

CIVIL AND ENVIRONMENTAL ENGINEERING DISTINGUISHED DEPARTMENT SEMINAR



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Date: Thursday, September 24th, 2026

Time: 10:00am - 11:00am EST

Location: In person, Bingham Building, Vose #138

Zoom Link: [Here](#)

Microplastics: Environmental distribution and health implication

Abstract:

Plastic pollution is one of the global environmental problems due to its large amount of annual production, low rate of recycling, and persistence. Disposed plastic products break down to microplastics (<5 mm) and nanoplastics (< 1 m) with weathering (or aging) over time. Microplastics (MPs) and nanoplastics (NPs) are a class of emerging contaminants, and they are widely distributed in all environmental media (including soil and water), foods, and organisms. The presence of MPs and NPs affects soil property and plant growth, and they can be taken up by crops to enter food chains, posing risks to ecosystems and human health. In this talk, the occurrence, process, toxicity, and risk of MPs and NPs will be discussed. In addition, the effect of MPs and NPs on elemental cycles (e.g., Hg) and crop yield will be presented.

Bio:

Baoshan Xing is University Distinguished Professor (Environmental & Soil Chemistry) and Director of Stockbridge School of Agriculture at University of Massachusetts Amherst. His current research includes agricultural application of engineered nanomaterials, environmental processes and analysis of microplastics and nanoplastics, use of biochar for soil improvement and remediation, and food safety. He is a “Most Cited Scientist” since 2014, indicating the impact and significance of his research. His h-index is currently at 173 and the total citation on his work is over 126,000 (Google Scholar). His research program is recognized nationally and internationally.

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