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Zach is a graduate research assistant with Oak Ridge National Laboratory and University of Tennessee. Zach is getting his Ph.D. in energy science and engineering. Currently, Zach is applying multivariate data mining methodologies for landscape characterization, yielding useful metrics for indicating the representativeness of sites, measurements, and model parameters.

Zach received his M.Sc. degree in civil engineering from The Pennsylvania State University having a focus on environmental remote sensing. Zach's research studied soil moisture dynamics in the McMurdo Dry Valleys, Antarctica using high-resolution satellite images. The resulting datasets provided information for the McMurdo Dry Valleys Long-Term Ecological Research Program, an interdisciplinary study of the aquatic and terrestrial ecosystems in an ice-free region of Antarctica.

Publications:

Langford, Zachary L., Michael Gooseff, and Derrick Lampkin (2015). Spatiotemporal dynamics of wetted soils across a polar desert landscape. *Antarctic Science*, 27, pp. 197-209, doi:10.1017/S0954102014000601.