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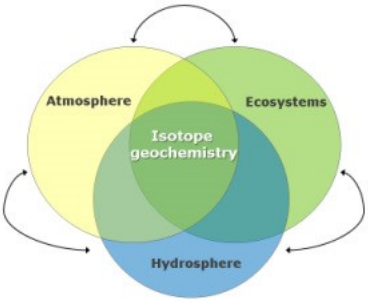
SEMINAR SERIES

Exploring AIR-WATER-ECOSYSTEM interactions of reactive nitrogen using stable isotope geochemistry



Nitrogen (N) distributions in the Earth's atmospheric, terrestrial and aquatic systems are tightly coupled with human activities. Although N is an essential building block of life, in excess nitrogen is a major factor in the degradation of air and water quality with important implications for ecosystem and human health. This presentation will demonstrate the utility of using stable isotope N biogeochemistry to address key challenges at the heart of the water-ecosystem-society nexus. I will describe several examples of our work that examine the coupled relationships between human activities on N distributions and dynamics in urban, forested, and agricultural systems. Together, this body of work ultimately aims to determine how best to manage inputs of N to protect ecosystem and human health, water and air quality.

Emily M. Elliott, Ph.D.
Department of Geology & Environmental Science
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Dr. Emily M. Elliott is an Associate Professor in the Department of Geology and Environmental Science at the University of Pittsburgh. Her research program examines the tight coupling between human activities and reactive nitrogen distributions in atmosphere, terrestrial and aquatic systems at multiple spatial scales using stable isotope geochemistry. In 2013 she was awarded an NSF CAREER grant for her research examining nitrogen dynamics of urban hydrological systems. She directs operations of the *Regional Stable Isotope Laboratory for Earth and Environmental Science Research.* Dr. Elliott also led an NSF-funded effort to engage unrepresented teens in Earth science issues and to improve public literacy regarding the nexus of energy-environment-society issues. Prior to joining the University of Pittsburgh in 2007, she was a Postdoctoral Researcher with the U.S. Geological Survey, Water Resources Division. She earned her M.S. and Ph.D. in the Department of Geography and Environmental Engineering at Johns Hopkins University in Baltimore, MD and her B.A. in Environmental Science at the University of Virginia in Charlottesville, VA. She is past Chair of the National Atmospheric Deposition Program and a *Science Ambassador* for the National Academies of Science and Engineering Science Ambassador Program.

Monday

April 17, 2017
10:30am– 11:30am

Location:

COB I, Rm. 322

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