

EINLADUNG ZUM VORTRAG

am **MONTAG, 15. APRIL 2024, 18:00 UHR**

INSTITUT FÜR GEOGRAPHIE UND REGIONALFORSCHUNG

Universität Wien UZAII Josef-Holaubek-Platz 2 1090 Wien

RAUM 2A310

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COLLOIDAL P IN THE GLACIER FORE- LAND SOIL CHRONOSEQUENCE OF NEW ZEALAND'S FRANZ JOSEF GLACIER

Research Topics

Biogeochemistry, soil-water-air interfaces in natural, wetland and agricultural ecosystems,

Foci: Organic matter, elemental and colloidal fluxes in ecosystems

Carbon, nitrogen and phosphorus cycles in forest, agricultural, arid and hyper-arid ecosystems

Stable isotopes as environmental tracers

Research Career

Scientifically, I am a hobo (short bo) labouring away on elements, like carbon, nitrogen, phosphorus, less often sulfur or iron. With no fixed abode I will go where the elements take me. I started my research career in the lush green permanent grasslands of Devon (UK) figuring out how much of the 'apparent' huge amounts of cow dung carbon gets sequestered into the soils. Based on my ^{13}C natural abundance approach, not that much only 10%. I then drifted into nitrogen (N) as I was interested to quantify the importance of the excretal-N on N_2O emission from permanent grasslands, using in the early 2000s quite novel isotopomers (now called isotopocules) analysis. We confirmed significant critical enhanced N_2O contribution from animal derived excretal N. After 2012 I vagabonded into the spruce forest of Eifel. There, its soil and stream phosphorus (P) dynamics after a major catchment clear-cut grabbed me, not only to look at in its bulk soil or dissolved P forms, but also the colloidal matter. Another eye opener, with significant proportion of the 'operationally' defined dissolved (<450 nm) stream water P leaving the catchment, not as truly dissolved but in a colloidal form. Once you look at one element you also see its multiple links to others, e.g. soil P for these are C and N, but also Fe, Al and Si. By looking to through the different elemental 'colored specs' perspectives at various times and different places in my research I hope I that I can gain wider sight and insight, and are more able understand the complex elemental soil ecosystems dynamics for what they are. I remain positively hopeful.

Organisiert von

Arbeitsgruppe *Geomorphologische Systeme und Risikoforschung*,

Arbeitsgruppe *Geoökologie*

Institut für Geographie und Regionalforschung

Universität Wien