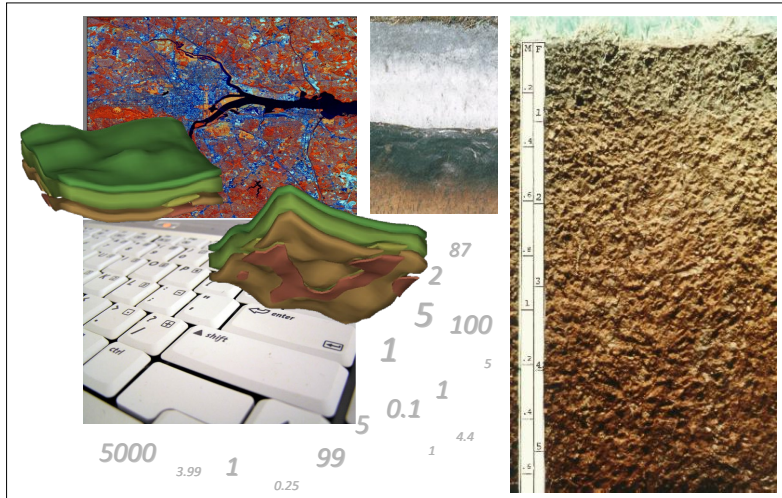


Soil and Water Sciences (SWS) – University of Florida – Award “Quantitative Environmental Soil Science / Pedometrics”

Award is Denoted: Award Certificate and Award of \$250



This award is given annually to an outstanding candidate, a graduate student in the Soil and Water Sciences Department (SWSD) UF; or student enrolled in the graduate program in the School of Natural Resources and Environment (SNRE) w/ Major Advisor or Co-Advisor in SWS) in recognition of cutting-edge research in Quantitative Environmental Soil Science / Pedometrics. We invite research

applications focused on: (i) the development and application of new quantitative methods, specifically in Artificial Intelligence, AI (machine learning (ML) and deep learning (DL) artificial neural network algorithms) applied to soils and the environment, (ii) mechanistic simulation modeling of soils, (iii) fusion of disparate soil-environmental data to derive new conclusions (synthesis analysis, meta-analysis), (iv) BIGDATA analysis using massive geospatial datasets, (v) soil spectroscopy (proximal soil sensing) and chemometrics, (vi) up- and downscaling of soil-environmental properties and ecosystem processes (local, regional, global scale), and (vii) digital soil: advanced modeling of soils across large soil-landscape (pedometrics and digital soil mapping).

The award is open to graduate students in SWSD or SNRE, UF. Self-nominations and nominations by faculty members are invited. The Award in “Quantitative Environmental Soil Science / Pedometrics” is awarded based upon submission of:

- Contact address of candidate (incl. email and phone)
- Curriculum vitae of candidate
- Essay of the candidate outlining research accomplishments in quantitative environmental-soil science, pedometrics, and/or digital soil mapping (limited to max. of 1 page)
- Two letters of nomination/recommendation (e.g., Major Advisor, faculty advisors)
- Provide pdfs of peer-reviewed published journal articles, book chapters relevant to this award; if available provide a pdf of the completed dissertation.

Each candidate will be judged on the following criteria:

- *Innovation* to apply quantitative methods (statistical, geostatistical, geospatial, temporal, or spatio-temporal modeling techniques) in soil-environmental sciences

- *Novelty* of research to investigate a soil-environmental problem of high priority
- *Cutting edge modeling* using Artificial Intelligence (machine learning and deep learning algorithms)
- *Application* of digital methods including GIS, remote sensing, proximal soil sensing, remote sensing; and/or development of new quantitative methods
- *Complexity and difficulty level* of applied methods
- *Clarity* of documentation of research
- *Quantification of* uncertainty and quality to assess/predict soil-environmental properties; ecosystem processes, functions, and/or services
- *Interpretation* of results and novel conclusions.

Sponsor: Pedometrics, Landscape Analysis and GIS Laboratory, SWSD, UF; Dr. Sabine Grunwald

Nomination submission deadline: October 1, 2021.

Award funds: \$250 award.