

The Pedology Lab at South Dakota State University has openings for 2 fully funded Masters level graduate students starting in May-August 2020. The successful applicants will conduct research related to soil management and mapping in South Dakota. Potential research topics include: **(i)** effects of mineralogy on salinity and erodibility soil management issues in SD, **(ii)** soil property mapping through drone mounted hyperspectral imagery, and **(iii)** predicting the effects of climate change on soil properties and management. We seek individuals interested in discovering new ways that the distribution and genesis of soil properties can improve soil and resource management.

The successful candidates will be based in Brookings, SD but will be required to do fieldwork across various parts of South Dakota. Candidates can expect to work with both collaborators from SDSU and local land managers. Additionally, the successful candidates should expect to co-produce peer-reviewed publications of the work and present their results at national and international conferences. The projects include tuition waivers, stipends, and funds to support research and travel expenses.

Required qualifications:

- Degree in Soil Science, Geology, GIS, Physical Geography, Earth Science, Agronomy or related discipline with a strong understanding of soil landscape relationships.
- Experience with ArcGIS or comparable open source software.
- Knowledge of remote sensing.
- Demonstrated ability to work in a team environment.
- Excellent command of spoken and written English.
- A valid US driver's license or the ability to obtain one.

Desired Qualifications:

- Familiarity with soil survey and soil geographic databases (SSURGO).
- Experience using R
- Familiarity with geospatial and multivariate statistics.
- Advanced GIS experience
- Experience collecting data using UAV's.

Interested candidates should submit the following to Dr. Kris Osterloh at [Kristopher.Osterloh@sdsu.edu](mailto:Kristopher.Osterloh@sdsu.edu). Feel free to contact me with any questions prior to applying.

- A cover letter describing your topic(s) of interests, your motivation for pursuing a graduate degree, and any pertinent experiences you have.
- CV with 3 professional references
- Unofficial transcripts