PURDUE UNIVERSITY | Environmental and Ecological Engineering

# Special EEE Research Seminar

**Date: October 15, 2020 at 2:30 P.M.**
**LOCATION: via Zoom** (full zoom invite at end of announcement)

https://purdue-edu.zoom.us/j/98988715089?pwd=ZEVqZWxuQWJtNUpQQVFnYmlOQVBsZz09

**Shakira R. Hobbs, PhD**
**Assistant Professor of Civil Engineering**
**University of Kentucky**

**Engineering for Sustainability and Enhanced Technology Integration with Anthropogenic Waste**

Organic waste streams often include plant-based plastics (bioplastics) and food waste that emit copious amounts of carbon dioxide and methane, an important energy source, when sent to traditional landfills. Demands for bioplastics in food packaging are increasing as interest in zero-waste products expands and societal concerns about climate change continue to grow. In addition, Glyphosate (N-phosphonomethyl glycine), a globally used herbicide, was previously believed to have minimal effects on human health and the environment. However, it is now known that high concentrations of glyphosate and its main metabolite, aminomethylphosphonic acid (AMPA), can be transported to surface water and in some cases drinking water. As global agricultural demand grows, it is becoming increasingly imperative to understand and manage the fate and transport of glyphosate in order to maintain food security without compromising human and environmental health. Food, energy, and water are stressed systems and interdisciplinary approaches are needed to develop solutions that meet current demands without disrupting ecosystem services for the future. This seminar will also explore fundamental research in environmental engineering, experimentation of water and energy systems, environmental analysis, and implementation of sustainable treatment technology at the food-energy-water nexus. In addition, Dr. Hobbs will focus on humanitarian engineering work in Belize.

## Bio

Dr. Shakira Hobbs' scholarship explores system approaches to environmental engineering, international development, and life cycle thinking applied to the food, energy, and water nexus. Dr. Hobbs is the founder of BioGals, an international non-profit corporation that empowers womxn of color to create sustainable solutions. Dr. Hobbs is currently an Assistant Professor in the Department of Civil Engineering at the University of Kentucky. She earned her B.S. degree from University of Maryland, College Park, M.S. from Arizona State University, Ph.D. from Clemson University in Civil Engineering (advised by Dr. Amy E. Landis), and was a postdoctoral scholar at University of Virginia. Dr. Hobbs is dedicated to disseminating engineering, sustainability concepts to the public, and creating diverse collaborations that investigate holistic management techniques to wicked problems.

Join Zoom Meeting

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