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**A. Education/Training**

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| INSTITUTION AND LOCATION | DEGREE | YEAR(s) | FIELD OF STUDY |
| Pennsylvania State University | Ph.D. | 2015 | Soil Science and Biogeochemistry |
| Punjab Agricultural University, India | M.S. | 2010 | Soil Science |
| Bidhan Chandra Krishi Viswavidyalaya, India | B.S. | 2008 | Agriculture |

**B. Research and Professional Experience**

2020 – present Assistant Professor (tenure track), Biosystems Engineering and Soil Science, University of Tennessee

2018 – 2019 Research Associate, Kellogg Biological Station, Michigan State University

2015 – 2018 Post-doctoral Researcher, Pennsylvania State University

2011 – 2015 Graduate Research Assistant, Pennsylvania State University

2008 – 2010 Junior research fellow of Indian Council of Agricultural Research (ICAR) at Punjab Agricultural University, India

**C. Synergistic Activities**

* *Professional Service and Activities*: Panels and committees: Panel reviewer for NSF (Chemical, Bioengineering, Environmental and Transport Systems to be held in March 2021) and USDA NIFA (2022); Chair Soil Carbon and Greenhouse Gas Community of American Society of Agronomy, 2022; Associate Editor of Soil Science Society of America Journal (2022-present).
* *Research Mentoring:* At the U. of Tennessee, I am mentoring one postdoc and four Ph.D. student. I am serving in two dissertation and two thesis committees.

LIST OF PUBLICATIONS

Panday, D., **Saha, D.,** Lee, J., Jagadamma, S., Adotey, N., Mengistu, A. 2022. Cover crop residue influence on soil N2O and CO2 emissions under wetting-drying intensities: an incubation study. European Journal of Soil Science, https://doi.org/10.1111/ejss.13309

Dhaliwal, J. K., Panday, D., **Saha, D.,** Lee, J., Jagadamma, S., Schaeffer, S., Mengistu, A. 2022. Predicting and interpreting cotton yield and its determinants under long-term conservation management practices using machine learning. Computers and Electronics in Agriculture, 199, 107107. doi.org/10.1016/j.compag.2022.107107

Patra, R., **Saha, D.,** Jagadamma, S. 2022. Winter wheat cover crop increased subsoil organic carbon in a long-term cotton cropping system. Soil and Tillage Research, 224, 105521. https://doi.org/10.1016/j.still.2022.105521

**Saha, D.,** Basso, B., and Robertson, G. P. 2021. Machine learning reveals simplified path for predicting N2O fluxes from agriculture. *Environmental Research Letters,* 16, 024004. doi.org/10.1088/1748-9326/abd2f3

**Saha, D.,** Kaye, J. P., Bhowmik, A., Bruns, M. A., Wallace, J., and Kemanian, A. R. 2021. Organic fertility inputs synergistically increase denitrification-derived nitrous oxide emissions in agroecosystems. *Ecological Applications*, e02403. doi.org/10.1002/eap.2403

Littrell, J., Xu, S., Omondi, E., **Saha, D.,** Lee, J., Jagadamma, S. 2021. Long-term organic management combined with conservation tillage enhanced soil organic carbon accumulation and aggregation. *Soil Science Society of America Journal* (Accepted).  https://doi.org/10.1002/saj2.20259.

Morris, A.H., Isbell, S.A., Kaye, J.P., and **Saha, D.** 2021. Mitigating nitrogen pollution with under-sown legume-grass cover crop mixtures in winter cereals. *Journal of Environmental Quality*, 50, 324-335. doi.org/10.1002/jeq2.20193

Berardi, D., Brzostek, E., Blanc-Betes, E., Davidson, B., DeLucia, E. H., Hartman, M. D., Kent, J., Parton, W., **Saha, D.,** and Hudiburg, T. W. 2020. 21st century biogeochemical modeling: Challenges for Century-based models and where do we go from here? *Global Change Biology Bioenergy*, 12, 774-788. https://doi.org/10.1111/gcbb.12730.

McDaniel, M.D., **Saha, D.,** Dumont, M.G., Hernández, M., Adams, M.A. 2019. The effect of land-use change on soil CH4 and N2O fluxes: a meta-analysis. *Ecosystems*, 22, 1424-1443. https://doi.org/10.1007/s10021-019-00347-z.

Rau, B. M., Adler, P. R., Dell, C., **Saha, D.,** and Kemanian, A. R. 2019. Herbaceous perennial biomass production on marginal soils: influence on N2O emissions and shallow groundwater. *Biomass & Bioenergy*, 122, 90-98.

Bhowmik, A., Kukal, S. S., **Saha, D.,** Sharma, H., Kalia, A., Sharma, S., 2019. Potential Indicators of Soil Health Degradation in Different Land Use-Based Ecosystems in the Shiwaliks of Northwestern India. *Sustainability*, 11, 1-17.

**Saha, D.,** Kemanian, A. R., Montes, F., Gall, H., Rau, B. M., and Adler, P. R. 2018. Lorenz curve and Gini coefficient reveal hot spots and hot moments for nitrous oxide emissions. *Journal of Geophysical Research: Biogeochemistry,* 123,193-206. doi: 10.1002/2017JG004041

**Saha, D.,** Kemanian, A. R., Rau, B. M., Adler, P. R., and Montes, F. 2017. Designing efficient nitrous oxide sampling strategies in agroecosystems using simulation models. *Atmospheric Environment,* 155, 189-198.

**Saha, D.,** Rau, B. M., Kaye, J. P., Montes, F., Adler, P. R., and Kemanian, A. R. 2016. Landscape control of nitrous oxide emissions during the transition from conservation reserve program to perennial grasses for bioenergy. *Global Change Biology Bioenergy,* 9, 783-795, doi:10.1111/gcbb.12395. \*Cover of the *GCB Bioenergy* issue 9.4.

Kukal, S. S., **Saha, D.,** Sharma, P., and Sharma, B. D. 2016. Profile distribution of carbon fractions under long-term rice-wheat and maize-wheat production in Alfisols and Inceptisols of northwest India. *Land Degradation and Development,* 27, 1205-1214. doi: 10.1002/ldr.2299.

**Saha, D.,** and Kukal, S. S. 2015. Soil structural stability and water retention characteristics under different land uses of degraded lower Himalayas of North-West India. *Land Degradation and Development*, 26, 263-271. doi: 10.1002/ldr.2204.

**Saha, D.,** Kukal S. S., and Bawa, S. S. 2014. Soil organic carbon stock and fractions in relation to land use and soil depth in the degraded Shiwaliks hills of lower Himalayas. *Land Degradation and Development,* 25, 407-416, doi: 10.1002/ldr.2151.

Mriganka De., **Saha, D.,** and Chakraborty, S. 2014. Soil structure and strength characteristics in relation to slope segments in a degraded Typic Ustochrepts of North-West India. *Soil Horizons,* doi:10.2136/sh13-09-0022.

Kukal S. S., **Saha, D.,** Bhowmik, A., and Dubey, R. K. 2012. Water retention characteristics of soil bio-amendments used as growing media in pot culture. *Journal of Applied Horticulture,* 14, 92-97.

**Saha, D.,** Kukal, S. S., and Sharma, S. 2011. Land use impacts on SOC fractions and aggregate stability in Typic Ustochrepts of Northwest India. *Plant and Soil,* 339, 457-470.