

UNIV-PROF. DR. ARNAUD TEMME (INNSBRUCK)

Soil-landscape evolution models: useful for the study of mountain landscapes?

#mountains #geomorphology #soil-landscape modelling

When we think about the dynamics of mountain landscapes, we probably consider multiple mechanisms acting at multiple spatial and temporal scales. Such mechanisms of change can be physical, chemical or biological. We are often able to quantify them in the present by direct measurement, or infer their past activity with some reasonable assumptions. But it gets more complicated when we need to make predictions, when we want to understand interactions between mechanisms, or when we want to explore dynamics over longer timescales. Geomorphic mechanistic models are intended to meet these challenges, and I will explore whether they currently achieve their purpose, and whether soil-oriented versions of such models are valuable.

Arnaud Temme (born 1978) is a physical geographer at the University of Innsbruck, whose main research interest is where geomorphology and soil science intersect: in joint soil-landscape development. His expertise is in connecting a multitude of empirical findings about (mountainous) study areas together to inform, run, and evaluate soil-landscape evolution models. He also develops such models, most importantly his soil-landscape model LORICA.

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