Deriving Multi-scale Terrain Signatures for Soil-landscape Models. (S05-slater154107-Poster)

Authors:

- B.K.Slater - *The Ohio State University*
- E.R.Venteris - *The Ohio State University*
- F.G.Calhoun - *The Ohio State University*
- S.A.Fineran - *The Ohio State University*

Abstract:

Digital elevation data is widely available and tools for derivation of terrain attributes are now readily applied within GIS. Inexpensive software tools now ensure that many useful depictions of terrain features including slope curvatures, landscape position, water flow pathways, water accumulation potential, and solar radiation receipt can be easily derived. The utility of soil-landscape models constructed by correlation of terrain signatures with soil attribute data and other environmental properties was investigated at a variety of scales in Ohio. High resolution (2m) DEMs were developed for landscape modeling of soil attributes (Coshocton, Ohio) and environmental change (Mentor, Ohio). Standard DEM data available from the USGS was appropriate for county scale models. Recently released seamless digital elevation data from the Shuttle Radar Topography Mission provides a basis for developing regional terrain-based soil-landscape models.

Corresponding Author Information:

Brian Slater
The Ohio State University
2021 Coffey Road
Columbus, OH 43210

phone: 614-292-5891
fax: 614-292-7432
e-mail: slater.39@osu.edu

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