**Session Proposal**

# Session Title

Soil mineralogy: current state and perspectives

# Session Organizers

**Sofia N. Lessovaia**, St.-Petersburg State University (SPSU), Russia, s.lesovaya@spbu.ru, primary contact person

**Edson Campanhola Bortoluzzi**, the University of Passo Fundo (UPF), Brazil, edsonb@upf.br

# Session Description

The session is aimed to demonstrate the current state and potential perspectives of soil mineralogy and its’ connections with other scientific branches. This is a key point to better understanding the soil properties as well as soil reactions to current challenges. Soil mineralogy requires in-depth knowledge of rock and mineral weathering and their fate in soil environments: (i) solid state transformations and/ or (ii) dissolving of inherited from the parent substrate minerals, and (iii) subsequent occurrence of newly formed minerals (including iron and aluminum oxides). That is achieved by using the complex of methods such as optical microscopy, X-ray diffraction and [Rietveld analysis](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/rietveld-analysis%22%20%5Co%20%22Learn%20more%20about%20Rietveld%20analysis%20from%20ScienceDirect%27s%20AI-generated%20Topic%20Pages), IR and Mossbauer spectroscopes etc. The special focus of the session is given to clay minerals: their identification, vertical patterns of profile distribution, and sensitivity to weathering and pedogenesis.

# Format

Oral and poster presentations, panel discussion