

Physics Seminar

Wednesday, January 15, 4:30 pm
Science & Engineering Building Auditorium

Brian E. Rood

Department of International and Global Studies
Mercer University

Techniques and Strategies in Paleoreconstructions of Lake Sediment and Wetland Soils

Lake sediment and wetland soils accumulate over time. In sedentary conditions, these materials may reflect the chronology of deposition such that surficial sediment is “younger” and deep sediment is “older”. Various experimental techniques permit aquatic researchers to reconstruct the history of sediment deposition and to characterize temporal changes of a variety of parameters. For example, a paleoecologist may perform a stratigraphic inventory of pollen spores to reconstruct long term changes in aquatic and terrestrial plant community structure. A geochronologist could examine temporal changes in sand, silt, and clay horizons to speculate about climate change or catastrophic weather events. An environmental scientist might measure concentrations of chemical contaminants, like mercury or DDT, to surmise the impact of local, regional, and/or global human activities on environmental quality. Three case studies will be presented to show various sediment dating techniques that employ radionuclide assays and to reveal the wealth of information that can be derived from mud!

*Please join us for light refreshments
at 4:15pm outside SEB 203.*