

Soil systems: Analytical methods for integrating the chemical, biophysical interface in soils

Literature meeting II

Course task: Assessment whether a soil system view is critical to own scientific work

16th of November, 9:00 – 12:00

zoom meeting: <https://slu-se.zoom.us/j/63328043059>

passcode: 880713

Soil interactions in the natural soil habitat: Technical advances

- Explain in your own words at least two micro-analytical techniques including which information can be obtained from these methods and challenges in their application(s) to soil research.
- Do you require spatial statistical analysis in your research?
- Screen through all papers proposed in the literature list (see below) and summarize one of them (your own choice).
- Do you have any specific questions regarding the papers?

Literature list

- Baveye PC, Otten W, Kravchenko A et al. 2018 Emergent Properties of Microbial Activity in Heterogeneous Soil Microenvironments : Different Research Approaches Are Slowly Converging, Yet Major Challenges Remain. *Frontier in Microbiology*, **9**, 1929.
- Kleber M, Bourg IC, Coward EK, Hansel, CM, Myneni SCB, Nunan N 2021 Dynamic interactions at the mineral-organic matter interface. *Nature Reviews*, **2**, 402 – 421.
- Shi A, Chakrawal A, Manzoni S, Fischer BMC, Nunan N, Herrmann AM 2021 Substrate spatial heterogeneity reduces soil microbial activity. *Soil Biology and Biogeochemistry*, **152**, 108068.
- Fierer N, Wood SA, Bueno de Mesquita CP 2021 How microbes can, and cannot, be used to assess soil health. *Soil Biology and Biogeochemistry*, **153**, 108111.