## What Do We Really Know About The Space-Time Continuum Of Soil-Landscapes? (S05-grunwald092911-Oral)

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#### Abstract:

Our tools to collect soil data have not changed in the same pace as (geo) statistical techniques and geographic information technologies used to analyze and represent soil-landscape data. Though soil scientists are driven to demystify soil genesis we are still struggling to develop pedodynamic simulation models to describe the space-time distribution of soil-landscape properties and hydrologic and pedogeomorphologic processes. Soil-landscape modeling approaches differ widely from traditional soil classification according to U.S. Soil Taxonomy, to predictive modeling using multiple regression models, fuzzy logic models, and neural networks, to geostatistical methods. Despite all advancements in soil-landscape analyses we are still in need of high-density soil datasets and subsurface sensors to help improve our understanding of the space-time continuum of soil-landscapes.

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