediator to enhance biological nitrogen fixation in paddy soil | Rong Jia Key Laboratory of Land Resources Evaluation and Monitoring in Southwest China, Ministry of Education, Sichuan Normal University, Chengdu, Sichuan Province 610066, PR China; Fujian Provincial Key Laboratory of Soil Environmental Health and Regulation, College of Resources and Environment, Fujian Agriculture and Forestry University, Fuzhou Fujian Province 350002, PR China; Engineering Research Center for the Development of Farmland Ecosystem Service Functions, Sichuan Province, PR China |
| 17:00-17:15 | 32569 | Domesticated rice alters the rhizosphere microbiome, reducing nitrogen fixation and increasing nitrous oxide emissions | Jingjing Chang Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences; Netherlands Institute of Ecology |
| 17:15-17:30 | 35755 | Nitrous oxide acts as an alternative electron acceptor for microbial methane oxidation in oxygen-deficient microcosms | Fengqin Liu Henan Agricultural University |
| 17:30-17:45 | 33957 | Irrigation management drives the niche differentiation and metabolic versatility of ammonia-oxidizing archaea in paddy soils | Xue Zhou Hohai University |



Parallel Sessions

| Monday, June 8 | | Room: Expo Center, Hall 6, 6201 | |
|-----------------------|-------|--|--|
| Session 310005 | | <p>Multiple Paths to Soil Health: From Technology to Policy, From Paddy Fields to the Globe</p> <p>Conveners: Cheng-Hsien Lin, Department of Soil and Environmental Sciences, National Chung Hsing University Lillian Øygarden, Chair of commission 3.2. Soil and Water Conservation Brajesh Singh, Chair of FAO Intergovernmental Technical Panel on Soils (ITPS), Hawkesbury Institute for the Environment, Western Sydney University, Australia</p> <p>Co-Conveners: Hung-Yu Lai, Department of Soil and Environmental Sciences, National Chung Hsing University Pei-Tzu Kao, Department of Soil and Environmental Sciences, National Chung Hsing University Dorota Dec. Vice chair of commission 3.2 Soil and water conservation Felipe A. Zuñiga U., Universidad Austral de Chile, Instituto de Bosques y Sociedad Xinhua Peng, Chair of FAO Intergovernmental Technical Panel on Soils (ITPS), Vice-chair of FAO Intergovernmental Technical Panel on Soils (ITPS), Institute of Agricultural Resources and Regional Planning, CAAS, P.C. China Tingting Chang, Hohai Unviersty</p> | |
| | | | |
| Schedule | ID | Title | Presenter |
| 13:15-13:18 | - | Opening remarks | - |
| 13:18-13:31 | 33403 | Changes in farm business model: Combined effects on soil health, ecosystem services, farm profit, and associated needs for incentives | Youssef Wang-Touri Wageningen University & Research |
| 13:31-13:44 | 34765 | Triangular approach (SQ-GQ-GY) based soil health assessment - A novel mechanism for ranking Resilient Rice Ecologies of eastern India | Debarati Bhaduri ICAR-Central Rice Research Institute, Cuttack, India |



Parallel Sessions

Monday, June 8 (Session 310005)

| | | | |
|-------------|-------|---|--|
| 13:44-13:57 | 34776 | Enhancing soil health through organic amendments in an acid soil | Tingting Chang Hohai University |
| 13:57-14:10 | 32336 | Assessing Human Land Use Impacts on Soil Properties and Genesis in the Great Plains Region of the United States | Elizabeth M. Eroshenko University of Nebraska-Lincoln |
| 14:10-14:23 | 32670 | Reducing the Global Warming Potential of Rice Farming: Why Biochar Works Better than Compost | Ronley C. Canatoy Soil Science Department, Central Mindanao University |
| 14:23-14:36 | 32644 | Methane Mitigation and Arsenic Immobilization in Paddy Soils by Sulfur-Containing Amendments Applied to Stimulate Sulfate-Reducing Bacteria | Han Na Kim Department of Environmental and Biological Chemistry, Chungbuk National University; Global Centre for Environmental Remediation (GCER), The University of Newcastle |
| 14:36-14:49 | 33948 | Managing water and litter inputs to safeguard wetland soil health: coupled C-N-P responses to drying-rewetting in River Murray floodplain soils | Rui Yan University of Adelaide |
| 14:49-15:02 | 35959 | Microbial innovation for nitrogen management in paddy soil: A success story of Endophytic Azotobacter chroococcum MCC 3432 (NRRI-EndoN) | Upendra Kumar Senior Scientist, ICAR-Central Rice Research Institute, Cuttack, India |
| 15:02-15:15 | 35884 | Agriculture as a strategy to improve food - water - energy nexus in Atlantic Forest, Brazil | Ana Paula Dias Turetta Brazilian Agriculture Research Corporation - Embrapa Soils, Rio de Janeiro, RJ, Brazil |



Parallel Sessions

Monday, June 8 (Session 310005)

| | | | |
|-------------|-------|---|---|
| 16:30-16:45 | 34387 | Integrated remediation strategies by health risk assessment of brown rice approaching technology for As, Cd, Cr, Ni, Cu and Zn-contaminated paddy soils in Taiwan | Zueng-Sang Chen Department of Agricultural Chemistry, National Taiwan University, Taipei, Republic of China. |
| 16:45-17:00 | 35553 | Soil ridging combined with soil amendments regulates the arsenic-cadmium related geochemical cycles and mitigate its accumulation in rice | Ting Zhang Institute of Environment and Sustainable Development in Agriculture, Chinese Academy of Agricultural Sciences |
| 17:00-17:15 | 36016 | Effect of organic materials and sulfate addition on cadmium bioavailability and accumulation of rice in cadmium sulfide nanoparticles- and cadmium chloride-treated soil | Yanhua Qiu Institute of Plant Nutrition, Resources and Environment, Beijing Academy of Agriculture and Forestry Sciences, Beijing 100081, China |
| 17:15-17:30 | 36403 | Synergistic modulation of Zinc Bioavailability in Alluvial paddy soil: Integrating Zn-solubilizing microbial consortia, cow dung, and mineral Zinc fertilizers for sustainable Rice production in India | Jaya Prajapati Department of Soil Science & Agricultural Chemistry, College of Agriculture, Central Agricultural University, Imphal, Manipur, India-795004 |
| 17:30-17:45 | 32566 | Exploring the environmental feasibility of montmorillonite integration in the electrochemical oxidation of acid mine drainage | Madinai Abulimiti Nanjing University |
| 17:45-18:00 | 35775 | Water quality and sediment analysis at selected locations of Imo River, Imo State, In Southeastern Nigeria. | Ubah, Venatius Chiamaka Steve Department Of Biology, Federal University Of Technology Owerri, Imo State, Nigeria. |
| 18:00-18:15 | 35603 | Impacts of Land Uses on Soil Quality in Western Patagonia | Felipe Zúñiga Ugalde Instituto de Bosques y Sociedad, Universidad Austral de Chile, Valdivia, Chile |
| 18:15-18:30 | - | General discussion | - |



Parallel Sessions

| Friday, June 12 | | Room: Expo Center, Hall 8, 8201 | |
|-----------------------|--------|---|--|
| Session 401001 | | Peatlands in a Changing World | |
| | | Convener: Claudio Zaccone, University of Verona, Italy | |
| | | Co-Conveners: Kunshan Bao, School of Geography, South China Normal University, China Angela Gallego-Sala, University of Exeter, UK | |
| | | | |
| Schedule | ID | Title | Presenter |
| 09:00-09:15 | 32398 | Carbon Storage Capacity of Peat Soils from High Bogs and Low Bogs | Wolfgang Burghardt Soil Technology, Faculty of Biology, University Duisburg-Essen |
| 09:15-09:30 | 34253 | Depth controls on CO ₂ emissions from drained agricultural peat soils and implications for national greenhouse gas inventories | Lars Elsgaard Department of Agroecology, Aarhus University, Tjele, Denmark |
| 09:30-09:45 | 36552 | Warming Amplifies Iron-Mediated Carbon Loss from Peatlands: A Positive Feedback Modulated By Soil Properties | Chunmei Chen Tianjin University |
| 09:45-10:00 | 33148 | Nutrient cycling in tropical peatland coconut agroecosystems integrating natural weeds as cover crops for sustainable management | Nurul Ihsan Fawzi Department of Soil Science and Land Resources, Faculty of Agriculture, IPB University |
| 10:00-10:15 | 35900 | Soil nitrogen loss and altered plant nitrogen uptake following alpine peatland degradation: insights from nitrogen isotopes | Xiaodong Zhang Institute of Ecological Conservation and Restoration, Chinese Academy of Forestry |
| 10:15-10:30 | 34703 | Breaking metabolomics limits for a molecular to pathway multidimensional analysis of metabolism alpine peatlands soil dissolved organic carbon | Shuangchao Wang Sichuan University |
| 10:30-10:45 | 32857 | Human activities overrode natural climate controls on mercury deposition in Southern China during the late Holocene | Shuming Li South China Normal University |
| 10:45-11:00 | 33136 | The secret and fascinating world of the free-floating peat island of Posta Fibreno | Claudio Zaccone Department of Biotechnology, University of Verona |
| 11:00-11:15 | 319B47 | Application of dredged soil resource utilization in Mangrove habitat improvement | Li Yaohua Technology R&D Center, CCCC Guangzhou Water Transport Engineering Design and Research Institute Co., Ltd. |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 5, 5202 | |
|-----------------------|-------|--|---|
| Session 401002 | | Soil Food Web Structure and Function under Global Change | |
| | | <p>Convener: Manqiang Liu, Lanzhou University</p> <p>Co-Conveners: Joann Whalen, McGill University Shenglei Fu, Henan University</p> | |
| Schedule | ID | Title | Presenter |
| 13:30-13:50 | 35638 | Four decades of Soil Ecology: the good, the bad and the missing | Shuijin Hu Nanjing Agricultural University |
| 13:50-14:05 | 35942 | Aggregate-Scale Microbial Communities: Spatial Heterogeneity, Potential food-webs & The Effect of Tillage | Arthur Taylor University of Edinburgh |
| 14:05-14:20 | 33391 | Proteobacteria as keystone bridges in the micro-food web: a new strategy for biocontrol design | Ting Liu Nanjing Agricultural University |
| 14:20-14:35 | 33772 | Greater trophic diversity of soil animal communities under agricultural land use and tropical climate | Zheng Zhou University of Hohenheim |
| 14:35-14:50 | 34219 | Size-structured Energy Channeling in Soil Food Webs across Ecto- and Arbuscular Mycorrhiza-dominated Deciduous Forests | Ajuan Zhang Senckenberg Museum of Natural History Görlitz, Department of Soil Zoology, Am Museum 1, 02826 Görlitz, Germany |
| 14:50-15:05 | 32451 | Coordinated plant-nematode ecological strategies shape soil carbon cycling | Chongzhe Zhang Lanzhou University |
| 15:05-15:20 | 34665 | Pesticide contamination in agricultural soils in Shanghai: residual characteristics and ecological risks to soil biota | Muyuan Wang Shanghai Jiao Tong University |



Parallel Sessions

Tuesday, June 9 (Session 401002)

| | | | |
|-------------|-------|---|--|
| 16:30-16:50 | 32205 | Harnessing the soil food web for sustainable ecosystems: Current evidence and future perspectives | Uffe N Nielsen Hawkesbury Institute for the Environment, Western Sydney University |
| 16:50-17:05 | 33785 | Leaving deadwood in canopy gap mitigates the decline of soil multifunctioning | Yan Zhang University of Göttingen |
| 17:05-17:20 | 34066 | Legume Intercropping Reshapes Aggregate-Scale Soil Micro-Food Webs and Nutrient Regulation in Tropical Rubber Plantations | Shujie Chen Xishuangbanna Tropical Botanical Garden |
| 17:20-17:35 | 33556 | Impacts of chemical free turfgrass renovation on soil arthropod and nematode communities | Zhiqiang Cheng University of Hawaii at Manoa |
| 17:35-17:50 | 32964 | Mechanism of soil fauna on soil microbial necromass carbon accumulation in a subtropical forest under nitrogen addition | Shixing Zhou Sichuan Agricultural University |
| 17:50-18:05 | 32735 | Effects of livestock grazing intensity on ground-dwelling arthropod communities in a desert steppe in Inner Mongolia | Haishan De Inner Mongolia Agricultural University |
| 18:05-18:20 | 34571 | Drivers and Mechanisms of Biological Homogenization of Soil Protists in Human Land-Use Systems | Zhi-Peng Li Institute of Urban Environment, Chinese Academy of Sciences; CAS Haixi Industrial Technology Innovation Center in Beilun; University of Chinese Academy of Sciences |
| 18:20-18:35 | 34601 | Trophic interactions regulate the effects of long-term nitrogen enrichment on soil organic carbon | Wen Xing Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |



Parallel Sessions

| Friday, June 12 | | Room: Convention Center, Nanjing 403B | |
|-----------------------|-------|--|---|
| Session 401003 | | Unveiling the Hidden World: Biodiversity and Ecological Function of Soil Fauna | |
| | | Convener: Yuji Jiang, Fujian Agriculture and Forestry University | |
| | | Co-Convener: Francisco Dini-Andreote, The Pennsylvania State University | |
| Schedule | ID | Title | Presenter |
| 11:15-11:30 | 35684 | Stage-specific microbial dynamics underpin ecosystem restoration on tropical coral islands | Wenjia Wu Guangdong Provincial Key Laboratory of Applied Botany, South China Botanical Garden; Key Laboratory of National Forestry and Grassland Administration on Plant Conservation and Utilization in Southern China, South China Botanical Garden, Chinese Academy of Sciences; Guangdong Heshan National Observation and Research Station for Forest Ecosystem, South China Botanical Garden, Chinese Academy of Sciences |
| 11:30-11:45 | 32354 | Investigating identification techniques and sample sizes effects on soil nematode community assessment | Lu Wang Helmholtz Centre for Environmental Research - UFZ; Leipzig University; German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig |
| 11:45-12:00 | 34617 | Grassland management and time jointly shape the gut microbiome of soil collembolan <i>Folsomia candida</i> : A laboratory study | Meijun Sheng Inner Mongolia Agricultural University |
| 12:00-12:15 | 36535 | Ecotoxicity of Combined Thallium and Polylactic Acid Microplastics Pollution on the Functional Traits of <i>Folsomia candida</i> | Yuying Chen Guangzhou University; Rural Non-Point Source Pollution Comprehensive Management Technology Center of Guangdong Province |



Parallel Sessions

| Thursday, June 11 Friday, June 12 | | Room: Convention Center, Nanjing 201 | |
|--------------------------------------|-------|--|---|
| Session 402001 | | Conservation and Restoration of Black Soils in Agro-Ecosystems | |
| | | <p>Convener: Xinhua Peng, Institute of Agricultural Resources and Regional Planning, CAAS, China</p> <p>Co-Conveners: Ole Wendroth, Department of Plant & Soil Science, University of Kentucky, UAS Zhongbin Zhang, Institute of Agricultural Resources and Regional Planning, CAAS, China Yanru Wen, Institute of Agricultural Resources and Regional Planning, CAAS, China</p> | |
| Schedule | ID | Title | Presenter |
| Thursday, June 11 | | | |
| 13:30-13:45 | 34308 | Bio-tillage: A new perspective for sustainable agriculture | Zhongbin Zhang Institute of Agricultural Resources and Regional Planning of the Chinese Academy of Agricultural Sciences |
| 13:45-13:58 | 35820 | Long-term no-tillage farming mitigates waterlogging during extreme rainfall events in black soil region of NE China | Weida Gao China Agricultural University |
| 13:58-14:11 | 35814 | Short-term effects of overwintering on porosity of the compacted topsoil due to harvest traffic in Northeast China | Shijie Qin Hunan Institute of Agricultural Soil and Eco-Environment Institute |
| 14:11-14:24 | 31632 | Strip tillage combines the characteristics of conventional tillage and no-tillage in terms of soil macropore structure and hydrothermal conditions | Yongqi Qian Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |



Parallel Sessions

Thursday, June 11 (Session 402001)

| | | | |
|-------------|-------|---|--|
| 14:24-14:37 | 34461 | Carbon-rich African dark earths have lower carbon footprint than adjacent land use types | Emmanuel Baidoo Kwame Nkrumah University of Science and Technology, Ghana |
| 14:37-14:50 | 32804 | Long-Term No-tillage Retains Intact Biopores in the Topsoil Compared to Conventional Tillage Based on the Soil Profile Study | Jiao Yan China Agricultural University |
| 14:50-15:03 | 36360 | Divergent Pathways of Soil Pore Structural Recovery under No-Till across a Semi-Arid to Semi-Humid Climatic Gradient | Wei Han, Jing Tan, Yanli Yi Shenyang Agricultural University |
| 15:03-15:16 | 32215 | Effects of Furrow Straw Mulch on Soil Erosion and Organic Carbon Redistribution in Soil Aggregates at Sloping Farmland | Libo Ye Jilin Agricultural University |
| 15:16-15:29 | 31947 | Microbial-Mediated Mechanisms Underlying Soil Fertility Stability in the Northeast Black Soil Region of China | Mengmeng Wang Shenyang Agricultural University |
| 16:30-16:45 | 32786 | Straw return combined with fertility enhances soil organic carbon and soil aggregate formation in Mollisol soils | Fenli Zheng Northwest A & F University |
| 16:45-16:58 | 31760 | Spatial Patterns of Ephemeral Gullies and Their Impacts on Farmland and Crop production in the Black Soil Region of Northeast China | Chunmei Wang Northwest University |
| 16:58-17:11 | 31622 | Gully Growth Rates in Northeast China | Yanru Wen The Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |



Parallel Sessions

Thursday, June 11 (Session 402001)

| | | | |
|-------------|-------|---|---|
| 17:11-17:24 | 32727 | Integrated Assessment of Slope Erosion in the Mollisol Region of Northeast China Using ¹³⁷ Cs Tracing and Improved RUSLE2 model | Yingli Shen the Research Center of Soil and Water Conservation and Ecological Environment, Chinese Academy of Sciences and Ministry of Education |
| 17:24-17:37 | 36525 | Coupling effects of freeze-thaw action and thawed soil depth on snowmelt erosion under near-surface hydrologic conditions in the Mollisol region of Northeast China | Bin Wang Beijing Forestry University |
| 17:37-17:50 | 31951 | Black Soil Degradation in Northeast China and its Driving Factors | Yili Meng Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 17:50-18:03 | 32713 | Effects of incorporated straw length on runoff and soil loss from black soil under simulated heavy rainfall | Yang Yang Beijing Normal University |
| 18:03-18:16 | 32372 | Benchmark and Near-Benchmark Chernozems: Assessing Human-Induced Transformation and Pedodiversity for Black Soils Conservation | Smirnova Maria Faculty of Geography, Lomonosov Moscow State University |
| 18:16-18:29 | 33243 | Soil Erosion Processes and Dynamic Mechanisms under Soil Compaction and Freeze-Thaw Cycles in the Black Soil Region of Northeast China | Renming Ma Shenyang Agricultural University |



Parallel Sessions

Friday, June 12 (Session 402001)

| | | | |
|-------------|-------|--|---|
| 09:00-09:15 | 32439 | Organic carbon loss process of black soil during cultivation | Weixin DING Institute of Soil Science, Chinese Academy of Sciences |
| 09:15-09:30 | 34082 | Mechanistic Insights into Cover Crops and Straw Incorporation: Root Traits, Soil Properties and Carbon Controls on Erosion Resistance across Degradation Gradients in Mollisols | Miaomiao Wang Northeast Forestry University |
| 09:30-09:45 | 31968 | Spatial heterogeneity of soil C-N-P stoichiometry and its controlling factors in agricultural soils across the Songnen Plain, Northeast China | Shihan Qin Shenyang Agricultural University |
| 09:45-10:00 | 35290 | Thermal Stability of Soil Organic Matter in Farmland Chernozems | Antonina Grigorova Laboratory of Carbon Monitoring of Terrestrial Ecosystems, Institute of Physicochemical and Biological Problems in Soil Science, the Russian Academy of Sciences, Pushchino, Russia |
| 10:00-10:15 | 33139 | The overlooked plant litter in the long-term biodiversity experiments | Wei-Ping Zhang China Agricultural University |
| 10:15-10:30 | 34077 | Multi-platform monitoring method for the quality of Black soils cropland and site specific application | Huanjun Liu Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 10:30-10:45 | 32084 | Multi-temporal monitoring of crop residue cover for large-scale classification of tillage practices: linking deep learning of UAV images with satellite-based spectral modelling | Pu Shi Jilin University; UC Louvain |
| 10:45-11:00 | 32947 | A Comprehensive Framework for Assessing Land Degradation Neutrality in Northeast China's Black Soil Region: Multi-Source Fusion, Driver Analysis, and Scenario Prediction | Yuanfang Huang and Wentao Zhou China Agricultural University, College of Land Science and Technology |



Parallel Sessions

| Friday, June 12 | | Room: Expo Center, Hall 5, 5203 | |
|-----------------------|--------|---|---|
| Session 402004 | | Sustainable Management and Restoration of Black Soils: Global Experiences and Actions | |
| | | <p>Convener: Yuxin Tong, Global Soil Partnership, FAO</p> <p>Co-Convener: Zhongjun Jia, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:15 | 319B88 | Intensification tradeoff for crop yield under different tillage scenarios towards agricultural sustainability of Black Soils | Jingying Fu Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences |
| 09:15-09:30 | 32777 | Assessment of the health of tropical black soils in the context of intensive agriculture: the case of the Vertisols of Tcheboa , Northern Cameroon | Ndzana Georges Martial Department of Soil Sciences, Faculty of Agronomy and Agricultural Sciences, University of Dschang |
| 09:30-09:45 | 31572 | Sambaquis as Records of Soil Management by Original Populations in the Holocene | Anjos, L.H.C. dos Department of Soils, Institute of Agronomy, Federal Rural University of Rio de Janeiro, UFRRJ |
| 09:45-10:00 | 35828 | Assessment of water resources carrying capacity and identification of obstacle factors in the Songnen Plain based on a combined weighting-matter-element extension model | Lei Wang Beijing Academy of Agriculture and Forestry Sciences |
| 10:00-10:15 | 31776 | Degradation severity shifts environmental controls and vegetation effects on soil respiration in restored Mollisols | Jia Yang School of Forestry, Northeast Forestry University |
| 10:15-10:30 | 32009 | Comparative Study on Conservation and Utilization of Black Soils in China and Argentina | Wenyou Hu Institute of Soil Science, Chinese Academy of Sciences |



Parallel Sessions

Friday, June 12 (Session 402004)

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|-------------|-------|---|---|
| 11:15-11:30 | 32041 | DSS for Sustainable Management and Conservation of Black Soils in Russia | Ivan I. Vasenev Ecology Department, Russian State Agrarian University-Moscow Timiryazev Agricultural Academy |
| 11:30-11:45 | 32175 | Status of Black Soils in Rio de Janeiro: a legacy of mismanagement and recommended practices to reclaim their potential | João Pedro Coumendouros Scott Federal Rural University of Rio de Janeiro - UFRRJ |
| 11:45-12:00 | 36185 | Uncovering the Biophysical Mitigation Potential of Off-Season Croplands across Global Black Soil Regions | Yifeng Cui Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences |
| 12:00-12:15 | 34266 | Soil-landscape Modeling on Experimental Plots: RECSOIL on Black Soils in Central Russia | A. Sorokin Department of Soil Science, Lomonosov Moscow State University, Moscow, 119991 Russia |
| 12:15-12:30 | 33782 | Depth-dependent responses of soil microbial communities to subsoil tillage with straw enhance soil quality and crop yield | Xin Xu Shenyang Institute of Applied Ecology, Chinese Academy of Sciences |



Parallel Sessions

| Monday, June 8 | | Room: Expo Center, Hall 5, 5201 | |
|-----------------------|-------|---|--|
| Session 402005 | | Soil Security and Policy: Foundations for a Sustainable Future | |
| | | <p>Convener: Alex McBratney, University of Sydney, Australia</p> <p>Co-Conveners: Cristine Morgan, Soil Health Institute, USA Jae Yang, Kangwon University, South Korea Yong-Guan Zhu, Research Center for Eco-environmental Sciences, Chinese Academy of Sciences, China</p> | |
| Schedule | ID | Title | Presenter |
| 13:15-13:30 | 34920 | Advocating for Soil Security: or “First Catch Your Hare” | Penelope Wensley Global Soil Security Think Tank |
| 13:30-13:45 | 32209 | The Global Pedogenon Map: combining and Spatialising the Factors of Soil Formation | Nicolas Francos Sydney Institute of Agriculture & School of Life & Environmental Sciences, The University of Sydney |
| 13:45-14:00 | 33091 | European Union advances in soil protection with the Soil Monitoring Law, the Mission Soil and the Carbon farming | Panos Panagos European Commission - Joint Research Centre |
| 14:00-14:15 | 31838 | A Pedogenon Approach to Declining Soil Districts across Europe | Quentin Styc The University of Sydney |
| 14:15-14:30 | 35299 | Development of Canadian Soil Strategy | Alan Kruszel Soil Conservation Council of Canada |



Parallel Sessions

Monday, June 8 (Session 402005)

| | | | |
|-------------|-------|---|--|
| 14:30-14:45 | 33070 | Components of a national soil security strategy for sustainable soil use and management | Amin Shariffar the University of Sydney |
| 14:45-15:00 | 31830 | Implementing the Soil Security Framework to Assess National Soil Governance: The Case of France | Julie Celia Itey IUCN WCEL SoilsAL SG |
| 15:00-15:15 | 31892 | Quantifying Soil Security under Climate Change: Integrating Digital Soil Mapping and the Soil Security Assessment Framework | Thilini Jayasekara School of Life and Environmental Sciences, The University of Sydney |
| 16:30-16:45 | 34864 | Soil Genotype and Cultural Diversity in Jeju Island, Korea: Linking Soil Security with Societal Heritage | Jae Yang Department of Biological Environment, Kangwon National University |
| 16:45-17:00 | 34540 | Connecting Soils and Consumers - The Regulation of Undefined Food Label Agricultural Sustainability Claims in Australia | Christopher Wilmot PhD Candidate, (Faculty of Business, Justice and Behavioural Science, Charles Sturt University, Bathurst, Australia, the Soil CRC Newcastle Australia and the University of Newcastle Australia) |
| 17:00-17:15 | 32155 | Legislation in Australia working for soil security (LAWSS) | Julio C. Pachon Maldonado School of Life and Environmental Sciences, The University of Sydney |
| 17:15-17:30 | 32208 | Towards a Global Convention to Secure Soil | Wartini Ng School of Life and Environmental Sciences, The University of Sydney, NSW 2015, Australia, Aroura, Soil Security Think Tank, Secretariat |
| 17:30-18:30 | - | Panel Discussion | Alex McBratney, Jae Yang, Cristine Morgan (facilitators) |



Parallel Sessions

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|-----------------|---------------------------------|
| Tuesday, June 9 | Room: Expo Center, Hall 7, 7203 |
|-----------------|---------------------------------|

| | |
|-----------------------|--|
| Session 402006 | Soil, Agriculture, and Human Futures: From Cold Frontiers to Global Challenges |
| | <p>Conveners: Chunwu Zhu, Institute of Soil Science, Chinese Academy of Sciences, China Giuseppe Corti, CREA - Council for Agricultural Research and Economics, Centre of Agriculture and Environment, Firenze, Italy Alma Guadalupe Barajas-Alcalá, National Autonomous University of Mexico campus Morelia</p> <p>Co-Conveners: Yongguan Zhu, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, China Junguo Liu, North China University of Water Resources and Electric Power, Henan, China Ziska, Lewis H., Environmental Health Sciences, Mailman School of Public Health, Columbia University Peng Wang, Nanjing Agriculture University Yu Wang, Institute of Soil Science, Chinese Academy of Sciences Silvia Imhoff, ICiAgro Litoral - CONICET-UNL, Esperanza, Argentina Karen Vancampenhout, KU Leuven Association, Leuven, Belgium</p> |

| Schedule | ID | Title | Presenter |
|-------------|--------|--|--|
| 09:00-09:15 | 33003 | Towards Sustainable Rice Cropping Systems in a Changing Climate | Kees Jan van Groenigen University of Exeter |
| 09:15-09:30 | 319B82 | Research Progress and Prospects of Paddy FACE | Chunwu Zhu Institute of Soil Science, Chinese Academy of Sciences |
| 09:30-09:45 | 32823 | Bio-Composts and Soil Microbiomes under a One Health Approach: Assessing Microbial Shifts and Antimicrobial Resistance in an Ex-Situ Pilot Study | Adriano Sofo University of Basilicata |



Parallel Sessions

Tuesday, June 9 (Session 402006)

| | | | |
|-------------|--------|--|---|
| 09:45-10:00 | 33750 | Characteristics of paddy soil: specifics in dynamics in organic carbon cycling | Tida Ge Ningbo University |
| 10:00-10:15 | 32809 | Occurrence, Properties and Sustainable Management of Degraded Upland Soils Under a Changing Climate in the Philippines | Victor B. Asio Visayas State University |
| 10:15-10:30 | 32665 | Omics analysis reveals the antagonistic mechanism of foliar zinc-selenium application and its impact on wheat grain quality | Xiaohong Tian College of Natural Resources and Environment, Northwest A&F University |
| 10:30-10:45 | 33202 | Preservation of Patterned Ground in Permafrost Non-Affected Soils: Evidence from the Central Apennines (Italy) | Andrea Salvucci Department of Agriculture, Food and Environmental Sciences, Polytechnic University of Marche, Ancona (Italy) |
| 10:45-11:00 | 33749 | Optimizing Mineral Nutrition to Improve Soybean Yield and Quality under Elevated CO ₂ | Zhichang Chen Institute of Soil Science, Chinese Academy of Sciences |
| 11:15-11:30 | 31556 | From Soil to Grain: Organic Farming Improves Micronutrient Bioavailability | Xiaopeng Gao University of Manitoba |
| 11:30-11:45 | 32461 | Managing domestic trade for food security with environmental and economic equity in China | Chen Wang Zhejiang University |
| 11:45-12:00 | 33906 | Revisiting Food Security in the Context of Climate Change: How Co-Occurring Heatwaves and Atmospheric Lead Deposition Jeopardize Crop Production | Kai Xu Sun Yat-sen University |
| 12:00-12:15 | 33558 | The link between soil security and one health | Damien J Field The University of Sydney |
| 12:15-12:30 | 319B81 | Climate change intensifies phosphorus limitation in rice systems | Yu Wang Institute of Soil Science, Chinese Academy of Sciences |



Parallel Sessions

Tuesday, June 9 (Session 402006)

| | | | |
|-------------|-------|--|---|
| 13:30-13:45 | 35673 | Soil Health-Driven Improvements in Tropical Fruit Production: Insights from a Vietnam “Living Lab” | Chon Nguyen Quang Eurofins Agro Testing Competence Centre, Wageningen, The Netherlands |
| 13:45-14:00 | 34433 | Remediation of Degradaged Coastal Soil Using Biochar and Pyroligneous Acid | Hongyu Zhang Ocean University of China |
| 14:00-14:15 | 36036 | Soil pH controls cropland N ₂ O responses to rising CO ₂ | Yu Jiang Nanjing Agricultural University |
| 14:15-14:30 | 35446 | Leveraging Sulfate to Modulate Arsenic Accumulation in Rice | Shuqiong Kong Yangtze University |
| 14:30-14:45 | 35796 | Reduced Protein Content under Elevated CO ₂ Enhances Perfluorooctanoic Acid Bioaccumulation in Wheat | Fan Jiang Nanjing University |
| 16:30-16:45 | 34470 | Beyond constant CO ₂ : Asymmetric day-night elevation, arbuscular mycorrhizal fungi, and intercropping dynamics shape plant physiology and productivity | Xinhua He Shanxi Agr UVSichuan Agr UVUWAVUC Davis |
| 16:45-17:00 | 34564 | Integrated Physiological and Microbial Mechanisms Underlying Cold Tolerance in Japonica Rice: From Root Function to Rhizosphere Ecology | Jia Yan Northeast Agriculture University |
| 17:00-17:15 | 36041 | Active soil microbiomes link urbanization and climate to zoonotic pathogen risk in Chinese cities | Yi-Yue Zhang Institute of Urban Environment, Chinese Academy of Sciences |



Parallel Sessions

| Monday, June 8 Tuesday, June 9 | | Room: Convention Center, Nanjing 203 | |
|--|-------|---|---|
| Session 403002 | | Land Use and Management Effects on Soil Health and Environmental Quality | |
| | | <p>Convener: Gary Feng, USDA-ARS, United States</p> <p>Co-Conveners: Tingting Chang, Hohai University, China Yujie Zhang, Nanjing Hydraulic Research Institute, China</p> | |
| Schedule | ID | Title | Presenter |
| Monday, June 8 (Session 403002) | | | |
| 13:15-13:30 | 31613 | Signatures of soil structural degradation: exploring stable water isotopes in soil pores | Jessica Brook School of Biological Sciences, University of Aberdeen |
| 13:30-13:45 | 31684 | Ecological impacts of farming practices on soil quality in a Mediterranean agroecosystem | Rosangela Adesso Department of Agricultural, Forestry, Food and Environmental Sciences (DAFE), University of Basilicata |
| 13:45-14:00 | 32230 | Impact of organic mulch dose and type: A comprehensive Belgian case study | Rémy Willemet Plant Sciences Unit, Flanders Research Institute for Agriculture, Fisheries and Food (ILVO); Department of Environment - SENSE Unit, Ghent University |
| 14:00-14:15 | 32357 | Soil health in the vineyards of North-Western Italy: a story of terroirs | Sara Negri Department of Agricultural, Forest and Food Sciences, University of Turin |



Parallel Sessions

Monday, June 8 (Session 403002)

| | | | |
|-------------|-------|---|---|
| 14:15-14:30 | 32437 | Effects of Land-Use Change on Soil Infiltrability and Preferential Flow in Typical Low Hilly Area | Linlin Chu Hohai University |
| 14:30-14:45 | 32567 | Soil health and carbon sequestration dynamics in sandy soil within the Low Carbon Brazilian Beef protocol | Flávia Cristina dos Santos Embrapa Maize and Sorghum |
| 14:45-15:00 | 32576 | Improving Soil Health in An Irrigated Arid Agroecosystem | Omololu J. Idowu Department of Extension Plant Sciences, New Mexico State University |
| 15:00-15:15 | 32659 | Dynamic of soil organic carbon and phosphorus for different technological options in the Peruvian Amazon | Julio Alegre Universidad Nacional Agraria La Molina |
| 16:30-16:45 | 32756 | Effects of regenerative organic agriculture on soil quality and plant biochemistry | Pavel Chechenkov Department of Humanities, University of Ferrara |
| 16:45-17:00 | 32775 | Post-Agrogenic Ecosystem Recovery in the Smolensk Lakeland: a Comprehensive Study in Western Russia | Ivan Semenov Isaev Centre for Problems of Forest Ecology and Productivity of the Russian Academy of Sciences |
| 17:00-17:15 | 32808 | Impact of Intensive Vegetable Production on the Properties of Andisol | Victor B. Asio Visayas State University |



Parallel Sessions

Monday, June 8 (Session 403002)

| | | | |
|-------------|-------|---|--|
| 17:15-17:30 | 32875 | Soil quality variation and its driving factors in rubber plantations of tropical China | Rui Sun Rubber Research Institute, Chinese Academy of Tropical Agricultural Sciences |
| 17:30-17:45 | 32910 | Distribution of Available Phosphorus in the Soils of Belgrade Across Urban Development Zones | Mirjana Tešić Department of Landscape architecture and horticulture, University of Belgrade Faculty of Forestry |
| 17:45-18:00 | 33155 | Tillage Intensity as a Driver of Soil Bacterial Composition and Functional Potential | Adriano Sofo Department of Agricultural, Forestry, Food and Environmental Sciences (DAFE), University of Basilicata, Potenza, Italy |
| 18:00-18:10 | 31576 | Soil health as a driver of yield patterns and management | Ricardo Canal Filho Laboratory of Precision Agriculture - Luiz de Queiroz College of Agriculture, University of São Paulo |
| 18:10-18:20 | 32242 | A Mixed-Methods Approach to Study Land Management and Soil Health in Urban Soils | Chengcheng Feng Wageningen University & Research |
| 18:20-18:30 | 33541 | The nonlinear response effect of arable land quality on arable land fragmentation in mountain areas | Ranran Pang Northeastern University |



Parallel Sessions

Tuesday, June 9 (Session 403002)

| | | | |
|-------------|-------|---|--|
| 09:00-09:15 | 33206 | Soil health and ecosystem services across land uses and biogeographical regions in Europe | Virginia Sánchez-Navarro Department of Agricultural Engineering, ETSIA, Universidad Politécnica de Cartagena, Cartagena, Spain |
| 09:15-09:30 | 33342 | Decades of Data: Evaluating soil dynamics under contrasting tillage systems in Fuchsenbigl, Austria, since 1988 | Sophia Götzinger Austrian Agency for Health and Food Safety (AGES), Department for Soil Health and Plant Nutrition, Vienna, Austria |
| 09:30-09:45 | 33350 | Soil Health in U.S. Northern Great Plains Agriculture: A Comprehensive Review and Meta-Analysis | Carlos B. Pires School of Natural Resource Sciences, North Dakota State University |
| 09:45-10:00 | 33618 | Initial soil carbon status governs soil C stock changes, while pore characteristics improve after conversion of arable land to semi-natural grassland | Lars J. Munkholm Aarhus University |
| 10:00-10:15 | 33801 | Nitrogen dynamics, Soil Health, and Yield Responses under Long-Term Fertilizer and Manure Management in SAT of Central India | S. D. Jadhao Department of Soil Science, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola (Maharashtra), India |
| 10:15-10:30 | 34085 | Effects of protection time and stationary state on the fractal dimensions characteristics of the sandy soil in Hunshandake Sandy Land | Shuli Wang Northeast Forestry University |
| 10:30-10:45 | 34225 | Long-Term No-Tillage Effects on Plant Residue Decomposition and Soil Organic Carbon Formation and Accumulation Patterns in a Japanese Andosol | Daniel Asiamah Aboagye United Graduate School of Agricultural Science, Tokyo University of Agriculture and Technology, Tokyo, Japan |
| 10:45-11:00 | 34346 | Vegetation-Driven Soil Organic Carbon Regulate Mercury Accumulation in Karst Soil Profiles | Jicheng Xia Guizhou University |



Parallel Sessions

Tuesday, June 9 (Session 403002)

| | | | |
|-------------|-------|--|---|
| 11:15-11:30 | 34467 | The Legislative Basis for Soil Protection - The Red Soil Book | Bezuglova Olga Southern federal university |
| 11:30-11:45 | 34475 | Replacing periodic burning with improved forages reshapes soil carbon and nitrogen dynamics and tree-soil interactions in Colombian savannas. | Melanie Estrella Departamento de Producción Agraria, Escuela Técnica Superior de Ingeniería Agronómica, Alimentaria y de Biosistemas, Universidad Politécnica de Madrid, Madrid, Spain |
| 13:30-13:45 | 34518 | The effect of winter-sown oat catch crops on nitrogen leaching after livestock grazing | Brendon Malcolm New Zealand Institute for Bioeconomy Science Limited |
| 13:45-14:00 | 34711 | High standard farmland construction in typical agricultural areas of the Yellow River Basin based on cultivated land health quality evaluation | Peijia Liu Zhengzhou University |
| 14:00-14:15 | 34912 | Soil Properties of Oil Palm Based Agroforestry System | Yeong Wei Yan Universiti Putra Malaysia |
| 14:15-14:30 | 35017 | Soil carbon and nitrogen dynamics in mechanized maize-based intercropping | Pedro R. Soares Soil Physics and Land Management Group (SLM), Wageningen University & Research, Wageningen, The Netherlands; Research Centre for Natural Resources Environment and Society (CERNAS), Polytechnic Institute of Coimbra, Coimbra, Portugal |
| 14:30-14:45 | 35224 | Oil Palm Height, Frond Development and Chlorophyll Responses under Monoculture and <i>Nauclea subdita</i> Agroforestry | Nur Azleen Jamal Jaganathan Department of Land Management, Universiti Putra Malaysia, Selangor, Malaysia |
| 14:45-15:00 | 32787 | Assessing Black Soil Health and Ecosystem Functioning Change in Response to Agricultural Practices in Foubot, Western Cameroon | Napoléon Amani Kagadju Department of Soil Sciences, Faculty of Agronomy and Agricultural Sciences, University of Dschang |



Parallel Sessions

Tuesday, June 9 (Session 403002)

| | | | |
|-------------|--------|---|---|
| 16:30-16:45 | 35547 | Decision support tool for improved nutrient and carbon management at farm level | Mengru Wang Earth Systems and Global Change, Wageningen University & Research, Wageningen, The Netherlands |
| 16:45-17:00 | 35768 | Optimized fertilization strengthens the soil health-yield relationship by enhancing biological activities | Junling Zhang china Agricultural University |
| 17:00-17:15 | 319B41 | Harnessing machine learning to improve nitrogen loss predictions in agroecosystems | Shu Kee Lam The University of Melbourne |
| 17:15-17:30 | 34260 | Land Use and Management Effects on Soil Health of Three Soil Types in the Republic of Serbia | Maja Manojlović University of Novi Sad, Faculty of Agriculture, Novi Sad, Republic of Serbia |



Parallel Sessions

| Thursday, June 11 Friday, June 12 | | Room: Expo Center, Hall 5, 5201 | |
|--------------------------------------|--------|---|--|
| Session 404002 | | Share Our Standpoints of Soil Teaching and Learning at School, University and Civil Society for the Future Development of Better Soil Education System | |
| | | <p>Convener: Takashi Kosaki, Aichi University, Japan</p> <p>Co-Conveners: Keiko Mori, Saitama Museum of Rivers, Japan Claudio Zaccone, University of Verona, Italy Taru Sanden, Austrian Agency for Health and Food Safety, Austria</p> | |
| Schedule | ID | Title | Presenter |
| Thursday, June 11 | | | |
| 11:15-11:20 | - | Introduction | Takashi Kosaki |
| 11:20-11:35 | 31980 | From Soil Pits to Global Goals: Reimagining Soil Education for a Sustainable Future | Said Al-Ismaily Department of Soils, Water and Agricultural Engineering, Sultan Qaboos University |
| 11:35-11:50 | 32179 | EXPLORING THE SOIL: Learning and service guide to assess soil quality | Rosa M Poch Universitat de Lleida |
| 11:50-12:05 | 33705 | Asking once more; What is the essential knowledge of soil in early education, particularly in Monsoon Asian countries? | Keiko Mori Saitama Museum of Rivers |
| 12:05-12:20 | 319B42 | Soil Science Education in Kazakhstan Universities: Strengthening Soil and Geological Literacy for Sustainable Land Management | Aigul Zhapparova Kazakh National Agrarian Research University |



Parallel Sessions

Thursday, June 11 (Session 404002)

| | | | |
|-------------|-------|--|---|
| 13:30-13:45 | 32691 | Building Soil Science Literacy: Assessing Impact in K-12 Teacher Training | Jim Cudahy Soil Science Society of America |
| 13:45-14:00 | 33462 | Cultivating Soil Literacy in China: Assessing the Soil Collage as a Transformative Educational Tool | Yan Zhu Abovefarm |
| 14:00-14:15 | 33085 | Building Soil Literacy Through LADA: Teaching Soil Assessment, SOC Understanding, and Reliable Sampling | Maira Kussainova Kazakh National Agrarian Research University; Kazakh-German University (DKU); Kyoto University, Graduate School of Agriculture; Alfred University; Rakurs Tech |
| 14:15-14:30 | 32755 | Enhancing Soil Science Laboratory Learning through a Computer-Based Mineral Identification Program (MIP) | P. Trakoonyingcharoen Soil Science Department, Faculty of Agriculture at Kamphaeng Saen, Kasetsart University |
| 14:30-14:45 | 35609 | Pedagogical Fossilization in the Era of AI: The Risks of Algorithmic Bias in Soil Science Education | Alessandro Samuel-Rosa Federal Technological University of Paraná (Department of Agronomy, Santa Helena, Paraná, Brazil) |
| 14:45-15:00 | 36368 | It's the pits! Cementing theory through practice in soil science teaching | Paul Hallett University of Aberdeen |
| 15:00-15:15 | 32337 | Digging Deeper into the State of Collegiate Soil Judging in the United States | Elizabeth M. Eroshenko University of Nebraska-Lincoln |



Parallel Sessions

Thursday, June 11 (Session 404002)

| | | | |
|-------------|-------|--|--|
| 16:30-16:45 | 32153 | Experiential learning in the field: assessing the impact of the 2024 Moana Oceania Soil Judging Competition (New Zealand) on participants knowledge, skills and attitudes. | Carol Smith Lincoln University |
| 16:45-17:00 | 32841 | Fostering Soil Science: Insights from the 1st European Soil Judging Contest | Luis D. Olivares-Martinez Soil Science and Environmental Technologies Group (GETECMA), Department of Agrochemistry and Environment, Miguel Hernández University (UMH) |
| 17:00-17:15 | 33141 | An International Master school in Applied Soil Science. The EU project "Medsoils-challenge" | Simone Priori University of Tuscia, Department of Agriculture and Forest Sciences |
| 17:15-17:30 | 33033 | Co-developing soil science teaching and learning across North-South - a unique educational collaboration between The University of Melbourne and National University of Laos | Alexis Pang School of Agriculture, Food and Ecosystem Sciences, Faculty of Science, University of Melbourne |
| 17:30-17:45 | 32132 | Sustainable Land Management Study in Tertiary Institutions for Land Reclamation: Key to Sustainable Agriculture | Sifau Adejumo Department of Crop Protection and Environmental Biology, Faculty of Agriculture, University of Ibadan |



Parallel Sessions

Friday, June 12 (Session 404002)

| | | | |
|-------------|--------|--|---|
| 09:00-09:15 | 319B80 | Current Status and Future Trends of Soil Education in Mongolia | Khadbaatar Sandag Geography Department, Mongolian National University of Education |
| 09:15-09:30 | 319B43 | The World Soil of the Year: a way to promote and popularize soils | J.J. Lelis Leal de Souza Universidade Federal de Vicosa |
| 09:30-09:45 | 33234 | Sculpting the Campus, Cultivating Soil: An Eco-Art Pedagogy of Care and Action | Lipeng Jin Sichuan Fine Art Institute |
| 09:45-10:00 | 33551 | Soil: Eternal Heritage and Khayyam's Perspective | Seyed Kazem Alavipanah, Jafar Jafarzadeh Prof. of University of Tehran |
| 10:00-10:15 | - | Discussion | Takashi Kosaki |



Parallel Sessions

Thursday, June 11
Friday, June 12

Room: Expo Center, Hall 6, 6202

Soil and People: Culture, Education, and Intergenerational Connections

Conveners:

Axel Cerón González, FWO Individual doctoral fellow - Vrije Universiteit Brussel and KU Leuven, Belgium

Laura Bertha Reyes-Sánchez. National Autonomous University of Mexico

Isabelle Verbeke, FAO, Land and Water Officer, Global Soil Partnership secretariat

Sandén Taru, Austrian Agency for Health and Food Safety, Austria

Nkosinomusa Buthelezi-Dube, University of KwaZulu-Natal, South Africa

Rita Brara Mukhopadhyay, Visiting Professor, Ashoka University, Sonipat, India and Senior Fellow, Institute of Economic Growth, University Enclave, Delhi-110007

Session 406003

Co-Conveners:

Arabela Vega Aguilar, Doctoral candidate - Autonomous University of Barcelona, Spain

Javier Leonardo Toxqui Roldán, Soil Genesis, Morphology and Classification Research Group, Colegio de Postgraduados Campus Montecillo, Mexico

Yannick Devos, AMGC - Archaeology, Environmental Change and Geochemistry Research Group, Vrije Universiteit Brussel, Belgium

Ma. del Carmen Gutiérrez Castorena, Genesis, Morphology and Soil Classification Research Group, Colegio de Postgraduados Campus Montecillo, Mexico

Xin Song, Institute of Soil Science, CAS

Anna Krzywoszynska, University of Oulu

Takuro Shinano, Hokkaido University

Katsutoshi Mizuta, University of Kentucky



Parallel Sessions

| Schedule | ID | Title | Presenter |
|---|-------|--|--|
| Thursday, June 11 (Session 406003) | | | |
| 11:15-11:20 | - | Opening: Soils & Heritage | Axel Cerón González |
| 11:20-11:40 | 31834 | Two-Eyed Soil Seeing: Bridging Indigenous Knowledge and Science for Soil Security | Alex McBratney The University of Sydney; Sydney Institute of Agriculture; Aroua Global Soil Think Tank |
| 11:40-11:55 | 31573 | Indigenous Agricultural Terraces in Mexico | Javier L. Toxqui-Roldán Colegio de Postgraduados |
| 11:55-12:10 | 33283 | Soil Memory and Heritage: Foundations for Soil Literacy and the Codification of Soil Rights | Edoardo A.C. Costantini Academy of Georgofili, Florence; National Academy of Agriculture, Bologna CNR-IBE - Department of Biology, Agriculture and Food Sciences, Sesto Fiorentino 50019 (Italy) |
| 12:10-12:25 | 31874 | Soil Memory in Karstic Terraced Landscapes: A Geoarchaeology Study of Montefalco Castle, Central Italy | Axel Cerón González Vrije Universiteit Brussel |
| 12:25-12:35 | - | Closing & Discussion | Javier Toxqui-Roldan + Edoardo A.C. Costantini + Alex MacBratney + Axel Ceron |



Parallel Sessions

Thursday, June 11 (Session 406003)

| | | | |
|-------------|-------|--|---|
| 13:30-13:35 | - | 2nd Part: Equity, Diversity & Inclusion | Laura Bertha Reyes + Nkosinomusa Buthelezi-Dube |
| 13:35-13:50 | 32180 | Profile of professor diversities (male and women) in Brazilian soil science | Risely Ferraz Almeida Universidade do Estado da Bahia |
| 13:50-14:05 | 31732 | Salary survey of soil science faculty in the United States of America: A gender comparison | Eric C. Brevik School of Agricultural Sciences, Southern Illinois University; School of Earth Systems and Sustainability, Southern Illinois University |
| 14:05-14:20 | 32177 | Gendered Dimensions of Soil and Agricultural Practices in Rajasthan's Arid Landscapes | Kanchan Mathur Professor and Officiating Director (Former) Institute of Development Studies |
| 14:20-14:35 | 33554 | Pathways to Inclusivity in Agricultural and Environmental Sciences | Jim Cudahy Soil Science Society of America |
| 14:35-14:50 | 33780 | Building the Future of Soil Science: Priorities in Workforce Development and Global Engagement | Michael Thompson Iowa State University |
| 14:50-15:00 | - | Closing & Discussion | Laura Bertha Reyes + Nkosinomusa Buthelezi-Dube |



Parallel Sessions

Thursday, June 11 (Session 406003)

| | | | |
|-------------|--------|--|--|
| 16:30-16:35 | - | 3rd Part: Education & Communication | Isabelle Verbecke |
| 16:35-16:50 | 33406 | Raising Soil Awareness through “Soil of the Year” Campaigns in Central Europe | Przemysław Charzyński Department of Soil Science and Landscape Ecology, Nicolaus Copernicus University in Toruń, Poland |
| 16:50-17:05 | 34508 | The Fun Soil Profiles according to the World Reference Base for Soil Resources | Adriana Ribon University of Goiás |
| 17:05-17:20 | 32382 | Digital resources and automated questionnaires for soil science education across secondary and higher education in Mexico | Axel Cerón-González Archaeology, Environmental Changes & Geochemistry Research Group, Vrije Universiteit Brussel; Department of Earth and Environmental Sciences, KU Leuven |
| 17:20-17:35 | 32810 | Operationalizing the Soil Information System Framework: a methodological approach to strengthening collaboration and strategic development applied through country roadmap workshops | David Rossiter ISRIC - World Soil Information |
| 17:35-17:50 | 319B40 | Publishing as an Early-Career Researcher in Soil and Water Conservation: Insights from International Soil and Water Conservation Research | Liqin Qu State Key Laboratory of Simulation and Regulation of Water Cycle in River Basin, China Institute of Water Resources and Hydropower Research |
| 17:50-18:00 | - | Closing & Discussion | Isabelle Verbecke |



Parallel Sessions

Friday, June 12 (Session 406003)

| | | | |
|-------------|-------|---|--|
| 09:00-09:05 | - | 4th Part: Early Career Researchers | Takuro Shinano |
| 09:05-09:20 | 31807 | Crop identity modulates the homogenization of soil microbial functions induced by long-term fertilization | Guangren Zheng Northeast Institute of Geography and Agroecology Chinese Academy of Sciences Center for Agricultural Technology |
| 09:20-09:35 | 31846 | Digging Deeper: How Soil Re-engineering and Nitrogen Strategies Improve Root Growth and Yield in Barley and Triticale | Kanchana Wickramarachchi Department of Primary Industries and Regional Development |
| 09:35-09:50 | 34720 | Regional Assessment of Soil Compaction and Susceptibility in Salt-affected Arable Land in the Yellow River Delta | Dong Yuhao Modern Agricultural Engineering Laboratory, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences |
| 09:50-10:05 | 35748 | Multiscale Risks-Bioaccessibility Coupling Framework for Improving Derivation of Soil Cadmium Threshold | Shiyan Yang Shanghai Academy of Agricultural Sciences |
| 10:05-10:20 | 35761 | Soil Dashboards creation and soil information systems: The case for Ghana | Edward Yeboah CSIR-Soil Research Institute, Academy Post Office, Kwadaso, Kumasi, Ghana |



Parallel Sessions

Friday, June 12 (Session 406003)

| | | | |
|-------------|-------|---|--|
| 10:20-10:25 | - | 5th Part: Soil Humanities | Rita Brara Mukhopadhyay |
| 10:25-10:40 | 32572 | Soil Justice: A Radical Black Marxist Framework for Addressing Soil Contamination | Salvatore Engel-Di Mauro SUNY New Paltz |
| 10:40-10:55 | 35612 | The evolution of soil science research in Portugal since the 19th century | João Horta Marques MED—Mediterranean Institute for Agriculture, Environment and Development and CHANGE—Global Change and Sustainability Institute, Universidade de Évora, Pólo da Mitra, Ap. 94, 7006-554 Évora, Portugal; CEF-Centro de Estudos Florestais and TERRA - Associate Laboratory, Instituto Superior de Agronomia, Universidade de Lisboa, Tapada da Ajuda, Lisbon 1349-017, Portugal |
| 11:15-11:30 | 35044 | Soil vocabularies: towards joint human and machine readable terminology | Maria Fantappie ISRIC - World Soil Information |
| 11:30-11:45 | - | Closing & Discussion | T. Shinano + I. Verbecke + N. Buthelizi-Dube + L.B. Reyes-Sanchez + R. B. Mukhopadhyay + A. Ceron-Gonzalez |



Parallel Sessions

| Monday, June 8 Tuesday, June 9 | | Room: Convention Center, Nanjing 201 | |
|-----------------------------------|-------|--|---|
| Session 407001 | | Soil Nitrogen Processes, Consequences, and Regulations | |
| | | <p>Convener: Feng Zhou, College of Urban and Environmental Sciences, Peking University</p> <p>Co-Conveners: Baojing Gu, College of Environmental & Resource Sciences, Zhejiang University Jinbo Zhang, School of Breeding and Multiplication, Hainan University Xu Zhao, Institute of Soil Science, Chinese Academy of Sciences Jun Shan, Institute of Soil Science, Chinese Academy of Sciences</p> | |
| Schedule | ID | Title | Presenter |
| Monday, June 8 | | | |
| 13:15-13:30 | 36210 | The potential of optimized agricultural management to reduce global cropland nitrogen losses within safe boundaries | Wim de Vries Wageningen University and Research |
| 13:30-13:45 | 35601 | Reducing N-related environmental risk while achieving food security in China | Xuejun Liu China Agricultural University |
| 13:45-14:00 | 31603 | Global Soil Nitrogen Budget and Pollution hotspots (1980-2022) | Xiuming Zhang IIASA; Zhejiang University |
| 14:00-14:15 | 33879 | Estimating fractions of N ₂ O emissions from nitrification and denitrification using data assimilation | Baobao Pan University of Melbourne |
| 14:15-14:30 | 34896 | Optimizing the C: N Ratio of N-Enriched Biochar Enhances Soil Nitrogen Dynamics, Enzyme Activity, and Crop Productivity under Reduced Nitrogen Inputs | Muhammad Tauseef Jaffar Northwest A & F University |
| 14:30-14:45 | 32023 | SmartField Solutions: Advancing N ₂ O Mitigation in Danish Agriculture | Meng Kong Department of Agroecology, Aarhus University, AU Viborg |
| 14:45-15:00 | 32289 | Modeling soil HONO emissions | Dianming Wu East China Normal University |
| 15:00-15:15 | 32965 | Balancing Productivity, Profitability, and Sustainability: Quantifying Nitrogen Fate and Optimizing Site-Specific Management in High-Rainfall Agroecosystems | Vaibhav Balasaheb Shelar Auburn University |



Parallel Sessions

Monday, June 8 (Session 407001)

| | | | |
|-------------|-------|---|---|
| 16:30-16:45 | 32516 | Evaluating the Fate of Nitrate in Deep Soils Using Dual Isotopes | Xia Zhu-Barker University of Wisconsin-Madison |
| 16:45-17:00 | 32239 | The disparity between canopy and understory N deposition in regulating soil N ₂ O emissions in a Moso bamboo forest | Yanjiang Cai Zhejiang A&F University |
| 17:00-17:15 | 36033 | Free-living nitrogen fixation in paddy soils: integrating continental-scale drivers with phenologic dependent dissolved organic matter coupling | Jun Shan Institute of Soil Science, Chinese Academy of Sciences |
| 17:15-17:30 | 34485 | Long-term atmospheric nitrogen deposition and environmental impacts in a subtropical watershed in Central China | Jianlin Shen Institute of Subtropical Agriculture, Chinese Academy of Sciences |
| 17:30-17:45 | 34724 | Soil rather than fertilizer dominates N ₂ emissions in flooded paddy fields | Longlong Xia Institute of Soil Science, Chinese Academy of Sciences |
| 17:45-18:00 | 35936 | Contrasting effects of drought periods on grassland nitrous oxide emissions are attenuated by nitrogen deposition | Yujie Shi Northeast Normal University |



Parallel Sessions

Tuesday, June 9 (Session 407001)

| | | | |
|-------------|--------|---|--|
| 09:00-09:15 | 319B49 | Introduction of N2026 and a new journal Nitrogen Cycling | Kentaro Hayashi Research Institute for Humanity and Nature, Japan Xiaoyuan Yan Institute of Soil Science, Chinese Academy of Sciences |
| 09:15-09:30 | 35116 | Quantify gaseous nitrogen production from agricultural soils using a microbial-explicit model | Zhifeng Yan Tianjin University |
| 09:30-09:45 | 33909 | Effects of manure substitution on nitrous oxide emissions in a subtropical Ultisol | Yongxin Lin Fujian Normal University |
| 09:45-10:00 | 33972 | Effect of Soil Moisture on Nitrous Oxide Emission from Two Intensively Cultivated Agricultural Soils in Sri Lanka - A Microcosm Study | K.M.T.S. Kulathunga Department of Soil Science, Faculty of Agriculture, University of Peradeniya |
| 10:00-10:15 | 34141 | Global nosZ diversity informs microbial community profiling related to N ₂ O reduction in maize cropland soils | Gengbo Jiang Sun Yat-sen University |
| 10:15-10:30 | 35255 | Dynamic Hydrological Connectivity Regulates the Transport and Transformation of Soil Derived N ₂ O in a Subtropical Karst Critical Zone | Nan Zou Tsinghua University |
| 10:30-10:45 | 36548 | Tracing nitrogen and carbon controls on urine-induced N ₂ O emissions in regenerative and continuous grazing systems | Yuxue Cai 1 Global Agriculture and Food Systems, The Royal (Dick) School of Veterinary Studies, University of Edinburgh, Edinburgh, UK |
| 10:45-11:00 | 36600 | Role of particulate organic matter accrual in affecting ¹⁵ N fate to grain corn comparing long-term vs. first-time vs. no cover cropping | Yajun Peng University of Guelph |

Parallel Sessions

Tuesday, June 9 (Session 407001)

| | | | |
|-------------|--------|--|---|
| 11:15-11:30 | 34446 | Mechanistic insights into microbial pathways for nitrate loss in forest ecosystems | Jinsen Zheng Japan International Research Center for Agricultural Sciences |
| 13:30-13:45 | 319B48 | Viruses of nitrifying prokaryotes and their impact on soil nitrogen cycling | Graeme W. Nicol Department of Microbial Ecology, University of Lyon |
| 13:45-14:00 | 32274 | Dissolved Organic Nitrogen Losses in Organic Systems: Challenging the Texture Paradigm | Eleanor Sangree University of California Santa Cruz |
| 14:00-14:15 | 32457 | Depth-Dependent Soil Compaction as a Modulator of Nitrous Oxide Fluxes in Cropping Systems | Elysia Lewis Department of Agronomy, Food, Natural Resources, Animals, and Environment, University of Padova |
| 14:15-14:30 | 32751 | Feasibility of gypsum by-products as soil amendment to mitigate nitrous oxide emission from arable soil | Chang Oh Hong Pusan National University |
| 14:30-14:45 | 32766 | Summer fallow drives leaching of legacy nitrogen in cereal land converted from old orchard | Mengzhen Zhao Northwest A&F University |
| 14:45-15:00 | 32668 | Flooding duration and temperature jointly drive soil nitrogen transformation rates in the floodplain wetlands of Poyang Lake during the dry season | Xinyi Jiang College of Life Sciences, Nanchang University; Jiangxi Provincial Key Laboratory of Carbon Neutrality and Ecosystem Carbon Sinks |
| 16:30-16:45 | 32315 | Coupled Carbon-Nitrogen Cycles with Global Change | Baojing Gu Zhejiang University |
| 16:45-17:00 | 34227 | A mechanistic framework to explain variability in nitrification inhibitor performance across soils | Ben A. Rigby The University of Melbourne |
| 17:00-17:15 | 31662 | Mineral-Microbial Interactions Drive Variation in Nitrogen Transformation Characteristics During Entisol (Purple Soil) Development | Ting Lan Sichuan Agricultural University |
| 17:15-17:30 | 33629 | Exogenous input stoichiometry regulates the spatiotemporal synchronization of soil nitrogen supply and maize demand: A microbiome-driven mechanism | Zhe Zhao Shenyang agricultural university |
| 17:30-17:45 | 35753 | Identifying active nitrate-assimilating bacteria that alleviate secondary salinization in facility soils | Cheng Han Nanjing Normal University |
| 17:45-18:00 | 36430 | Water content and pH thresholds jointly control the distribution pattern of soil nitrogen in arid zone ecosystems | Jia Guo Xinjiang University |
| 18:00-18:15 | 32710 | Patterns and mitigation mechanisms of dinitrogen emissions and ammonia volatilization from paddy under elevated CO ₂ and warming | Yu Liu Institute of Soil Science, Chinese Academy of Sciences |



Parallel Sessions

| Monday, June 8 | | Room: Expo Center, Hall 5, 5202 | |
|-----------------------|-------|--|---|
| Session 408001 | | Harmonization of Soil Health Monitoring: Scientific, Institutional, and Societal Perspectives | |
| | | Convener: Claudio Zucca, University of Sassari & Sustainable Management of Soil and Landscape (SMSL) Centre | |
| | | Co-Convener: Sergio Saia, University of Pisa | |
| Schedule | ID | Title | Presenter |
| 13:15-13:30 | 32985 | The Soil Indicator Dichotomy - finding the common ground | Nathan Robinson Federation University |
| 13:30-13:45 | 31815 | Unpacking Cause and Effect in Soil Health Science | Yang Lin University of Florida |
| 13:45-14:00 | 35764 | Building a Grower Facing Portal for Soil Health Assessment and Decision Making | Elizabeth Rieke Soil Health Institute |
| 14:00-14:15 | 36615 | The role of SOILS4MED project in promoting soil information in the Mediterranean and a unique case study from Apulia Region in Italy | Pandi Zdruli CIHEAM Mediterranean Agronomic Institute of Bari |
| 14:15-14:30 | 35506 | Assessment and Long-Term Monitoring of Soil Quality in France and its Overseas Territories | Lilou VANOVERBEKE INRAE France |



Parallel Sessions

Monday, June 8 (Session 408001)

| | | | |
|-------------|-------|---|--|
| 16:30-16:45 | 33443 | From Soil Enzymes to Policy: The Soil Health BR Platform as a National Tool for Climate-Smart Agriculture in Brazil | Ieda Carvalho Mendes Embrapa Cerrados |
| 16:45-17:00 | 33543 | Study on the Trade-offs between Cultivated Land Soil Health and Cultivated Land Soil Quality | Huan Xu Northeastern University |
| 17:00-17:15 | 35885 | A Comparison of Two Soil Health Assessment Frameworks | Cristine L.S. Morgan Soil Health Institute |
| 17:15-17:30 | 32197 | Microbial Biodiversity and its role in Soil Health in Mediterranean Agricultural Landscapes of Sicily | Lino Sciurba Department of Agricultural, Food and Forest Sciences, University of Palermo |
| 17:30-17:45 | 35003 | Unveiling Soil Vitality in Morocco: A Comprehensive Evaluation of Soil Health Indicators in a semi-arid area | Zineb El Mouridi National Institute of Agricultural Research (INRA), BP 6356, CRRA Rabat, Av. Al Irfane, 10100 Rabat, Morocco.; Ibn Tofail University, Faculty of Sciences, Plant and Animal Productions and Agro-Industry Laboratory, Department of Biology, PO Box 133, Kénitra, Morocco. |
| 17:45-18:00 | 32907 | From fragmented legacy data to predictive hydraulics: PTF4MED for Mediterranean soils | Giacomo Belvisi Dipartimento di Scienze Agrarie, Alimentari e Forestali, Università degli studi di Palermo |
| 18:00-18:15 | 35363 | The Soil Health Indicator: A Scalable, Rapid Assessment Tool Linking Soil Science to Agricultural Sustainability | J.A. Reijneveld Eurofins Agro Testing Competence Centre |



Parallel Sessions

| Thursday, June 11 | | Room: Convention Center, Nanjing 303A | |
|-----------------------|-------|---|---|
| Session 408003 | | Soil Management Practices on Soil Health in Plastic Greenhouses | |
| | | <p>Convener: Ju Min, Institute of Soil Science, CAS</p> <p>Co-Conveners: Yufeng Liu, Shenyang Agriculture University Tingting Chang, Hohai University, China Yujie Zhang, Nanjing Hydraulic Research Institute, China</p> | |
| Schedule | ID | Title | Presenter |
| 16:30-16:45 | 32631 | Soil of Plastic Greenhouse Vegetable in China: Problems and Countermeasures | Ju Min Institute of Soil Science, Chinese Academy of Sciences |
| 16:45-17:00 | 31824 | Balancing Crop Yield and Environmental Risk in Chinese Greenhouse Vegetable Production Systems: Insights from Phosphorus Management | Yusef Kianpoor Kalkhajeh Department of Environmental Science, College of Science, Mathematics and Technology, Wenzhou-Kean University; Center for Integrative Plant Sciences, Wenzhou-Kean University; Department of Biology, College of Science, Mathematics and Technology |
| 17:00-17:15 | 31789 | Farming system diversification enhances land use efficiency of China's protected horticulture | Jinlong Dong Institute of Soil Science, Chinese Academy of Sciences |



Parallel Sessions

Thursday, June 11 (Session 408003)

| | | | |
|-------------|-------|--|--|
| 17:15-17:30 | 35882 | Organic substitution as a soil health management practice alleviates salinization and steers nematode assembly in plastic greenhouse soils | Xuefeng Hu Tianjin Normal University |
| 17:30-17:45 | 32782 | Effects and Mechanisms of Plastic Film Residue on N ₂ O Emissions in Greenhouse Vegetable Soils | Yaqiong Hao Institute of Soil Science, Chinese Academy of Sciences |
| 17:45-18:00 | 34149 | Enhanced soil ecosystem multifunctionality and microbial community shifts following spent mushroom substrate application in protected vineyards | Xiaochi Ma Jiangsu Academy of Agricultural Sciences |
| 18:00-18:15 | 35041 | Enhancing silicon uptake and use efficiency in <i>Piper nigrum</i> L. against <i>Fusarium</i> disease on acidic soils using Calciprill and sodium silicate | Ng Ji Feng PS Global Sdn. Bhd., No. 12-5, Block 2, Jln Setia Prima S U13VS, Setia Alam, 40170 Shah Alam, Selangor, Malaysia |



Parallel Sessions

| Thursday, June 11 Friday, June 12 | | Room: Convention Center, Nanjing 202 | |
|--------------------------------------|--|---|---|
| Session 408004 | | Soil & Environmental Health: Advancing Science for Human & Ecosystem Resilience | |
| | | Conveners: Lizhong Zhu, Zhejiang University Yongguan Zhu, Research Center for Eco-Environmental Sciences | |
| | | Co-Convenor: Lena Qiyang Ma, Zhejiang University | |
| Schedule | ID | Title | Presenter |
| Thursday, June 11 | | | |
| 11:15-11:18 | Starting Chairs: Fang-Jie Zhao and Montserrat Filella | | |
| 11:18-11:43 | 33427 | Arsenic biogeochemistry in paddy rice systems | Fang-Jie Zhao Nanjing Agricultural University |
| 11:43-12:03 | 33539 | A seminal paper: 25 years on enrichment factors cited rather than understood | Montserrat Filella Department F.-A. Forel, University of Geneva, Geneva, Switzerland |
| 12:03-12:18 | 33429 | Ecological and Human Health Risks of Heavy Metals in Coastal Sediments of Grand Bahama Island | Williamson Gustave School of Chemistry, Environmental & Life Sciences, University of the Bahamas |
| 12:18-12:30 | 35065 | Seeing is believing: Exploring metal interactions in rice paddies using chemical imaging tools | Dong-Xing Guan Zhejiang University |



Parallel Sessions

Thursday, June 11 (Session 408004)

| Starting Chairs: Yetao Tang and Xiaoming Zou | | | |
|--|-------|---|---|
| 13:30-13:33 | | | |
| 13:33-13:58 | - | Ecological restoration of rare earth element mine sites in South China | Yetao Tang Sun Yat-sen University |
| 13:58-14:18 | 34684 | Calcium in Soil Health: Beyond pH Management to Mitigating Phosphorus Overuse and Enhancing Carbon Stabilization | Xiaoming Zou Jiangsu Academy of Agricultural Sciences |
| 14:18-14:38 | 34686 | Biochar laced with elemental sulfur restores microbial function in aridland soils | Daniel Blackburn Department of Soils, Water and Agricultural Engineering, Sultan Qaboos University |
| 14:38-14:58 | 33679 | Particle and mass characteristics influence in vitro and in vivo lead bioavailability from multiple sources | Xiaoping Li Shaanxi Normal University |
| 14:58-15:15 | 33961 | Harnessing Non-Conventional Salt-Accumulating Plants for Integrated Phytodesalination and Sustainable Salinity Management | Kashif Hayat Zhejiang Shuren University |
| Starting Chairs: Xinbin Feng and Daniel Blackburn | | | |
| 15:30-15:33 | | | |
| 15:33-15:58 | 33823 | Mercury sources in soil of forest ecosystems and health risks to birds | Xinbin Feng Institute Of Geochemistry, Chinese Academy Of Sciences |
| 15:58-16:13 | 33846 | Dietary strategies to reduce bioavailability and toxicity of lead, cadmium, and arsenic following oral exposure: Mechanisms and health implications | Hongbo Li Nanjing University |
| 16:13-16:28 | 35159 | Heavy metals migration from soil to animal/human in heavy metal contaminated areas: Fate and risk of legacy Pb and Cd | Liping Li Henan University of Technology |
| 16:28-16:40 | 34616 | Health risk assessment of dietary cadmium exposure based on cadmium bioavailability in food: Opportunities and challenges | Di Zhao Nanjing Agricultural University |
| 16:40-16:52 | 35376 | From Predict to Control Cr(VI) Risk in Agricultural Soil: Aging Model and S-nZVI Stabilization for Crop Safety | Shi-Wei Li University of Jinan |
| 16:52-17:02 | 34237 | Luxury at a Cost: Linking Portable XRF-Based Bioaccessible Chromium to ICP-MS-Determined Chromate and Dermal Permeation Risk in Bright-colored Leather Products | Can Liu Zhejiang University |
| 17:05-18:00 | - | Editorial board meeting of Soil & Environmental Health journal | Chair: Lena Q Ma |



Parallel Sessions

Friday, June 12 (Session 408004)

09:00-09:05

Starting Chairs: Jay Gan and Benny Chefetz

09:05-09:30

35425

PFAS in Agro-Food Systems: Risk Management Strategies

Jay Gan
Zhejiang University

09:30-09:50

33847

Agricultural Water Reuse: Effects on Soil and Ecosystem Health

Benny Chefetz
Agricultural Research
Organization - Volcani Institute;
Hebrew University of Jerusalem

09:50-10:10

36071

Reinventing Soil Health in the Plastic Age: Fungal-Nano
Synergies for Microplastic Remediation

Nasir Mehmood
Academy of Biology and
Medicine, Southern Federal
University, Rostov on Don,
Russia

10:10-10:25

34786

Variation in Arsenic Accumulation and Remediation Potential
among Different Genotypes of *Pteris vittata*

Yue Cao
Sun Yat-sen University

10:25-10:37

34137

Hyphospheric Phosphorus Enhances Arsenic Hyperaccumulation
in *Pteris vittata* via Coordinated Mycorrhizal and Root Uptake
Pathways

Chenjing Liu
Zhejiang University

10:37-10:48

35652

Phytate-Mediated Arsenic Hyperaccumulation in *Pteris vittata*:
Synthesis, Sequestration, and Exudation

Chunyan Hu
Zhejiang University

10:48-11:00

34606

Multi-dimensional Drivers for Urban Soil Microbial Diversity:
Insights from the Species-area Relationship

Xinyue Yang
School of Geographical
Sciences, Faculty of Science and
Engineering, University of
Nottingham Ningbo China; State
Key Laboratory of Regional and
Urban Ecology, Ningbo
Observation and Research
Station, Institute of Urban
Environment, Chinese Academy
of Sciences



Parallel Sessions

Friday, June 12 (Session 408004)

Chairs: Ganga M Hettiarachchi and Lena Q Ma

| | | | |
|-------------|-------|--|--|
| 11:15-11:35 | 35469 | Phosphorus and cover crop management practices alter phosphorus speciation in soils and eroded sediments | Ganga M Hettiarachchi Kansas State University |
| 11:35-11:50 | 35721 | Re-thinking Climate Resilience in Smallholder Agriculture: Insights from Technology, Economics, and Policy Interactions in Eastern India | Shubham Anil Durgude International Maize and Wheat Improvement Centre CIMMYT, New Delhi, India |
| 11:50-12:02 | 34622 | How Does Vegetation Cover Alter Mercury Accumulation and Mobility in Soils of Guizhou? | Namu Moduzuo GuizhouUniversity |
| 12:02-12:14 | 35780 | Adapting to Climate Change: Sustaining Soil Health through Carbon-Nitrogen Cycle Management | Jinglan Cui Zhejiang University |
| 12:14-12:25 | 36387 | Digital Characterization of the Spatial Distribution of the Albic Horizon in the Northeast Black Soil Region | Shou-Xi Lv Shenyang Agricultural University |



Parallel Sessions

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|--------------------------------------|---------------------------------------|
| Thursday, June 11 Friday, June 12 | Room: Convention Center, Nanjing 403A |
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| | |
|-----------------------|---|
| Session 409001 | <p>Advances in Best Management Practices for Achieving Climate-Smart Agriculture</p> <p>Convener: Yuchuan Fan, Professor, College of Jiyang, Zhejiang A&F University, Zhejiang, China</p> <p>Co-Conveners: Xi Zhang, Assistant Professor, Biosystems Engineering and Soil Science Department, The University of Tennessee, Knoxville, TN, USA Xun Wu, Associate Professor, College of Land Science and Technology, China Agricultural University, Beijing, China LiuJun Xiao, Associate Professor, College of Agriculture, Nanjing Agricultural University, Nanjing, China</p> |
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| Schedule | ID | Title | Presenter |
|----------|----|-------|-----------|
|----------|----|-------|-----------|

Thursday, June 11

| | | | |
|-------------|-------|--|---|
| 11:15-11:30 | 33082 | A Framework for Agricultural Best Management Practices (BMPs): Guidelines, Database, and Future Directions | Yuchuan Fan Zhejiang A&F University |
| 11:30-11:45 | 31631 | Optimizing sampling protocols for agriculture and soil science: introduction of a spatial machine learning decision support tool | Alon Ben-Gal Soil, Water, and Environmental Sciences, Agricultural Research Organization - Volcani Institute |
| 11:45-12:00 | 36370 | Regional variation in the potential to reach net zero emissions in global agriculture | G.H. Ros Wageningen University, the Netherlands |



Parallel Sessions

Thursday, June 11 (Session 409001)

| | | | |
|-------------|-------|--|---|
| 12:00-12:15 | 33240 | Enhancing Soil Resilience and Climate Adaptation through Site-Specific Agroecological Strategies - AGROSUS Project | Alicia Morugán-Coronado Universidad Politécnica de Cartagena |
| 12:15-12:30 | 34633 | Soil Organic Carbon Buffers Wheat Yield Against Warming by Regulating Phenological Sensitivity | Yang Yan xianghu lab; zhejiang univerfsity; Xianghu lab; Zhejiang univerfsity |
| 13:30-13:45 | 36493 | Optimizing soil improvement and nitrogen management for sustainable crop production | LiuJun Xiao Nanjing Agricultural University |
| 13:45-14:00 | 31584 | Effect of cover crops on carbon and nitrogen stocks in perennial crops under Mediterranean conditions | Raul Zornoza Universidad Politecnica de Cartagena |
| 14:00-14:15 | 33152 | Mechanism of soil carbon sequestration in cover cropping systems | Jun Wang Northwest University, PR China |
| 14:15-14:30 | 33670 | Functional legume rotations optimize global synergies between soil organic carbon accrual and crop yield | Huadong Zang China Agricultural University |
| 14:30-14:45 | 34549 | Effects of manure and agronomic practices on particulate, dissolved, and mineral-associated organic matter in a long-term integrated crop-livestock system | Inoka Amarakoon The University of Manitoba |
| 14:45-15:00 | 34155 | Effects of Plant Density, Nitrogen Rate and Supplemental Irrigation on Maize Source-Sink Relationship and Water-Nitrogen Use Efficiency Under Straw Mulch in Northeast China | Yuning Li China Agricultural University |
| 15:00-15:15 | 33275 | Nitrogen use for improved profitability and sustainability of rice production in central Myanmar | Xia Liang School of Agriculture, Food and Ecosystem Sciences, Faculty of Science, The University of Melbourne |



Parallel Sessions

Thursday, June 11 (Session 409001)

| | | | |
|-------------|-------|---|--|
| 16:30-16:45 | 35629 | Including water-salinity stress hysteresis and compensation to empirical root water uptake models | Xun Wu China Agricultural University |
| 16:45-17:00 | 34823 | Root-zone Water and Salt Transport Dynamics and Irrigation Optimization in Mulched Drip-Irrigated Cotton Fields in Arid Regions | Chong Fu China Agricultural University |
| 17:00-17:15 | 32069 | Neglecting Non-Rainfall Water Contributions Results in an Overestimation of Crop Water Use Efficiency | Anqi Wang College of Jiyang, Zhejiang A&F University |
| 17:15-17:30 | 31637 | Pathways to resilience in dryland agricultural systems | Zhihao Tan The University of Queensland |
| 17:30-17:45 | 32598 | Interactive effects of straw and biochar amendments on soil organic carbon stabilization and bacterial community dynamics | Ninghui Xie College of Agriculture, Inner Mongolia Minzu University |
| 17:45-18:00 | 34818 | Decadal biochar legacy alters soil physicochemical properties but not microbial C turnover | Mingming Zong Aarhus University |
| 18:00-18:15 | 36230 | Evaluation of ultra-fine lime to manage soil acidity using reactivity and eluviation assays | Erinne Stirling Adelaide University; CSIRO |
| 18:15-18:30 | 31582 | EcoPond - A nature-based mitigation technology for methane emissions from animal effluents | Hong J Di Lincoln University |



Parallel Sessions

Friday, June 12 (Session 409001)

| | | | |
|-------------|-------|--|---|
| 09:00-09:15 | 31849 | Innovative Pasture Diversification Trials to Enhance Soil Health, Carbon Dynamics, and Climate Resilience | James O'Connor The UWA Institute of Agriculture, The University of Western Australia; UWA School of Agriculture and Environment, The University of Western Australia |
| 09:15-09:30 | 35509 | Silvopastoral Systems as a Strategy to Increase Carbon Stocks and Improve Soil Health in Brazilian Drylands | Leidivan Almeida Frazão Federal University of Minas Gerais; Center for Carbon Research in Tropical Agriculture |
| 09:30-09:45 | 31806 | Impacts of Corn Hybrid and Fertilization Strategies on Plant Carbon Allocation and Soil Carbon Dynamics Under Variable Moisture Conditions | Yichao Rui Purdue University |
| 09:45-10:00 | 32052 | Does a long-term no-till corn-soybean rotation decrease nitrous oxide emissions in Alfisols? | Amir Sadeghpour Crop, Soil, and Environment Program, School of Agricultural Sciences, Southern Illinois University |
| 10:00-10:15 | 35208 | Evaluating BMPs that reduce GHGs (N ₂ O) and improve water quality: A case study in southern Ontario, Canada | Prasad Daggupati Department of Civil, Environmental and Water Resource Engineering, University of Guelph, Canada |
| 10:15-10:30 | 32945 | Greenhouse gas emissions as influenced by integrated conservation management practices under organic production in a sandy soil | Frank Oliver Clemson University |
| 10:30-10:45 | 33447 | Sustainable Pathways for Southeast Asia's Rice Systems | Yunrui Li School of Agriculture, Food and Ecosystem Science (SAFES), Faculty of Science, The University of Melbourne, Melbourne, Australia |
| 10:45-11:00 | 36619 | Controlled-Release Fertilizers in BMPs for Sustainable Agriculture | Bin Gao Rensselaer Polytechnic Institute |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 5, 5201 | |
|-----------------------|-------|---|---|
| Session 409002 | | Advancing Soil Organic Carbon Science for Sustainable Land Management | |
| | | <p>Convener: Zhongkui Luo, Zhejiang University</p> <p>Co-Conveners: Budiman Minansy, University of Sydney Zhou Shi, Zhejiang University Qiangyi Yu, Chinese Academy of Agricultural Sciences Songchao Chen, Zhejiang University</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:15 | 34020 | Global estimation of soil microbial-derived carbon stocks and its implications for the carbon cycle | Han Hu Institute of Soil Science, Chinese Academy of Sciences |
| 09:15-09:30 | 32672 | Divergent drivers of soil organic carbon fractions across global pedoclimatic zones | Songchao Chen Zhejiang University |
| 09:30-09:45 | 33992 | Advancing soil organic carbon assessment by integrating fractionated pools, biology, and land-use history across managed landscapes | Louis-Pierre Comeau Agriculture and Agri-Food Canada, Government of Canada |
| 09:45-10:00 | 34742 | Response of soil organic carbon to the changes in plant productivity under warming | Mingming Wang Zhejiang University |
| 10:00-10:15 | 34641 | Unraveling the Interconnections of Soil Organic Carbon Dynamics in Sustainable Land Management | Qiangyi Yu CAAS; CAAS |
| 10:15-10:30 | 32378 | Whole-profile soil organic carbon simulation in China using SOILcarb model | Yuanyuan Du Zhejiang University |
| 10:30-10:45 | 33327 | Soil organic carbon buffers crop yields against climate extremes | Haoyu Zhang Zhejiang University |
| 10:45-11:00 | 32475 | Modelling climate change impacts on soil organic carbon dynamics in dryland croplands | Jorge Álvaro-Fuentes CSIC |



Parallel Sessions

Tuesday, June 9 (Session 409002)

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|-------------|-------|--|--|
| 11:15-11:30 | 32387 | Coupled geomorphic and climate-driven biogeochemical processes regulate soil organic carbon stocks in agricultural terraces | Pengzhi Zhao Earth & Life Institute, Université catholique de Louvain |
| 11:30-11:45 | 34368 | Quantifying non-linear relationships and causal effects of soil organic carbon on crop productivity stability | Yuyang Huang Zhejiang University |
| 11:45-12:00 | 34524 | National Scale Mapping of Soil Organic Carbon Vulnerability Indicators in New Zealand | Pierre Roudier Bioeconomy Science Institute |
| 13:30-13:45 | 33187 | Crushed basalt application shows soil improvement and potential carbon capture in wheat field | Binoy Sarkar Future Industries Institute, Adelaide University, Mawson Lakes, SA 5095, Australia |
| 13:45-14:00 | 34460 | Integrating Remote Sensing and Process-Based Modeling to Assess Grassland Soil Organic Carbon Change | Marmar Sabetizadeh Earth and Life Institute, Université catholique de Louvain, Louvain-La-Neuve, Belgium |
| 14:00-14:15 | 31956 | Optimal Selection of Soil Organic Carbon Prediction Models and Their Implications for Potential Soil Erosion Estimation (RUSLE) | Qian Zou Jiangxi University of Finance and Economics |
| 16:30-16:45 | 31383 | Comprehensive Review: Insights into the Dynamics of Soil Organic Carbon Stocks in Vineyards | Mukkaram EJAZ Silesian University of Technology, Institute of Physics - Centre for Science and Education, Division of Geochronology and Environmental Isotopes, Konarskiego 22B, Gliwice 44-100, Poland |
| 16:45-17:00 | 33089 | Cover crop species and mixtures drive contrasting vertical distribution of root- and residue-derived C and N in conservation-tilled sandy Ultisols | Rongzhong Ye Clemson University |
| 17:00-17:15 | 34967 | Urban soils carbon across the scales and regions: who and what drive the spatio-temporal variability of soil carbon in urban areas | Viacheslav Vasenev Wageningen University |
| 17:15-17:30 | 33798 | Soil Organic Carbon Assessment Across Land-Use and Management Scenarios in a Metropolitan Urban-Rural Territory | C. Walter SAS, Institut Agro, INRAE |
| 17:30-17:45 | 35295 | Depth Variations and Drivers of Soil Organic Carbon in Croplands of the Black Soil Region, Northeast China | LI Liang College of Land Science and Technology, China Agricultural University |



Parallel Sessions

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| Thursday, June 11 Friday, June 12 | Room: Convention Center, Nanjing 203 |
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| Session 409003 | <p style="text-align: center;">Climate Change and Soil Microbial Control Carbon Sequestration</p> <p>Convener: Yang Yang, State Key Laboratory of Loess Science, Institute of Earth Environment, Chinese Academy of Sciences</p> <p>Co-Conveners: Shaoshan An, State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, Northwest A&F University Anna Gunina, Peoples' Friendship University of Russia/Institute of Applied Ecology, Chinese Academy of Sciences Baorong Wang, State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, Northwest A&F University Yanxing Dou, State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, Northwest A&F University</p> |
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| Schedule | ID | Title | Presenter |
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Thursday, June 11

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|-------------|-------|--|--|
| 11:15-11:30 | 32981 | Activation energy of soil organic matter decomposition and Consequences of Global Warming | Yakov Kuzyakov University of Goettingen |
| 11:30-11:45 | 32114 | Mechanism of increased drought intensity stimulating the extracellular polymeric substance (EPS) accumulation and their contribution to soil organic carbon | Shaoshan An Northwest A&F University |
| 11:45-12:00 | 34463 | Symbiosis in an asymmetrical day-night high-CO ₂ world: Interactive effects of arbuscular mycorrhizal fungi and elevated CO ₂ on legume nutrition and soil fertility | Xinhua He Shanxi Agr UVSichuan Agr UVUWA\UC Davis |
| 12:00-12:15 | 33508 | Exploring drivers of microbial drought sensitivity through combined laboratory and field approaches | Alberto Canarini Department of Biological, Geological and Environmental Sciences, University of Bologna, Bologna, Italy |



Parallel Sessions

Thursday, June 11 (Session 409003)

| | | | |
|-------------|-------|--|--|
| 12:15-12:30 | 35864 | Effects of warming on SOC | Yuan Sun Nanjing Forestry University |
| 13:30-13:40 | 32307 | Fungal Necromass Carbon: Insights into Global Soil Carbon Sequestration and Its Practical Implementation in Circular Agricultural Systems | Dong Liu Kunming Institute of Botany, Chinese Academy of Sciences |
| 13:40-13:50 | 32701 | Linking the diversity of soil CO ₂ -fixing microorganisms with soil organic carbon accumulation along biological soil crust chronosequence | Baorong Wang Northwest A&F University |
| 13:50-14:00 | 33132 | Grassland degradation-induced soil organic carbon loss associated with micro-food web simplification | Yang Hu Xinjiang Agricultural University |
| 14:00-14:10 | 33469 | Arbuscular mycorrhizal fungi hyphal density rather than diversity stimulates microbial necromass accumulation after long-term Robinia pseudoacacia plantations | Chunhui Liu Northwest A&F University |
| 14:10-14:20 | 32883 | Quantifying microbial controls on particulate and mineral-associated organic matter in cropland soils | Meixia Gao Institute of Applied Ecology, Chinese Academy of Sciences |
| 14:20-14:30 | 31356 | Aridity-driven soil carbon vulnerability to drought shapes future carbon-climate feedbacks | Baoku Shi Northeast Normal University |
| 14:30-14:40 | 32080 | Soil carbon mineralization decreased in desert steppe by light grazing but not fencing management | Tianqi Zhao Institute of Water Resources for Pastoral Area, Ministry of Water Resources |
| 14:40-14:50 | 32081 | Grazing disturbance reduces soil organic carbon sequestration and stability in desert steppe | Naijing Lu Institute of Water Resources for Pastoral Area, Ministry of Water Resources |
| 14:50-15:00 | 35294 | Thermal acclimation of soil microbial respiration across permafrost ecosystems: contrasting roles of autotrophic and heterotrophic microorganisms | Ning Tian Institute of Applied Ecology, Chinese Academy of Sciences |
| 15:00-15:10 | 36406 | Recognizing the role of soil microorganisms in organic carbon accumulation in drylands | Xiaoguo Zhou Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences |



Parallel Sessions

Thursday, June 11 (Session 409003)

| | | | |
|-------------|-------|--|--|
| 16:30-16:45 | 34594 | Global warming decreased soil organic carbon stock via increasing organic matter lability and heterotrophic respiration | YoungHo Seo Division of Applied Life Science (BK21+ Program), Gyeongsang National University, 501 Jinju-daero, Jinju, 52828, Republic of Korea |
| 16:45-17:00 | 32340 | Community, metabolic pathways and fixation potential of soil CO ₂ -fixing microorganisms on the Loess Plateau | Yimei Huang Northwest A&F University |
| 17:00-17:15 | 33025 | Microbial Intracellular Carbon Storage: A Missing Link in Global Soil Carbon Sequestration Framework | Guanglong Tian Biosolids Utilization and Soil Science Section, Monitoring and Research Department, Metropolitan Water Reclamation District of Greater Chicago |
| 17:15-17:30 | 33653 | Global Change Reshapes Microbial Residues and Plant Lignin Components in Soils | Jiwei Li Northwest Agriculture & Forestry University |
| 17:30-17:42 | 32266 | Microplastics from conventional and biodegradable mulch films alter microbial necromass accumulation and organic carbon sequestration | Zhang Haixin HENAN INSTITUTE OF SCIENCE AND TECHNOLOGY |
| 17:42-17:54 | 32267 | Shifts in C-degradation genes and microbial metabolic activity with vegetation types affected the surface soil organic carbon pool | Huang Qian Northwest A&F University |
| 17:54-18:06 | 32339 | Orchard soils exhibit the highest microbial CO ₂ fixation potential and contribution to soil organic carbon across land-use types in Qaidam Basin | Fadan Lei Northwest A&F University |
| 18:06-18:18 | 33733 | Turnover of microbial biomass residues to soil organic matter and its contribution mechanism | Tiantian Zheng Shenyang Normal University |
| 18:18-18:30 | 33824 | Mechanisms underlying rhizosphere regulation of soil organic carbon components and stability by leguminous plants in subtropical karst and non-karst forests | Shuting Chen Guangxi Normal University |



Parallel Sessions

Friday, June 12 (Session 409003)

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|-------------|-------|---|--|
| 09:00-09:10 | 33886 | Soil organic carbon formation from plant and microbial residual carbon: Effects of home-field advantage and root litter quality | Huijun Li Qinghai University |
| 09:10-09:20 | 34193 | Substrate availability modulates the thermal responses of soil microbial respiration and growth | Tengyue Du Institute of Applied Ecology, Chinese Academy of Sciences |
| 09:20-09:30 | 34247 | Coupled temperature sensitivity of microbial carbon and nitrogen use efficiencies in forest soils on a continental scale | Yang Zhang Institute of Applied Ecology, Chinese Academy of Sciences |
| 09:30-09:40 | 34336 | Divergent responses of plant lignin phenols and microbial residues to global change: a global meta-analysis | Linjie Fan Zhejiang University |
| 09:40-09:50 | 32309 | The influence and mechanism of the interaction between Mineral-associated Organic Carbon and soil aggregates on soil carbon sequestration | Zijia Zuo Shaanxi Normal University |
| 09:50-10:00 | 34630 | Decades of no-till coupled with warming improves topsoil soil organic matter accrual via stimulate microbial carbon use efficiency | Xiaoying Jin China Agricultural University |
| 10:00-10:10 | 35269 | Context-dependent dominance of plant detritus or microbial necromass in soil organic carbon accrual | Tao Wang Institute of Mountain Hazards and Environment, Chinese Academy of Sciences, Chengdu 610041, China |



Parallel Sessions

| Thursday, June 11 | | Room: Expo Center, Hall 5, 5202 | |
|-----------------------|-------|--|--|
| Session 409004 | | Evolution of Soil Organic Matter: Impacts of Climate Change and Land Use Change | |
| | | Convener: Nan Sun, Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, China | |
| | | Co-Conveners: Xiujun Wang, Shanxi Agricultural University, China Lili Zhang, Institute of Applied Ecology, Chinese Academy of Sciences, China | |
| | | | |
| Schedule | ID | Title | Presenter |
| 11:15-11:35 | 31933 | Differences of Soil Carbon Sequestration Efficiency of Typical Cropland in China, UK and USA | Minggang Xu State Key Laboratory of Efficient Utilization of Arid and Semi-arid Arable Land in Northern China, Key Laboratory of Arable Land Quality Monitoring and Evaluation, Ministry of Agriculture and Rural Affairs/Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences; Institute of Eco-Environment and Industrial Technology, Shanxi Agricultural University |
| 11:35-11:55 | 32406 | Soil Carbon Change under Land Use and Climate Change | Pete Smith Institute of Biological & Environmental Sciences, University of Aberdeen |
| 11:55-12:10 | 32305 | Does elevated atmosphere CO ₂ facilitate soil carbon sequestration? | Caixian Tang La Trobe University |



Parallel Sessions

Thursday, June 11 (Session 409004)

| | | | |
|-------------|--------|--|---|
| 12:10-12:25 | 320B40 | Reconstruction of Rhizosphere Soil Microenvironments: Synergistic Plant-Microbe Purification Mechanisms and Practices | Lijuan Cui State Key Laboratory of Wetland Conservation and Restoration, Chinese Academy of Forestry Sciences, Beijing 100091, China |
| 13:30-13:45 | 31934 | To reduce CH ₄ and N ₂ O emissions whilst maintaining crop yield in rice-wheat system in China with climate change using SPACSYS model | Nan Sun State Key Laboratory of Efficient Utilization of Arable Land in China, Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 13:45-14:00 | 33728 | Nitrogen addition effects on soil organic carbon accrual in cropland land | Tian Jing State Key Laboratory of Nutrient Use and Management, College of Resources and Environmental Sciences, China Agricultural University |
| 14:00-14:15 | 33068 | Decadal extreme drought reduces alpine subsoil carbon stocks | Jinsong Wang, Ronglei Zhou, Shuli Niu Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences |
| 14:15-14:30 | 33205 | Crop diversification as a climate-smart strategy: A model-based assessment in Mediterranean orchards for soil carbon sequestration and greenhouse gas emissions mitigation | Virginia Sánchez-Navarro Department of Agricultural Engineering, ETSIA, Universidad Politécnica de Cartagena, Cartagena, Spain |
| 14:30-14:45 | 36461 | Long-term Grassland Conversion Reshapes Deep Soil C and N Cycling: Thermodynamic Destabilization and Microbial Drivers | Xiang Wang China Agricultural University |
| 14:45-15:00 | 31501 | Soil Microbial Diversity and Carbon Stability for Climate Resilient Land Management in the Western Ghats | Jagadesh Muthumani Department of Soil Science and Agricultural Chemistry, Tamil Nadu Agricultural University |
| 15:00-15:15 | 34199 | Mechanisms of soil organic carbon sequestration within aggregates of black soil under long-term land use change | Na Li Northeast Institute of Geography and Agroecology, CAS |



Parallel Sessions

Thursday, June 11 (Session 409004)

| | | | |
|-------------|-------|--|---|
| 16:30-16:45 | 34091 | Fertilizer-N recovery links to SOC stabilization and fractionation in straw-mulched soil: Insights from ¹⁵ N-tracing and ¹³ C natural abundance | Cong Xu Institute of Agricultural Resources and Environment, Jiangsu Academy of Agricultural Sciences |
| 16:45-17:00 | 33770 | Quantifying soil organic matter effects on nitrogen use efficiency and fate in wheat-maize cropping systems: a ¹⁵ N tracer approach | Lin Liu Changzhi University |
| 17:00-17:15 | 34382 | Contrasting effects of long-term fertilization on pore structure and POM in upland and paddy soils revealed by X-ray CT | Zichun Guo Institute of Soil Science, Chinese Academy of Sciences, Nanjing |
| 17:15-17:30 | 34588 | Evolutionary Characteristics of Stable Organic Matter in Lateritic Red Soils under Long-Term Rotation and Fertilization Systems | Yingting Gong Institute of Agricultural Resources and Environment, Guangdong Academy of Agricultural Sciences |
| 17:30-17:45 | 33392 | Photocatalytic generation of reactive oxygen species from dissolved black carbon: Identification of photoproduction sites | Lin Wang Institute of Agricultural Resources and Environment, Sichuan Academy of Agricultural Sciences, Chengdu, 610066, China |
| 17:45-18:00 | 33931 | Organic fertilization under conservation tillage enhances biopore formation and particulate organic matter accumulation via fraction-specific pore relationships in a Vertisol | Tianyu Ding Institute of Soil Science, Chinese Academy of Sciences |
| 18:00-18:15 | 34976 | Distribution Characteristics and Influencing Factors of Carbon and Nitrogen Content in Mineral-Associated Organic Matter in Mollisols (Phaeozems) of Northeast China | Jiayi Duan Northeast Normal University; Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 18:15-18:30 | 35026 | Long-term organic farming alters soil organic matter molecular composition through divergent microbial processing pathways | Zhanlonggang Yu China Agricultural University |



Parallel Sessions

| Monday, June 8 | | Room: Convention Center, Nanjing 205 | |
|-----------------------|-------|--|--|
| Session 409006 | | One Carbon Metabolism in Terrestrial Ecosystems | |
| | | <p>Convener: Jingjing Peng, China Agricultural University</p> <p>Co-Conveners: Werner liesack, Max Planck Institute for Terrestrial Microbiology Lei Cheng, Biogas Institute of Ministry of Agriculture and Rural Affairs Diana Z. Sousa, Wageningen University and Research</p> | |
| Schedule | ID | Title | Presenter |
| 13:15-13:30 | 34487 | Functional Diversity and Interactions of CO-utilizing Microbial Communities | Diana Z. Sousa Wageningen University & Research |
| 13:30-13:45 | 34490 | Culturing the Uncultured Anaerobes from the Perspective of Microbial Growth Curves | Lei Cheng Biogas Institute of Ministry of Agriculture and Rural Affairs |
| 13:45-14:00 | 33914 | Exploring Aerobic Methanotroph Diversity in Terrestrial Habitats: Recent Advances and Challenges for Further Studies | Svetlana N. Dedysh Winogradsky Institute of Microbiology, Research Center of Biotechnology of the Russian Academy of Sciences |
| 14:00-14:15 | 34130 | Life under Limiting Methane Metabolic Flexibility, Hydrogen Use, and Starvation/Revival of Methylocystis spp. | Werner Liesack Max Planck Institute for terrestrial Microbiology, 35043 Marburg, Germany; College of Resources and Environmental Sciences, China Agricultural University, Beijing 100083, China |
| 14:15-14:25 | 33044 | Optimizing and Simulating the Soil Carbon Fractions within the Beps-mend Framework | Mousong Wu Nanjing University |



Parallel Sessions

Monday, June 8 (Session 409006)

| | | | |
|-------------|-------|---|---|
| 14:25-14:35 | 34061 | Ozone-driven Spatial Divergence of Methane Production in Rice Paddies | Yang Ji Nanjing University of Information Science and Technology |
| 14:35-14:45 | 34363 | Vertical Profiles of Community and Activity of Methanotrophs in Large Lake and Reservoir of Southwest China | Quan Yuan Institute of Geochemistry, Chinese Academy of Science |
| 14:45-14:55 | 34370 | Elevational Patterns and Temperature Sensitivity of Soil Methane Oxidation in Southeastern Tibetan Forests | Yongcui Deng Nanjing Normal University |
| 14:55-15:05 | 34136 | Temperature-Driven Virus-Host Interactions Regulating Methane Production in Paddy Fields | Ruiliang Xu College of Resources and Environmental Sciences, State Key Laboratory of Nutrient Use and Management; Key Laboratory of Plant-Soil Interactions; National Academy of Agricultural Green Development, China Agricultural University, Beijing, China |
| 15:05-15:15 | 34900 | Cascading Regulation of Soil Micro-food Web on Carbon Stability in <i>Camellia oleifera</i> Intercropping Systems | Xiaohong Wu Central South University of Forestry and Technology |



Parallel Sessions

| Thursday, June 11 Friday, June 12 | | Room: Convention Center, Nanjing 205 | |
|--------------------------------------|-------|---|--------------------------------------|
| Session 409007 | | Physical, Chemical, and Biological Drivers for Soil Greenhouse Gas Fluxes | |
| | | <p>Convener: Zhifeng Yan, School of Earth System Science, Tianjin University</p> <p>Co-Conveners: Dani Or, Dept. of Civil and Environmental Engineering, University of Nevada, Reno, USA Yonghong Wu, Institute of Soil Science, Chinese Academy of Sciences, China Shuli Niu, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China Pete Smith, Institute of Biological and Environmental Sciences, School of Biological Sciences, University of Aberdeen, UK</p> | |
| Schedule | ID | Title | Presenter |
| Thursday, June 11 | | | |
| 13:30-13:45 | 32538 | Greenhouse Gas Emissions from Soils and Ways to Reduce Them | Pete Smith University of Aberdeen |
| 13:45-13:55 | 32474 | Soil greenhouse gas emissions under different land uses across Europe | Jorge Álvaro-Fuentes CSIC |
| 13:55-14:05 | 32703 | Recent stabilization of agricultural non-CO ₂ greenhouse gas emissions in China | Songbai Hong Peking University |
| 14:05-14:15 | 35183 | Static Chamber Protocol Optimization for Soil Greenhouse Gas Flux Measurements under Pulse Events | Lifang Wu Tsinghua university |



Parallel Sessions

Thursday, June 11 (Session 409006)

| | | | |
|-------------|-------|--|--|
| 14:15-14:25 | 32960 | Effect of no-tillage based cover crop management on greenhouse gas emissions, and greenhouse gas balance in organic soybean field in Hokkaido, Japan | Bishal Subedi Graduate School of Agriculture, Hokkaido University |
| 14:25-14:35 | 32293 | Agricultural Management and Soil Leakiness: Drivers of Methane Oxidation and Nitrification | Ruchen Tian Netherlands Institute of Ecology (NIOO-KNAW) |
| 14:35-14:45 | 35278 | Microbial regulation of soil CO ₂ and CH ₄ emissions during rewetting of degraded peatlands | Jiye Cai Northeast Normal University |
| 14:45-14:55 | 35720 | Belowground Cross-trophic Networks Impact CH ₄ and CO ₂ Emissions in Degraded Alpine Peatlands | Dengbo Chen Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 14:55-15:05 | 36385 | Iron-carbon coupling mechanisms during soil organic carbon dynamics under climate-change conditions in long-term biochar-amended soils | Haohua He Fudan University; EPFL |
| 15:05-15:15 | 34530 | Coupling of nocturnal water vapor and CO ₂ uptake in arid soils: Comparative analysis from three arid soils | Thuc T. Nguyen The Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, 84990, Israel |
| 16:30-16:45 | 35084 | Slowing down the strong ammonia oxidation is the key to reduce N ₂ O emission in alkaline agricultural soils | Xiaotang Ju Hainan University |
| 16:45-16:55 | 33167 | Coupling expression of nitrifying and denitrifying genes induce high N ₂ O emissions in strong ammonia oxidizing soils | Xiaotong Song Chinese Academy of Sciences, Research Center for Eco-Environmental Sciences |
| 16:55-17:05 | 34717 | Organic amendments regulated the pattern and product stoichiometry of nitrate reduction processes in arable soils | Zhijun Wei Institute of Soil Science, Chinese Academy of Sciences |



Parallel Sessions

Thursday, June 11 (Session 409006)

| | | | |
|-------------|--------|--|---|
| 17:05-17:15 | 33820 | N ₂ O fluxes after application of organic and mineral fertilizers to acidic tea soils in Kenya | Thomas Smith Cranfield University |
| 17:15-17:25 | 319B89 | A “naturally dominant” chemo-denitrification pathway drives N ₂ O emissions in Tibetan glacier retreat zones | Lei Zhong School of Earth System Science, Tianjin University |
| 17:25-17:35 | 36193 | Mechanistic controls of nitrous oxide emissions revealed by flux-gradient measurements and site-specific incubations | Sarah Demers University of Saskatchewan |
| 17:35-17:45 | 33305 | Effects of Elevated CO ₂ Concentrations and Temperature on Soil Inorganic Nitrogen and Greenhouse Gas Emissions in Winter Wheat | Danni Lv Inner Mongolia Agricultural University |
| 17:45-17:55 | 34456 | Effect of soil structure on N ₂ O production and emission | Baoxuan Chang Tianjin University |
| 17:55-18:05 | 31891 | Carbon Dioxide Emissions from Soil Can Serve as a Sustainable Characteristic of the Forest-Steppe Biome | Olga Sukhoveeva Institute of Geography, Russian Academy of Sciences |



Parallel Sessions

Friday, June 12 (Session 409006)

| | | | |
|-------------|-------|--|--|
| 09:00-09:15 | 35280 | Effect of soil structure on CO ₂ production and emission | Zhifeng Yan Tianjin University |
| 09:15-09:25 | 36153 | Effects of Three-Dimensional Surface Area Correction on Soil CO ₂ Flux and Biomass Accounting in a Gully Landscape | Peiyu Sun Northwest A&F University |
| 09:25-09:35 | 34188 | Microbial phosphorus cycling: A key driver of CO ₂ emission in phosphorus-supplied subtropical forest soils | Muhammed Mustapha Ibrahim South China Botanical Garden, Chinese Academy of Sciences, Guangzhou, China |
| 09:35-09:45 | 32862 | Global Response and Mechanism of Methane Cycling in Wetlands Under Elevated Atmospheric CO ₂ and Warming | Siyu Chen Research Center for Eco-Environmental Sciences; University of Chinese Academy of Sciences |
| 09:45-09:55 | 34312 | The Carbon-Iron Coupling Mechanism of Organic Carbon Turnover in the Rice Root Zone Under Redox Gradients | Yan Li Institute of Subtropical Agriculture, Chinese Academy of Science |
| 09:55-10:05 | 31717 | Understanding methane emission dynamics in temperate rice fields through systematic review and statistical modeling | Lucia Crosetto Department of Agricultural, Forest and Food Sciences, University of Torino |
| 10:05-10:15 | 34629 | Carbon Flux Responses of Rice Paddy to Coupled Heatwaves and Droughts in the Jiangnan Plain | Xiaorui Liu Key Laboratory for Geographical Process Analysis and Simulation of Hubei Province, College of Urban and Environmental Sciences, Central China Normal University; Hubei Jiangnan Plain Scientific Observation and Research Station of Farmland Ecosystem, Central China Normal University |
| 10:15-10:25 | 35029 | Contrasting warming responses of anaerobic microbial communities explain variation in methane Q ₁₀ across paddy soils | Ye Liu State Key Laboratory of Bioactive Substance and Function of Natural Medicines, Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences & Peking Union Medical College, Beijing 100193, China |
| 10:25-10:35 | 35129 | Inhibition and the mechanisms of ethene on methanogen | Jingjing Wang Institute of Applied Ecology, Chinese Academy of Sciences |



Parallel Sessions

| Monday, June 8 Tuesday, June 9 | | Room: Convention Center, Nanjing 205 | |
|-----------------------------------|-------|---|---|
| Session 409008 | | Soil Carbon Dynamics and Impacts of Land Use and Management | |
| | | Convener: Xiujun Wang, Shanxi Agricultural University, China | |
| | | Co-Conveners: Jianbin Zhou, Northwest A&F University, China Kazem Zamanian, Leibniz University, Germany | |
| Schedule | ID | Title | Presenter |
| Monday, June 8 | | | |
| 16:30-16:45 | 31915 | Cover crop quantity and quality jointly drive priming effects and new soil organic carbon formation across soil fertilization histories | Zhi Liang Department of Agroecology, Aarhus University |
| 16:45-17:00 | 32562 | The conversion of paddy to upland soils triggers the loss of soil organic carbon stocks by promoting Fe oxide crystallization | Dong Wu Hebei Academy of Agriculture and Forestry Sciences |
| 17:00-17:15 | 34183 | Impact of burning cessation on soil carbon stocks and organic matter fractions in semi-natural grasslands | Hajime Sakurada Graduate school of agriculture, Hokkaido University |



Parallel Sessions

Monday, June 8 (Session 409008)

| | | | |
|-------------|-------|--|---|
| 17:15-17:30 | 33258 | Soil carbon stocks and sequestration rates in Northern Irish grasslands | Selva Dhandapani Agri Food and Biosciences Institute |
| 17:30-17:45 | 33938 | Long-Term Variability of Peat Soil Properties and CO ₂ Flux in a Planted Forest Ecosystem | Putri Oktariani IPB University; Indonesian Peat Community Association |
| 17:45-18:00 | 34059 | Effects of Eucalyptus robusta afforestation on soil carbon fractions and the underlying mechanisms | Xin Zhou Guangxi Normal University |
| 18:00-18:15 | 36088 | Tree proximity effects on soil organic carbon, bulk density and soil moisture in a dryland landscape | Ana Paula Ferreira de Brito School of Agriculture, Food and Wine, Faculty of Sciences, Engineering and Technology, The University of Adelaide, Waite Campus, Glen Osmond, SA 5064, Australia; CSIRO, Adelaide, SA, Australia |
| 18:15-18:30 | 34657 | Long-term impact of integrated crop-livestock-forest systems on soil organic carbon sequestration and edaphic health in the Brazil | Alberto C. de Campos Bernardi Embrapa |



Parallel Sessions

Tuesday, June 9 (Session 409008)

| | | | |
|-------------|-------|---|---|
| 09:00-09:15 | 31842 | Carbon-Nitrogen Dynamics and Soil Aggregation in Terrace Soil of Rice-Wheat Cropping System | Md. Mizanur Rahman Department of Soil Science, Gazipur Agricultural University |
| 09:15-09:30 | 31878 | Soil C and N storages response to land-use and management changes: A comparison of various plant-soil ecosystems in Eastern Japan | Cheng Weiguo Yamagata University Japan |
| 09:30-09:45 | 32034 | Land-use pattern influenced quality and climate-resilience of soil in the Brahmaputra valley at Himalayan foothill in India | Prabhat Pramanik NRM Division, ICAR - Indian Agricultural Research Institute |
| 09:45-10:00 | 32545 | Global response of soil organic carbon pools to land management and climate change | Shui-Qing Chen Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences", "University of Science and Technology of China |
| 10:00-10:15 | 32822 | Soil Carbon-Nitrogen Pools in Different Land Use Types and Varying Time Scales: Implications for Soil Health and Sustainable Agriculture | Samuel Ayodele Mesele International Institute of Tropical Agriculture |
| 10:15-10:30 | 33185 | Linking the Chemical Composition of Soil Organic Carbon with the Formation, Stability, and Carbon Accumulation of Soil Aggregates under Divergent Land Uses | Kiattisak Sonsri Department of Soil Science, Faculty of Agriculture at Kamphaeng Saen, Kasetsart University, Kamphaeng Saen Campus, Nakhon Pathom 73140, Thailand |
| 10:30-10:45 | 34539 | Digging Deeper: Increasing Precision in quantifying Soil Organic Carbon Losses After Forest-to-Cultivated Land Conversion | Nastaran Chalabianlou University of Guelph |
| 10:45-11:00 | 34997 | Evaluating Carbon Stock Shifts Following Land-Use Change: Secondary Land to Plantation in Azamgarh, India | Jitendra Ahirwal Centre of Environmental Studies, University of Allahabad, Prayagraj- 211002, Uttar Pradesh, India |



Parallel Sessions

Tuesday, June 9 (Session 409008)

| | | | |
|-------------|-------|---|--|
| 11:15-11:30 | 32520 | Integration of artificial intelligence and remote sensing reflectance spectra for regional SOC Mapping | Yiping Wu Institute of Global Environmental Change, Xi'an Jiaotong University", "School of Soil and Water Conservation, Central South University of Forestry and Technology |
| 11:30-11:45 | 31639 | Divergent carbon stabilisation pathways in Australian soils | Yijia Tang Sydney Institute of Agriculture & School of Life and Environmental Sciences, the University of Sydney |
| 11:45-12:00 | 35188 | Soil organic carbon stocks under no-tillage on farms in European Russia | Kristina Ivashchenko Institute of Physicochemical and Biological Problems in Soil Science, Russian Academy of Sciences |
| 13:30-13:45 | 32980 | Soil Acidification in the Anthropocene | Yakov Kuzyakov University of Goettingen |
| 13:45-14:05 | 34731 | Vulnerable Zone of Soil Inorganic Carbon Loss in Intensive Agricultural Regions | Zhou Jianbin College of Natural Resources and Environment, Northwest A&F University |
| 14:05-14:25 | 31805 | Biologically driven short-term inorganic carbon changes in calcareous soils | Rosa M Poch Universitat de Lleida", "Universidad Pública de Navarra |
| 14:25-14:40 | 32410 | Dynamics of soil organic and inorganic carbon in aggregates under straw and biochar amendments | Amar Ali Adam Hamad Shanxi Agricultural University |
| 14:40-14:55 | 32412 | Coupling mechanism of soil organic carbon and inorganic carbon | Tongping Lu Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences |
| 14:55-15:10 | 32408 | Synergistic Relationships Between Soil Organic and Inorganic Carbon in North China's Croplands: A Mini-review and Prospective | Xiujun Wang Shanxi Agricultural University |



Parallel Sessions

Tuesday, June 9 (Session 409008)

| | | | |
|-------------|--------|--|---|
| 16:30-16:45 | 33452 | Biochar-loaded NH ₄ ⁺ -N effectively reduces carbon emissions by changing the composition of soil organic carbon and microbial community | Xuebo Zheng Tobacco Research Institute of Chinese Agricultural Sciences |
| 16:45-17:00 | 33460 | Contrasting microbial C dynamics under different long-term P fertilization regimes in non-allophanic Andosols. | Koizumi Wako Graduate School of Agricultural Science, Tohoku University Miyagi Japan |
| 17:00-17:15 | 34764 | Using Natural δ ¹³ C Signature from Both Soil Profiles and Topsoils to Understand Organic Carbon Transformation in Mollisols (Phaeozems) of Northeast China | Kangning Geng Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 17:15-17:30 | 34789 | Soil carbon dynamics and microbial associations across the soil profile under regenerative management in Northern California vineyards | Connie T. F. Wong Department of Land, Air and Water Resources, University of California, Davis, CA, USA |
| 17:30-17:45 | 35135 | Trade-offs between soil organic carbon input and mineralization driven by high-level phosphorus fertilization: 30-year field evidence | Jianguo Li College of Resources and Environment, Interdisciplinary Research Center for Agriculture Green Development in Yangtze River Basin, Southwest University |
| 17:45-18:00 | 151705 | Initial organic carbon content controls the depth-dependent soil organic carbon responses to liming | Yang Li Sichuan Agricultural University |



Parallel Sessions

| Friday, June 12 | | Room: Expo Center, Hall 5, 5202 | |
|-----------------------|-------|---|---|
| Session 409009 | | Soil Carbon Fluxes for Climate and Soil Health | |
| | | <p>Convener: Yafei Li, Agroecology and Environment, Agroscope, Switzerland</p> <p>Co-Conveners: Yuqiao Wang, Henan Agricultural University, China Ruikun Gou, Northwest Agricultural and Forestry University, China</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:05 | - | Session Introduction | Conveners |
| 09:05-09:20 | 32314 | Management practices to mitigate long-term soil organic carbon losses in temperate arable soils | Martin Wiesmeier Bavarian State Research Center for Agriculture |
| 09:20-09:35 | 31767 | A model-based tool for supporting sustainable management of soil organic carbon in Swiss croplands | Yafei Li Agroecology and Environment, Agroscope, Zürich |
| 09:35-09:50 | 34904 | Soil Carbon Fluxes in Agroecosystems with Annual and Perennial Grasses in the Moscow region of Russia | Svatlana Kulachkova Lomonosov Moscow State University |
| 09:50-10:05 | 33659 | Contrasting effects of inorganic vs. organic nitrogen deposition on soil respiration: Evidence from a 10-year field experiment | Lili Dong Shenyang Agricultural University; Chinese Academy of Sciences |
| 10:05-10:20 | 32574 | Blue Carbon Stocks in Brazilian Mangroves | João Pedro Coumendouros Scott Federal Rural University of Rio de Janeiro |
| 10:20-10:35 | 32690 | Mangrove Biomass and Soil Carbon Stocks: Spatial Approach in the Cananéia Region | Anjos, L.H.C dos Department of Soils, Institute of Agronomy, Federal Rural University of Rio de Janeiro |
| 10:35-10:50 | 33484 | How temperature controls methane fluxes and methanogenic pathways at polygonal tundra of Samoylov Island in the Lena River Delta (Northern Siberia) | Nikita B. Ustinov Laboratory of Greenhouse Gases, A.M. Obukhov Institute of Atmospheric Physics, RAS, Moscow, Russia |



Parallel Sessions

Friday, June 12 (Session 409009)

| | | | |
|-------------|-------|---|---|
| 11:15-11:30 | 34294 | Greenhouse Gas Fluxes and Their Environmental Drivers in a Coastal Peatland of the Kamchatka Peninsula | Liudmila A. Krivenok A.M. Obukhov Institute of Atmospheric Physics, RAS, Moscow, Russia |
| 11:30-11:45 | 36265 | Linking Seasonal Controls and Biological Degradation in the Chihuahuan Desert, Mexico | Dulce Flores-Renteria SECIHTI-Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, Unidad Saltillo, Ramos Arizpe, Mexico; Laboratorio Nacional MexFlux, Monitoring of Greenhouse Gases in Ecosystems. Sede regional Saltillo, México. |
| 11:45-12:00 | 34492 | Evaluating global soil carbon sequestration and loss: an expert assessment of their role in climate mitigation and adaptation | Budiman Minasny College of Science and Engineering, James Cook University, Cairns, Queensland, Australia |
| 12:00-12:15 | 33060 | Soil carbon fluxes as indicator of Healthy urban soils in a Mediterranean city | Teresa Alía Soil Science Unit, Chemistry in Pharmaceutical Science Department. Universidad Complutense de Madrid. |



Parallel Sessions

| Thursday, June 11 Friday, June 12 | | Room: Convention Center, Nanjing 402A | | | |
|--------------------------------------|-------|---|--|-------|-----------|
| Session 409010 | | Soil microbial life and death: impacts on soil organic carbon dynamics under global change | | | |
| | | Convener: Qing-Fang Bi, Max-Planck Institute for Biogeochemistry, Jena, Germany | | | |
| | | Co-Conveners: Alberto Canarini, Department of Biological, Geological and Environmental Science, University of Bologna, Bologna, Italy Xiuli Hao, Huazhong Agricultural University, Wuhan, China Ke-Qing Xiao, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences Yuting Liang, Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China | | | |
| | | Schedule | ID | Title | Presenter |
| | | Thursday, June 11 | | | |
| 11:15-11:20 | - | 5-minute convener introduction | - | | |
| 11:20-11:35 | 32195 | Global viral auxiliary metabolic genes drive carbon sequestration under climate change | Mao Ye Institute of Soil Science, Chinese Academy of Sciences (Nanjing) | | |
| 11:35-11:50 | 34154 | Viral mediation of microbial turnover governs soil organic matter allocation | Weigen Huang State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China | | |



Parallel Sessions

Thursday, June 11 (Session 409010)

| | | | |
|-------------|-------|---|---|
| 13:30-13:35 | - | 5-minute convener introduction | - |
| 13:35-14:05 | 34639 | Microbes as engineers in modulating and preserving soil organic carbon | Qiaoyun Huang Huazhong Agricultural University |
| 14:05-14:20 | 34562 | Pathway-aware microbial phosphorus traits predict carbon-use efficiency and soil organic carbon turnover across urban gradients | Bangxiao Zheng Xiamen University of Technology |
| 14:20-14:35 | 34170 | Protist predation shifts bacterial life strategies and increases carbon use efficiency across contrasting soils | Silin Ma National Key Laboratory of Agricultural Microbiology, Huazhong Agricultural University, Wuhan, China. |
| 14:35-14:50 | 35052 | Microbial respiration, growth, and CUE - The roles of Land use, management, and environmental factors | Jarin Jose Max Planck Institute for Biogeochemistry (MPI-BGC), Jena, Germany |
| 14:50-15:05 | 35876 | Microbial growth rate is a stronger predictor of soil organic carbon than carbon use efficiency | Xianjin He South Chian Botanical Garden, Chinese Academy of Sciences |



Parallel Sessions

Thursday, June 11 (Session 409010)

| | | | |
|-------------|-------|--|--|
| 16:30-16:45 | 34421 | Response of Microbial Necromass and Extracellular Polymeric Substances under Multifaceted Global Change | Ke Shi German Centre for Integrative Biodiversity Research (iDiv) Halle-Leipzig-Jena, Puschstr. 4, 04103 Leipzig, Germany; Department of Biology, Leipzig University, Puschstr. 4, 04103 Leipzig, Germany; Department of Ecology, Co-Innovation Center for Sustainable Forestry in Southern China, Nanjing Forestry University, Nanjing, 210037, China |
| 16:45-17:00 | 34600 | From expansion to endurance: persistent warming reshapes soil active microbial communities in forest ecosystems | Jieying Wang NorthwestUniversity |
| 17:00-17:15 | 34364 | Thermal adaptation reshapes soil microbial carbon use efficiency under prolong warming | Lingrui Qu Institute of Applied Ecology, Chinese Academy of Sciences |
| 17:15-17:30 | 33259 | Soil microbial community structure and soil carbon dynamics in fields and hedgerows of Northern Irish Grasslands | Selva Dhandapani Agri Food and Biosciences Institute |
| 17:30-17:45 | 33934 | Soil microbial life-history strategies covary with ecosystem multifunctionality across aridity gradients | Tao Zhou NORTHEAST FORESTRY UNIVERSITY |



Parallel Sessions

Friday, June 12 (Session 409010)

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| 09:00-09:05 | - | 5-minute convener introduction | - |
| 09:05-09:30 | 32278 | Multi-Scale Evidence for Declining Microbial Carbon Fixation Along Forest Succession Gradients | Shu-Yi-Dan Zhou South China Botanical Garden, Chinese Academy of Sciences |
| 09:30-09:45 | 34405 | Influence of nitrogen fertilization and cover crops on soil microbial dormant fraction | Simeng Wang Northwest University |
| 09:45-10:00 | 34347 | Microbial Enhancement of Soil Inorganic Carbon and Its Synergy with Organic Carbon Stabilization | Yishu Hu Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences; Sino-Danish College, University of Chinese Academy of Sciences; Department of Plant and Environmental Sciences, University of Copenhagen, Thorvaldsensvej 40, Frederiksberg 1871, Denmark |
| 10:00-10:15 | 34834 | Vertical distribution and controlling factors of soil microbial necromass carbon (MNC) under erosion-deposition processes | Qilin Yang Huazhong Agricultural University |
| 10:15-10:30 | 34041 | Microbial sequestration pathways of soil organic carbon in meadow steppes under long-term nitrogen and phosphorus application: Analysis based on aggregate scale residual carbon | Zhendan Wu Inner Mongolia Agricultural University |
| 10:30-10:45 | 32141 | Unlocking Carbon Management Sustainability by Quantifying Microbial Necromass and SOC Asynchrony | Xuefeng Zhu Institute of Applied Ecology, Chinese Academy of Sciences (Shenyang) |
| 10:45-11:00 | 33849 | Fenton reaction facilitates chitin degradation and nitrogen acquisition in the ectomycorrhizal fungus <i>Suillus luteus</i> | Bowen Zhang Centre for Environmental and Climate Science, Lund University; Research Center for Mountain Environment and Ecological Security, Institute of Mountain Hazards and Environment, Chinese Academy of Sciences |



Parallel Sessions

Friday, June 12 (Session 409010)

| | | | |
|-------------|-------|--|--|
| 11:15-11:30 | 32444 | Patterns and drivers of soil microbial residue carbon responses to precipitation changes in grassland ecosystems | Yingchao Yu Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences; University of Chinese Academy of Sciences |
| 11:30-11:45 | 34013 | Resolving the microbial processes underpinning necromass pools across landuses | Yao LI Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 11:45-12:00 | 34206 | Clay-organic matter interactions drive microbial necromass preservation in soils | Xu Wang Institute of Applied Ecology, Chinese Academy of Sciences |
| 12:00-12:15 | 34269 | Soil organic matter persistence emerges from recursive microbial necromass and mineral feedbacks | Bin Zhang Nanjing Agricultural University |



Parallel Sessions

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| Monday, June 8 Tuesday, June 9 | Room: Convention Center, Nanjing 202 |
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|-----------------------|--|
| Session 409011 | <p>Soil Organic Matter Transformation, Stabilization and Storage</p> <p>Convener: Claudio Zaccone, Dept. of Biotechnology, University of Verona, ITALY</p> <p>Co-Conveners: Boris Jansen, University of Amsterdam, Institute for Biodiversity and Ecosystem Dynamics, Amsterdam, THE NETHERLANDS</p> <p>Cesar Plaza, Consejo Superior de Investigaciones Científicas, Instituto de Ciencias Agrarias, Madrid, SPAIN</p> |
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| Schedule | ID | Title | Presenter |
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Monday, June 8

| | | | |
|-------------|-------|---|--|
| 13:15-13:30 | 32582 | Soil Carbon Dynamics and the Observer Effect | Ronald Amundson University of California, Berkeley |
| 13:30-13:45 | 32655 | Toward a standardized and ecologically relevant framework for soil organic matter physical fractionation | Xinnan Li Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 13:45-14:00 | 31863 | Multi-element evidence that soil organic matter persistence is not attributed to selective preservation or loss but an ecosystem property | Wenxiang Zhou The University of Queensland, School of Agriculture and Food Sustainability |
| 14:00-14:15 | 34515 | Ancient radiocarbon-free organic carbon as a pervasive bias in soil ¹⁴ C-based turnover estimates | Yoann COPARD Univ Rouen Normandie, Université Caen Normandie, CNRS, Normandie Univ, M2C UMR 6143, F-76000 Rouen, France |



Parallel Sessions

Monday, June 8 (Session 409011)

| | | | |
|-------------|-------|--|--|
| 14:15-14:30 | 35265 | A mechanistic investigation into the influence of mineral surface carbon loading on the formation of soil organic carbon | YaLu Wang Institute of Mountain Hazards and Environment, Chinese Academy of Sciences; University of Chinese Academy of Sciences |
| 14:30-14:45 | 36149 | The Interaction between Mineral Transformation and Mineral-Associated Organic Matter (MAOM) Degradation | Jiahui Wu University of Vienna, Division of Environmental Geosciences, Vienna, Austria |
| 14:45-15:00 | 34745 | Particulate pathway dominates mineral-associated organic matter formation and transformation | X. Chen Anhui Agricultural University |
| 15:00-15:15 | 32719 | Controls on the mineralization and stabilization of exogenous organic matter in volcanic soils | Dalin Wang Kyoto University |
| 16:30-16:45 | 33711 | ¹³ C tracing reveals organo-mineral regulation of carbon stabilization under ambient and elevated CO ₂ levels | Lukas Van Zwieten NSW Department of Primary Industries and Regional Development |
| 16:45-17:00 | 34337 | Dual and divergent formation pathways govern the composition and origins of mineral-associated organic carbon | Mengqiang Zhu University of Maryland College Park; University of Wyoming |
| 17:00-17:15 | 36470 | Soil Erosion and Organic Matter Stabilization Mechanisms | Xiang Wang China Agricultural University |
| 17:15-17:30 | 33634 | Manganese oxides direct polyphenol carbon toward abiotic polymerization or oxidative decomposition: Effect of pH and molecular structure | Hui Li Department of Crop and Soil Sciences, North Carolina State University |
| 17:30-17:45 | 32377 | Ferrihydrite-mediated carbon stabilization and plant responses in an alkaline soil | Zeinab Ghasemzadeh The University of Adelaide |
| 17:45-18:00 | 35062 | Iron oxides promote stable soil organic carbon sequestration in rice paddies | So Yeong Park Division of Applied Life Science (BK21), Gyeongsang National University, Jinju, Republic of Korea |
| 18:00-18:15 | 36538 | Iron-Mediated Carbon Dynamics in Coastal Wetlands under Seawater Intrusion | Chunmei Chen Tianjin University |
| 18:15-18:30 | 33518 | Hydrothermal-driven iron reduction-mineralization and organic carbon sequestration | Liulong Cheng South China Agricultural University |



Parallel Sessions

Tuesday, June 9 (Session 409011)

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|-------------|-------|--|---|
| 09:00-09:15 | 31817 | Roots enhance the accrual of mineral-associated organic carbon via new carbon formation and microbial conversion of native soil carbon | Juan Jia State Key Laboratory of Forage Breeding- by- Design and Utilization, Key Laboratory of Vegetation and Environmental Change, Institute of Botany, Chinese Academy of Sciences |
| 09:15-09:30 | 31819 | Organic acid-mediated destabilization overrides warming effect on soil carbon mineralization | Xiaojuan Feng State Key Laboratory of Forage Breeding-By-Design and Utilization, and Key Laboratory of Vegetation and Environmental Change, Institute of Botany, Chinese Academy of Sciences |
| 09:30-09:45 | 32001 | Insights from soil-aggregate microbiome and in-field soil respiration for improved carbon sequestration assessment of land use practices | Anil Somenahally Texas A&M AgriLife Research |
| 09:45-10:00 | 32666 | Organic materials combined with microbial inoculants suppress priming effect and enhance SOC sequestration in sandy soil | Xiaohong Tian College of Natural Resources and Environment, Northwest A&F University |
| 10:00-10:15 | 35962 | Microbial mediation of deep soil inorganic carbon accumulation under long-term straw return in alkaline agricultural soils | Jianning Shang China Agricultural University |
| 10:15-10:30 | 35198 | Fresh Plant Residues Drive Fungal Necromass Carbon Turnover to Stabilize Organic Carbon throughout the Soil Profile | Dabin Zhang College of Natural Resources and Environment, Northwest A&F University |
| 10:30-10:45 | 33285 | Discovering the molecular basis for carbon storage in soil for food security and climate change mitigation | Wanyue Zhao University of Bristol |
| 10:45-11:00 | 32758 | Amplifying the soil mineral pump for carbon sequestration | Ke-Qing Xiao Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |



Parallel Sessions

Tuesday, June 9 (Session 409011)

| | | | |
|-------------|-------|--|---|
| 11:15-11:30 | 35162 | Tree species traits interact with site properties to shape soil organic matter composition | Delphine Derrien INRAE, BEF, F-54000 Nancy, France; (11)\tINRAE, Institut Agro, SAS, 35000 Rennes, France |
| 11:30-11:45 | 32593 | Rapid soil formation and carbon accumulation along a Little Ice Age soil chronosequence in southeast Alaska | Diogo Spinola University of Northern British Columbia |
| 11:45-12:00 | 33528 | Controls on Temperature Sensitivity of Soil Organic Carbon Decomposition Along a Volcanic Elevation Gradient in California | Ze Jingwen Graduate School of Agriculture, Kyoto University, JAPAN; Institute of Agriculture, Tokyo University of Agriculture and Technology, JAPAN; Faculty of Agriculture, Tokyo University of Agriculture and Technology, JAPAN; Department of Land, Air and Water Resources, University of California, USA |
| 12:00-12:15 | 33752 | Conversion of coastal marshes to croplands shifts the pool, composition and functional groups of soil organic matter | Yidong Wang, Wei Xu, Qiang Li Tianjin Normal University |
| 13:30-13:45 | 33145 | Global warming and soil management impact on organic carbon stocks and dynamics in vineyard soils | Giorgio Galluzzi Department of Biotechnology, University of Verona |
| 13:45-14:00 | 35145 | Assessment of carbon stock, stabilization, and soil aggregate structure in different Mediterranean agro-ecosystems | Martina Grattacaso Research Institute on Terrestrial Ecosystems (IRET), National Research Council (CNR), Via Madonna del Piano 10, 50019 Sesto Fiorentino, Italy; Department of agricultural, food, environmental and forestry science and technology (DAGRI), University of Florence, Piazzale delle Cascine 18, 50144 Firenze, Italy |
| 14:00-14:15 | 32669 | Reframing Manure Amendments and Nitrogen Inputs as Co-Determinants of Persistent Soil Organic Carbon in Semi-Arid Agroecosystems | Xiangtian Meng College of Natural Resources and Environment, Northwest A&F University |



Parallel Sessions

Tuesday, June 9 (Session 409011)

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| 14:15-14:30 | 32514 | Long-term organic amendment in a maize cropping system enhanced CO ₂ emissions via stimulation of oligotrophic microbial decomposition of chemically recalcitrant dissolved organic matter compounds | Hongqin Zou Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, Beijing |
| 14:30-14:45 | 32579 | A repeat-pulse field labeling study to trace the fate of ¹³ C and ¹⁵ N labelled canola and durum crop residues in plant and soil organic matter on the Canadian Prairies | Hongjie Zhang Swift Current Research and Development Centre, Agriculture and Agri-Food Canada |
| 14:45-15:00 | 32681 | Molecular signatures of soil organic matter diverge under long-term manure versus straw amendments in agricultural Mollisols | Meng Zhou, Yang Xiao, Yansheng Li, Xiaobing Liu Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 16:30-16:45 | 32802 | Straw incorporation stimulated the intercropping effect to enhance soil carbon sequestration | Yi-Wen Zhao China Agricultural University |
| 16:45-17:00 | 36109 | Application of Clay and Iron Oxide-Amended Compost: Linking Emission Reductions to Enhanced Soil Aggregation, Necromass, and Plant Performance | Benedikt Boppré Utrecht University; NIOO-KNAW |
| 17:00-17:15 | 35151 | From waste to carbon sink: mineral-organic coupling in technosols | Yujia Tang Sichuan University |
| 17:15-17:30 | 32889 | The Long-Term Impact of Excess Phosphorus Saturation on Soil Organic Carbon Sequestration in Agricultural Soils | Marie Tuerlinckx Ghent University |
| 17:30-17:45 | 34264 | Soil organic matter formation from high P organic amendments | Mario Alvarez Salas University of Copenhagen |
| 17:45-18:00 | 36174 | Rapid versus delayed stabilization of residue-derived carbon by amorphous aluminum hydroxide and rice-husk biochar in alkaline soils | Tetsuhiro Watanabe Kyoto University |
| 18:00-18:15 | 35659 | Effects of silicon modified biochar with different pyrolysis temperatures on carbon stabilization pathways in saline alkali soil | Xin Gao Qingdao Agricultural University |
| 18:15-18:30 | 36062 | Sewage Sludge Biochar Is Less Persistent Than Plant-Based Biochars in Soil | Haichao Li Department of Soil and Environment, Swedish University of Agricultural Sciences, Uppsala, Sweden; Institute of Crop Science and Resource Conservation, University of Bonn, Bonn, Germany |



Parallel Sessions

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| Thursday, June 11 Friday, June 12 | Room: Convention Center, Nanjing 402B |
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|-----------------------|--|
| Session 409012 | <p>The Challenge and Opportunity for Precise Assessment and Prediction of Soil Carbon Sequestration and Storage Across Spatial and Temporal Scales</p> <p>Convener: Aizhen Liang, Northeast Institute of Geography and Agroecology, CAS</p> <p>Co-Conveners: Michael Thompson, Iowa State University William Horwath, University of California, Davis Zhongjun JIA, Northeast Institute of Geography and Agroecology, CAS</p> |
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| Schedule | ID | Title | Presenter |
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Thursday, June 11

Chair: Michael Thompson, Past President of SSSA

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|-------------|-------|--|--|
| 11:15-11:35 | 34444 | How spatial resolution shapes soil carbon estimates | Michael Thompson Iowa State University |
| 11:35-11:55 | 35013 | Climate-vegetation interactions regulate decadal dynamics of soil organic carbon fractions across Europe | Yuntao Wu Zhejiang University |
| 11:55-12:10 | 32801 | Microscale soil organic matter patches shaped by carbon- and nitrogen-rich microdomains | Yahan Hu TUM School of Life Sciences, Technical University of Munich |



Parallel Sessions

Thursday, June 11 (Session 409012)

Chair: Aizhen Liang, Northeast Institute of Geography and Agroecology, CAS

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|-------------|-------|--|---|
| 13:30-14:00 | 35371 | Soil carbon sequestration: Realism versus potential | William R. Horwath University of California Davis |
| 14:00-14:30 | 33228 | Long-term field trials as a tool to evaluate the potential of fertilizers to maintain soil carbon persistence | Evgenia Blagodatskaya Department of Ecology of Agroecosystems, Helmholtz Centre for Environmental Research - UFZ |
| 14:30-14:45 | 36110 | Cultivation management reshapes soil profile configuration and organic carbon sequestration: Evidence from a 45-year field study | Si-Yu Cui Shenyang Agricultural University |
| 14:45-15:00 | 32987 | An approach to carbon credit finance feasibility assessment of SOC sequestration projects | Andrei Rozanov Stellenbosch University |
| 15:00-15:15 | 34428 | Estimating sequestration potentials of soil organic carbon in black soils of Northeast China | Jiubo Pei Shenyang Agricultural University |



Parallel Sessions

Thursday, June 11 (Session 409012)

**Chair: Evgenia Blagodatskaya, Department of Ecology of Agroecosystems
Helmholtz Centre for Environmental Research - UFZ**

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|-------------|-------|---|---|
| 16:30-17:00 | 34727 | An integrated framework combining spatial soil carbon information and a calibrated Roth C model for improving cropland SOC estimation | Kyeongyeong kim National Institute of Agricultural Sciences, Republic of Korea |
| 17:00-17:15 | 34162 | Impact of long-term tillage on the soil organic carbon storage and its composition in black soil | Pengxiang Sui Jilin Academy of Agricultural Sciences (Northeast Agricultural Research Center of China) |
| 17:15-17:30 | 31858 | How no-tillage and cropping systems shape soil organic carbon formation and stabilization over time: Evidence from a 16-year chronosequence | Yan Zhang Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 17:30-17:45 | 32207 | Equilibrium levels for SOC stocks under different environmental regimes | Jonathan Gray Retired (formerly NSW Dept Planning & Environment) |
| 17:45-18:00 | 36017 | Driving factors and spatiotemporal variations of soil organic carbon in the Northeast China Plain | Honghong Ma Institute of Geophysical and Geochemical Exploration, Chinese Academy of Geological Sciences |
| 18:00-18:15 | 36504 | From diagnosis to management: informing low-carbon policy for tea plantations in Jiangsu, China | Xiao Han School of Tea and Food Science and Technology, Jiangsu Vocational College of Agriculture and Forestry |
| 18:15-18:30 | 33354 | Enhancing soil carbon sequestration and straw utilization through optimized microbial decomposition strategies | Shuaimin Chen Jilin Academy of Agricultural Sciences |



Parallel Sessions

Friday, June 12 (Session 409012)

Chair: William Horwath, UC Davis

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|-------------|-------|--|---|
| 09:00-09:30 | 35588 | Dynamics of soil organic carbon and its mineralization in black soils of Northeast China | Lu-Jun Li Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 09:30-10:00 | 33320 | Coupling of microbial carbon and energy fluxes in soil | Sergey Blagodatsky Karlsruhe Institute of Technology |
| 10:00-10:15 | 34273 | Stover incorporation enhances soil carbon sequestration by improving the hydrophobicity of humic acid and soil water repellency | Boyan Zhang Jilin Agricultural University |
| 10:15-10:30 | 35012 | Using a historical a soil properties database (INFOSOLO) to analyse long-term variations in SOC, SOC fractions, and soil structure: a case study | J. Antunes LEAF —Linking Landscape, Environment, Agriculture and Food Research Center, Associate Laboratory TERRA, School of Agriculture, University of Lisbon, Lisboa, Portugal ; National Institute for Agricultural and Veterinary Research (INIAV), Soil Lab, Oeiras, Portugal |
| 10:30-10:45 | 36133 | Reconstructing rangeland soil carbon erosion using sediment trapped behind small reservoir dams | LU LI University of Basel |
| 10:45-11:00 | 33746 | Latitude-dependent temperature thresholds reverse soil organic carbon losses in global Mollisol croplands | Xiangtian Meng Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |



Parallel Sessions

Friday, June 12 (Session 409012)

Chair: Xiaobin Guo, Institute of Subtropical Agriculture, CAS

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|-------------|-------|--|--|
| 11:15-11:30 | 33883 | Field experiment reveals varied earthworm densities boost soil organic carbon more than they increase carbon dioxide emissions | Ronggui Tang Zhejiang A&F University |
| 11:30-11:45 | 33087 | Straw return depth and tillage intensity drive changes in organic carbon fractions and their stability in black soil | Lei Zhang Northeast Institute of Geography and Agroecology Chinese Academy of Sciences |
| 11:45-12:00 | 35356 | The carbon sequestration potential of arable soils in Russia based on dynamic modeling | Vladimir A. Romanenkov Soil Science Faculty, Lomonosov Moscow State University, Moscow, Russia; Pryanishnikov Research Institute of Agrochemistry, Moscow, Russia |
| 12:00-12:15 | 34173 | Soil biogeochemical models current applications and future directions | Wenjun Wang Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |



Parallel Sessions

| Thursday, June 11 | | Room: Expo Center, Hall 5, 5203 | |
|-----------------------|-------|---|--|
| Session 409014 | | Soil Organic Carbon: Accounting, Mechanisms, and Sustainable Management | |
| | | <p>Conveners: Jianming Xu, Zhejiang University, China Yanfen Wang, University of the Chinese Academy of Sciences (UCAS), China</p> <p>Co-Conveners: Johannes Lehmann, Cornell University, USA Yu Luo, Zhejiang University, China Yash Dang, University of Queensland, Australia Jianqing Du, University of the Chinese Academy of Sciences (UCAS), China Songchao Chen, Zhejiang University, China Anquan Xia, Development and Research Center (National Geological Archives of China), China Geological Survey, Beijing, 100037, China Francesco Fava, Department of Environmental Science and Policy, Università degli Studi di Milano, Via Celoria 2, Milan, Italy Tong Li, University of Queensland, Australia Kai Xue University of the Chinese Academy of Sciences (UCAS), China</p> | |
| Schedule | ID | Title | Presenter |
| 11:15-11:30 | 34134 | A simple gravimetric proxy for rapid, low-cost estimates across diverse subtropical soils | Jeff Ellis Griffith University, School of Environment and Science, Australian Rivers Institute |
| 11:30-11:45 | 34351 | Biochar at scale needs long-term proof: LTE field trials supporting the green transition of Danish agriculture | Lars Elsgaard Department of Agroecology, Aarhus University, Tjele, Denmark |



Parallel Sessions

Thursday, June 11 (Session 409014)

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|-------------|-------|---|---|
| 11:45-12:00 | 31698 | Enhancing spectral estimation accuracy of soil organic carbon by using geographic region and clay content as covariates | Wenxu Zhang College of Agriculture, Shihezi University |
| 12:00-12:15 | 32076 | Integration of Smartphone Imagery with Topographic Parameters for Soil Organic Carbon Prediction in the Indo-Gangetic Plains: An Interpretable Machine Learning Approach | Pragati Pramanik Maity ICAR-Indian Agricultural Research Institute |
| 13:30-13:45 | 32425 | Differences in the physical protection mechanisms of soil organic carbon with ¹³ C-labeled straw and biochar | Caidi Yang Northwest University |
| 13:45-14:00 | 33645 | Engineered biochar amendments to address multiple soil constraints: Results from 12 field studies | Lukas Van Zwieten NSW Department of Primary Industries and Regional Development |
| 14:00-14:15 | 32473 | The influence of natural and anthropogenic pyrogenic history of the landscape on soil carbon stocks on example of Komi Republic | Alexey Dymov Institute of Biology Komi Scientific Center, Ural Branch of the RAS |
| 14:15-14:30 | 32581 | Underestimating Soil Carbon Dynamics: The Missing Role of Vertical Transport | Ronald Amundson University of California, Berkeley |
| 14:30-14:45 | 33199 | A long-term global Mollisols SOC content prediction framework: integrating prior knowledge, geographical partitioning, and deep learning models with spatio-temporal validation | Xiangtian Meng Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 14:45-15:00 | 33242 | Field NIR Spectroscopy for Soil Carbon Monitoring in Hazelnut Orchards | Leonardo Pace University of Tuscia |



Parallel Sessions

Thursday, June 11 (Session 409014)

| | | | |
|-------------|-------|--|--|
| 16:30-16:45 | 32445 | Recognizing and Reducing Effects of Moisture-Salt Coexistence on Soil Organic Matter Spectral Prediction: From Laboratory to Satellite | Danyang Wang Nanjing Agricultural University |
| 16:45-17:00 | 34034 | Can we grow food on the Moon? Engineering biological systems in lunar regolith | Katherine Weigh Department of Primary Industries and Regional Development, NSW |
| 17:00-17:15 | 34723 | Life Cycle Assessment of Traditional Japanese Thatched Roofs with Biochar End-of-Life Integration: Implications for Carbon Mitigation | Tawiah Joseph Kotey Graduate School of Science and Technology, University of Tsukuba, Ibaraki, Tsukuba Japan |
| 17:15-17:30 | 35729 | Intercropping to Enhance Agricultural Production and Increase The Level of Carbon in The Soil | Juline Diken Malounghou Boungnan Laboratory of Biotechnology, Agri-food, Materials and Environment, Faculty of Science and Technology, Hassan II University of Casablanca, Morocco 2 Higher Institute of Agronomy and Biotechnology, University of Science and Technology of Masuku, Gabon |
| 17:30-17:45 | 35772 | Uncertainty of Vis-NIR-based models for predicting soil organic carbon using Monte Carlo simulation | Po-Hui Wu Department of Agricultural Chemistry, National Taiwan University, Taipei 10617, Taiwan |
| 17:45-18:00 | 31616 | Mid-Infrared Spectroscopy for Soil Organic Carbon Estimation: Global Insights and Case Studies | Tong Li The University of Queensland |
| 18:00-18:15 | 35854 | Innovation and Application of Targeted Humification of Agricultural Wastes and Targeted Soil Improvement Technologies | Wei Dan Beijing Academy of Agriculture and Forestry Sciences |



Parallel Sessions

| Thursday, June 11 | | Room: Expo Center, Hall 6, 6201 | |
|-----------------------|--------|---|--|
| Session 502002 | | From Dirt to Destiny: Communicating Soil Science for Global Sustainability and Cultural Understanding | |
| | | Convener: Neng-Chang Chen, Institute of Eco-environmental and Soil Sciences, Guangdong Academy of Sciences | |
| | | Co-Convener: Yuan-Ming Song, University of Science and Technology Beijing | |
| Schedule | ID | Title | Presenter |
| 11:15-11:30 | 319B50 | Soil Survey in Modern China from the Perspective of Sino-American Academic Exchange: A Case Study of the University of Nanking and the Geological Survey of China | Yongguan ZHU Research Center for Eco-environmental Sciences, Chinese Academy of Sciences |
| 11:30-11:45 | 34880 | On Shishi Wanwusheng Soil Science Communication Hall | Zaifa Dong Shishi Wanwusheng Soil Science Communication Hall |
| 11:45-12:00 | 34469 | From Soil to Screen: Storytelling and Digital Media to Boost Soil Literacy | Stephan Mantel ISRIC World Soil Information, Wageningen, the Netherlands |
| 12:00-12:15 | 31997 | Soil as Component of Ancient Adobe, Mudbricks, Mortar, and Plaster: Investigation of Engineering Structures of The Past in Oman | Said Al-Ismaily Department of Soils, Water and Agricultural Engineering, Sultan Qaboos University |
| 12:15-12:30 | 36178 | Soil aesthetics in the popularization of soil science | Maria Chepurnova Lomonosov Moscow State University |



Parallel Sessions

Thursday, June 11 (Session 502002)

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|-------------|--------|---|--|
| 13:30-13:45 | 33410 | Optimal Organic Amendment Strategies for Safe Utilization of Heavy Metal-Contaminated Soils via Interpretable Machine Learning and Multi-Objective Optimization | Qifeng Min Agro-Environmental Protection Institute, Ministry of Agriculture and Rural Affairs |
| 13:45-14:00 | 34849 | Past, Present and Perspective of Soil Science Communication in China | Nengchang CHEN Guangdong Institute of Eco-Environmental and Soil Sciences |
| 14:00-14:15 | 33306 | Analysis and Exploration on the Paths of Experiential Soil Science Popularization towards Primary School Students | Chen-yang Xu Northwest A&F University |
| 14:15-14:30 | 34987 | Siliceous restrictive layer: a new soil constraint in Northeast China's Black Soil Region | Zhong-Xiu Sun Shenyang Agricultural University |
| 14:30-14:45 | 34413 | “Fertile Land with Childlike Heart”-Science Popularization Action of Little Guardians for Soil Protection | Nan Zhao Institute of Eco-environmental and Soil Sciences, Guangdong Academy of Sciences |
| 14:45-15:00 | 34990 | Biochar-based fertilizers alter the ecological components of organic carbon in the soil aggregates of red soil tea gardens | Junming Hu Guangxi Academy of Agricultural Sciences |
| 15:00-15:15 | 34080 | From Soil Healing to System Thinking: Repositioning Sustainability through Nature's Logic | Enheng Wang Northeast Forestry University |
| 15:15-15:30 | 36546 | Performance: Open Hands | Cristina Angueira Soil consultant, Former Soil researcher INTA |
| 15:30-15:45 | 330B03 | Addressing the pains of chemical agriculture with traditional farming wisdom | Yuyan Guo Nanjing Forestry University |
| 15:45-16:00 | 35282 | How Can Traditional Farming Wisdom Address the Challenges of Modern Chemical Agriculture? - Qinbang Farm's Model in Practice | Yuyan Guo Nanjing Forestry University |



Parallel Sessions

| Tuesday, June 9 | | Room: Expo Center, Hall 6, 6201 | |
|-----------------------|-------|--|--|
| Session 503005 | | The Digital Transformation of Soil Science | |
| | | <p>Conveners: Richard J Heck, University of Guelph, Canada Fernando Ayala Niño. Laboratorio de edafología aplicada y Servicios Ambientales Unidad de Biotecnología y Prototipos (UBIPRO). Facultad de Estudios Superiores Iztacala-UNAM. Tlalnepantla de Baz Estado de México, México Giuliano Langella, Department of Agriculture, University of Naples Federico II, Piazza Carlo di Borbone 1, 80055 Portici NA, Italy</p> <p>Co-Conveners: Fabio Terribile, Università di Napoli Federico II, Italy Francisco Bautista. Centro de Investigación en Geografía Ambiental, Universidad Nacional Autónoma de México-UNAM, Morelia 58190, Michoacán, Mexico Héctor Estrada-Medina. Campus de Ciencias Biológicas y Agropecuarias. Universidad Autónoma de Yucatán. Mérida 97315, Yucatán, México Piero Manna, Institute for Mediterranean Agricultural and Forestry Systems (ISAFOM), National Research Council (CNR), Piazzale E. Fermi, 1, Portici, NA, 80055, Italy Marialaura Bancheri, Institute for Mediterranean Agricultural and Forestry Systems (ISAFOM), National Research Council (CNR), Piazzale E. Fermi, 1, Portici, NA, 80055, Italy</p> | |
| Schedule | ID | Title | Presenter |
| 09:00-09:05 | - | Welcoming message | - |
| 09:05-09:17 | 31890 | Classifying Soils with Artificial Intelligence | Estrada-Medina Héctor Universidad Autónoma de Yucatán |



Parallel Sessions

Tuesday, June 9 (Session 503005)

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|-------------|-------|--|--|
| 09:17-09:29 | 32002 | Artificial Intelligence Assisted Soil Description and Inference | Sandra Evangelista The University of Sydney |
| 09:29-09:41 | 32200 | Mixed reality for soils monoliths: an example from the National Museum of Soils of Mexico | Fernando Ayala-Niño Laboratorio de Edafología Aplicada y Servicios Ambientales, UBIPRO. Facultad de Estudios Superiores Iztacala-UNAM |
| 09:41-09:53 | 32268 | Technology in Soil Science Education in the 21st Century: Web, Software, and Apps for Generation Z | Francisco Bautista and Angeles Gallegos Centro de Investigaciones en Geografía Ambiental, Universidad Nacional Autónoma de México. |
| 09:53-10:05 | 32613 | The Algorithmic Lens: Unraveling Soil Structure with Artificial Intelligence | Yongwei Fu China Agricultural University |
| 10:05-10:17 | 32836 | Machine learning-based prediction of plant-available nutrients in soils using multiple variable selection strategies | Seung Jun Lee Chung-buk National University |
| 10:17-10:29 | 33599 | Automatic segmentation of soil micromorphological images using a Convolutional Neural Network | Komkova Daria Federal Research Centre V.V. Dokuchaev Soil Science Institute, Moscow, Russia |
| 10:29-10:41 | 33640 | AI Enabled Soil Moisture Monitoring for Real Time Drought Detection in the Western United States | John Blackwell Colorado State University |
| 10:41-10:53 | 33969 | AI-Driven Data Mining of Scientific Literature: A Framework for Soil Research | Yikang Cheng Nanjing TAG-HUB Innovation Technology Co., Ltd. |



Parallel Sessions

Tuesday, June 9 (Session 503005)

| | | | |
|-------------|-------|---|---|
| 11:12-11:24 | 34132 | 3D Two-stage Multi-modal Soil Pore Segmentation based on Flow Field | Yinkai Fu School of Technology, Beijing Forestry University |
| 11:24-11:36 | 34165 | Multi-Class Segmentation of Soil Structure from CT Images based Deep Learning | Zihan Huang Beijing Forestry University |
| 11:36-11:48 | 34477 | AI-Assisted Applications for Soil Science Education: Tools for Teaching and Learning | Héctor Estrada-Medina Autonomous University of Yucatán |
| 11:48-12:00 | 35074 | Segmentation of soil structural domains in thin-section images a deep learning approach | Carlo Perreca University of Naples Federico II - Department of Agricultural Sciences |
| 12:00-12:12 | 35833 | Precise Source Apportionment and Spatial Distribution Prediction of Soils Heavy Metals Pollution in the Largest Magacity in China Based on Multi-source Data and Machine Learning | Lian Wang Shanghai Academy of Agricultural Sciences |
| 12:12-12:30 | - | General comments | - |



Parallel Sessions

| Monday, June 8 Tuesday, June 9 | Room: Convention Center, Yangtze Room | |
|---|---|--|
| Session 505005 | Soil Feeds Life | |
| Schedule | Title | Presenter |
| Monday, June 8 | | |
| Part 1: Ecological Protection, Restoration and Sustainable Development of Gobi Chair: Lixing Yuan | | |
| 13:30-13:45 | The Classification, Regionalization and Mapping of Gobi in China | Yiming Feng Institute of Desertification Studies, Chinese Academy of Forestry |
| 13:45-14:00 | Soil Characteristics and Utilization Routes of the Gobi Desert in Xinjiang | Hongfei Zhou Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences |
| 14:00-14:15 | Soil Survey and Damage Analysis of Gobi Gravel layer in Hami City | Junli Li Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences |
| 14:15-14:30 | Research on Collaborative Paths of Gobi Ecological Protection and Regional High-Quality Development in Hami City, Xinjiang Uygur Autonomous Region | Rong Dai Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment/ Hami Municipal Bureau of Ecology and Environment, Xinjiang Uygur Autonomous Region/Xinjiang Hami Desert-Gobi Station, Ministry of Ecology and Environment |
| 14:30-14:45 | Research on Gobi Ecological Quality Assessment and Its Driving Mechanism in Hami City | Chaoran Li Nanjing Normal University |
| 14:45-15:00 | Exploration of Near-Zero Carbon Restoration Pathways for the "Mining-Photovoltaic-Greening" model in Gobi Mining Areas: A case of Xinjiang Hami Yinggema No.2 Coal Mine | Wenlong Yao Xinjiang Hami Yinggema Coal Power Investment Co., Ltd. |
| 15:00-15:15 | Effects of Photovoltaic Infrastructure Development and Operation on Soil Ecosystem Dynamics in Extremely Arid Regions | Chunbo Chen Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences |
| 15:15-15:30 | A Research on Spatio-temporal Evolution and Driving Mechanisms of Vegetation in Typical Arid and Semi-Arid Regions - A Case Study of Ningxia | Yangyang Gu Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment |



Parallel Sessions

Monday, June 8

Part 2: Curb Land Degradation, Protect Soil Health

Chair: Rong Dai

| | | |
|-------------|--|--|
| 15:45-16:00 | Desert Ecosystems in China: Past, Present and Future | Xunming Wang Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences |
| 16:00-16:15 | Advances in the Application of Bio-based Materials for Sand Fixation | Daihui Zhang Institute of Chemical Industry of Forest Products, Chinese Academy of Forestry |
| 16:15-16:30 | Synergy Between Abandoned Mine Restoration and Gobi Conservation in Desert Areas: An Environmental Boundary Perspective | Haidong Li College of Forestry and Grassland, College of Soil and Water Conservation, Nanjing Forestry University |
| 16:30-16:45 | Risk Assessment, Source Apportionment and Driving Mechanism of Soil Heavy Metals in Coal Mining Areas of Xinjiang, China | Fei Zhang Zhejiang Normal University |
| 16:45-17:00 | Spatio-temporal Mapping and Multi Scenario Prediction of Soil Organic Carbon of Grassland Ecosystems in China | Changming Zhu Jiangsu Normal University |
| 17:00-17:15 | Stabilization Study on Synergistic Disposal of Arsenic-Contaminated Soil by Ceramsite Kiln | Yifan Yan Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment |
| 17:15-17:30 | Effect and Quantitative Simulation of Watershed Buffer Zone on Prevention and Control of Agricultural Non-point Source Pollution | Ruozhu Yang Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment |



Parallel Sessions

Tuesday, June 9 (Session 505005)

Nature-Based Solutions for Soil Health and Sustainable Crop Production

Chair: Junling Zhang

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|-------------|---|
| 09:00-09:15 | <p>Welcome Address:</p> <p>Jie Yu, Vice Chairperson, Agricultural Committee, China Democratic League</p> <p>Lixing Yuan, Professor, Dean of the College of Resources and Environmental Sciences, China Agricultural University</p> <p>Hongye Wang, Division Director, Cultivated Land Quality and Farmland Construction Monitoring and Protection Center, Ministry of Agriculture and Rural Affairs</p> |
| 09:15-09:25 | <p>Speech:</p> <p>Ray R Weil, Professor of University of Maryland</p> |
| 09:25-09:50 | <p>Plenary Speech:</p> <p>Minggang Xu, Academician of Chinese Academy of Engineering, Professor of Shanxi Agricultural University</p> <p>Contribution of soil fertility to crop yield and its increased major technologies in arable land of China</p> |
| 09:50-10:05 | <p>Keynote Speech:</p> <p>Zhixian Zhang, Executive Vice Mayor of Hami Municipal People's Government</p> <p>Empowering high-quality development in Hami City by developing new quality productive forces in the Gobi Region</p> |
| 10:05-10:20 | <p>Keynote Speech:</p> <p>Weifeng Zhang, Professor/Director of Quzhou Experimental Station, China Agricultural University</p> <p>Agricultural green development model based on resource efficiency and environmental emission reduction in North China - a case study in Quzhou</p> |



Parallel Sessions

Tuesday, June 9 (Session 505005)

Part 1 Crop Diversification for Sustainable Agriculture

Chair: Didier Lesueur, Guangzhou Wang

| Schedule | ID | Title | Presenter |
|-------------|-------|---|--|
| 10:35-10:50 | 36195 | Intercropping increases soil multifunctionality potentially by increasing the abundance of functional genes: evidence from a long-term field experiment | Long Li State Key Laboratory of Nutrient Use and Management, Beijing Key Laboratory of Biodiversity and Organic Farming, College of Resources and Environmental Sciences, China Agricultural University, Beijing, China |
| 10:50-11:05 | 35743 | Maize/peanut intercropping advantages: evidence for soil biota-mediated nitrogen transfer | Xiao Wang Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang 110016, China |
| 11:05-11:20 | 36607 | What matters to detect early soil health change in integrated cover crop systems? | Yajun Peng School of Environmental Sciences, University of Guelph, Ridgetown Campus, Ridgetown, ON Canada N0P 2C0 |
| 11:20-11:35 | 34480 | Agronomic constraints limit the climate change mitigation potential of winter cover crops in Europe | Renske Hijbeek Plant Production Systems group, Wageningen University, Wageningen, the Netherlands |
| 11:35-11:50 | 33239 | Optimizing Soil Health in Tropical Peatlands through Coconut-based Agroforestry | Safira Eka Aprianti Tay Juhana Foundation, North Jakarta, 14440 Indonesia |
| 11:50-12:05 | 33513 | Restoring soil health and managing soilborne pathogens in Vietnam's intensified coffee and black pepper systems | Didier Lesueur The Centre de coopération internationale en recherche agronomique pour le développement (CIRAD), UMR Eco&Sols, Hanoi, Vietnam |



Parallel Sessions

Tuesday, June 9 (Session 505005)

| | | | |
|-------------|-------|--|---|
| 13:30-13:45 | 33784 | Faba bean-wheat intercropping sustains soil water and nutrient cycling, and the carbon availability for microbes in the short term. | Shamina Imran Pathan Department of Agriculture, Food, Environment and Forestry (DAGRI), University of Florence, Piazzale Delle Cascine 28, 50144, Florence, Italy |
| 13:45-14:00 | 36599 | Copper – amendment interactions drive molecular and physiological stress responses in <i>Vitis vinifera</i> | Beatriz Fernandes GreenUPorto\INOV4Agro, Campus de Vairão, Vairão, Portugal |
| 14:00-14:15 | 35355 | Cover cropping for soil health improvement in North-western Canada | Bharat Shrestha Agriculture and Agri-Food Canada, Beavelodge Research Farm, Beaverlodge AB T0H 0C0 |
| 14:15-14:30 | 31339 | Cover crop-driven anaerobic soil disinfestation enhances weed suppression and collard greens productivity | Mahmoud Rady Department of Plant and Environmental Sciences, Clemson University, Charleston, USA |
| 14:30-14:45 | 32077 | Productive grassland: influence of mixture composition on yield and nitrogen response efficiency in a temperate region | Danielle Varley Agri-Food and Biosciences Institute (AFBI), Northern Ireland, United Kingdom |
| 14:45-15:00 | 34942 | Soil natural productivity: A Path to self-regeneration and sustainability - Empirical Insights from Hechuren's "Natural Mulching and No-Tillage" | Yi Zhu Natural Mulching and No-Tillage Empirical Laboratory Chongqing Hechuren Farming Culture Heritage and Development Center Chongqing, China |
| 15:00-15:15 | 36582 | Phytoremediation potential of native plant species for improving soil health in vineyards with high levels of arsenic and copper | Cristiana Paiva GreenUPorto\Inov4Agro - Sustainable Agrifood Production Research Centre, University of Porto, Vairão, Portugal", "Department of Geosciences, Environment and Spatial Plannings, University of Porto, Porto, Portugal |



Parallel Sessions

Tuesday, June 9 (Session 505005)

Part 2 Soil Health Solutions for Sustainable Agriculture

Chair: Guangzhou Wang, Didier Lesueur

| | | | |
|-------------|-------|--|---|
| 15:30-15:45 | 32333 | Biochar and compost as nature-positive solutions to semi-arid agriculture: Multi-level assessments of soil health, nutrient cycling, and greenhouse gas emissions | Rajan Ghimire New Mexico State University, Agricultural Science Center, Clovis, NM, USA |
| 15:45-16:00 | 33208 | Enhancing drought and salinity resilience in tomato plants using plant growth-promoting <i>Bacillus</i> species from semi-arid soils of Australia | Erandi Madukumari Herath The University of Melbourne (School of Agriculture, Food and Ecosystem Sciences, Faculty of Science, Melbourne, Australia) |
| 16:00-16:15 | 35851 | Microbial solutions for reducing soil nitrous oxide emissions | Guang He Affiliation of Guang He (Ecology, East China Normal University, Shanghai, China) |
| 16:15-16:30 | 33975 | Evaluation of the soil quality improvement potential through basalt rock dust amendment | Angelique Daniell Unit for Environmental Sciences and Management, North-West University, Potchefstroom, South Africa |
| 16:30-16:45 | 32037 | Changes in Soil Bacterial and Fungal Community Characteristics in Response to Biochar Treatments | Nicholas Clarke Norwegian Institute of Bioeconomy Research, Ås, Norway |
| 16:45-17:00 | 34999 | Soil-crop-fertilization interactions drive the effects of <i>Fusarium oxysporum</i> FO12 on soil properties and plant nutrition | Jesús Sevillano-Caño Departamento de Agronomía, Universidad de Córdoba, Córdoba, España |
| 17:00-17:15 | 34669 | The issue of soil pollution solved using organic farming-case studies for solved the soil damaged by flood disaster problem | Pathawit Chongsermsirisakul SiPa Research Organisation, Bangkok, Thailand |
| 17:15-17:30 | 34374 | Identification of soil health-related problems in apple orchards: preliminary results from the Grójec Living Lab | Jerzy Jonczak Department of Soil Science, Warsaw University of Life Sciences-SGGW, Warsaw, Poland |
| 17:30-17:45 | 33337 | Ecological regulation function of soil microorganisms: Synergistic effects of arbuscular mycorrhizal fungi and <i>Trichoderma</i> in biotic and abiotic stress tolerance | Zhipeng Hao State Key Laboratory of Regional and Urban Ecology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing 100085, China |
| 17:45-18:00 | | Optimizing manure application and straw return to enhance ecosystem multi-functions | Jiyu Jia State Key Laboratory of Nutrient Use and Management, College of Resources and Environmental Sciences, China Agricultural University |



Poster Session

Expo Center, Hall 4, 1st level

Poster Area

Monday, June 8, 15:30-16:30

Tuesday, June 9, 15:30-16:30

Thursday, June 11, 15:30-16:30

Friday, June 12, 15:00-16:30

| No. | ID | Title | Presenter |
|-----|-------|--|---|
| 001 | 36038 | Micro-morphological characterization of dry-farming soils at Yangshao site in China about 5000 B.P. | Zha lisi Guangdong University of Finance and Economics |
| 002 | 35788 | Effects of grass hedgerow measures on physical crust development and slope runoff and sediment of southern Quaternary red clay in China | Huiyun Xu China Agriculture University |
| 003 | 35694 | Dynamic safe nitrogen boundary for maintaining surface water quality in China | Yiyang Zou Zhejiang University |
| 004 | 35865 | Effect of dynamic salt precipitation on water and heat transport in unsaturated saline soil: Experiments and simulations | Hongchao Wang Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences |
| 005 | 33747 | Evaluation of Greenhouse Gas Emission Characteristics by the Use of Organic Resources and No-Tillings in Organic Agricultural-Based Corn Plantations | Da-Eun Kim Kangwon National University |
| 006 | 35511 | Microbial Hydrogen Cycling as a Potential Driver of Drought Resistance in Agricultural Soils | Lijun Hou Xinjiang Academy of Agricultural Sciences |
| 007 | 32879 | Arbuscular Mycorrhizal Fungi in Rare Earth Mining Areas: Community Vulnerability and Functional Roles in Runoff Regulation | Hongguang Liu Jiangxi Academy of Water Science and Engineering |
| 008 | 33840 | High resolution mapping of carbon dioxide pollution in the Xi'an megacity using plant carbon isotopes | Yilong Ren Xi'an Jiaotong University |
| 009 | 36258 | Study on the Impact of River-Sea Position on Water Sources of Tamarix chinensis Vegetation in the Yellow River Delta before the Rainy Season | Xiangyu Hu LuDong University |
| 010 | 35101 | Environmental Behaviors and Effects of Micro- and Nanoplastics and Phthalate Esters in Farmland Environments | Yu Wang Institute of Soil Science, Chinese Academy of Sciences |
| 011 | 35027 | Enhanced weathering technology using blast furnace slag(BFS) for carbon sequestration in soil | Seong-hyeon Nam Kangwon National University |



Poster Session

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|-----|--------|---|---|
| 012 | 33742 | Influence of a tailored composite amendment on soil health and wheat productivity in reclaimed tidal land | Chae Youn Won Kangwon national university college of agriculture and life sciences school of natural resources and environmental sciences |
| 013 | 34602 | Enhancement of soil physical properties through the use of cover crops: A systematic review for the Argentinean Pampas | Walter D. Carciochi Facultad de Ciencias Agrarias (Universidad Nacional de Mar del Plata) Instituto de Innovación para la Producción Agropecuaria y el Desarrollo Sostenible |
| 014 | 32991 | Rate of decomposition of litter fall and nutrients recycling in three soil use systems in the Peruvian Amazon | Julio Alegre Universidad Nacional Agraria la Molina |
| 015 | 31680 | Phytoremediation of Cd-Contaminated Soil: Role of Tropical Grasses in Modulating Cadmium Speciation | Flávio Henrique Silveira Rabêlo University of São Paulo |
| 016 | 33721 | Effect of Pusa Decomposer-mediated rice residue management on soil phosphorus dynamics in a rice-wheat system of the Indo-Gangetic Plains | Ranjan Bhattacharyya Indian Agricultural Research Institute, New Delhi, India |
| 017 | 33359 | Culture-Dependent Bacteriome Analysis Reveals PGPB Candidates for Okra Biopriming under Salinity Stress | Felix Tokyo University of Agriculture and Technology |
| 018 | 319B83 | Integrating Soil Remediation and Land Valuation Comparative Evidence from the UK and China | WANG FENG Independent researchers |
| 019 | 33816 | Advancing Corn Yield Prediction through Cross-Scale Integration Approaches | Solmaz Fathololoumi University of Guelph |
| 020 | 33817 | Enhancing Precision Nitrogen Management through Integration of Soil Properties and Remote Sensing | Solmaz Fathololoumi University of Guelph |
| 021 | 32430 | Cadmium uptake by maize grown with microplastics and their effect on water content and grain quality | Mary Beth Kirkham Kansas State University |
| 022 | 33384 | Multivariate Analysis of Biomass Production and Nutritional Efficiency of Marandu Palisadegrass Fertilized with Bioinputs | Reges Heinrichs São Paulo State University - UNESP |
| 023 | 30652 | Making Darcy visible: A simple apparatus for teaching Saturated flow in Soil | Roger McLenaghan Lincoln University |



Poster Session

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|-----|--------|--|--|
| 024 | 32157 | Tradeoffs between microbial life-history strategies drive soil carbon cycling during revegetation in karst ecosystems: A metagenomic perspective | Xiaoyi Cai Xishuangbanna Tropical Botanical Garden |
| 025 | 32842 | In karst fragile habitats, abiotic factors, particularly soil organic carbon, dominate over microbial communities in determining soil multifunctionality | Zhen Han College of Forestry, Guizhou University |
| 026 | 31882 | Monitoring spatial changes in soil organic carbon in response to land-use and slope direction | Morteza Gheysouri Xi'an University of Technology |
| 027 | 34653 | Simulating Soil-Plant-Climatic Interactions and Greenhouse Gas Exchange in Boreal Grasslands Using the DNDC Model | Daniel Forster Fukushima Institute for Research, Education and Innovation (F-REI) |
| 028 | 33300 | Immobilization of Arsenic and Cadmium in Alkaline Soil Using Combined Red Mud-Phosphogypsum Amendment | Namhee Yi Gyeongsang National University |
| 029 | 32375 | Innovating Truffle Agroforestry for Sustainable Mediterranean Landscapes: The TAIE Project | Luisa Massaccesi Institute for Agricultural and Forest Systems in the Mediterranean, National Research Council, Italy |
| 030 | 32617 | Soil organic C composition and microbial community regulate soil enzymatic stoichiometry in <i>Camellia oleifera</i> land with cover crops | JiaJunTian Central South University of Forestry and Technology |
| 031 | 320B44 | Hydrochar amendment under controlled irrigation enhance microbial carbon use efficiency by regulating turnover dynamics in paddy soils | Kechun Wang Northwest A&F University |
| 032 | 33748 | Effects of Microplastics on Litter Decomposition in Shengjinhu Wetlands | Ziyuan Liang Anhui University |
| 033 | 31982 | Carbon dioxide emissions from technogenic soils of the Central forest steppe | Tikhonova Elena Voronezh State University of Forestry and Technologies named after G.F. Morozov |
| 034 | 32529 | Climate Change Effects on Nitrogen Cycles in Global Grasslands | Miao Zheng Zhejiang University |
| 035 | 32259 | Soil development on coal-waste dump in southern Poland | Agnieszka Czajka University of Silesia, Faculty of Natural Science |
| 036 | 33493 | Monitoring Cadmium in Soils, Fertilizers, and Baby Leaf Vegetables in Southern Italy: Regulatory and Environmental Insights | Paola Adamo Department of Agricultural Sciences, University of Naples Federico II |



Poster Session

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|-----|-------|--|---|
| 037 | 33494 | Soil-Plant Isotopic Coupling in Support of PDO Agri-Food Traceability | Paola Adamo Department of Agricultural Sciences, University of Naples Federico II |
| 038 | 34297 | Rhizosphere bacterial communities mediate host genetic effects on agronomic traits in soybean | Jia zhongjun Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun, China |
| 039 | 33536 | Evaluating the phosphorus release efficiency of duo-biochar to spring wheat | Christina van Midden Agri-Food and Biosciences Institute |
| 040 | 33535 | Field evaluation of biochar on soil and crops in Northern Ireland (NI) | Christina van Midden Agri-Food and Biosciences Institute |
| 041 | 32931 | Short-term organic fertilization enhances soil microbial diversity in common bean cultivation | Glacy Jaqueline da Silva Paranaense University |
| 042 | 32347 | Nutrients Leaching In A Maize Stover Biochar Amended Soil | Prof. Olubunmi Samuel SHITTU Federal University Oye-Ekiti, Oye-Ekiti, Nigeria. |
| 043 | 32303 | Heavy Metal Immobilization Potentials of Some Agricultural Wastes in Contaminated Arable Soil | Dr. Augustus O. A. ILORI Federal University Oye-Ekiti, Oye-Ekiti, Nigeria. |
| 044 | 33853 | Regulatory Effects of Nitrogen and Acetate on Arsenic Adsorption by Bentonite in an Anaerobic System | Xinyun Meng Southwest University |
| 045 | 33709 | SoilBio Reveals the Power of Forage Grasses to Improve Biological Functioning, Soil Health and Long-Term Soybean Yield in Maranhão, Brazil | Fábio Bueno dos Reis Junior Embrapa Cerrados |
| 046 | 32351 | Aligning nitrogen form with rice preference raises yield and cuts emissions | Shending Chen College of Environmental and Resource Sciences, Zhejiang University, Hangzhou, China |
| 047 | 34680 | AMF modulation of sweet potato plant performance and rhizosphere microecology depends on soil potassium availability: shared and differential strategies | Jie Yuan Jiangsu Academy of Agricultural Sciences |
| 048 | 35079 | Soil Profile Horizon Classification Integrating Point-Based Hyperspectral Data and Machine Learning Algorithms | Liuxiang Nanjing University of Information Science and Technology |
| 049 | 32863 | Scale-dependent mechanisms of grazing-induced soil carbon sequestration: Mediated by soil nitrogen quantity vs. heterogeneity in grasslands | Yue Bai Northwestern Polytechnical University |



Poster Session

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| 050 | 32856 | Enrichment of metastable iron minerals in global coastal wetlands | Ma Hua Institute of Geochemistry, Chinese Academy of Sciences (IGC CAS) |
| 051 | 32770 | Integrated Modelling and Technological Tools to prevent Agricultural Non-Point Source Nitrate Pollution of Shallow Groundwater in Arborea Area, Sardinia, Italy | Andrea Vacca University of Cagliari |
| 052 | 35799 | Spatio-temporal patterns and environmental controls of soil organic carbon stocks in global tidal wetlands since 2009 | yang chenconghai Nanjing university |
| 053 | 35849 | Reactive oxygen species in paddy rice systems: Links with environmental parameters and soil microbial communities | Jidong Ying South China Agricultural University |
| 054 | 319B35 | Revealing Microplastic Contamination in Coastal Soils in Southern Italy via ATR-FTIR and SEM | Martina Cusano University of Molise |
| 055 | 31888 | The Virtual Soil Museum of Northern Paraná: A Space for Soil Education | Jully Gabriela Retzlaf de Oliveira UENP |
| 056 | 35672 | Changes in Soil Biological Activity Induced by Increasing Doses of Aged Microplastics in Agricultural Soil | Humberto Aponte Universidad de O'Higgins |
| 057 | 31868 | SOIL MANAGEMENT AND CONSERVATION FOR AGRICULTURAL SUSTAINABILITY IN MALI VILLAGES | MARX LEANDRO NAVES SILVA Department of Soil Science, Federal University of Lavras |
| 058 | 35679 | Field Evaluation of Vegetation with Contrasting Root Traits for Runoff and Soil Erosion Control on Sloping Agricultural Land | INTAN NADHIRAH BINTI MASRI Malaysian Agricultural Research and Development Institute |
| 059 | 32441 | Rhizosphere-triggered viral lysogeny mediates microbial metabolic reprogramming to enhance arsenic oxidation | Xinwei Song Zhejiang University |
| 060 | 32629 | Gradient virtual sampling along pedogenetic sequences improves soil taxonomic mapping in low-relief regions | Zhidong Zhao College of Land Science and Technology, China Agricultural University |
| 061 | 33179 | Soil pH Modulates the Global Stabilized Soil Organic Carbon | Cuijuan Liao Key Laboratory of Ecosystem Network Observation and Modeling, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China |



Poster Session

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| 062 | 35589 | Keystone microbes mediate root plasticity and phosphorus uptake to enhance maize crop productivity in intercropping systems | Yi-Wen Zhao China Agricultural University |
| 063 | 36423 | Research on Soil Reconstruction Technology Based on Red Clay-Sandy Soil Compounding in Grassland Open-Pit Mining Areas | Qiao Yang 1.Land Consolidation and Rehabilitation Center, Ministry of Natural Resources, Beijing, China.2 Technology Innovation Centerfor Land Engineering, Ministry of Natural Resources, Beijing, China. 3 China University of Geosciences, Beijing, China. |
| 064 | 33720 | CONTROL AND EVALUATION OF ALUMINUM METAL COMPONENTSIN SALINE ACID SULFATE SOIL BY ECO-FRIENDLY AMENDMENTS | Tung Xuan Tan Nguyen Department of Informatics, Natural Resources and Environment (DINRE), Institute for Environment and Resources (IER), Vietnam National University Ho Chi Minh City (VNU-HCM), Ho Chi Minh City, Vietnam |
| 065 | 32604 | Sulfur enhances iron plaque formation and stress resistance to reduce the transfer of Cd and As in the soil-rice system | Fei Miao Huazhong Agricultural University |
| 066 | 32609 | Fe-S mineral evolution drives colloidal restructuring and reshapes Cd and As migration pathways in paddy soils | Fei Miao Huazhong Agricultural University |
| 067 | 34744 | Transformation of Aluminum Forms During Andosol Genesis in Japan | Syuntaro Hiradate Kyushu University |
| 068 | 32185 | The mineralogical mechanisms of solid phase aluminum mobilization during soil acidification | Kewei Li Institute of Soil Science, Chinese Academy of Sciences |
| 069 | 32301 | The “Reactive Mineral Sink” Model for Reframing Soil Organic Carbon Stabilization | Songlin Wu Research Centerfor Eco-Environmental Sciences, Chinese Academy of Sciences |
| 070 | 33214 | Tracing soil microbial life–death dynamics through Intra- and extra-cellular DNA divergence across the Tibetan Plateau | Ting Li University of Chinese Academy of Sciences |
| 071 | 32817 | Prediction of Soil Structural, Hydraulic, and Chemical Properties: A Comparison of NIR and MIR Across the Critical Zone | Yasas Gamagedara Mississippi State University |
| 072 | 33806 | Uracil as an alternative plant nitrogen source affecting plant growth and shaping plant-soil-microbe interactions | Qing Zheng University of California, Davis |



Poster Session

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| 073 | 32102 | Pedogenic Carbonates and Calcimetry Near Detection Limits: Field-scale weathering dynamics in wollastonite-amended clayey/acidic soils | Rafael M. Santos University of Guelph |
| 074 | 31829 | Transferring Global Pedogenon Insights for Soil Security in Australia | Wartini Ng The University of Sydney |
| 075 | 34099 | Ecological strategies govern fungal performance on soil carbon cycling in agroecosystems | Wenxin Zou Southwest University |
| 076 | 34328 | Urban soil virus homogenization reshapes microbial organic matter decomposition and carbon sequestration potential | Panpan wang Huazhong Agricultural University |
| 077 | 319B38 | Digital Mapping for Spatial Prediction of Soil Properties Using Machine Learning Models for Soil Management in Rice Cultivation Areas Affected by Salt: A Case Study of Mueang Phia, Ban Phai, Khon Kaen, Bangkok | Waramporn Wongwarapas Land Development Department |
| 078 | 33993 | Trait-mediated rhizosphere phosphorus strategies among coexisting desert shrubs | Jing Zhou, Mingzhu He, Chunming Xin, Huijun Qin, Shengzhong Du, Huihui Niu Northwest Institute of Eco-Environment and Resources, CAS |
| 079 | 32057 | Arenization in the Bauru Basin, Mato Grosso do Sul, Brazil | Viviane Capoane, Robert A. Burrow UEMS and UFSM |
| 080 | 33814 | Organic rice cultivation boosts microbial CUE by modulating soil nutrient availability and microbial resource acquisition strategies | Guanghua Wang Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 081 | 34003 | Nitrogen fertilization increases rice productivity at the expense of endophytic bacterial community stability and diversity | Guanghua Wang Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 082 | 33362 | Soil Calcium Carbonate Leaching Process of Millennial Soil Chronosequence in Coastal Regions | Yajing Cai School of Geographic Sciences, Nanjing University of Information Science & Technology |
| 083 | 33069 | Microbial driven soil carbon cycling in red soil aggregates under different fertilization | Liu Ming State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, Nanjing |
| 084 | 33262 | Age-related shifts in soil microbial community structure and metabolic pathways in <i>Picea schrenkiana</i> var. <i>tianschanica</i> plantations | Liu Li Xinjiang Agricultural University |



Poster Session

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|-----|-------|---|---|
| 085 | 33470 | Accuracy improvement of spatial prediction for soil organic matter using receptive field fusion module in hilly areas | Yangfan Xie Hunan Agricultural University |
| 086 | 34283 | Appraisal of Soil Taxonomy and the World Reference Base for Soil Resources Applied to Classify Purple Soils from the Eastern Sichuan Basin, China | Siyu Liu College of Resources and Environment, Southwest University, Chongqing, China |
| 087 | 34681 | Soil Carbon Stocks and Stable Isotope Profiles in South Korean Forested Wetlands across Successional Stages | Tae Kyung Yoon Kookmin University |
| 088 | 31597 | Humate Boosts Liming Value? Insights into humate-assisted lime dissolution across acidic environments | Oshadi Hettithanthri UWA School of Agriculture and Environment, The University of Western Australia |
| 089 | 32166 | Improving soil organic carbon sequestration through conservation tillage incorporating legume-based crop rotations | Wenxuan Liu China Agriculture University |
| 090 | 35758 | Biochar-based microbial fertilizer enhances cucumber growth and yield by improving soil quality in protected agriculture | Dongliang Fan Xi'an University of Technology |
| 091 | 33592 | Ciprofloxacin- driven purifying selection on viral genomes accelerates soil N ₂ O production | Linfang Fang China Agricultural University |
| 092 | 35007 | Initial soil organic C and mean annual precipitation regulate black soil C dynamics under different tillage regimes in Northeast China | Jianyu Tao State Key Laboratory of Efficient Utilization of Arable Land in China, Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, Beijing 100081, China |
| 093 | 32660 | Short rotation coppice on degraded and fertile soils | Vladimir Ivezic Faculty of Agrobiotechnical sciences Osijek |
| 094 | 33930 | Accumulation, Distribution, and Migration Patterns of PAHs in Typical Coal Fire Zones | Pengcheng Zhang China University of Mining and Technology |
| 095 | 34656 | Acidification Discrepancy in Soils with Contrasting Surface Charge | Zhanyu Guo Ludong University |
| 096 | 32633 | Biohydrogen utilization in legume-rhizobium symbiosis reveals a novel mechanism of accelerated tetrachlorobiphenyl transformation | Yongfeng Xu Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China |



Poster Session

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| 097 | 35890 | Estimation of Salinization in the Yellow River Delta Based on BO-XGBoost and a Four-Dimensional Feature Space, with Spatiotemporal and Trade-off/Synergy Factor Analysis | Jicun Yang Shandong University of Technology |
| 098 | 35892 | Interpretable salinization estimation model for Dongying City based on integrated multidimensional spectral indices with XGBoost-driven transformations | Xinyu Che Shandong University of Technology |
| 099 | 35889 | INSIGHT: A Spatially-Explicit Watershed Model Integrating Biogeochemistry and Hydrology to Track Nitrogen Fate and Transport | Hao Liang Hohai University |
| 100 | 33997 | Wheat and faba bean intercropping enriches nitrogen-cycling taxa, shifting networks to enhance nitrogen mineralization | International Union of Soil Sciences Yunnan Agricultural University, Kunming |
| 101 | 33949 | Regulation of methane oxidation in natural grassland by animal urine addition gradients | Wang Yufang Key Laboratory of Microbial Resources Exploitation and Application of Gansu Province, Institute of Biology, Gansu Academy of Sciences, Lanzhou 730000, P.R. China |
| 102 | 35623 | Typical mineral additions promote soil MAOC sequestration: Interactions between Fe oxides and microbial-derived peptides | Qi Li 1Institute of Agricultural Resources and Environment, Guangdong Academy of Agricultural Sciences, Guangzhou, China. 2Key Laboratory of Plant Nutrition and Fertilizer in South Region, Ministry of Agriculture and Rural Affairs, Guangzhou, China. |
| 103 | 32921 | Rhizosphere strategies of maize: Effects of drought type on root and rhizosphere traits in different soil textures | Andreas J. Wild University of Bayreuth |
| 104 | 35847 | Disentangling plant community and environmental controls on soil-borne pathogens in grassland ecosystems | Junsheng Ke Lanzhou University |
| 105 | 35306 | Microbial activity and biomass in a cultivated and bioinoculated soil under water and nutritional deficit conditions | Erika Lorena Blanco Carrero Universidad Nacional Experimental del Táchira |
| 106 | 35845 | Mild to moderate drought stress reinforces the role of functional microbiome in promoting growth of a dominant forage species (<i>Neopallasia pectinata</i>) in desert steppe | Zhenzhen huang Inner Mongolia Agricultural University |



Poster Session

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| 107 | 320B90 | Differences in the forms of bidirectional nitrogen transfer facilitate species coexistence in maize-green manure mixture systems | Runfu Li Beijing Forestry University |
| 108 | 34008 | Soil Type Prediction in Jianshi County, China Based on Soil Formation Factors and Random Forest | Yao Lu School of Geography and Information Engineering, China University of Geosciences, Wuhan, China |
| 109 | 32920 | Symbiotic N ₂ fixation drive nitrogen-phosphorus synergy in maize-lablab mixture | Runfu Li Beijing Forestry University |
| 110 | 34853 | Earthworms enhance soil phosphorus cycling but plant responses differ among earthworm ecological categories | Wenli Ding Beijing Forestry University |
| 111 | 34386 | Spatial distribution of medium and trace elements in tea garden soil of Laoshan District, Qingdao | Zhengkuan Kong Qingdao Agricultural University |
| 112 | 31337 | Degradation of Sugar Beet Pulp by Klebsiella sp. HDJT1 and Pseudomonas sp. C27: A Metabolic Cross-Feeding Strategy for Soil Health Improvement | Yanli Liu Heilongjiang university |
| 113 | 35843 | Synthetic DNA Fragments as High-Resolution Tracers for Hydrological Parameter Inversion | XinLin Li China Agricultural University |
| 114 | 35874 | Methane production potential in winter flooded rice paddy | zhijie sun China West Normal University |
| 115 | 33180 | Adopting wheat-legume intercropping enhances crop productivity and soil quality: Evidence from living labs across Pakistan under LEGUMINOSE Project | Muhammad Riaz Government College University Faisalabad, Pakistan |
| 116 | 35746 | Cutting global nitrogen emissions by one-third for balanced and achievable SDGs by 2030 | Yi Zhou Zhejiang University |
| 117 | 34755 | Soil organic matter effects on interfacial water thermodynamic behavior revealed by isothermal thermogravimetric analysis | Zizheng Deng College of Land Science and Technology, China Agricultural University |
| 118 | 35793 | Nitrogen addition promotes soil microbial-derived carbon storage: A meta-analysis | Junjie Guo Sun Yat-sen University |
| 119 | 34349 | The influence of the application of sewage sludge compost on the yield of winter oilseed rape | Jovica Vasin Institute of Field and Vegetable Crop, Novi Sad, Serbia |



Poster Session

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| 120 | 31914 | Methylmercury Accumulation and Risk Mitigation in Chinese Paddy Soils | Yusef Kianpoor Kalkhajeh Wenzhou-Kean University |
| 121 | 36311 | Green-Ampt infiltration model calibration on a Peruvian Andean hillslope under different land uses | Diego Armando Fernandez Ibarra Universidade de Sao Paulo |
| 122 | 34582 | Straw- decomposing inoculants strengthen the mitigation effect of straw on N ₂ O emissions via synergistically inhibiting the abundance and activity of AOB in a wheat field | Cheng Ji Institute of Agricultural Resources and Environment, Jiangsu Academy of Agricultural Sciences, Nanjing, China |
| 123 | 34635 | Multi-benefits of wastewater phosphorus recovery for croplands in China | Zijie Tang Zhejiang University |
| 124 | 34030 | Microbiomes hold the key to build up high soil fertility beyond organic fertilization | Chunkai Li Nanjing Forestry University |
| 125 | 35281 | Modeling of Carbon Sequestration in Future Climate Conditions in a Long-Term Field Experiment on Light-Textured Retisol in the Tver Region, Russia | Igor Ilichev Lomonosov Moscow State University |
| 126 | 34306 | Rethinking Watershed Delineation in Human-Modified Plain Farmlands: From Topographic Units to Process-Oriented Hydrological Systems | Jiahao Liu Northeast Forestry University |
| 127 | 33269 | Study on the Coupled Processes of Cd and Fe Transfer in the Soil-Rice System: a Remedial Strategy Using Functional Fertilizer | Li Yichun Institute of Agricultural Resources and Environment, Guangdong Academy of Agricultural Sciences, Guangzhou, China |
| 128 | 35929 | Soil carbon quality modulates the responses of soil respiration and its heterotrophic and autotrophic components to fertilization under straw return and extreme rainfall | Shiqi Xu 1 State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, Nanjing, China 2 State Key Laboratory of Environmental Geochemistry, Institute of Geochemistry, Chinese Academy of Sciences, Guiyang, China |
| 129 | 35866 | The spatial distribution characteristics of microbial community in soda saline-alkali paddy with flue gas desulfurization gypsum reclamation | Bangyan Liu Tsinghua University |
| 130 | 33902 | Organic amendments exacerbate fertilization-induced reduction in microbial NUE across China | Xinran Wang Chinese Academy of Agricultural Sciences |



Poster Session

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| 131 | 33544 | Vegetation Biodiversity and Microbial Communities Drive Carbon Cycling during Secondary Succession in the Longmen Mountain Seismic Belt | Yingyan Wang Mianyang Teachers ' College |
| 132 | 34441 | Microbial necromass outperforms the chemical stability of SOC in predicting soil multifunctionality under 44-year of organic amendment in red paddy soil | No Jiangxi Institute of Red Soil and Germplasm Resources |
| 133 | 33778 | Differences in water erosion between in-row and inter-row positions of maize in sloping farmland | Shuai Chen College of Land Science and Technology, China Agricultural University, Beijing, China. |
| 134 | 33574 | Oral Exposure of Arsenic-Contaminated Soils Triggers Hepatic Ferroptosis via Iron Dysregulation and Glutathione Metabolism Disruption: From Bioavailability to Mechanisms | Cheng-Chen Wang Southwest Forestry University |
| 135 | 35398 | Response of soil erosion resistance capacity to different vegetation restoration measures and driving mechanisms in the Three Gorges Reservoir Area | Ruyuan Hu Ecology and Nature Conservation Institute, Chinese Academy of Forestry |
| 136 | 31833 | Technical Feasibility of Biomass Buffer Strips for Capturing Excess Nutrients from Agricultural Runoff | Tianying LI University of Guelph |
| 137 | 36332 | Effects of Spatial Resolution on Spectral Characteristics of Soil Salinity in Plastic-Mulched Farmland | Weitong Ma College of Hydraulic and Civil Engineering, Ludong University |
| 138 | 33326 | Soil microbial community structure in reclaimed and unreclaimed post-mining areas | Andres Rodriguez Seijo Universidade de Vigo |
| 139 | 33146 | Effects of alley cover crops on soil carbon and nitrogen along the soil profile in almond orchards under a Mediterranean climate | Jesús Aguilera Huertas Universidad Politécnica de Cartagena |
| 140 | 31875 | Rotational grazing with no-till can efficiently maintain soil carbon stocks in Mediterranean woody pastures but results in lower microbial abundance and fungal diversity than grazing abandonment | Jesús Aguilera Huertas Universidad Politécnica de Cartagena |
| 141 | 34109 | Influence of species diversity and soil cementing substances on the stability of agglomerates in three forest types of Zhangguangcailing Mountains | Yang fengjiao Northeast Forestry University |



Poster Session

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| 142 | 34899 | Sustainability of mountainous olive orchards: evaluation of soil microbial diversity and functionality of organic, integrated and conventional agroecosystems. | Victoria Ochoa Esteban University of Jaén |
| 143 | 321B04 | Drivers of soil health of olive groves and their impact on the sustainable production of olive oil in the Mediterranean | Victoria Ochoa Esteban Universidad de Jaén |
| 144 | 32201 | The impact of agricultural land use on soil hydraulic properties and hydrological functioning across the lowlands of England and Wales | Yong Wang University of Reading |
| 145 | 35336 | Mitigation of Heavy Metal Transfer from Soil to Lettuce Using Pyrophyllite: A Soil-Plant Study | Emina Sijahović University of Sarajevo-Faculty of Agriculture and Food Sciences |
| 146 | 31866 | Patterns of formation of the soil cover of historical urban parks (using the example of St. Petersburg, Russia) | Kseniia bakhmatova Saint Petersburg State University |
| 147 | 33296 | Insight in the characteristics of humic substances with cotton straw derived organic materials amendments | Xiangyun Song Qingdao Agricultural University |
| 148 | 33048 | Identification of Key Factors for Soil Drainage Classification via Color Metric Comparison from Soil Images | Danbi Lee National Institute of Agricultural Sciences |
| 149 | 34583 | Crop rotation and residue management enhance banana health by enriching core antagonistic microbes | Shan Hong Hainan Academy of Agricultural Sciences |
| 150 | 34655 | Organic Compounds in Organically Managed Farmland in Fukushima and Their Effects on Roots of <i>A. Thaliana</i> | Marcel Pascal Beier Fukushima Institute for Research, Education and Innovation |
| 151 | 33713 | Initial changes in soil microbial community structure after combined biochar and straw application to agricultural soil: evidence from a 180-day incubation experiment | Xiaodong Zheng Institute of Agricultural Resources and Environment, Guangdong Academy of Agricultural Sciences |
| 152 | 36235 | Conservation tillage and wheat straw managements improve soil organic carbon sequestration via calcium-mediated microbial communities and aggregate stability in Calcaric Cambisols | Xueping Wu Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 153 | 31836 | Soil Security Indicator Classes: Reframing soil indicators for effective governance | Sandra Evangelista The University of Sydney |



Poster Session

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| 154 | 32116 | Development of carrier-based microbial inoculant and the assessment of soil application impact on Faba bean (<i>Vicia faba</i>) growth | Sajeevee S. Sarathchandra University of Western Australia, Imtrade CropScience |
| 155 | 31480 | Evaluating the Applicability of the RothC Model for Soil Organic Carbon Dynamics in Canadian Prairie Grasslands Using Physical Fractionation | Ruitian Chen University of Guelph |
| 156 | 32533 | Spatiotemporal divergence of soil acidification in China's cropland | Xi Wang Zhejiang University |
| 157 | 33289 | Effects of microplastics on microbial communities and antibiotic resistance genes in the soil-plant system | Nuo Chen Anhui University |
| 158 | 33805 | Seasonal Soil Hydraulic Function and Pore Size Dynamics throughout Cover Crop–Corn Rotation in a Reduced-Tillage System | Rui Peng The University of Tennessee |
| 159 | 34298 | Comparative Analysis of Soil Microbial Community Structures in Rhizosphere of Two Texture-Differentiated Lotus Root Varieties | Xinni Li Guangxi University |
| 160 | 35948 | Pollution characteristics, sources and risk assessment of per- and polyfluoroalkyl substances (PFASs) in river water, sediments, soils of the Inner Mongolia Section of the Yellow River | Xuehui Xu Inner Mongolia Agricultural University |
| 161 | 32930 | The SIMULATE Project: evaluating climate-warming impacts on metalliferous mine tailings to guide restoration strategies in semiarid landscapes | María Nazaret González-Alcaraz Technical University of Cartagena |
| 162 | 32908 | Quantifying Metal Transport by Water Erosion: A Field-Based Assessment in a Semiarid Mediterranean Former Mining Area (SE Spain) | María Nazaret González-Alcaraz Technical University of Cartagena |
| 163 | 34305 | Gynococious and monoecious cucumbers drive the assembly of different rhizosphere microbial communities | Liyuan Liao Guangxi University |
| 164 | 32961 | Phosphate-Solubilizing Bacteria Enhance Sugarcane Growth: High-Potential Candidates for Sustainable Biofertilizer Development | Pechrada Pinjai Kasetsart University, Thailand |
| 165 | 33941 | State-Dependent Thresholds and Ecological Safety Boundaries for Vegetation Restoration on the Loess Plateau Under Root-Zone Soil Moisture Constraints | Guiming Hu Chang'an University |



Poster Session

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|-----|-------|---|---|
| 166 | 34040 | Reseeding <i>Caragana korshinskii</i> recovers soil microbiome structure but not stability or complexity after eight years in degraded desert steppe | Huhaina Inner Mongolia Agricultural University |
| 167 | 32951 | Halophytes reclamation soil through improving soil structures, decreasing salinity and enhancing SOC storage in coastal saline land | Huanyu Chen Jiangsu Coastal Area Institute of Agricultural Sciences |
| 168 | 31641 | Microbial Community Assembly, Network Resilience, and Nitrogen Functional Stability Under Canopy Gap Disturbance in Karst Forest Soils | Guangqi Zhang Guizhou University |
| 169 | 32918 | Short-term intercropping reduces total symbiotic N ₂ fixation and alters the fate of nitrogen derived from free-living fixation | Runfu Li Beijing Forestry University |
| 170 | 34005 | Responses of Runoff and Sediment Yield to Natural Rainfall Characteristics and Vegetation Configuration in a Loess Hill–Gully Slope System | Hongjie Peng Chang'an University |
| 171 | 33466 | MOF-303 Reinforced Bio-based Coatings for Precision Nitrogen Release in Agriculture | Mingchuan Yang Shandong Agricultural University |
| 172 | 33704 | Iron engineering unlocks carbon sequestration potential in salinized drylands | Bin Jia College of Natural Resources and Environment, Northwest A&F University |
| 173 | 33939 | Regulatory effects of vegetation configuration on erosion hydrodynamic thresholds for hill-gully slopes in the loess hilly and gullied region | Chenyu Cui Chang'an University |
| 174 | 33769 | Screening of microplastic-degrading bacteria and their effect on lettuce growth under pollution stress | Qiming Lu Anhui University |
| 175 | 35138 | Influence of Soil Microstructure on Capillary Rise in Disturbed and Undisturbed Sandy Arid Soils, Oman | Afrah Al-Shukaili Sultan Qaboos University |
| 176 | 32342 | Increasing maize yield and rhizosphere soil organic carbon content via combined application of humic acid and microbial agents | Yue Yuan Shangqiu Normal University |
| 177 | 34437 | Assessment of Livestock Carrying Capacity in Typical Agro-Pastoral Transition Zones Based on Heavy Metal Pollution in Cultivated Land: The Case of Chifeng City | Ru Bai Inner Mongolia Agricultural University |



Poster Session

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| 178 | 34631 | Soil Organic Carbon Storage Patterns and Environmental Drivers in Large-Diameter Timber Plantations of Southern China | Hongting Quan South China Agricultural University |
| 179 | 34661 | Response of soil microbial metabolites to repeated freeze-thaw cycling in a temperate forest | Maki Miura F-REI |
| 180 | 34024 | Combined effects of biochar and milk vetch with 20% N reduction on rice yield, soil aggregation and C- N allocation in reddish paddy soil | Xie Zhijian College of Land Resources and Environment, Jiangxi Agricultural University |
| 181 | 34350 | Dual Benefits of Nano-Iron Oxide: Enhancing Rice Yield and Mitigating Greenhouse Gas Emissions Across Diverse Paddy Soils | Lihong Xue Jiangsu Academy of Agricultural Sciences |
| 182 | 35777 | Dual-Dimension Spectral Reconstruction: Spatiotemporal Mapping of Soil Organic Matter under Complex Cropland Surface Conditions | He Rongpeng Chinese Academy of Sciences Aerospace Information Research Institute |
| 183 | 319B46 | Rice straw return by water-logged press-bury in autumn Enhanced Black Soils Carbon Stability in Northeast China Paddy Fields | Dongju Bai Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 184 | 34319 | The influence of organic materials on the chemical structure of humus in salt crust aggregates in the Yellow River Delta | Zichen Xu Qingdao Agricultural University |
| 185 | 32938 | Can soil magnetism affect the soil response to the magnetized water? | Alshymaa M. Guda National Research Institute of Astronomy and Geophysics (NRIAG) |
| 186 | 35918 | Multi-stressor environments reshape soil microbial biodiversity and genomic strategies, favoring stress-adapted and unknown taxa | Shuxun Cheng Zhejiang University, Institute of Soil and Water Resources and Environmental Science |
| 187 | 34994 | Structured Mini-Dunes (SMDs): Engineered Soil Structures for Moisture Retention and Salinity Control in Arid Sabkha Soils | Afrah Al-Shukaili Sultan Qaboos University |
| 188 | 32290 | Differences in soil organic carbon among soil layers caused by microbial necromass carbon accumulation under different tillage and carbon input regimes | Ximing Liu Institute of Agricultural Resources and Environment, Jilin Academy of Agricultural Sciences |
| 189 | 33411 | Evaluation of Environmentally Important Elements from Glacial Ice-Water and Associated Glacial Sediments | Kashmala Jadoon Nanjing University |
| 190 | 34397 | Effects of compost application on rhizosphere microbial communities in sandy soil under different tillage practices | Xinyu Ma Qingdao Agricultural University |



Poster Session

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| 191 | 34216 | Elevated ozone alters methane emissions in straw-amended paddy fields via plant–soil–microbial regulation | Yijia Zhang Nanjing University of Information Science and Technology |
| 192 | 32276 | Synergistic Mitigation of Crop Rhizosphere Soil Microbial Nitrogen Limitation by Maize-Peanut Intercropping and Straw Return in Black Soil Region: Insights from Extracellular Enzyme Stoichiometry | QilaSa Jilin Agricultural University and Jilin Academy of Agricultural Sciences (Northeast Agricultural Research Center of China) |
| 193 | 34174 | Combined Effects of Elevated Ozone and Warming on Methanogenesis in Paddy Soil Across Depths | Jinfeng Ma Nanjing University of Information Science and Technology |
| 194 | 33708 | Lab evaluation of the SoilVUE10 time domain reflectometry sensor under drying and wetting conditions of saline soils | Xuan Yu Institute of Soil Sciences, CAS |
| 195 | 320B10 | The silent season: Rapid increases in non-growing season soil respiration on the Tibetan Plateau | Qinlu Li, Weibo Kong Northwest A&F University |
| 196 | 34076 | Warming alters fresh-carbon assimilating bacterial community relevant to priming effect in Mollisols | Gao Yan Northeast Institute of Geography and Agroecology |
| 197 | 33439 | Predicting the interaction of a coated moldboard plow and soil compared to the conventional one using adaptive neuro-fuzzy inference system (ANFIS) | Mohammad Askari Sari Agricultural Sciences and Natural Resources University, Sari, IRAN |
| 198 | 31986 | Optimization of Ethyl Cellulose-Coated Urea for High-Performance Controlled Release | Yuanfang Zhou Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 199 | 31638 | How soil food web composition and stoichiometry regulate ecosystem function and soil health | Yang Bai Institute of Applied Ecology, Chinese Academy of Sciences |
| 200 | 33715 | Speciation of Heavy Metals in Soil and Their Influencing Factors in a Tailings-Affected Area of Eastern Inner Mongolia | Yibo Ma Inner Mongolia Agricultural University |
| 201 | 32708 | Soil β -Diversity responses to global change mediated by assembly processes and multi-trophic interactions | Zhenxin XU Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang, China |
| 202 | 319B45 | Trade-off between Pore-Throat Structure and Mineral Composition in Modulating the Stability of Soil Organic Carbon | Lingke Guo Hunan Agricultural University |



Poster Session

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| 203 | 33652 | Combined Application of Straw and Biochar: A Synergistic Strategy to Enhance Fertilizer Efficiency, Boost Yield, and Reduce Greenhouse Gas Emissions in Northeast China | Aizheng Yang Northeast Agricultural University |
| 204 | 35240 | Spatio-Temporal Variations in Soil Organic Carbon Stocks in Erosion Zones Under Future Climate Change | Xinyu Zhang Shenyang Agricultural University |
| 205 | 36316 | Evolution of Global Soil Science Collaboration Networks and Its Implications for Journal Development | Ping Lu Institute of Soil Science, Chinese Academy of Sciences |
| 206 | 34344 | Mechanisms of Biochar and Cattle Manure in Regulating the Microstructure of Humic Substances within Saline Fluvo-Aquic Soil Aggregates | Rui Zhang Qingdao Agricultural University |
| 207 | 35769 | The potential role of groundwater microplastics on arsenic cycling in alluvial aquifers: insights from links of DOM characteristics and microbial community | Shengfeng Liu State Key Laboratory of Geomicrobiology and Environmental Changes, China University of Geosciences (Wuhan) |
| 208 | 32159 | Bacterial modification of the root cell wall facilitates rice aluminum resistance in acidic soils | Zhang li State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences |
| 209 | 32235 | Going Deep Vertical Migration of Biodegradable vs. Conventional Film Microplastics and Responses of Soil C–N Dynamics | Diego Pinzon Tsinghua University |
| 210 | 31984 | Sample storage conditions impact extracellular DNA yield and subsequent soil biodiversity assessments | Philippe Belliard Universität Innsbruck |
| 211 | 33605 | Breaking the Size Barrier: Surface Roughness Enables Oversized Chromium Colloids to Penetrate Plant Cell Walls | Xu, Kai Sun Yat-sen University |
| 212 | 31710 | Biochar application ameliorates soil and water loss on the soil-mantled karst slopes: mechanisms and benefits | Longshan Zhao Guizhou University |
| 213 | 34143 | Effects of crop type on the soil anti-scourability index of sloping farmland in the black soil region of northeast China | Fei Yu China Agricultural University |
| 214 | 34179 | Study on the Effects of Different Organic Materials on Soil Humus and Nutrients | Liming Sun Jilin Agricultural University |



Poster Session

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|-----|-------|--|--|
| 215 | 36347 | Driving Mechanisms of Antibiotic Resistance Genes in Urban Forest Soils | Ying Zhang Central South University of Forestry and Technology |
| 216 | 32726 | Neighbor-dependent isoflavonoid signaling triggers microbial decomposition of recalcitrant carbon in soybean rhizosphere | Rong Jia China Agricultural University |
| 217 | 34624 | Different parts of corn plant residue returning to field caused the differences of humus composition in quantity and humic acid in molecular level in black soil | Liu yuanbo College of Resource and Environmental Science, Jilin Agricultural University |
| 218 | 31876 | Reassessment of the anthropogenic soils' classification of Slovakia – basic principles and criteria | Jaroslava Sobocká National Agricultural and Food Centre, Soil Science and Soil Conservation Department Bratislava, Slovakia |
| 219 | 34124 | Counteracting warming-induced soil organic matter loss via cyanobacteria enhanced glomalin-mediated aggregation | Haowei Ni, Weigen Huang, Sen Li, Chengrong Peng, Xiaoyue Wang, Jixian Ding, Jizhong Zhou, Jiabao Zhang, Yuting Liang Institute of Soil Science, Chinese Academy of Sciences |
| 220 | 36083 | Soil drying accelerates CO ₂ emissions in global cold and wet ecosystems | Shaobo Sun Tianjin University |
| 221 | 32012 | Root-soil interactions govern soil organic nitrogen dynamics under acid rain and nitrogen deposition | Xiongfei Zhang 1Nanjing Forestry University |
| 222 | 34748 | Future Soil Nutrient Dynamics and Acidification Risk in Subtropical China under SSPs | Chao Xiao Jiangxi Agricultural University |
| 223 | 35053 | Mechanisms and machine learning-based load estimation of phosphorus runoff losses in Chinese rice cropping systems | Junjia Qi Ludong university |
| 224 | 32551 | Response Of Maize Growth and Phosphorus Uptake to Phosphorus Application in Maize/Alfalfa Intercropping System | Ziqi Li Inner Mongolia Agricultural University |



Poster Session

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| 225 | 33481 | Long-Term Organic Fertilization Enhances Particulate Organic Matter Accumulation through Macroaggregate Formation in the Loess Plateau | Ting Shi 1 Soil Health Laboratory in Shanxi Province, Institute of Eco-environment and Industrial Technology, Shanxi Agricultural University, Taiyuan 030031, China 2 College of Resources and Environment, Shanxi Agricultural University, Taigu 030801, China 3 School of Environmental and Resource Sciences, Shanxi University, Taiyuan 030006, China |
| 226 | 35576 | An open-path nitrous oxide laser analyzer for eddy covariance flux and mobile monitoring | Ruisheng Jiang HealthyPhoton Technology Co., Ltd |
| 227 | 33298 | Mechanisms of low carbon sequestration efficiency in the croplands of the eastern Loess Plateau | Xinyue Su 1State Key Laboratory of Efficient Utilization of Arid and Semi-arid Arable Land in Northern China, Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, Beijing 100081, China. 2Soil Health Laboratory in Shanxi Province, Institute of Eco-environment and Industrial Technology, Shanxi Agricultural University, Taiyuan 030031, China. 3College of Resources and Environment, Shanxi Agricultural University, Taigu 030801, China |
| 228 | 34577 | Hyperspectral imaging explains the leaf base to tip nitrogen spatial dynamics in maize | Yuzhe Tang Inner Mongolia Agricultural University |
| 229 | 34415 | Two-stage heavy metal enrichment during carbonate rock weathering-pedogenesis: Micro-scale evidence from soil-rock interface | Jian Wu Sichuan University |
| 230 | 34276 | Easily biodegradable organic materials serve as soil biostimulants to rapidly enhance soil aggregate stability by increasing fungal biomass | Zheng Ma Southwest University |
| 231 | 34313 | Straw Returning in Cooperation With Legume-Based Cover Crops A Potential Path to Promote Both Soil Organic Carbon and Total Nitrogen | Fengqiang Yan Northeast Forestry University |
| 232 | 32031 | Soil Erosion Characteristics and Mechanisms Affecting Maize Yield on Sloping Farmland in the Chinese Mollisol Region | Yuwen Jin Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |



Poster Session

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|-----|--------|--|---|
| 233 | 36348 | Vegetation Types and Management Practices Reshape Mineral Element Cycling in Tropical Soil-Plant Systems | Hao-Zhe Zhang Institute of Soil Science, Chinese Academy of Sciences |
| 234 | 32452 | One-time root-zone nitrogen application enhances nitrogen utilization and yield of faba bean by reducing nitrogen loss in the plateau of Southwest China | Xinyuan Lu Institute of soil science, CAS |
| 235 | 35829 | Effects of Crop Association on Soil Extracellular Enzyme Stoichiometry in Erosion-Prone Sloping Farmlands in the Rocky Mountainous Region of North China | Lei Wang Beijing Academy of Agricultural and Forestry Science |
| 236 | 31941 | Interactive Effects of Compost, Clay, and Plant Presence on Soil Aggregate Fractions and Biochemical Properties in Sandy Soil | Linda Ernawati Lindongi The University of Western Australia |
| 237 | 36324 | Synergistic Effects of Irrigation Regimes and Duckweed Species on Microplastic Dynamics in Paddy soil | Zhenchang Wang Hohai University |
| 238 | 33053 | From High-REE Backgrounds to Global Oceans: Coordination Chemistry Drives Lanthanide Substitution in Calcium-Binding Domains | Hanpu Yu School of Environmental Science and Engineering, Sun Yat-Sen University |
| 239 | 36082 | Upcycling Rare Earth Element Hyperaccumulator Biomass toward High-Performance Catalysts | Cuiling Huang School of Environmental Science and Engineering, Sun Yat-sen University |
| 240 | 33952 | Spatiotemporal Evolution of Cropland Soil Organic Carbon Stocks in the Tuojiang River Basin over the Past Century | Qi Wang Sichuan Agricultural University |
| 241 | 320B11 | How organic slow-release nitrogen fertilizer controls rice yield and greenhouse gas emissions under intermittent irrigation regime in paddy fields | Shurong Hao Hohai University |
| 242 | 33756 | Mapping Soil Cadmium Pollution with Explainable Deep Learning: A Geospatial AI Approach in Dongguan, China | 赵文浩 Chinese Research Academy of Environmental Sciences |
| 243 | 34006 | Water and Nitrogen Management for Intercropping Systems Based on COMSOL Modelling: Crop Growth and Soil Environment | Yan Qiu Yunnan Agricultural University |
| 244 | 36015 | Unveiling soil organic carbon sequestration potential and driving factors of global black soil: A meta-analysis | Naiwen Zhang Northeast institute of Geography and Agroecology, Chinese Academy of Sciences |



Poster Session

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|-----|-------|--|---|
| 245 | 34710 | Global Meta-Analysis Reveals the Potential of No-Tillage to Reduce Winter–Early Spring N ₂ O Emissions | Mengyang Wang NORTHWEST A&F UNIVERSITY |
| 246 | 34177 | Quantitative Comparison Study on Soil Layer Migration under Vertical and Horizontal Rotary Tillage | Zhao Hongbo College of Mechanical and Electronic Engineering, Northwest A&F University, China |
| 247 | 33971 | Temperature effects on nutrient biogeochemistry along a climosequence of forest soils | Bielnicka Aleksandra Weronika Gyeongsang National University |
| 248 | 35916 | Oxygen isotopes reveal contrasting contributions of soil nitrate pools to leaching in forests under semi-arid climate | Zhong-Cong Sun Institute of Geochemistry, Chinese Academy of Sciences |
| 249 | 32619 | Effects and Mechanisms of Soil Heterogeneity on Soil Organic Carbon Mineralization | Jing Yan Central South University of Forestry and Technology |
| 250 | 34824 | Arbuscular Mycorrhizal Fungi and Iron-Modified Peat Couple Heavy Metal Immobilization with Organic Matter Stabilization | Minghan Wang Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 251 | 33759 | Precipitation-driven carbon–nitrogen dynamics shape soil carbon stability and resilience in semi-arid grasslands | Na Li Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 252 | 33485 | Organic Fertilizer Substitution Reshapes Carbon Component Distribution in Soil Aggregates Driving Niche Differentiation of Nitrogen Functional Microorganisms and Regulating Nitrogen Use Efficiency | Bingqian Xu Chinese Academy of Agricultural Sciences |
| 253 | 34120 | Appropriate nitrogen combined with controlled irrigation enhances rice productivity by optimizing rhizosphere microenvironment | Yuxuan Zha Sichuan University |
| 254 | 33154 | From Microbial Acclimation to Keystone Degradors: Uncovering Quinclorac Biodegradation in Farmland Soil | Danning Li South China Agricultural University |
| 255 | 35251 | Mapping and Driving Factor Decomposition of Regional Soil Health Assessment Based on Machine Learning | Junfu Li School of Land Science and Technology, China University of Geosciences(Beijing) |
| 256 | 34004 | Evolutionary engineering of microbial communities to combat aluminum toxicity in acidic soils | Meitong Jiang, Yuting Liang State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences |



Poster Session

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|-----|-------|--|--|
| 257 | 34636 | Land-use types alter soil-microbial C:N:P stoichiometry and phosphorus-related imbalance a semi-arid agro-pastoral ecotone | Yutong Zhang Institute of Grassland Research, Chinese Academy of Agricultural Sciences |
| 258 | 36482 | Impacts of precipitation and heat changes on agricultural water resources and grain production in the North China Plain | Wang Xin College of Hydraulic and Civil Engineering, Ludong University, Yantai 264025, China |
| 259 | 33753 | Microbial mechanisms of nitrogen- calcium ratio regulating nutrient uptake in poplar | Xiaohang Weng Liaoning Academy of Forest Sciences |
| 260 | 34965 | Biological Approach to Phosphorus Stewardship in Calcareous Soils | Mahdi Shahabirokni Ferdowsi University of Mashhad |
| 261 | 32849 | Sensor-based monitoring of Soil EC responses to nitrogen and potassium fertilization under laboratory and field conditions | Su Kyeong Shin Chungbuk National University |
| 262 | 35103 | Using hedgerow-grass ditch systems in controlling nitrogen and phosphorus losses in citrus orchards under varying rainfall | Xinmei Zhao College of Resources and Environment, Southwest University, Yunnan Academy of Agricultural Sciences |
| 263 | 32536 | A global dataset of soil microplastics (2005-2026) | Peiwen Wu Zhejiang University |
| 264 | 36255 | Performance and Mechanism of the Iron-Driven Electron Transfer Mediated Adsorption for PFOA and PFOS by the Iron-Carbon Composite | Aonan Nie China University of Geosciences (Wuhan), Institute of Soil Science, Chinese Academy of Sciences |
| 265 | 34096 | Effects of Antibiotic Stress on Soil Microbial Diversity, Community Assembly, and Ecological Interactions | Jialin Tan South China Agricultural University |
| 266 | 36256 | Upcycling Solid Wastes into Magnetic Hierarchical Porous Adsorbents for Micro- and Nano-plastics Removal from groundwater | Jiyuan Zhang Institute of Soil Science, Chinese Academy of Sciences China University of Geosciences (Wuhan) |
| 267 | 30974 | Trace Elements Accumulation Patterns in Cryoconites and Periglacial Soils of the Central Caucasus Mt (Russia) and Northern Tian Shan Mt (Kazakhstan) | Ivan Kushnov St Petersburg State University |
| 268 | 31936 | Predicting Current and Future Erosion Risk across NSW, Australia | Esther Zhu State Key Laboratory of Soil and Water Conservation and Desertification Control, Institute of Soil and Water Conservation Northwest A&F University, Yangling, Shaanxi, 712100, China |



Poster Session

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|-----|-------|---|---|
| 269 | 33236 | Differences in soil organic carbon among soil layers caused by microbial necromass carbon accumulation under different tillage and carbon input regimes | yantian Cui Jilin academy of agricultural sciences |
| 270 | 31859 | Effects of tillage practices on environment, energy, and economy of maize production in Northeast China | Yang Zhang Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 271 | 32173 | A <i>Bacillus paramycoides</i> strain and its application in wastewater treatment | Yinglu Tao Qingdao University of Technology |
| 272 | 32657 | Straw-Induced Carbon Dynamics in Saline Soils: Insights from CO ₂ Emissions to Soil Organic Carbon Sequestration | Shi Cailing Qingdao University of Technology |
| 273 | 32317 | Retrieval of Soil Organic Matter for Soils with Different Textures in Northeast Black Soil Region Using Hyperspectral Remote Sensing | Ma Minghui Shandong Agricultural University |
| 274 | 34038 | Metallic micronutrients bioavailability and pH co-regulated soil microbial diversity and community structure in degraded desert steppe | Huhaina Inner Mongolia Agricultural University |
| 275 | 34303 | Microbial-Driven Humification of Sugarcane Leaf Residues in Lateritic Soils | Xi-Mei Xue State Key Laboratory of Regional and Urban Ecology, Institute of Urban Environment, Chinese Academy of Sciences |
| 276 | 34443 | Study on Spatial Distribution Characteristics of Soil Organic Matter in Tea Gardens of Laoshan District, Qingdao Based on GIS and the Impact of Different Altitudes | Pengfei Sun Qingdao Agricultural University |
| 277 | 31563 | Hydraulically informed Bayesian regularization improves isotope-based inference of root water uptake | Han Fu Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 278 | 35443 | From DOM to Methane and Arsenic Release: Soil as a Key Control in Paddy Soils | Shuqiong Kong Yangtze University |
| 279 | 33904 | Contact Electrification at Iron Mineral–Water Interfaces Triggers Surface Iron Redox and Reactive Oxygen Species Generation | Xuewei Wang Sun Yat-Sen University |
| 280 | 36054 | Machine learning reveals that duration dominates rate in driving soil nitrogen cycling responses to long-term fertilization | Beilei Wei Guangxi University |



Poster Session

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|-----|--------|--|---|
| 281 | 32784 | Large-scale 1-km soil heavy metal risk screening using open-access environmental covariates: spatial distribution and uncertainty-informed monitoring prioritization | Tianhao Guo China university of geoscience, beijing |
| 282 | 32172 | Effects of the size of biodegradable superabsorbent polymers on interrill erosion | Takahiro Tatsuno Hokkaido University |
| 283 | 36361 | Land use effects on soil carbon retention through glomalin-mediated aggregation | Ying ZHAO Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 284 | 31826 | Climate-driven shifts in microbe-mediated home field advantage in litter decomposition | Yixing Deng Institute of Applied Ecology, Chinese Academy of Sciences |
| 285 | 320B68 | Effects of soil management strategies on maize and soybean yields in northeast China: A meta-analysis | Ming Gao Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 286 | 33463 | Comprehensive Assessment and Spatial Variability of Soil Health in Fruit Sugarcane Fields of Wengyuan, Northern Guangdong | Ke Yi Shaoguan University |
| 287 | 34436 | Ecosystem service value of conservation tillage with cover crop-maize intercropping in the black soil region of Northeast China | Xiaobo Ba Institute of Applied Ecology, Chinese Academy of Sciences |
| 288 | 32558 | Microbial cheating is a widespread resource acquisition strategy in soils | Yingyi Fu University of Edinburgh |
| 289 | 32297 | The process of dissimilatory nitrate reduction to ammonium mediated by microorganisms | Xuejiao Huang Guangxi University |
| 290 | 36007 | Drivers of soil quality and maize yield under long-term tillage and straw incorporation in Mollisols | Chunzhu Liu Northeast Institute of Geography and Agroecology Chinese Academy of Sciences Center for Agricultural Research |
| 291 | 35787 | Effects of film mulching and straw retention on soil labile nitrogen pool, enzymes and ammonia volatilization in the root zone of winter wheat | Huitong Li College of Life Sciences, Yan'an University |
| 292 | 33394 | Photodegradation of clindamycin by biochar-derived dissolved organic matter is simultaneously regulated by ROS generation and binding effect | Lin Wang Institute of Agricultural Resources and Environment, Sichuan Academy of Agricultural Sciences, Chengdu, 610066, China |



Poster Session

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| 293 | 36020 | Soil-Based Assessment of Lead Release and Contamination Risks Associated with Lead-Saturated Biochars | Chong Li University of Alberta |
| 294 | 31952 | Root exudate-mediated bacterial networks enhance particulate and mineral-associated carbon sequestration in grass-covered citrus orchards | Ludan Chen Institute of Mountain Hazards and Environment, Chinese Academy of Sciences |
| 295 | 32625 | Effects of Full Maize Straw returning on Soil Physical Properties and Maize Yield | Han-yu SU Shenyang Agricultural University |
| 296 | 33546 | Bio-organic fertilizer improves soil carbon sequestration and structure in intensive greenhouse cultivation | Lijun Ren College of Land and Environment, Shenyang Agricultural University, Shenyang 110866, People's Republic of China; 2 Institute of Bio- and Geosciences (IBG), Forschungszentrum Jülich, Jülich 52428, Germany |
| 297 | 35681 | Afforestation improves soil multifunctionality through microbial activity and SOC molecular diversification | Yue Li South China Botanical Garden, the Chinese Academy of Sciences |
| 298 | 32739 | Effects of Different Agricultural Management Practices on Nitrous Oxide Emissions from Cropland | wangchuanzong Sichuan Agricultural University |
| 299 | 319B10 | A Novel Rainfall-Based Model for Forecasting Soil Moisture Content | Daniel Gu Hamilton High School |
| 300 | 31813 | Black Soldier Fly Gut Microbiota as a Green Alternative to Chemical Fungicides | Yudong Ren Shanghai Jiao Tong University |
| 301 | 32890 | Transformation of Soil Organic Matter in Agricultural Soils in Subarctic Climatic Conditions | Timur Nizamutdinov St. Petersburg State University |
| 302 | 34280 | Characteristics of soil phosphorus profile distribution in degraded black soil areas and effects of tillage patterns on root zone phosphorus supply barriers | Huajie Zhang China Agricultural University |
| 303 | 34022 | Divergent ecohydrological adaptation mechanisms of restored vegetation driven by micro-topography: Structural decoupling, hydro-thermal trade-offs, and competitive depletion | Fengwei Tuo Chang'an University |



Poster Session

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|-----|--------|--|---|
| 304 | 33626 | Incorporating Lime into Acidic Soil Improved Root Growth and Rhizosphere Microorganisms in Wheat | Bingchen Li The University of Western Australia |
| 305 | 319B37 | Phylogenetic and metabolic diversity of mercury-methylating microorganisms in paddy soils across China | Rui Sun College of Resources and Environment, Huazhong Agricultural University |
| 306 | 33002 | Differential impacts of moisture fluctuation on dissolved organic matter under different water availability by regulating bacterial network and functional structure | Jiayu Liu South China University of Technology |
| 307 | 32632 | Distribution Characteristics of Soil Labile Organic Carbon Fractions in Coastal Paddy Profiles with Different Fertility Levels | Le YANG College of Land and Environment Shenyang Agricultural University Shenyang 110866 P.R.China |
| 308 | 32773 | The Effect of Nutrient Management on Yield and Fruit Quality of Nam Hom Coconut in Thailand | Jiraphat KWANSUE Department of Soil Science, Faculty of Agriculture at Kamphaeng Saen, Kasetsart University, Nakhon Pathom, Thailand |
| 309 | 320B42 | Slope aspect regulates constrained soil organic carbon dynamics under long-term grazing exclusion in semiarid grasslands | Shulei Dong Northwest A&F University |
| 310 | 32458 | Remediation of Cadmium-Contaminated Soil via the Coupling of Marigold-Water Spinach Intercropping and Passivation | Hui Sun Shandong Agricultural University |
| 311 | 32793 | Determination of Nitrogen in Maize Plant Using Near Infrared Spectroscopy and Partial Least Squares Regression | Yue MA Shenyang Agricultural University |
| 312 | 34749 | Methodological insights in the determination of soil SOC:clay ratio at farm level in Southern Belgium | Colinet Gilles University of Liege |
| 313 | 32816 | Aging of plastic polymers used in agriculture affects sorption of pesticides and their subsequent release | Marco Contin University of Udine |
| 314 | 34838 | Nitrogen Characteristics and Sustainable Management in Global Sloping Croplands | Wenjing Zhou Sichuan Agricultural University |
| 315 | 33110 | Microbial Community Succession in the Rhizosphere of Citrus Grandis Exocarpium under Long-Term Fertilization and Plant Disease Stress | Kaiqing Yang, Zhepu Ruan, Rongliang Qiu South China Agricultural University |



Poster Session

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|-----|-------|--|--|
| 316 | 36530 | Optimising Nitrogen Nutrition Index (NNI) for maize cultivation with controlled release fertilizer treatments guided by UAV remote sensing technology | Hongyu Ma Inner Mongolia Agricultural University |
| 317 | 35781 | Chemical carbon sequestration dominates leguminous green manure return, whereas physical carbon sequestration prevails in non-leguminous systems | Huitong Li College of Life Sciences, Yan'an University |
| 318 | 33828 | Can Soil Inorganic Carbon Be Estimated from Visible-Near Infrared Reflectance Absorption Depth? | Jiajing Gu Nanjing University of Information Science and Technology |
| 319 | 36555 | Root dynamics govern the vertical transport of microplastics by reshaping soil pore networks | Xiaolong Wu Chinese Academy of Tropical Agricultural Sciences |
| 320 | 35954 | Nitrogen, manganese, iron and carbon resource acquisition are potential functions of the wild rice <i>Oryza rufipogon</i> core rhizomicrobiome | Changji Wang Netherlands Institute of Ecology (NIOO-KNAW) |
| 321 | 34321 | Four Decades of Soil Organic Carbon Dynamics in Seasonally Flooded Haor Wetlands of North-eastern Bangladesh Amid Landscape Transformation | Md Jashim Uddin University of Dhaka |
| 322 | 35564 | Effect of polymeric materials on mobile forms of heavy metals the upper soil horizon at different levels of contamination in Umbric Albeluvisols | Calero Herrera Vanessa Katherine Patrice Lumumba Peoples' Friendship University of Russia, Moscow, Russian Federation |
| 323 | 33809 | Identification of key bacterial taxa from native microbiome for soil monitoring after wildfire | Ricardo Romero Arguelles Universidad Autonoma de Nuevo Leon |
| 324 | 34471 | More than a metaphor: soil memory as methodological framework | Francisco Sérgio Bernardes Ladeira Unicamp |
| 325 | 36204 | Soil aggregate stability index independent from pre-stress aggregate size distribution: A test from soils affected by the water level fluctuation in the Three Gorges Reservoir, China | Gratien Nsabimana Institute of Mountain Hazards and Environment, Chinese Academy of Sciences |
| 326 | 32176 | Specific Features of Urbic Technosol (Transportic) Functioning in Cities of the Steppe and Subtropical Zones of Southern Russia | Gorbov Sergey Sirius University of Science and Technology |
| 327 | 36388 | Organic Waste-Derived Soil Amendments for Climate-Smart Soil Fertility Management | YIHUAI HU Biogas Institute of Ministry of Agriculture |



Poster Session

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|-----|-------|--|---|
| 328 | 32785 | How Periglacial Past Affected the Evolutionary Pathways of Holocene Temperate Soils: Northern Part of the East European Loess Belt | Vasily Lobkov Institute of Geography Russian Academy of Sciences |
| 329 | 34507 | What would our soils say if they could speak? | Pedro Henrique Ribon Ogera Universidade Estadual de Goiás |
| 330 | 34947 | Optimizing Methods for Selective Removal of Soil Nematodes to Study Their Functional Roles: Toward Effective Techniques with Minimal Impact on Soil and Plants | Robin Beckx Ghent University |
| 331 | 33813 | Metagenomic tools for soil health-oriented microbial monitoring in agricultural systems in Mexico | Mayra Alejandra Gomez Govea Universidad Autonoma de Nuevo Leon |
| 332 | 33549 | Quantification of Microplastics in Urban Compost-Amended Farmland Soil Using an Elutriation Device | Luigi Paolo D'Acqui Research Institute on Terrestrial Ecosystems - IRET, National Research Council - CNR |
| 333 | 32295 | Hydrothermal Carbonization of municipal Organic Waste: Is it a sustainable pathway for soil restoration in highly urbanized regions? | Laurence Le Brun Universidad Autónoma de México (UNAM) |
| 334 | 34095 | Is the tobacco carbon footprint influenced by soil attributes? | Vanderlise Giongo Embrapa |
| 335 | 34051 | Low-Carbon Wheat Program: Integrating Soil Quality and Soil Carbon Dynamic into Life Cycle Assessment | Vanderlise Giongo Embrapa |
| 336 | 35669 | Legacy soil information in the Northern Regions of Ghana: Implications for Integrated Soil Fertility Management (ISFM) | Dr. Edward Yeboah CSIR-Soil Research Institute, Ghana |
| 337 | 32815 | Mineral-Microbial Coupling Rebalances Soil Microbiome and Alleviates Aluminum Toxicity for Improving Nutrient Availability in Acidic Soil | DEBO HE Institute of Mountain Hazards and Environment. CAS |
| 338 | 32654 | Impact of Enhanced Silicate Rock Weathering on Soil CO ₂ Dynamics in Agricultural Field: Field Monitoring and Numerical Simulation | Shoichiro Hamamoto Hokkaido University |
| 339 | 33142 | Regenerative Management Reduces Urine-Derived N ₂ O Emissions from Dairy Pastures | Tharindi Lakshani Lincoln University, New Zealand |
| 340 | 34486 | Poultry Litter Rate Drives Surface Soil Nutrient Accumulation More Than Row Spacing in a No-Till Cotton System | Sainfort Vital Mississippi State University |



Poster Session

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|-----|-------|--|---|
| 341 | 34489 | Soil Fertility and Cotton Growth Responses to Poultry Litter and Rye–Clover Configuration in a Mississippi Cotton System | Sainfort Vital Mississippi State University |
| 342 | 33697 | Influence of soil pH and cover crop residues on the abundance of ammonia oxidizing microorganisms and nitrous oxide emissions in tropical agriculture soils | Lucas P. Canisares University do Sao Paulo |
| 343 | 35952 | Synergistic Effects of Water and Straw Management on Greenhouse Gas Dynamics and Carbon Sequestration in Subtropical Rice Ecosystems using Multichannel Automated Chamber System | Chuan-Fu Kao National Taiwan University |
| 344 | 34447 | The Soil Factors of Palsas Resilience in an Industrial Wasteland in the Arctic Region (Monchegorsk, Russia) | Pavel Ignashov Institute of Biology of the Karelian Research Centre of the Russian Academy of Sciences |
| 345 | 33281 | Long-term persistence of immobilizing agents for reducing the phytoavailability of heavy metal (loid)s in contaminated soil | Hyunmin Lee Department of Smart Agro-industry, Gyeongsang National University, Jinju, Republic of Korea |
| 346 | 34287 | PRODUCTIVE DAIRY PASTURE WITHOUT N - FERTILISER | Gary Clark La Trobe University |
| 347 | 34847 | Characteristics of Serpentinite Soil in Northern Hokkaido | Mei Tsuchihashi University of Tsukuba |
| 348 | 34702 | Microplastic Contamination in Soil around the Aral Sea in Uzbekistan | Natsuto Okubo University of Tsukuba |
| 349 | 32560 | Dissipation of ¹³ C-Sulfamethoxazole in Tropical Soils under Contrasting Management Systems and Microplastic Contamination | Jussara Borges Regitano Department of Soil Science, ESALQ/USP |
| 350 | 33426 | Pure Water-Based Nano Pesticide-Fertilizer Co-delivery for Soil-Friendly Crop Nutrition and Protection | Changcheng An, Yi Sun, Yaqi Jiang, Xueqing Chang, Yaping Lyu, Peng Zhang University of Science and Technology of China |
| 351 | 32688 | Enzyme Activity and Biological Quality Scores in Tropical Soils Exposed to Cadmium and Chromium | Rayana da Rocha Sarmento University of São Paulo |
| 352 | 32700 | Combined Wide Ridges with Straw Mulching and Salt Scraping Significantly Inhibit Topsoil Salinity Accumulation and Enhance Soil Water Retention | Lili Tan Ludong University |



Poster Session

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| 353 | 35313 | Long-term effects of land-use change from paddy to orchard, pasture, and upland on soil carbon and nitrogen pools after 50 years at Yamagata University Farm, Japan | Phansa Udkham Graduate School of Agriculture Science, Yamagata University, Japan |
| 354 | 36434 | Analysis of four soil moisture products in China: Spatial-temporal distribution and uncertainty | Jiayi He Sichuan Agricultural University |
| 355 | 34822 | Organic manure substitution of chemical nitrogen rather than phosphorus optimizes soil quality and microbial functions in acidic red paddy soil | Junquan Chen ^{1,2} , Yanqi Guo ^{1,2} , Guanjie Jiang ^{1,2} , Taihui Zheng ^{1,2*} 1. Key Laboratory of Agricultural Resources and Ecology in Poyang Lake Basin of Ministry of Agriculture and Rural Affairs in China; 2. School of Land Resources and Environment, Jiangxi Agricultural University |
| 356 | 32413 | Enhancing inherent soil productivity to support sustainable wheat production in China | Yinghua Duan Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, Beijing, China |
| 357 | 36336 | Sensitivity analysis of agricultural hydrological processes to climate change in the North China Plain | Shen'ao Feng Ludong University |
| 358 | 32064 | Exogenous Chemicals Used to Alleviate or Salvage Plants under Flooding/Waterlogging Stress: Their Biochemical Effects and Perspectives | Lingyue Wang Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 359 | 35844 | Grassland legacy effects regulate nutrient leaching losses in cropland phases in long-term grassland-crop rotations | Sen Gu Institute of Hydrobiology, Chinese Academy of Sciences |
| 360 | 32220 | Rapid induction of NH ₄ ⁺ efflux in rice roots under high-ammonium stress and its association with varietal differences in ammonium tolerance and ammonium-utilization efficiency | Dong-Wei Di Institute of Soil Science, CAS |
| 361 | 34279 | Integrating plant-microbial diversity and mixed litter decomposition to enhance nutrient coupling and productivity in intercropping systems | Shumin Li Resource and Environmental College, Northeast Agricultural University, Harbin, China |
| 362 | 320B22 | Modeling the spatiotemporal changes in soil moisture under different vegetation types in the farming-pastoral ecotone of northern China | Jingshun Zhang Northwest A&F University |
| 363 | 33123 | Rhizosphere AMF-Bacteria Synergy Driving Soil Phosphorus Activation in Maize//Soybean Intercropping | Han Jiaqi Yunnan Agricultural University |



Poster Session

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|-----|-------|---|---|
| 364 | 35895 | A Novel Soil Salinity Inversion Method Based on BO-XGBoost and 3D Spectral Feature Space in the Yellow River Delta | Runze Zhang Shandong University of Technology |
| 365 | 36362 | Reduced below-ground carbon allocation triggers contrasting nitrogen dynamics in rhizosphere and bulk soils | Dengjie Zhou School of Life Science and Technology, Northwestern Polytechnical University |
| 366 | 33838 | Effects of Acai Seed Biochar Amendment on Chemical and Biological Properties of Brazilian Soils | Andre Freire Cruz Kyoto Prefectural University |
| 367 | 34101 | Evaluating Cross-Regional Models for Predicting Soil Carbon and Properties in Taiwan Using Mid-Infrared Spectroscopy and Machine Learning | Cheng-Hsien Lin National Chung Hsing University |
| 368 | 34989 | Effective suppression of methane emission using ethephon and polymer mixture | Ho Jun Shin Gyeongsang National University, Republic of Korea |
| 369 | 33104 | Long-term nitrogen fertilization effects on soil mineralogy and micromorphology: The Magruder Plots | DeAnn Presley Kansas State University |
| 370 | 35688 | Integrating regional critical boundaries and nitrogen-phosphorus limitation for global water quality | Yuanyuan Chen Zhejiang University |
| 371 | 34850 | Differences in chemical properties and soil classification of Andosols under varying volcanic ash deposition in the caldera rim of Mt. Aso, Kyusyu Islands, Japan | HARUKO SAITO Tokyo University of Agriculture |
| 372 | 32859 | Analysis for structure of soil layer composed of large clods using X-ray CT image | Yoshihiro Matsumoto National Agriculture and Food Research Organization NARO |
| 373 | 34875 | Impact of Warming and Fertilization on Viral Communities in Agricultural Soils | lixinyi Zhejiang University |
| 374 | 32450 | Optimizing water and potassium management enhances yield and water-nutrient use efficiency through improved soil nitrogen availability in citrus orchards | Yuxuan Zha Sichuan University |
| 375 | 33197 | Long-term fate of photosynthetic carbon in desert plants: microbial necromass-driven pathways for soil carbon stabilization | Yang Yang Xinjiang Institute of Ecology and Geography |



Poster Session

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|-----|-------|--|--|
| 376 | 32794 | Upcycling Rare Earth Hyperaccumulator Biomass into Functional CaS:Ce Phosphors: A Coupled Remediation–Utilization Strategy for Degraded Rare Earth Mine Soils | Candie Xie Sun Yat-sen University |
| 377 | 34482 | Comparison for colloidal stability and aggregation behavior of fulvic and humic acids: effects of cations and pH | Chunli Wang Forschungszentrum Jülich |
| 378 | 32872 | Assessment of the reliability to extract soil microplastics by a flotation sieving method | CHEN YEN-CHENG National Chung Hsing University |
| 379 | 34610 | Parameters Optimization of RothC Model for Simulating Soil Organic Carbon Dynamics: A Case Study of Rice Straw and Soybean Residue Inputs | Liao, ChienKai National Chung Hsing University |
| 380 | 33663 | Effects of fertilizers on arsenic accumulation in ratoon rice: implications for human health risks | Chang-Shiu Li National Chung Hsing University |
| 381 | 36084 | Organic fertilization reduces cadmium bioavailability via enhanced binding to organic fractions and Fe-bearing minerals | Fu-Sheng Sun Tianjin University |
| 382 | 33237 | Localized SCORPAN-based machine learning framework for spatial-temporal tracking (2000-2025) of soil carbon dynamics in Chile | Raul Roberto Poppiel University of São Paulo |
| 383 | 33912 | Influence on the structural stability of aggregates and soil organic carbon sequestration with different organic materials application: Analyzed from the perspective of the characteristics and structure of humic acid in aggregates | LiuYuZhang State Key Laboratory of Nutrient Use and Management and Key Laboratory of Agro-Environment of Huang-Huai-Hai Plain, and Ministry of Agriculture and Rural Affairs, College of Resources and Environment, Qingdao Agricultural University, Qingdao, People's Republic of China. |
| 384 | 34894 | Century-long spatiotemporal variation in cropland soil erosion and the roles of anthropogenic factors in the Tuojiang River Basin, China | Yuchen Zhong Sichuan Agricultural University |
| 385 | 32916 | CO ₂ fixation by soil algae in agricultural lands | Jun Murase Nagoya University |
| 386 | 32912 | Engaging Youth with Soil Science through an Original Picture Book | Shunhua Yang Institute of Soil Science, Chinese Academy of Sciences |



Poster Session

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|-----|--------|--|---|
| 387 | 32999 | Oxygen-adaptation traits govern the functional resilience of soil N ₂ O-reducing communities | Siyu Yu Shanghai Jiao Tong University |
| 388 | 32602 | Potassium Precipitation Efficiency at Different Dilution Ratios in Thai Sugarcane Molasses | Karima Amphong Kasetsart University |
| 389 | 32469 | Nutrient status and fertility constraints of highly weathered oil palm-growing soils in Thailand | Pornpavee Somkiatikul Kasetsart University |
| 390 | 32653 | Effects of Foliar Potassium Nitrate on Chlorophyll and Leaf Macronutrients in Sugarcane | Weeraya Lekwong Kasetsart University |
| 391 | 32597 | Soil fertility and nutrient status of long-term durian orchards under organic–chemical management in Chanthaburi, Thailand | Daojarus Ketrot 1Department of Soil Science, Faculty of Agriculture, Kasetsart University, Bangkok 10900, Thailand 2Agricultural Chemistry Program, Faculty of Agriculture, Kasetsart University, Bangkok 10900, Thailand |
| 392 | 320B67 | Bacillus aryabhatai Alleviates Manganese Toxicity and Enhances Phytoremediation Potential of Miscanthus sinensis | Changrui Liu Central South University of Forestry and Technology |
| 393 | 32610 | Understanding spatiotemporal potassium availability from polyhalite in the fertosphere of contrasting soils | Joy Eloiza M. Rosales Adelaide University |
| 394 | 320B69 | Sulfur nanoparticles enhance Cd-phytoremediation in Salix chaenomeloides via alleviating phytotoxicity and modulating rhizosphere microbiota | Yaping Wang Central South University of Forestry and Technology |
| 395 | 35459 | A Field Study to Examine Applicability of a Novel Groundwater in-situ Bioremediation Method to Co-optimize Dechlorination of Chlorinated Ethenes and Subsurface Ecological Stability | HYUNSOO LIM Yonsei University |
| 396 | 32860 | Advancing Soil Fertility Management Using Tuna Meal Organic Waste: Impacts on Rhizosphere Microenvironment and Tea Quality | Yujie Song United Graduate School of Agricultural Science, Gifu, Japan |
| 397 | 32050 | Bioremediation of soil contaminated with boron by using biochar and barley plants | José Luis Moreno CEBAS-CSIC |
| 398 | 32405 | Synergistic regulation of dissolved organic matter and microbial community on microbial necromass accumulation | Yuanchen Zhu Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |



Poster Session

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|-----|--------|---|---|
| 399 | 32892 | Coastal Acid Sulfate Soils and Their Mapping in Finland | Jaakko Auri Geological Survey of Finland |
| 400 | 321B07 | CIT2 is involved in coumarins trafficking, mediating Fe uptake | Rossille INRAE |
| 401 | 33641 | Assessing Heavy Metal Pollution Levels and Associated Ecological Risks in Peatland Sediments of the Mekong Delta, Viet Nam | Nguyen Ngoc Son Hai Thai Nguyen University of Agriculture and Forestry (TUAF), Thai Nguyen city, Vietnam |
| 402 | 35380 | Modeling runoff and soil erosion amounts affected by slope gradient and length in black soil slope farmland of Northeast China based on APSIM | Zizhong LI China Agricultural University |
| 403 | 36059 | Soil Physical, Chemical, and Biological Properties Across a Prairie Restoration Chronosequence in Southern Wisconsin | Mengmeng Luo University of Wisconsin-Madison |
| 404 | 36199 | Selected forms of potassium in soils of the steppe and desert zones of Mongolia | Tomasz Kaczmarek Department of Soil Science and Microbiology, Poznań University of Life Sciences |
| 405 | 33866 | The impact of trees on soil microbial biomass and CO ₂ emissions from fertilized soil | Walkiewicz Anna Institute of Agrophysics, Polish Academy of Sciences |
| 406 | 31621 | Mycobacterium vaccae: The Interconnection between Soil Health and Human Health | Winfred Espejo Department of Soils & Natural Resources, Facultad de Agronomía, Universidad de Concepción, Chillán, Chile |
| 407 | 33843 | Multifractal scaling of soil particle size distributions along a semi arid toposequence. | Peter Ndubuisi Eze University of Potsdam, Golm Campus, Germany |
| 408 | 35223 | Microbiome-enabled biochar tightens nitrogen cycling and boosts wheat water productivity under regulated deficit irrigation | Mir Moazzam Ali Talpur College of Agricultural Science and Engineering, Hohai University, Nanjing, China |
| 409 | 321B06 | Towards the identification of microbial indicators of soil health: a one-year field study in a Mediterranean olive grove | Laura Gismero-Rodríguez IG-CSIC |
| 410 | 36233 | Effects of Chlorella Application on Soil Quality and Crop Productivity in Saline-Alkali Soils of Xinjiang, China | Xiaoyang WANG Xi'an University of Technology |
| 411 | 34851 | A streamlined soil database strengthening near-real-time interoperability for soil monitoring networks and services | Andrea Lachi CREA (Research Centre for Agriculture and Environment) |



Poster Session

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|-----|--------|---|--|
| 412 | 33841 | X-ray CT and nutrient analyses of effects of polyhalite on wheat establishment | Roman Sadeghian University of Nottingham |
| 413 | 31969 | Relationship between agricultural water and soil resources carrying capacity and crop yield with long-term plastic film mulching coupled with fertilization | ShiJiahui Shenyang Agricultural University |
| 414 | 31870 | Spatial Differentiation and Driving Factors of Soil Compaction in the Songnen Plain Black Soil Region Based on Random Forest and Geodetector | WANG Bingjie Shenyang Agricultural University |
| 415 | 32381 | Construction of the Integrated Soil Database for Hydrological Modeling in Brazil | Luís Carlos Timm Federal University of Pelotas |
| 416 | 34668 | Effect of Intermittent Irrigation on Rice Growth and GHG Emissions in Rice Paddies on Acid Sulfate Soils | Sakura Yamaguchi University of Tsukuba |
| 417 | 34887 | Impact of Blast Furnace Slag-Based Enhanced Rock Weathering on Soil Organic Carbon Dynamics through Microbial Activity | Ye Lim Park Kyung Hee University |
| 418 | 34973 | Effects of long-term fertilization on soil macropore structure and hydraulic conductivity in paddy soils | Zhiduo Zhou Hokkaido University |
| 419 | 33613 | Bronze Age kurgans as a complex paleoarchive: data from paleosols and kurgan constructions in the steppe zone of Russia | Alyona Sverchkova Institute of Geography, Russian Academy of Sciences, Moscow, Russia |
| 420 | 33210 | Variations in synergistic benefits among different intercropping systems: evidence from crop, soil and soil biota in agroecosystems | Minghao Yang institute of applied ecology, Chinese Academy of sciences |
| 421 | 321B11 | Can nematode-based indices reflect ecosystem functioning? | Lucia Borrás Ghent University |
| 422 | 32861 | Column experiment and numerical simulation for quantification of carbon fixation by enhanced rock weathering | Takuhei Yamasaki The University of Tokyo |
| 423 | 34854 | Comparison of different methods for estimating microbial biomass in biochar-amended soil | Vito Armando Laudicina University of Palermo |
| 424 | 33209 | Carbon and Depth Gradients Synergistically Structure Microbial Nutrient Balance and Soil Biodiversity Networks | Enping Yu Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang, |



Poster Session

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|-----|-------|---|---|
| 425 | 34462 | Reading the Quaternary Soil Memory: Quartz Isotope Fingerprints of Aeolian Processes in the Asian Steppe | Geer Teni University of Tsukuba |
| 426 | 34603 | Development of Non-destructive Soil Bulk Density Measurement Technology for Efficient and Precise Estimation of Soil Carbon Stocks | Yonghui Jung Kyung Hee University |
| 427 | 35617 | Soil quality and health: foundations for the agroecological transition in agroecosystems | MARIA CRISTINA MARTINS RIBEIRO DE SOUZA IFCE-SOBRAL |
| 428 | 36349 | Urbanization-driven forest soil greenhouse gas emissions: Insights from the role of soil bacteria in carbon and nitrogen cycling using a metagenomic approach | Gongxiu He Central South University of Forestry and Technology |
| 429 | 33506 | SOIL HEALTH RESPONSES TO NATURE-POSITIVE MANAGEMENT REGULATE SOIL WATER INFILTRATION IN SEMI-ARID AGROECOSYSTEMS | Prakriti Bista New Mexico State University |
| 430 | 36344 | A Hybrid SWAT-LSTM Framework for Daily Sediment Load Prediction in the Data-Scarce Songhua River Basin, Northeast China | Junjie Xu Beijing Normal University |
| 431 | 34554 | Soil health mediates diversification effects on crop resilience in tropical agroecosystems | Viviana Meneghini University of São Paulo |
| 432 | 31818 | Spatiotemporal Variations of Soil Hydrothermal Processes and Their Association with Mattic Layer Rupture in Alpine Soils on the Qinghai-Tibetan Plateau | wang yunzhi Shenyang Agricultural University |
| 433 | 31948 | Hydropedological Responses to Anthropogenic Soil Importation and Wadi Channel Narrowing in Arid Oman | Said Salim Al-Ismaily Sultan Qaboos University |
| 434 | 33609 | Fairy ring presence alters fungal-soil carbon/nitrogen dynamics and stable isotope ratios | Sijia Wang Forschungszentrum Jülich |
| 435 | 35165 | Comprehensive Soil Education Package for Achieving SDGs: Good practices in schools and universities | Takashi Kosaki Aichi University, Japan |
| 436 | 36047 | Depth-resolved soil organic carbon estimation: a scalable approach | Moa van Kretschmar The University of Sydney |



Poster Session

| | | | |
|-----|-------|---|---|
| 437 | 35381 | Temporal Dynamics and Metabolic Profiling of Vetiver Root Exudates Under Atrazine Stress | Faming Zhang Yunnan Open University; Yunnan Agricultural University; Southwest Forestry University |
| 438 | 33216 | Effects of soil acidity on organic matter stabilization in <i>Cryptomeria japonica</i> and <i>Chamaecyparis obtusa</i> plantations | Ryota Hayashi Nagoya University |
| 439 | 33049 | National Inventory of Plastic Mulch Residues in Chinese Croplands from 1993 to 2050 | Jizhao Dai Shenyang agricultural university |
| 440 | 36594 | Can soil protists improve plant growth? | Thi Bao Anh Nguyen The University of Melbourne |
| 441 | 32694 | Phosphorus availability and legacy in highly weathered soils: Unveiling the interplay with soil aggregation across diverse agricultural land uses as integrated systems | Mauricio Leite The University of Queensland |
| 442 | 34090 | Metagenomics reveals microbial regulation of soil nitrogen retention and supply under nitrogen fertilizer reduction with long-term residue retention | Fangbo Deng Institute of Applied Ecology, Chinese Academy of Sciences |
| 443 | 32753 | Irrigation Regime and Straw-returning Mode Regulate Soil Conditions, Leaf Physiology, and Yield of Winter Wheat in Saline-Alkali Soil | Jie Zhang hohai university |
| 444 | 33257 | Soil extracellular vesicles harbour a distinct reservoir of antibiotic resistance genes shaped by land use | Haining Huang Department of Applied Microbial Ecology, UFZ - Helmholtz Centre for Environmental Research |
| 445 | 36621 | Biologically Driven Remediation of Saline-Alkali Soils Using Soil Bio-activation Technology in Arid Regions | Abdul Sami GreenTech (Shanghai) Agricultural Technology Co., Ltd. |
| 446 | 34164 | Characterization and Dynamics of NaOH-Extratable Organic Phosphorus Species in Soils | Yaqin Wang Xi'an Jiaotong-Liverpool University |
| 447 | 35599 | Selenium Dynamics in Seleniferous Soils of Punjab: Role of Organic and Inorganic Amendments in Mitigating Selenium Toxicity | savreen kaur PUNJAB AGRICULTURAL UNIVERSITY, LUDHIANA |
| 448 | 32074 | Evaluating the Impact of Stakeholder-Driven Agricultural Scenarios on Nitrogen Footprint and Virtual Nitrogen Factor using SWAT | Ryosuke Ogino Hokkaido University |
| 449 | 33061 | Effects of Calcination Temperature on the Chemical Properties of Natural and Commercial Diatomites | Wanpen Buamuang Kasetsart University |



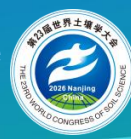
Poster Session

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| 450 | 32448 | Regional Suitability of Soil Fertility Improvement Technologies in the Dry-Hot Valleys of Yuanmou County, Southwest China | Jinglong Liu Yunnan University |
| 451 | 35950 | Fusion simulations based on process-based modeling and AI technology for groundwater storage in the Mollisol Regions | Xiaoyu Zhang College of Land Science and Technology, China Agricultural University |
| 452 | 33593 | Effects of Crop Residue Management Strategies on Soil and Root Nematode Assemblages | Md Niraul Islam Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang, China |
| 453 | 34291 | Intercropping and phosphorus-fertilizer application have contrasting impacts on soil carbon pools | Xiao Chuanlin China Agricultural University |
| 454 | 34865 | Rhizosphere physical buffering explains the growth window of <i>Suaeda salsa</i> under combined drought and salinity stress | Bindeliya Inner Mongolia Agricultural University |
| 455 | 33428 | Paddy cultivation history affects soil water dynamics and water balance by altering soil physical and hydraulic parameters | Prof LI Xiaoyan College of Agriculture, Yangtze University |
| 456 | 34898 | Refining the RothC Model's Decomposition Rate Modifier for Moisture to Improve Soil Organic Carbon Estimation in Paddy Fields | Sunyoung Joo Kyung Hee University |
| 457 | 36393 | HYDRUS-2D-based Study on the Impact of Drip Irrigation and Soil Compaction on Soil Water and Salt Movement | Xiaodong Zhan Ludong University |
| 458 | 321B09 | Microbial community shifts reveal the multifunctional potential of biobased fertilizers in Mediterranean calcareous soils | Sana Boubehziz University of Cordoba |
| 459 | 33128 | Mycorrhiza-Mediated Soil Aggregate Stability under Maize//Soybean Intercropping in Acid Soil | Jian Jiao Yunnan Agricultural University |
| 460 | 31181 | Fundamentals of disturbed land reclamation | Androkhanov Vladimir Institute of Soil Science and Agrochemistry SB RAS |
| 461 | 36285 | Performance of sediment microbial fuel cells to inhibit arsenic availability in soil porewater: A laboratory study of three different Japanese paddy soils | Adhena Tesfau Bekele Tohoku University |
| 462 | 32748 | Global warming potential in rice paddy soil applied with different fertilization and tillage management | Mu Seong Kim Department of Life Science and Environmental Biochemistry, Pusan National University, Miryang, Republic of Korea |



Poster Session

| | | | |
|-----|--------|--|---|
| 463 | 32831 | Effects of combined application of biochar and manure composts on greenhouse gas emissions and forage maize yields | Tsuyoshi Yamane National Agriculture and Food Research Organization (NARO) |
| 464 | 32707 | Stability of SOC and Shifts in Microbial Community Structure along Vegetation Succession in the Shrinking Area of Plateau Inland Lakes | Ming Li Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment |
| 465 | 320B43 | Plant-mediated regulation of soil CO ₂ fluxes under experimental warming in a dryland wheat agroecosystem | Yue Zheng Northwest A&F University |
| 466 | 33147 | Effects of Long-term Organic Fertilization in Tea Gardens on Soil Microbial Communities and Tea Quality | ZHIWEI DENG Tarim University |
| 467 | 33623 | Deep soil carbon accrual by perennial energy crops offers large potential for atmospheric CO ₂ removal | Wei Yao China Agricultural University |
| 468 | 35602 | Chemical and biochemical approaches to assess the biodegradation of polyhydroxyalkanoates in soil | Maria Antonietta Rao University of Naples Federico II |
| 469 | 33266 | Effect of Biochar from Spent Media Growth on Kimchi Cabbage Cultivation in Upland Area | Kang, Se-Won Sunchon National University |
| 470 | 33212 | Effects of Long-term Chemical Fertilizer Reduction Combined with Bio-organic Fertilizer on Soil Organic Carbon Fractions and Aggregate Stability in Tobacco-planting Soil | Ting Li Yunnan Agricultural University |
| 471 | 33267 | Assessing the Agricultural Utilization Potential of Chicken Manure Biochar: Effects on Kimchi Cabbage Growth, Nitrogen Use Efficiency, and N ₂ O Emissions in Upland Soil | Kang, Se-Won Sunchon National University |
| 472 | 33482 | Intercropping, soil microbiomes, and mycotoxin risk: mechanistic pathways for safer maize production | Yurui Tang China Agriculture University |
| 473 | 33137 | Interspecific interactions increase soil aggregate stability through altered root traits in long-term legume/maize intercropping | Xiao-Yang Duan College of Resources and Environmental Sciences, China Agricultural University |
| 474 | 33105 | The classification Salt-affected Soil in Reclaimed Agricultural Tide Land | byounghwan seo National Institute of Agricultural Sciences |



Poster Session

| | | | |
|-----|-------|---|---|
| 475 | 33138 | Effects of conservation tillage combined with diversified cropping on crop productivity and soil fertility in black soil region | Zhong-yang Guo College of Resources and Environmental Sciences, China Agricultural University |
| 476 | 34192 | Threshold responses of soil microbial communities and functions to 18O-H ₂ O enrichment | Fangying Qu Institute of Applied Ecology, CAS |
| 477 | 34044 | Effect of compaction on the number and morphology of ground-nesting bee burrows | Minghan Liu China Agricultural University |
| 478 | 33515 | Effect of autumn ratoon biomass on the rice growth and biomass during the following summer season under organic cultivation | ATANA MELINGUI Elie Desire The United Graduate School of Agricultural Sciences, Iwate University, Morioka, Japan |
| 479 | 34242 | Needle ice - an antigravity mechanism of cryogenic transformation of soils | Maria Chepurnova Moscow State University Lomonosov |
| 480 | 35956 | Assessing Future Climate Change Impacts on Soil Erosion, Agricultural Nonpoint Source Pollution, and Crop Growth in the Huai River Basin | Jiaren Hu College of Land Science and Technology, China Agricultural University |
| 481 | 32250 | Decoupling potassium availability and movement in fertilizer bands across contrasting soils | Yunyun Zheng The University of Queensland |
| 482 | 34371 | Sustainable Management of Zinc in the Soil-Plant-Animal Continuum | Suganya S Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India |
| 483 | 36485 | Spatial distribution and formation environment of rock fragment layer in black soil region of northeastern China | Jiayi Shi Shenyang Agricultural University |
| 484 | 34970 | Process-based modelling of river sediment composition incorporating pedogenetic processes at the catchment scale: the Sendaigawa River basin, Japan | Atsunobu KADONO Tottori University of Environmental Studies |
| 485 | 32407 | Impact of soil amendments, irrigation regimes, and subsurface drainage on wheat yield in coastal saline soils | Saffi Ur Rehman College of Agricultural Science and Engineering; Hohai University, China. |
| 486 | 36046 | Superheated steam torrefaction could upgrade spent coffee ground to peat alternative for soilless culture | Rui Yang Institute of Urban Agriculture, Chinese Academy of Agricultural Sciences |
| 487 | 32724 | Cloud-Based Soil Erosion Drivers and Sediment Yield Assessment Using RUSLE-SDR Modeling in the Mangla Himalayan Watershed | Saffi Ur Rehman College of Agricultural Science and Engineering, Hohai University, China |



Poster Session

| | | | |
|-----|-------|--|--|
| 488 | 34771 | Organic fertilizer application improves soil health and crop growth in acidic soil | Tingting Chang HOHAI UNIVERSITY |
| 489 | 34873 | Impacts of Applications of Three Wood Ash Types on Elemental Dynamics and Crop Growth | Chuanzhen Jian Graduate School of Agriculture, Tohoku University, Sendai, Japan |
| 490 | 32414 | Decoding the Rubik's Cube of Soil Health: A Genoform-Management-Phenoform Framework for Cropland | Tao Wang China University of Geosciences, Beijing |
| 491 | 35025 | Effects of subsurface drainage systems on water and salt transport characteristics of saline-alkali soil | Yujie Zhang Nanjing Hydraulic Research Institute |
| 492 | 34915 | Organic amendments affect microbial soil health indicators in a saline soil | Yujie Zhang Nanjing Hydraulic Research Institute |
| 493 | 33126 | Maize//Soybean Intercropping Enhances Soil Multifunctionality in Low-fertility Red Soil and Its Response to Biodiversity Effects | Kangxian Zhang Yunnan Agricultural University |
| 494 | 32868 | Potential for Rapid Improvement of Low-Fertility Soils by Cattle Manure Compost Application | Muxiye Tohoku University |
| 495 | 32673 | Podzols of the north of Western Siberia – the bridge between modern soil formation and paleocryogenesis | Maria Chepurnova Lomonosov Moscow State University |
| 496 | 34827 | Temporal Dynamics of Soil Organic Carbon Fractions and Microbial Activity Across a Chronosequence of Abandoned Paddy Fields in Korea | Seoyeon Kim Kyung Hee University |
| 497 | 34286 | Variations in Rhizosphere Microbial Community Structure and Function Among Diploid, Triploid, and Tetraploid Watermelon Cultivars | Qingshan Li Guangxi University |
| 498 | 35456 | Cell-level Toxicological and Biodegradation Responses of Pure Bacterial Cultures to Per- and Polyfluoroalkyl Substances (PFAS) | Gayeon Jang Yonsei University |
| 499 | 34736 | Soil virome dynamics and ecological regulation during revegetation of rare earth tailings | Yong He Nanchang University |
| 500 | 35046 | Land use overrides soil type in shaping soil N ₂ O reduction potential through nosZII-associated communities | Xin Xia Zhejiang University |



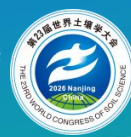
Poster Session

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| 501 | 33596 | The effects of nutrient-loaded biochar on earthworms in boreal agricultural soil | Zannatul Ferdous University of Helsinki |
| 502 | 33131 | Effect of Biogenic Synthesized Nano Sulphur on growth, yield and quality of Soybean | Dr. Sandeep Sevakram Hadole Dr. Panjabrao Deshmukh Krishi Vidyapeeth , Akola, INDIA |
| 503 | 34089 | Exploiting Iron-Efficient Groundnut Genotypes to Combat Iron Deficiency in Calcareous Soils | Meena S Tamil Nadu Agricultural University, Coimbatore, India |
| 504 | 33279 | Combined application of mineral and bio-organic fertilizers improves coffee yield and quality by enhancing soil multifunctionality | Yunhao Feng Yunnan Agricultural University, College of Resources and Environment |
| 505 | 32720 | Effect of dry direct-seeded and seedling-transplanted rice cultivation on methane emissions from a paddy field in Hokkaido, Japan. | Mariko Shimizu Civil Engineering Research Institute for Cold Region |
| 506 | 33124 | Effects of Biological Nitrification Inhibitors on Maize Yield and Nitrogen Utilization in Red Soil | Xingkui Zhu College of Resources and Environment, Yunnan Agricultural University |
| 507 | 32308 | Quantifying the direct and indirect effects of soil-forming factors on clay mineral abundance | Rina Matsuki Kyoto university |
| 508 | 32162 | Comparative experiments and analysis of water and nitrogen dynamics in bare and rice fields using HYDRUS-1D | Juxiu Tong China University of Geosciences Beijing |
| 509 | 35091 | Effects of three differently activated biochars on greenhouse gas emissions from a fertile clay loam in boreal conditions | SAMUEL AMOAH University of Helsinki |
| 510 | 33471 | Long-Term Effects of Organic Manure on Rice Productivity and Soil Nutrient in Paddy Systems | VALLENTIA NISRINA QURRATUAIN ANNIDA Graduate School of Agriculture Science, Yamagata University, Tsuruoka, Japan |
| 511 | 34659 | Quantification of Micro- and Nanoplastics in Agricultural Soil and Application in Japan | Nozomi Kagami Hokkaido University |
| 512 | 35157 | Improving Soil Thermal Conductivity Models by Unifying Dry and Saturated Thermal Conductivity Estimates | Xin Zhao Inner Mongolia Agricultural University |
| 513 | 34651 | The Effect of Soil Microorganisms on Organic Carbon Sequestration in Saline-Alkali Soils of the Hetao Irrigation District under Exogenous Organic Matter Addition | Fei Chang Inner Mongolia Agricultural University |



Poster Session

| | | | |
|-----|--------|---|--|
| 514 | 33218 | Towards a low-carbon and climate-resilient Mediterranean agriculture: the integration of Conservation Agriculture and 4R Nutrient Stewardship in herbaceous and woody crops | Jesús Sevillano-Caño University of Córdoba |
| 515 | 320B24 | Soil Bacterial Diversity at the Molecular Level: Origins, Consequences, and Implications | Shuchang Zhao Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 516 | 33125 | Multi-Element Synergy-Driven Transfer Learning Model for Enhancing the Generality of Soil Heavy Metal Concentration Estimating | Chang Meng Inner Mongolia Agricultural University |
| 517 | 32168 | Long-Term Land-Use Change in a Mediterranean Agroforestry System: Assessing and Restoring Soil Health in Apple Orchards of Pelion, Greece | Dr. Eleftherios Evangelou Institute of Industrial and Forage Crops Hellenic Agricultural ORganization Dimitra |
| 518 | 35150 | Long-term Combined Organic and Inorganic Fertilizers Increases Maize Yield in Upland Acidic Red Soils by Enhancing soil chemical properties and aggregate characteristics | Xinmei Zhao Agricultural Environment and Resources Institute |
| 519 | 35348 | Multidimensional approach to anthropogenic markers -evidence from urban soils in Krakow (SE Poland) | Kinga Jarosz Jagiellonian University in Krakow (Faculty of Geography and Geology, Krakow, Poland) |
| 520 | 31976 | Bacillus megaterium (S2-4a1) Improves Compost Biofertilizers by Solubilizing Potassium from Feldspar | Yupa Chromkaew Chiang Mai University |
| 521 | 33361 | Global Patterns of Coarse Woody Debris Decomposition Rates | Yuxin Zhang Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences |
| 522 | 34376 | Dynamics of Native Low Molecular Weight Organic Substances (LMWOS) and Their Relationship to Soil Quality Indices in Gray Lowland Soil | Nobchulee Nuanaon Soil and plant Multi-Dynamics Research Unit, Fukushima Institute for Research, Education and Innovation(F-REI) |
| 523 | 33272 | Time-scale dependent responses of microbial carbon use efficiency to warming in alpine soils on the Qinghai-Tibetan Plateau | Yike Wang Chinese Academy of Sciences Key Laboratory of Ecosystem Network Observation and Modelling |
| 524 | 34625 | Incorporating cover crop and rice straw promoted inorganic phosphorus mobilization via rhizobacterial-secreted oxalic and malic acids | Qiang Zhu Huazhong Agricultural University |
| 525 | 33203 | The Stability of Softwood Biochars and Their Impact on Nitrogen Retention in Contrasting Boreal Soils Over 14 Years | Zhouyang Tian University of Helsinki |



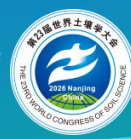
Poster Session

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| 526 | 32039 | Rhizobial Isolate YL 14 Biofertilizer Substitutes for Urea Fertilizer and Improves Yardlong Bean Growth and Nutrient Content | Yupa Chromkaew Chiang Mai University |
| 527 | 33610 | Soil Microbial Biomass and Community Response to Different Pesticides Under Greenhouse Conditions | GUMISIRIYA COSTA UNIVERSITY OF DEBRECEN |
| 528 | 31843 | Climate Variability: Bridging Time Scales in Soil Formation Analysis | Sofia Zhmyro Faculty of Geography and Geoinformation Technology, Higher School of Economics, Moscow, Russia |
| 529 | 35140 | Balanced NPK Nutrition via TNAU Water Soluble Fertilizer (19:19:19) for Higher Yield and Nutrient Efficiency in Cotton | M R BACKIYAVATHY Tamil Nadu Agricultural University, Coimbatore, India |
| 530 | 33614 | Effects of phosphogypsum on heavy metal mobility and nutrient dynamics in Solonetz soil under spring wheat | Evelin Kármén Juhász University of Debrecen |
| 531 | 34796 | Synergistic Remediation of Mixed Chlorinated Hydrocarbon Contamination by Sulfidated Nanoscale Zero-Valent Iron Coupled with Dehalococcoides mccartyi | Yutong Zhu College of Environment, Zhejiang University of Technology |
| 532 | 34809 | From Antagonism to Synergy: Aquifer Media Regulate the Coupled Degradation of Trichloroethylene by Nanoscale Zero-Valent Iron and Reductive Dechlorinating Bacteria | Yujie Fan Zhejiang University of Technology |
| 533 | 32421 | Harnessing soil pore functionality for enhanced nitrogen dynamics understanding and fertilizer management in pastures | John Clunes Universidad Austral de Chile |
| 534 | 33332 | Evaluation of nitrogen mineralization of paste fertilizer in Japanese paddy soils | MOHAMED Sayid Ali Yusuf Yamagata University |
| 535 | 34420 | The Water Table Crux for Peatland Recovery | Haojie Liu University of Rostock |
| 536 | 34043 | Soil vertical gradients shape soil respiration but not its temperature sensitivity | Ting Sun Zhejiang University |
| 537 | 35099 | Effect of straw incorporation on the formation of roots-surface iron plaque in rice and soil cadmium availability | Jing Mu Anhui Agricultural University |



Poster Session

| | | | |
|-----|--------|--|---|
| 538 | 33625 | Supporting environmental sustainability by increasing soil carbon sink through biowaste recycling and remote sensing integrated with machine learning | Cho-Yin Wu Tunghai University |
| 539 | 35033 | Urban soils mulching: temperature and moisture regulation in urban soils under different substrates | Makar Silaev Faculty of Soil Science, Lomonosov Moscow State University, Moscow, Russia |
| 540 | 33270 | Crystallinity–solubility relationship of phytoliths derived from different gramineous plants: validation using X-ray diffraction analysis | AKIHITO FUKUOKA Laboratory of Soil Science, Graduate School of Life and Environmental Sciences, Kyoto Prefectural University |
| 541 | 34345 | A New Nonlinear Method for Simulating Nitrogen Pollutant Transport in Farmland | Yuan Zhao Northeast Normal University |
| 542 | 320B23 | Long-term Agricultural Management Decouples Microbial Resource Acquisition from Carbon Metabolism under Short-term Resource Pulses | Zeyu Cheng Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 543 | 32546 | Long-Term Effects of Repeated Organic Amendment Applications on Cadmium Bioavailability: Insights from a Five-Year Pot Experiment | Sibylle Comeliau Gembloux Agro-Bio Tech (University of Liège) |
| 544 | 34117 | Trophic cascades in the rhizosphere micro-food web under different P regimes regulate soil P dynamics and maize growth | Ming Lang Southwest University |
| 545 | 33081 | Evaluating the Effectiveness of Conservation Tillage in the Black Soil Region of Northeast China Based on the Apparent Characteristics of Crop-Residue-Soil | Jing Wang institute of geographic sciences and natural resources research |
| 546 | 319B44 | Nature-based Solutions for Transforming Smallholder Agriculture in Highland Areas of Northern Thailand | Nattaporn Prakongkep Land Development Department |
| 547 | 31894 | Identifying spatiotemporal patterns of hillslope subsurface flow in an alpine critical zone on the Qinghai–Tibetan Plateau based on three-year, high-resolution field observations | GUANGRONG HU Faculty of Geographical Science, Beijing Normal University |
| 548 | 34488 | Influence of grazing on soil structure of the Patagonian wetlands meadows (Vegas) | Dorota Dec Austral University of Chile |



Poster Session

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|-----|-------|--|--|
| 549 | 34841 | Biochar Utilization Strategies Based on Feedstock and Application Frequency: Effects of Wood and Chicken Manure Biochars on Crop Productivity | Ju Young Cho Gyeongsang National University |
| 550 | 32087 | Bioaugmentation effects of three ecological earthworm species on phytoextraction of <i>Sedum plumbizincicola</i> in Cd and Zn contaminated soils of South China | Menghao Zhang South China Agricultural University, Guangzhou, China |
| 551 | 34890 | Modified biochar enhances the growth of pepper and reduces the accumulation of cadmium in soil contaminated with cadmium. | Hengji Qin Hohai University |
| 552 | 35087 | The contribution of N derived from deep-rooting cover crop mixture to soil N dynamics and subsequent maize nutrition | Juanjuan Ai Institute of Agricultural Resources and Environment, Guangdong Academy of Agricultural Sciences, |
| 553 | 33986 | Interactive dynamics between rhizosphere bacterial and viral communities facilitate soybean fitness to cadmium stress revealed by time-series metagenomics | Zhongyi CHENG Zhejiang University |
| 554 | 33743 | Comprehensive soil health assessment for Cd-contaminated farmland: From the perspective of safe utilization practice | Zhongyi CHENG Zhejiang University |
| 555 | 36474 | Synergistic Remediation of Cadmium-Contaminated Soil and Antibiotic Resistance Gene Mitigation by Anaerobic Soil Biological Treatment | Jianxiao Song Northwestern Polytechnical University |
| 556 | 32482 | Methodological Proposal for the Identification and Prioritization of Degraded Areas in the Implementation of Environmental Restoration Public Policies in Minas Gerais, Brazil | ADRIANA MONTEIRO DA COSTA Federal University of Minas Gerais |
| 557 | 35239 | Assessing quality gains from physically supervised harmonic fitting for apparent soil thermal diffusivity estimation. | Martín Francia Faculty of Agronomy, Universidad de la República, Montevideo , Uruguay |
| 558 | 35006 | Contrasting water regimes reshape denitrification-induced organic nitrogen mineralization under anaerobic conditions | Bing Han State Key Laboratory of Black Soils Conservation and Utilization, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun, Jilin, China |
| 559 | 35206 | Differentiating parent materials using the soil thermal gradient between 5 and 10 cm at national scale, Uruguay | Martín Francia Faculty of Agronomy, Universidad de la República, Montevideo , Uruguay. |



Poster Session

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|-----|-------|--|---|
| 560 | 34640 | Pore-Scale Simulation of Heat–Water Coupling during Soil Thawing under Contrasting Tillage Systems | Jiayun Wang China Agricultural University |
| 561 | 33191 | The Need for Standardized Protocol for Soil Organic Matter Prediction using Vis-NIR Spectroscopy-A Meta-Analysis | Anshu Beri University of Guelph |
| 562 | 33731 | Mixing rice straw with various N sources in a sandy soil: organic C stabilization and priming effect | Wimonsiri Pingthaisong Suranaree University of Technology, Thailand |
| 563 | 36118 | Field-scale prediction of black soil thickness based on wavelet decomposed components and multi-model validation | Lei Qiao State Key Laboratory of Soil and Sustainable Agriculture Institute of Soil Science Chinese Academy of Sciences |
| 564 | 34842 | Optimizing Water-saving Irrigation Strategies: Integrative Assessment of Soil Quality, Crop Yield, Greenhouse Gas Emissions, and Microbial Diversity in Rice Paddies | Chia-Chia Lin National Chung Hsing University |
| 565 | 36442 | Earthworm burrows enhanced rice root growth under a no-tillage rice-rapeseed rotation system | unknow Hunan Cultivated Land and Agricultural Eco-Environment Institute |
| 566 | 32478 | Sensitivity of soil organic matter priming to warming depends on diurnal temperature cycle | Qiong Xiao Institute of Agricultural Resources and Regional Planning, CAAS |
| 567 | 33604 | Digital Soil Mapping of Soil Organic Matter in Well-Facilitated Farmland Using Multi-source Covariates and Feature Selection | Yi Zhao Zhejiang University |
| 568 | 36578 | Inorganic Phosphorus Fractionation and Acidity in Red Soil Affected by Activated Phosphate Rock Powder | Xianmei Zhang State Key Laboratory of Efficient Utilization of Arable Land in China, Key Laboratory of Arable Land Quality Monitoring and Evaluation, Ministry of Agriculture and Rural Affairs, The Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences, Beijing, China |
| 569 | 34840 | Rice Ratoon as a Novel Carbon Source and the Growth-Regulating Factors in Mono-Rice Paddies | Gayeon Jang Sunchon National University |
| 570 | 36433 | Potassium Management Strategies for Soybean–Corn Rotation Under No Tillage in a Brazilian Oxisol | Paulo Cesar Teixeira Embrapa |



Poster Session

| | | | |
|-----|-------|---|---|
| 571 | 33235 | Soil Art in Action: Transdisciplinary Pedagogy and Community Practice in the Healing Garden Project | Lipeng Jin Sichuan Fine Art Institute |
| 572 | 33497 | Differences in soil organic carbon and its stability between topsoil and subsoil under organic material amendments | Hu Shengchao Northwest A&F University |
| 573 | 34730 | Feasibility of Pot-Grown Seedling Transplanting as an Alternative Strategy to Mitigate CH ₄ Emissions and Enhance Rice Productivity in a Paddy Field | Mingyeong Lee Sunchon National University |
| 574 | 34734 | Nitrate Reduction Influences the Structure and Function of Dehalogenating Community | Jingjing Wang Institute of Applied Ecology Chinese Academy of Sciences |
| 575 | 34761 | Effects of organic amendments on soil carbon stocks and their distribution between particle and mineral-associated organic carbons in a red pepper field | Sohee Yoon Sunchon National University |
| 576 | 33831 | Integrated Practice and Model Construction Based on BIOACTIVE FARMING PATHWAYS | Miaoxian Li Guangdong Jieshi Agricultural Technology Co., Ltd. |
| 577 | 33143 | Phosphogypsum Effects on Soil Microbial Communities Revealed by PLFA Analysis in Arenosol and Meadow Chernosem Soil | Andrea Balla Kovacs University of Debrecen, Hungary |
| 578 | 34275 | Partial organic substitution improves rice yield in high-fertility paddy soils by increasing MBN and regulating nitrogen supply | Lijia Chen CENTRAL CHINA NORMAL UNIVERSITY |
| 579 | 32771 | Biodegradable Microplastics Alter Soil N ₂ O Emissions and Nitrogen Cycling under Contrasting Nitrogen Fertilization | Yuhan Yin Nanjing University of Information Science & Technology |
| 580 | 35110 | Enhancing soil-wheat resilience with biochar-based microbial fertilizer application under deficit irrigation | Xu Yang Nanjing Forestry University |
| 581 | 34660 | Symphony of Biological Vitality | Miaoxian Li Guangdong Jieshi Agricultural Technology Co., Ltd. |
| 582 | 33725 | The impact of microbial-mediated crop residues and their humification products on soil organic matter transformation | Yifeng Zhang Jilin Agricultural University |
| 583 | 35311 | Microbial mechanisms underlying soil organic carbon dynamics during vegetation restoration in alpine sandy region | Jinlu Guo Qinghai Normal University |



Poster Session

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| 584 | 36313 | Characteristics of Aggregates in Dark Brown Soils and Their Response to Nitrogen and Phosphorus at Different Levels | Shuxiang Zhang Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences/State Key Laboratory of Efficient Utilization of Arid and Semi-arid Arable Land in Northern China |
| 585 | 35258 | How do historical land uses shape soil carbon and microbial communities Evidence from alpine sandy region | Jinlu Guo Qinghai Normal University |
| 586 | 34861 | Integrating Hydrological Modeling and Explainable Machine Learning to Reveal the Key Drivers of Salinization of Soda Saline-Alkali Soils | Peng Guo China agricultural university |
| 587 | 35030 | Contents and controls of phytolith and phytolith-occluded carbon (PhytOC) in Mollisols of Northeast China | zhouyuan Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences |
| 588 | 36468 | Screening and Principles of Efficient Peanut Nutrient Utilization of Germplasm Resources | ZiyanZhao State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences |
| 589 | 35648 | Soil Organic Carbon Fraction Dynamics Across Paddy Soil Profiles: A Critical Role of Parent Material | Chu Zheng Sichuan Agricultural University |
| 590 | 36379 | A physics-guided embedding framework for estimating water content and bulk density in black soil using TDR | Jienan Xu Institute of Soil Science, Chinese Academy of Sciences |
| 591 | 36551 | Quantitative Monitoring and Inversion of Soil Moisture Content Based on Ground Penetrating Radar: Progress, Methods, and Prospects | Ping WANG Qufu Normal University |
| 592 | 33023 | Impact of dry-wet cycles on nitrogen and phosphorus mineralization in soils amended with cattle manure | Theresa Adesanya University of Northern British Columbia, Canada |
| 593 | 34767 | The removal mechanism of Pb ²⁺ from wastewater by phosphorus-modified biochar | Guanjie Jiang Jiangxi Agricultural University |
| 594 | 33095 | Elucidation of Chemical Structure of Soil Clay Minerals Using Electron Probe Microanalyzer | Satoshi Ushijima Kyushu University |
| 595 | 31825 | Weighted ensembles with spatial residual correction for improved soil pH mapping in tropical croplands | Zhang Meixuan Hainan University |



Poster Session

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|-----|-------|--|---|
| 596 | 34766 | Manure addition enhances the formation and accrual of soil organic carbon from straw through regulating microbial metabolic in paddy soils | Xiaobin Guo Institute of Subtropical Agriculture, Chinese Academy of Sciences |
| 597 | 35072 | Assessment of soil temperature dynamics in different soil landscapes in western Greenland | Marcio R Francelino Universidade Federal de Viçosa |
| 598 | 35264 | Digital mapping of Solonetz within forest-steppe landscapes of the Oka-Don Lowland | Daniil Kornilov Lomonosov Moscow State University |
| 599 | 35468 | The Final Stage Of Loess Accumulation In The Glacial Region Of The Last Glaciation And Its Reflection In The Properties Of Modern Soils: A Case Study Of Northwestern Russia | Leontev Aleksandr ¹ Saint-Petersburg State University (SPbU) |
| 600 | 34862 | Liming reshapes the balance between mineral-associated and particulate organic carbon through a mineral-microbial interactions in paddy soils | Hanchen Wu aInstitute of Subtropical Agriculture, Chinese Academy of Sciences |
| 601 | 36187 | Decadal Spatiotemporal Dynamics of Boreal Soil Chemistry in Response to Industrial Atmospheric Loading | Theresa Adesanya University of Northern British Columbia |
| 602 | 34505 | The evolution of assimilable elements in the soil, and in the Sorrento Lemon PGI during growth | Simona Vingiani University of Naples Federico II |
| 603 | 34208 | CO ₂ emission following total vegetation removal: a pilot study | Johann Thorsson Land and forest Iceland |
| 604 | 32019 | Urbanization Affects Soil Microbiome Profile Distribution in the Russian Arctic Region | Korneykova Maria RUDN University |
| 605 | 33630 | Iceland's degradation history is taking a hopeful turn through revegetation and ecosystem monitoring | Solveig Sanchez Land and Forest, Iceland |
| 606 | 36264 | Second-year effects of basalt application on maize growth and soil carbon sequestration under field conditions. | Itsuki Ogawa Graduate school of Agriculture, Hokkaido University |
| 607 | 34499 | Assessment of the Stabilizing Effect of Compost and Phosphogypsum on the Metabolism of <i>Bacillus subtilis</i> and <i>Pseudomonas putida</i> in Lead- and Zinc-Contaminated Sod-Podzolic Soil | Nikitenko Anton Mikhailovich Department of Ecology, Russian State Agrarian University - Moscow Timiryazev Agricultural Academy (RSAU - MTAA) |
| 608 | 36450 | Community-based research and action for sustainable land use in the Ethiopian Rift Valley | Paul Hallett University of Aberdeen |



Poster Session

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| 609 | 32589 | Managements impact on Color and Organic Carbon in Great Plain Soils of the United States | Isaac Nelson Kansas State University |
| 610 | 34474 | Soil Physical and Chemical Responses Along a Pasture-to-Forest Succession in the Italian Alps | Valeria Cesarini University of Turin |
| 611 | 34284 | Biochar and microorganism-assisted remediation of brownfields | Agnieszka Medyńska-Juraszek Institute of Soil Science, Plant Nutrition and Environmental Sciences, Wroclaw University of Environmental and Life Sciences |
| 612 | 35373 | Effect of veterinary antibiotics on test plants and enzymes activity and microbiological respiration of sod-podzolic soil | Serikov Konstantin Moscow State University |
| 613 | 35557 | The permanence of carbon sequestration in agricultural soil – what do we (not) know | Chantal Hendriks Wageningen University & Research |
| 614 | 31923 | Short-term effects of molasse-derived digestates from one- and two-stage anaerobic digestion on wheat crop and chosen soil properties | Jerzy Jonczak Warsaw University of Life Sciences |
| 615 | 34406 | Matric-potential-dependent partitioning between structural and matrix controls on soil water retention under long-term tillage management | Yuhong Zhou University of Guelph |
| 616 | 34326 | Does particle size of digestate-derived biochar affect phosphorus losses and fertilizer value? Evidence from a lysimeter study in a temperate soil. | Oliver Lindunda Daka Aarhus University |
| 617 | 34948 | Aggregate-Size-Specific Carbon and Nitrogen Responses to Reduced and Deep Tillage in Japanese Andosols | Ulendo Taizya University of Tsukuba |
| 618 | 34270 | Indicators of the paleoecological situation in the Volga region soils | Radislava Reshetnikova Lomonosov Moscow State University |
| 619 | 34513 | Local microbial yield-associating signatures extend globally to plant growth differences | Berenice Di Biase Soilytix GmbH |
| 620 | 31816 | Deciphering Soils through the Power of Games | Alma Barajas-Alcalá National Autonomous University of Mexico |
| 621 | 34644 | Characterizing Temperature-Dependent Dissipation Kinetics of Co-Mingled Contaminated Soils | Theresa Adesanya University of Northern British Columbia |



Poster Session

| | | | |
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| 622 | 34512 | SOCBIO-MAP: Soil Organic Carbon and BIOdiversity Mapping and Analytics for Projects | Berenice Di Biase Soilytix GmbH |
| 623 | 34542 | Impacts of model root exudates (Pectin and Oxalic Acid) on multiscale soil structural, hydraulic, and surface properties | Hui Ao university of aberdeen |
| 624 | 32848 | Utilization of Chemically Recycled Bio-based Plastic as Nitrogen Fertilizer in Paddy Soil: A Pot Culture Study for Brassica rapa | Mizuhiko Nishida Tohoku University |
| 625 | 33867 | Geospatial Index of Acid Mine Drainage Impact on Soils (IIMSDAM) | Joseph Tadeo Almazan Valencia Universidad Nacional Autónoma de México |
| 626 | 32852 | Rainfall-induced hot moments of N ₂ O emissions in sandy agricultural soils managed with winter cover crops | Sapana Parajuli Clemson University |
| 627 | 32089 | Quantifying Soil Organic Carbon Deficits with Dynamic Baselines and Attainable Scenarios Modeled from Legacy Dat | Anil Somenahally Texas A7m AgriLife Research |
| 628 | 36397 | Impact of Integrated Agricultural Systems on Soil CO ₂ Efflux in the Cerrado Biome | Leidivan Almeida Frazão Federal University of Minas Gerais |
| 629 | 35182 | Response Patterns of Microbial Communities to Cd Stress in a Wastewater-Irrigated Farmland | Shushen Yang Hebei Agricultural University |
| 630 | 35510 | Drivers and Spatial Variability of CO ₂ Efflux in Agrosilvopastoral System and Native Vegetation in the Brazilian Cerrado | Demerson Luiz de Almeida Barbosa Federal University of Jequitinhonha and Mucuri Valleys |
| 631 | 319B62 | Spatiotemporal Pattern and Mitigation Potential of Carbon Emissions from Ex-Situ Thermal Desorption for Contaminated Soil in China | LIU ZHAOYUE Tongji university |
| 632 | 34455 | Soil Carbon Trend Index (SCTI): A Biochemical Tool for Predicting Carbon Dynamics in Agricultural Soils | Guilherme M. Chaer Embrapa |
| 633 | 319B39 | Wintertime Snow Manipulation Effects on Forest Soil Aggregate Stability in Two Contrasting Forest–Soil Systems in Wisconsin, USA. | Daniel Igirimbabazi University of Wisconsin-Madison |
| 634 | 31609 | Geochemical Fractions of Pb and Ni in Orchard Soils and Ecological Risk Assessment Using Pollution Indices | Enise Sukuşu Siirt University |



Poster Session

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|-----|--------|--|---|
| 635 | 34274 | Seven-year trial: Biochar enhances yield and NUE in high-fertility paddy but the benefits are no longer significant after six years | Qin Liao Central China Normal University |
| 636 | 319B61 | Genotypic Variability in Bioaccumulation and Dietary Risks of PFAS across 30 Wheat Cultivars: A field Assessment | JunYing Wang 1 Tongji University, Shanghai, China. 2 Chinese Research Academy of Environmental Sciences, Beijing, China. |
| 637 | 34457 | Organic P Mineralization in Agricultural Soils: Process Dynamics and Microbial Drivers | Jinzhen Zhan Sun Yat-sen University |
| 638 | 36179 | Seven-year addition of labile organic carbon and phosphorus enhances soil phosphorus fertility and organic carbon accumulation in calcareous soil | Qin xiaoran Xinjiang Agricultural University |
| 639 | 34701 | Iron Speciation as an Interpretive Framework for Padochemical Variability in CO ₂ -Degassing Mofette Ecosystems | Christian Dave Alonzo University of Agriculture in Krakow |
| 640 | 32570 | Abiotic Methane Production Driven by Soil Reactive Oxygen Species | Ziyan Liu Xi'anJiaotong-Liverpool University", "Liverpool University |
| 641 | 34949 | Variation in Nutrient Requirements of Rice (<i>Oryza sativa</i> L.) Under Elevated CO ₂ and Temperature | Seung Ju Shin Gyeongsang National University |
| 642 | 33334 | Effects of crop rotation and organic amendments on crop productivity, soil chemical properties, and soil organic carbon accumulation in greenhouse vegetable systems | Bomi KIM Hankyong National University, Rep. of Korea |
| 643 | 36196 | Interactions between pollutants, antibiotic resistance and pathogens during transition from untreated to treated wastewater irrigation: a multiscale approach | Christina Siebe Universidad Nacional Autónoma de México |
| 644 | 36540 | Organic and inorganic carbon losses in straw amended saline and sodic soils | Yuyi Li Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences |
| 645 | 34509 | Sulfur Geochemistry of a Sulfuric Wetland in Ostrobothnia, Western Finland | Anton Boman Geological Survey of Finland |



Poster Session

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| 646 | 34863 | Title Effect of Manganese Foliar Application in Combination with <i>Bacillus australimaris</i> KU32 on the Stalk Elongation Growth Stage of Sugarcane Variety Khon Kaen 3 Planted in Calcareous Soil | Aunthicha Phommuangkhu, Bang-on Ubon, Kanokkorn Sinma, Suphachai Amkha and Nongphat Chaichana Department of Soil Science, Faculty of Agriculture at Kamphaeng Saen, Kasetsart University, Kamphaeng Saen Campus, Nakhon Pathom, Thailand |
| 647 | 35315 | Bio-Organo Silicon Granules: A Strategy for Salinity Tolerance in Tomato | Selvi Duraisamy Tamil Nadu Agricultural University |
| 648 | 32547 | Managing Cadmium Uptake in Vegetables with Repeated Applications of Amendments: Lessons from a Multi-year Field Experiment | Sibylle Comeliau Gembloux Agro-Bio Tech (University of Liège) |
| 649 | 33453 | Higher Efficiency of Nano-Sized Lime for Improved Limestone Conservation | Saw Chin Chien University Putra Malaysia |
| 650 | 32621 | Functional Resilience and Network Reorganization: How Plant-Associated Microbiome Maintain Ecosystem Services Under Antibiotic Pressure | Karabo Tsholo Unit for Environmental Sciences and Management, North-West University, Potchefstroom, South Africa |
| 651 | 32783 | Denitrifier community responses to irrigation and straw management in subtropical paddy soils | Pei-Ju Lu National Taiwan University |
| 652 | 33176 | Integrating Multi-Scale Soil Evaluation and Ecosystem Service Assessment for Sustainable Land Use Planning with Targeted Agri-Environmental Measures | Christopher Marples Leibniz Centre for Agricultural Landscape Research (ZALF) |
| 653 | 32418 | Biochar-Induced Changes on Soil Nutrient Retention and Saturated Hydraulic Conductivity of Sandy Loam Soil in Lahar-laden Area of Zambales, Philippines. | Jacob B. Labita Soil and Water Resources Research Division, Bureau of Soils and Water Management |
| 654 | 321B02 | Preliminary assessment of humic substances from chicken manure hydrochar as drivers of soil microbial activity | Francisco Jesús Moreno Racero Instituto de la Grasa - CSIC |
| 655 | 35319 | Fungal consortium assisted composting for rapid stabilization of poultry litter | Thiyageshwari Subramaniam Tamil Nadu Agricultural University |
| 656 | 32741 | Mechanism of Surface Runoff Erosion Transport and Its Verification and Application | GAO JIANEN Northwest A&F University |



Poster Session

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| 657 | 33136 | Fungal biodiversity associated to alpine peatlands in northern Italy | Claudio ZACCONE University of Verona, ITALY |
| 658 | 34808 | Iron-mediated mechanisms of soil organic carbon stabilization in paddy soils under warming and altered flooding | Claudio ZACCONE University of Verona, ITALY |
| 659 | 35345 | Assessing pedotransfer functions for bulk density to improve predictions of soil carbon stocks in Retisols (Moscow region, boreal zone) | Olga Manakova Faculty of Soil Science, Lomonosov Moscow State University |
| 660 | 34691 | Integrating Soil Properties and Management into Data-Driven Modeling of Soil CO ₂ Efflux in Urban Green Roofs | Cho Junyoung Korea Institute of Civil Engineering and Building Technology |
| 661 | 32563 | Sustainability of using salt affected lands in saline agriculture | Leila Jahanbazi Aarhus University |
| 662 | 34377 | Improved recommendations for phosphate fertilizer application to promote soil health and reduce carbon emissions | Chin-Hua MA World Vegetable Center |
| 663 | 34121 | Short term impact of biochar on soil total carbon, total nitrogen, $\delta^{13}C$ and $\delta^{15}N$ in two vineyards in Southeast Queensland of subtropical Australia | Kate Kingston Griffith University |
| 664 | 32972 | Risks of wheat yields reduction under future climate extremes | Guanmo Li Chinese Academy of Agricultural Sciences |
| 665 | 35370 | The impact of veterinary antibiotics on the functional diversity of microorganisms in agro-sod-podzolic soil | Andrey Batakov Lomonosov Moscow State University |
| 666 | 36593 | Phosphorus fractions in selected soil types located on the desert and steppe zones of Mongolia | Undrakh-Od Baatar National University of Mongolia |
| 667 | 34941 | Characterization of Small Microplastics in Japanese Agricultural Soils and Their Effects on Soil Aggregate Structure | Maki Asano University of Tsukuba |
| 668 | 320B66 | Comparative evaluation of dispersion pretreatments for tailoring iron-based MOF structure and controlled-release performance in fertilizers | Lianjie Wan Institute of Soil Science Chinese Academy of Sciences |
| 669 | 34416 | Urbanization Alters Wetland Sulfur Cycling via Microbial Restructuring, Not Diversity Loss | ZHONG PING Hainan University |



Poster Session

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| 670 | 35922 | Soil-Root Shear Strength of Gullies Covered by Different Vegetation Types on the Loess Plateau of China | Zhu Ruipeng Beijing Normal University |
| 671 | 33775 | Phytomining of rare earth elements from phosphogypsum waste heaps using silver birch (<i>Betula pendula</i> Roth) | Beata Rustowska Warsaw University of Life Sciences – SGGW |
| 672 | 34145 | Effects of gypsum application on rice growth and yield in paddy soils with varying heavy metal content | Toru HAMAMOTO Tohoku University |
| 673 | 34930 | Species-Specific Effects of Earthworm on Soil Modification Functions Across an Ecosystem Development Gradient: Evidence from Miyakejima and Mikurajima, Japan | Ran Sesoko University of Tsukuba |
| 674 | 34532 | Medieval Urban Cultural Layers in Contrasting Arid and Humid Waterlogged Environments: Morphological and Chemical Properties, and Genesis | Yulia Karpova Institute of Geography, Russian Academy of Sciences |
| 675 | 33947 | Pedogenic Response to Holocene climatic fluctuations in the Caucasian foothills (Dagestan, Russia) | Fatima Kurbanova Institute of Geography, Russian Academy of Sciences, Moscow, Russia |
| 676 | 32946 | Can Perennials Cut Nitrous Oxide Emissions? Insights from Manitoba Cropping Systems | Xiaopeng Gao University of Manitoba |
| 677 | 32123 | Earthworms feeding on leaf litter reduced litter-derived particulate organic carbon without increasing mineral-associated organic carbon over 50 days in a field experiment | Doy Kim Korea University |
| 678 | 34936 | Temporal clockof BNI in wheat | Xiaoping Fan University of Aberdeen |
| 679 | 35036 | Characteristics, Driving Mechanisms, and Machine Learning Modeling of Nitrogen Runoff Losses from Chinese Rice Cropping Systems | Yi Wang Ludong university |
| 680 | 320B65 | Afforestation can lower microbial diversity and functionality in deep soil layers in a semiarid region | Weibo Kong Northwest A&F University |
| 681 | 32363 | Diatomaceous bio-silicon as a sustainable alternative to mineral silicon fertilizers: Impacts on rice yield, soilfertility, and heavy metal dynamics | Qin Zhang Jiangxi Agricultural University |



Poster Session

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| 682 | 34674 | Effects of different irrigation timings on survival and early growth of <i>Haloxylon ammodendron</i> seedlings in southern Tajikistan | Nasrulloi Avaz Korea University |
| 683 | 35545 | Non-monotonic Reproductive Toxicity of F-53B in Earthworm: Environmental Relevance from Northwest China Industrial Soils | Zeliang Liu Xi'an University of Architecture and Technology |
| 684 | 32275 | Threshold sand content of sand-clay mixtures is affected by clay mineralogy and compaction effort | Evan Mascitti University of Massachusetts |
| 685 | 34222 | Biochar–microbial interactions as drivers of soil carbon sequestration: from heterotrophic priming to autotrophic CO ₂ fixation | Xiaomin Zhu Aarhus University |
| 686 | 35643 | Urbanization Promotes Topsoil Black Carbon Accumulation: A Meta-analysis | Wang Min Zhongkai University of Agriculture and Engineering |
| 687 | 31855 | Unraveling soil microbial guilds driving phosphorus, nitrogen, and carbon transformations through multi-omics approaches | Felipe Bastida CSIC |
| 688 | 32556 | Auxotrophic Bacteria in Maize Rhizosphere and Bulk Soil: Insights into Microbial Dependencies and Nutrient-Driven Selection | Gabriel de Castro Theodoro Universidade de São Paulo (USP/ESALQ) |
| 689 | 35021 | Abiotic Dephosphorylation of Nucleotides by MnO ₂ | Xiao Yu Nanjing University |
| 690 | 36412 | Effects of Two Plant Growth-Promoting Bacteria on Salt Tolerance of Soybean in Coastal Saline Soil and the Mechanisms | Gaidi Ren Institute of Agricultural Resources and Environment, Jiangsu Academy of Agricultural Sciences |
| 691 | 35937 | Calibration and Validation of a Site-Specific Nutrient Expert Tool for Sorghum in the Sudano-Sahelian Region of Nigeria | Jibrin Mohammed Jibrin Bayero University, Kano |
| 692 | 34425 | Dung applied anthelmintic drug Moxidectin alters free-living soil nematode communities | Janina Milkereit Department of Soil Science, Kiel University |
| 693 | 35209 | Earthworm Responses to Veterinary Antibiotic Contamination in Soil and their Role in Mitigating Crop Toxicity | Young-Nam Kim Kyungpook National University |
| 694 | 35221 | Phytoremediation Potential of Native Garden Plants in Urban Soil | Young-Nam Kim Kyungpook National University |



Poster Session

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| 695 | 35887 | Beyond Methane: Reassessing the Role of Rice Paddies in Global Warming | Pil Joo Kim Gyeongsang National University |
| 696 | 33616 | A systematic analysis and review of soil organic carbon stocks in urban greenspaces | Yang Guo Hangzhou City University |
| 697 | 32316 | Assessing rhizosphere and root traits of maize varieties under drought in integrated greenhouse and field experiments | Martin Wiesmeier Bavarian State Research Center for Agriculture |
| 698 | 32803 | Vegetable Expansion Drives County-Scale Nitrogen Surplus and Nitrate Leaching Risk on the Loess Plateau | Mingxia Yang Northwest A&F University |
| 699 | 32805 | Dynamics of soil salinization and its combined effect with nutrients on the microbial community in solar greenhouses | Xiaofang Deng Northwest A&F University |
| 700 | 31812 | Anthropogenic activities and hydrologic environment of Danjiangkou Reservoir regulate soil microplastics in the water level fluctuation zone | zhaoyaun Huazhong Agricultural University |
| 701 | 34267 | Effects of green manure returning and tillage practices on soil organic carbon fractions and runoff-induced erosion in sloping red soils | HUAHUI LI Yunnan Agricultural University, Kunming , China |
| 702 | 34318 | Microbially Constructed Carbon–Mineral–Structural Interfaces: Revealing a Novel Perspective on Soil Texture–Mediated Organic Carbon Temperature Sensitivity | HUAHUILI Yunnan Agricultural University, Kunming , China |
| 703 | 34255 | Estimating near-surface soil thermal property values using a semi-analytical heat-pulse model with a Robin boundary condition | Tianyue Zhao China Agricultural University |
| 704 | 34053 | Green recycling food waste management – a comparative case study in China | Liu Yu College of Land Science and Technology, China Agricultural University |
| 705 | 32711 | Environmental fate and effects of mulch films on agricultural soil: A systematic review from application to residual impact | Ziyi Shao Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 706 | 34393 | Impact of MP-induced changes in earthworm feeding behavior on soil carbon mineralization | Kanghua Chen Northwest A&F University |
| 707 | 34971 | Monitoring Soil Respiration in Street-level Green Infrastructure: A Preliminary Field Study | Kim Hyomin Korea Institute of Civil Engineering and Building Technology |



Poster Session

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|-----|-------|---|---|
| 708 | 33732 | Effects of sustainable cropping systems on soil fauna and microbial biomass and aggregate structure | Kyota Watanabe Tohoku University, Japan |
| 709 | 32870 | Effect of pH Gradient on Microbial Respiration using an Artificial Soil Systems | YUTO YAMAMOTO Graduate School of Agricultural Science, Tohoku University |
| 710 | 33533 | Fluorinated Pesticides Pose Emerging Global Environmental Risks | Zihao Sun China Agricultural University |
| 711 | 36126 | Hydraulic Properties of Artificial Soil Constructed from Agricultural and Forestry Waste | Yarun Wang Institute of Plant Nutrition, Resources and Environment, Beijing Academy of Agriculture and Forestry Sciences |
| 712 | 35329 | CSDMS BMI model coupling for Soil Digital Twins | Danila Bardashov V.V. Dokuchaev Soil Science Institute |
| 713 | 35360 | Spatially-Explicit Uncertainty and Feature Attribution in Landscape-Scale Topsoil Carbon Mapping in Forest-Steppe | Danila Bardashov V.V. Dokuchaev Soil Science Institute |
| 714 | 31821 | Nutrient Management Effects on Sustainable Yield, Soil Fertility, and Carbon Stock in a Cauliflower–Capsicum Cropping Sequence of the Northwestern Himalayan Region | Archana Sharma Department of Soil Science and Water Management |
| 715 | 34304 | Land use change and management strategies promoting soil organic carbon sequestration in LAC countries | Mariana Rosas-Alenicov INIA-Uruguay |
| 716 | 31971 | Sustainable Management of Saline and Sodic Black Soils in the Lowlands of Eastern Georgia | Giorgi Ghambashidze Agricultural University of Georgia |
| 717 | 33084 | Impact of Land Use and Windbreak Establishment on Soil Carbon Pools in Dryland Agroecosystems | Giorgi Ghambashidze Scientific-Research Centre of Agriculture |
| 718 | 32167 | Biotechnological strategies to enhance phosphorus use efficiency in Soybean - Maize cropping systems | Mikaella Meira Monteiro University of São Paulo |
| 719 | 34609 | Testing the scaling effects and mechanisms of N-induced soil nematode diversity loss in natural grassland | Liheng Zhang Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 720 | 34331 | SHORT-TERM SOIL FERTILITY AND CROP YIELD RESPONSES TO MUNICIPAL ORGANIC WASTE | Stanko Milić Institute of Field and Vegetable Crops, Novi Sad, Serbia |
| 721 | 35910 | Assessing Nutrient Status of Selected Lowland Rice Soils in Siniloan, Laguna, Philippines | Nicola Louise Timbas University of the Philippines Los Baños |



Poster Session

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|-----|--------|---|--|
| 722 | 33395 | Identification of Bioplastic-associated Bacteria with Potential Degradative Activity in an Agricultural Soil System | Zeyu Zhu Department of Food Science and Technology, University of California, Davis, USA |
| 723 | 34922 | NBPT + DMPP simultaneously reduce NH ₃ volatilisation and N ₂ O emissions in commercial irrigated spinach production | Brendon Costello University of Melbourne |
| 724 | 34125 | Exposure to cypermethrin pesticide disturbs the microbiome and disseminates antibiotic resistance genes in soil and the gut of <i>Enchytraeus crypticus</i> | Ming-Kang Jin Research Center for Eco-Environmental Sciences |
| 725 | 31839 | A Decade of Soil Security: From Concept to Global Action | Alex McBratney The University of Sydney; Sydney Institute of Agriculture; Aroua Global Soil Security Think Tank |
| 726 | 34553 | Optimizing Soil Fertilization Processes for Improving 4R Nutrient Stewardship | Sadia Mahajabin University of Guelph |
| 727 | 36257 | Remediation of oxytetracycline-contaminated calcareous soil by a novel Zinc oxide Schwertmannite composite interface behavior and plant synergy | Yingxuan Fan Shanxi Agricultural University |
| 728 | 32373 | Chemical Composition of Soil Organic Carbon and Its Relationship with Soil Properties and Carbon Dynamics in Tropical Soils of Thailand | Phongsakon Tantarawongsa Japan Atomic Energy Agency |
| 729 | 35655 | Dynamics of Soil Carbon and Nitrogen in Check-Dam Sediments: Impacts of Burial Time and Decadal Exposure Following Dam Breaching | Yufei Yao Northwest University |
| 730 | 320B63 | Enhancing wheat drought resilience through organic amendments: integrating soil health improvement and antioxidant defense activation | Sidra Sohail Northwest A&F University |
| 731 | 34516 | The influence of selected factors on the various phosphorus compounds in soils with a bog iron ore horizon | Lidia Oktaba Warsaw University of Life Sciences |
| 732 | 319B34 | Nutrient Management and N ₂ O Emissions from Agricultural Peatlands in Ireland | Wenxuan Shi Teagasc |
| 733 | 34817 | The overlooked methanogenic N ₂ -fixation revealed during rice straw incorporation by metatranscriptomics | Feiran Jia Institute of Soil Science, Chinese Academy of Sciences |
| 734 | 32181 | Use of polyhalite as an ameliorant for sodic soils | Tomalika Roy University of Queensland |



Poster Session

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| 735 | 34236 | Soil and Life in Bayinbuluk | Hongtao Jia Xinjiang Agricultural University |
| 736 | 35310 | Effects of carbon-equal straw return on active organic carbon fractions in the black soil plow layer and maize growth | Yan Shi Institute of Applied Ecology, Chinese Academy of Sciences |
| 737 | 32607 | Nitrification-induced acidity controls CO ₂ emission from soil carbonates in the Loess Plateau of China | Jingjing Tao Northwest A&F University |
| 738 | 35453 | Phosphorus Maximum Sorption Capacity in Soils from Paraná State in Southern Brazil | Oriel Tiago Kölln Universidade Estadual do Norte do Paraná - UENP |
| 739 | 320B41 | Establishing of a National Digital Database and Information System for Agricultural Soils in Mongolia under the AFACI Project | Enkhtuya Bazarradnaa Mongolian University of Life Sciences |
| 740 | 32434 | Coupling of microbial iron and sulfate reduction with organic carbon stabilization in mangrove soil | Heyimo Xia Sun Yat-sen University |
| 741 | 319B65 | Green Surfactant Remediation of Petroleum Hydrocarbon-Contaminated Soil and Bacterial Community Response | Changhao Wu Technical Center, Center Environmental Protection Technology Co., Ltd. |
| 742 | 319B66 | Comparative Study on the Efficiency of Multiphase Extraction Combined with Bioremediation and Thermal Enhanced Coupling Process | Gubai Luo Center International Group Co., Ltd. |
| 743 | 319B67 | More Than Containment: An Innovative Attempt to Solve Groundwater Contamination at Landfills - The Application of a Nation's First Full-Process Technical System Integrating Source, Pathway, and End-of-Pipe Treatment | Ying Chao Center Environmental Technology Co., Ltd. |
| 744 | 321B03 | Multiple environmental stressor networks shape divergent pathways of biodiversity and ecosystem functioning in urban ecosystems. | Mateo González Quero IRNAS - CSIC |
| 745 | 320B61 | Stability mechanisms of organic matter (DOM) in typical soil microaggregates | Jie Xu Safety, Environmental Protection and Supervision Center, PetroChina Southwest Oil and Gas Field Company, Chengdu, 61000, China |
| 746 | 33222 | Alternative Spectroscopic Approaches for Soil Analysis: A Comparative Study | Roberto Barbetti CREA-FL council for agricultural research and economics, Forestry and Wood, Casale Monferrato IT |
| 747 | 36630 | Modelling and Mapping Land Susceptibility to Degradation and Desertification in Europe | Remus PRĂVĂLIE University of Bucharest |



Poster Session

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| 748 | 34210 | Improving Digital Soil Hydraulic Characterization: A Workflow for Enforcing Periodic Boundary Conditions on Tomographic Soil 3D Images | Marina Karsanina Moscow Institute of Physics and Technology (Moscow Region, Russia) |
| 749 | 35432 | Seeing Soil Microstructure with Expansion Microscopy: A New Window into the Physical Structure and Chemical Hotspots | Zheng Chen Xi'an Jiaotong - Liverpool University |
| 750 | 34876 | Nanoscale imaging reveals the kinetics of mineral potassium release and its thermodynamic mechanism | Zhihao Xiong College of Resources and Environment, Huazhong Agricultural University, Key Laboratory of Arable Land Conservation (Middle and Lower Reaches of Yangtze River), Ministry of Agriculture and Rural Affairs, Microelement Research Center, Huazhong Agricultural University |
| 751 | 36069 | Responses of N ₂ O emissions from <i>Leymus chinensis</i> to nitrogen and phosphorus addition | Yujie Shi Northeast Normal University |
| 752 | 32729 | Effectiveness of using the poultry-litter biochar pyrolyzed by different processes on soil available P | Zheyu Chi Ph.D. program of Agriculture Science, College of Agriculture, National Chiayi university |
| 753 | 34983 | Straw Return Exacerbates Soil Acidification in Major Chinese Croplands | Fei Liang Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences |
| 754 | 33987 | Root exudate-microbe synergy drives P activation in mixed Chinese fir species plantation | Yijie Ding Research Institute of Forestry, Chinese Academy of Forestry |
| 755 | 34611 | The Fun Soil Profiles: Characters for the YECS Working Group at WCSS 2026. | Adriana Ribon State University of Goiás |
| 756 | 34928 | Nitrogen cycling in the soil-plant continuum in multispecies swards: insights from a miniature sward experiment | Rifaath Hassan The University of Melbourne |
| 757 | 32637 | Mediation of soil aggregate stability and carbon sequestration by meadow steppe soil microorganisms under long-term nitrogen and phosphorus nutrient additions | He Ye Inner Mongolia Agricultural University |
| 758 | 34390 | Spatial variations of organic matter content in cultivated land topsoil in North China based on updated soil databases | Dongheng Yao Hebei Agricultural University |



Poster Session

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| 759 | 34787 | The Potential of Returning Lignified Sesbania and Sun Hemp to the Soil to Increase Soil Organic Matter in Tropical Farmlands | Chia-Hsing Lee Department of Plant Industry, National Pingtung University of Science and Technology |
| 760 | 34632 | Aluminum and microplastic release from reflective agricultural films disrupt microbial communities and functions in soil | Rui Jiang Soochow University |
| 761 | 34340 | Long-term Field Evidence on Microplastic Generation and Altered Soil Functioning by Biodegradable Film Mulch | Rui Jiang Soochow University |
| 762 | 330B01 | Innovative transformation of China's food production systems and agro-ecological landscapes towards sustainability-Climate-Smart Rice Cultivation in China | Shengji Yan Institute of Crop Sciences, Chinese Academy of Agricultural Sciences |
| 763 | 330B02 | Global cropland nitrous oxide emissions in fallow period are comparable to growing-season emissions | Ziyin Shang Institute of Crop Sciences, Chinese Academy of Agricultural Sciences |
| 764 | 34065 | Non-linear regulation of soil organic carbon by salinization: aggregate-microbe coupling | Yuanduo Wang Ningxia University |
| 765 | 31845 | Calibration of N, P, and K for Orange-Fleshed Sweet potato (<i>Ipomoea batatas</i> (L) Lam) Production in an Ultisol at Ikwo, Ebonyi State, Nigeria | Iroegbu Chidinma Susan Alex Ekwueme Federal University Ndufu Alike Ikwo Ebonyi state |
| 766 | 36217 | From Soil to Shoots: Fungal Communities in Pea-Barley Intercropping | Magdalena Frąć Institute of Agrophysics, Polish Academy of Sciences, Lublin, Poland |
| 767 | 36218 | Sustainable Alternatives to Peat-Based Growing Media: Microbial Functionality as a Key Indicator | Magdalena Frąć Institute of Agrophysics, Polish Academy of Sciences, Lublin, Poland |
| 768 | 36402 | What fungi can we count on in the mitigation of climate change influence on forests in different climatic regions – comparison of arbuscular and ectomycorrhizal solutions in Serbia and China | Zaklina Marjanovic University of Belgrade - Institute for Multidisciplinary Research, National Institute of the Republic of Serbia, Belgrade, Serbia |



Poster Session

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| 769 | 31591 | Differentiation of Urban Lawn Soils on the Basis of a Combination of Physico-Chemical Methods (for Forensic Purposes) | Anna Khokh Scientific and Practical Center of the State Forensic Examination Committee of the Republic of Belarus |
| 770 | 31590 | ON THE POSSIBILITIES OF USING NIR SPECTROSCOPY TO ESTABLISH THE GENETIC TYPE OF SOILS | Mikhail Stsepaniuk Scientific and Practical Center of the State Forensic Examination Committee of the Republic of Belarus |
| 771 | 32016 | Enhanced Sorption of Per- and Polyfluoroalkyl Substances by Soils from Water via Cation Bridging Interaction | Hui Li Michigan State University |
| 772 | 32280 | Drivers and Consequences of Microbial-Derived Carbon Loss in Degraded Alpine Grasslands on the Qinghai-Xizang Plateau | Zhaolong Zhu College of Soil and Water Conservation Science and Engineering, Northwest A&F University |
| 773 | 33245 | Irreversible soil carbon and nitrogen loss during the thermokarst lake succession under climate change in the Tibetan Plateau | Yuanhong Deng Beijing Normal University |
| 774 | 330B04 | Effects of Long-Term Cultivation on Multi-Trophic Soil Fauna Diversity and Soil Health in Oasis Farmland | Yongzhen Wang Northwest Institute of Eco-Environment and Resources, Lanzhou |
| 775 | 32709 | Identifying the driving factors of soil nitrate nitrogen via MLs-GIS framework in an intensive plain agricultural area, China | Jianwei Liu Henan Agricultural University |
| 776 | 319B26 | From Sedimentation to Laser Diffraction: A New Particle Size Distribution Classification Based on Soil Mechanical Properties | Fomin Dmitriy V.V. Dokuchaev soil Science Institute |
| 777 | 31685 | Investigating the Dry Color Requirement for Mollic and Umbric Horizons | William B. Hernández Virginia Polytechnic Institute and State University |
| 778 | 35289 | Heavy Metal Contamination and associated ecological risks in Soils around Buddha Nullah drain, Punjab, India | Rishabh Pawar Ph.D. Student, Department of Soil Science, Punjab Agricultural University, Ludhiana 141004, India |

