9th International Symposium of Interactions of Soil Minerals with Organic Components and Microorganisms (ISMOM)

Commission 2.5 Soil Interfacial Reactions International Union of Soil Science

Key topics such as climate change mitigation, soil C sequestration, enhanced rock weathering, and modelling soil C and N dynamics are directly or indirectly controlled by the interactions of soil minerals with organic matter and microbes (ISMOM) that take place at different scales. Important, frequently used, concepts (e.g., soil C saturation, microbially-driven soil C formation, soil C-aggregate relationships) are hampered by limited understanding of the underlying mechanisms. Progress requires exploration of interfacial reactions among minerals, organic matter, and microbes in soil, not simply the study of soil C in isolation.

Following the interdisciplinary spirit of ISMOM, the ISMOM 2024 will focus on "soil structure/aggregate" as a critical physical constraint on biogeochemical processes, and on how our understanding of ISMOM and other soil processes can be applied to land management and C policy making. We also welcome various topics related to ISMOM from all types of soils and ecosystems, including aquatic sediments.

The number of participants is rather small (<200), and single sessions with ample time for poster sessions and social gatherings will ensure fruitful discussions and exchanges.

Tentative sessions are the following:

- Feedbacks between soil structure and the interaction of soil minerals, microbes, and OM (ISMOM)
- Relative importance of Fe, Al, and Ca in determining soil OM abundance and persistence
- Bio-weathering and soil OM formation
- Microbe-mineral-OM interactions & the cycling of nutrients and pollutants
- Conceptualization of ISMOM for ecosystem and earth system models
- Advanced techniques to study the interfacial reactions among microbes, minerals & OM.

Special session:

- Impact of soil organo-mineral interactions on C policy

Invited Speakers: Jon Chorover (Univ. Arizona, USA), Claire Chenu (INRAE, France), Anke Herrmann (SLU, Sweden), Sebastian Dötterl (ETH, Switzerland), Christina Kaiser (Univ. of Vienna, Austria), Heike Knicker (IG-CSIC, Spain), Alexandra Kravchenko (Michigan State Univ., USA)., Francisco J. Matus (Universidad de La Frontera, Chile) & more

Important Dates in 2024

- Feb 15: Tentative program announcement
- March 1: Call for Abstracts & pre-registration
- May 1: Abstract deadline
- June 30: Acceptance/Rejection Notification
- July 1: Registration open
- August 31: Registration deadline
- Sept 30: Final program announcement
- Oct 15-18: ISMOM symposium
- Oct 18-20: Field excursion*

**The tentative field trip plan is to visit Andisol and Paddy soil profiles, temples (Nikko World Heritage Site), mountain landscape, and a hot spring in Tochigi, Japan*

International Scientific Committee

- Deborah P. Dick (Univ. Rio Grande do Sul, Brazil)
- Mark Farrell (CISRO, Australia)
- Xiaojuan Feng (CAS – Inst. of Botany, China)
- Kate Heckman (USDA-Forest Service, USA)
- Klaus Kaiser (Martin Luther University, Germany)
- Carsten Mueller (Tech. Univ. Berlin, Germany)
- Atsushi Nakao (Kyoto Prefectural Univ., Japan)
- Naoise Nunan (CNRS/Sorbonne Université, France)
- Rota Wagai (NARO, Japan)

Local Organizing Committee

- Rota Wagai (Executive Committee Chair, NARO)
- Maki Asano (Univ. Tsukuba)
- Natsuko Hamamura (Kyushu Univ.)
- Atsushi Nakao (Kyoto Prefectural Univ.)
- Junpei Fukumasu (NARO)
- Kazumichi Fujii (FFPRI, Japan)
- Nagamitsu Maie (Kitasato Univ, Japan)
- Satoshi Mitsunobu (Ehime Univ., Japan)
- Noriko Yamaguchi (NARO, Japan)
- Yuji Yamashita (Univ. Tsukuba)

Commission 2.5. chair & co-chair ・Elke Noellemeyer (UNLPAM, Argentine) ・Pablo Cornejo (PUCV, Chile)

ISMOM 2024

contact: ISMOM2024-info@ml.affrc.go.jp **website:** coming soon