**Environmental Engineering**

**and Earth Sciences**



**EEES Department Seminar**

“Biomanufacturing for Food, Feed, Fuel, and Material”

Presented By

**Dr. Yi Zheng**

Environmental Engineering and Earth Sciences

Clemson University

Biomanufacturing is a type of advanced manufacturing technology that utilizes biological systems (i.e., cell factories) to produce commercially important intermediates and platform chemicals for use in food, feed, fuels, materials, pharmaceuticals, and other industrial applications. Compared to conventional manufacturing processes (CMP), biomanufacturing has less dependence on fossil energy and environmental impact while it could be used under extreme environmental conditions where CMP is difficult and even impossible. Dr. Yi Zheng has dedicated his research effort in the research and development of cost-efficient biomanufacturing technologies and processes to produce food, feed, fuels, and materials. In his presentation, Dr. Zheng will introduce his research projects on: (1) Lignin valorization; (2) Bio-upgrading of rendering byproducts; (3) Biocementation to produce construction materials and nutrients for space exploration; (4) Microbial extracellular polymeric compounds for pharmaceuticals; and (5) Stimuli-responsive polymer for cell harvesting and intracellular product recovery.

**About Dr. Zheng:**

Dr. Zheng is an Assistant Professor in the Department of Environmental Engineering and Earth Sciences (EEES) at Clemson University. Dr. Zheng achieved his PhD degree in Biosystems Engineering in the Department of Biological and Agricultural Engineering at University of California, Davis (UCDavis). After that, he did postdoc research at UCDavis and Ohio State University. He had been working for Novozymes Inc. in Denmark for two years before he joined in EEES at Clemson. Dr. Zheng is interested in the development of advanced biotechnologies and bioprocesses for converting biomass into renewable biofuels and bio-based products while protecting the environment and conserving our natural resources. His current research is focused on biomanufacturing for food, feed, fuels and materials from natural resources.

**2:30 PM**

 Friday, November 17, 2017 Brackett 100

 **Refreshments following Seminar**