

Water Insights Seminar Series 2019



PennState

Hosted by: Environment and Natural Resources Institute
College of Agricultural Sciences



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Meng Wang

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Environmental Systems
Engineering**

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Department of Energy and
Mineral Engineering**

Intensification of Wastewater Treatment for Nutrient Removal and Resource Recovery

Abstract:

Management of the N cycle has been identified as one of the Grand Challenges in the 21st century by the National Academy of Engineering, highlighting needs for further research using integrated management approaches. In a wastewater treatment plant, aeration accounts for about 40-60% of energy consumption for organic C and N removal. Innovative technologies are necessary to reduce the energy consumption in wastewater treatment and recover resources from waste streams.

Dr. Meng Wang will discuss her research on the nutrient management strategies and anaerobic digestion processes in the context of municipal and agricultural wastewater managements. In particular, she will discuss the synergistic effects of the algae and bacteria for the resource recovery from high ammonium strength wastewater. Furthermore, she will talk about the hybrid ion exchange and biological processes utilizing natural zeolite minerals to improve the system stability and regulate the intracellular contents of the biomass for different applications.

Spring 2019 Series Schedule

**All talks will be held at 12:00 p.m.
312 Ag Engineering Building**

ZOOM Link:

<https://psu.zoom.us/j/529222320>

Tuesday, April 23 - Larry Fennessey

An Overview of Penn State's Stormwater Facilities, Permits, and Water Resource Data Collection and Management Efforts

**A link to the seminar recording can be made available upon request after the event for those who cannot tune into the seminars on the actual day of the event.*

Please stay tuned for future seminar topics this Fall (same time & same place)!