

## Variability of Gas Diffusion in Soils

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Soils are complex systems involving myriad processes of chemical, biological, and physical significance. Separating these might go some way to helping us understand and predict the soil system, but how do we approach this?

This talk will cover soil gas dynamics, and how the use of the inert trace gas radon-222 is being used to drive computer models of soil gas diffusion and better predict soil gas movements. Applications include non-invasive observation of diurnal and annual cycles in belowground gas concentrations, and estimations of the soil gas diffusion coefficient across soil types.

This information can inform on gas movement between soil interfaces, from any production at bedrock-level, to escape to / exchange with the atmosphere. This understanding is vital for not only human health but also for the protection of ecosystems in a world increasingly reliant on what's under our feet.