

## Ph.D. Opportunity in Understanding Biogeochemical Mechanisms of Soil Nitrous Oxide Emissions

**Degree Opportunity:** One funded Ph.D. position is available in the Biosystems Engineering & Soil Science (BESS) Department at the University of Tennessee, Knoxville

**Timelines:** Preferred start date of August 1, 2021. Positions will remain open until filled.

**Project Leads:** Dr. Debasish Saha, Assistant Professor in BESS; Dr. Sean Schaeffer, Associate Professor in BESS; Dr. Sindhu Jagadamma, Assistant Professor in BESS; Dr. Hao Gan, Assistant Professor in BESS; and Dr. Anthony Faiia, UTK Stable Isotope Facility.

**Project Description:** We are seeking a graduate student to use N isotopes and molecular methods in understanding biogeochemical mechanisms of soil nitrous oxide (N<sub>2</sub>O) emissions in response to long-term conservation practices (no-tillage and cover cropping)

**Position Requirements:** Ideal candidates should have:

- An MS degree in soil science, ecology, environmental science, agronomy, or related fields with experience in biogeochemical understanding of coupled soil carbon-nitrogen-water cycling and soil greenhouse gas (GHG) emissions and their environmental and management controls
- Experience in both field measurements and laboratory incubation studies on soil GHG fluxes
- Frequent travel to the experimental site (Jackson in west TN) to collect soil and gas samples during the peak emission periods as dictated by management and environmental conditions
- An ability to work independently to undertake hypothesis-driven research as well as working in a diverse team environment
- A valid (non-probationary) US drivers' license

**Desirable Skills:**

- Experience in quantifying abundance of keystone N cycling genes
- Experience in working with N<sup>15</sup> isotope in studying soil N cycling/N<sub>2</sub>O emissions
- Excellent verbal and writing skills
- Strong background in statistical analysis using R or SAS

**How to Apply:** Interested candidates should send a copy of transcripts, CV, and a statement of research experience and interests (1-2 pages), with the contact information of three references to **Dr. Debasish Saha** ([dsaha3@utk.edu](mailto:dsaha3@utk.edu)), Assistant Professor, Biosystems Engineering & Soil Science, University of Tennessee.