Environmental Engineering & Sciences

Department of Civil and Environmental Engineering
CEE 595AG Seminar

Friday, November 10, 2023 | 10:00 – 10:50 a.m. CST | 2311 Yeh Center

Emerging Agricultural Biotechnology: Opportunities and Challenges for Environmental Systems

Currently, synthetic biology is revolutionizing sectors including agriculture through the rapid development and adoption of emerging biotechnology products. In this seminar, Dr. Parker will share how her group is addressing critical environmental challenges resulting from the adoption of emerging synthetic biology products in agriculture. Firstly, she will present her research on the environmental transport and degradation of novel double-stranded RNA (dsRNA) biopesticides. Secondly, she will discuss her group's recent work investigating the transport and reactions of potent herbicides applied on new herbicide-tolerant GM crops in the agro-environmental system. Finally, she will present her perspectives on what environmental chemists and engineers are able to contribute to ongoing conversations surrounding risk assessment of emerging synthetic biology in agriculture and other sectors.

Kimberly Parker
Assistant Professor
Washington University in St. Louis
Energy, Environmental & Chemical Engineering

Education
- PhD, Stanford University, 2016
- MS, Yale University, 2013
- BS, University of Illinois at Urbana-Champaign, 2011

Biography
Professor Parker earned her PhD at Stanford University, where she was supported by the Abel Wolman Fellowship (American Water Works Association), the Gerald J. Lieberman Fellowship (from Stanford for excellence in teaching), and the National Science Foundation Graduate Research Fellowship. She was then awarded a Marie Curie Individual Fellowship (European Commission) to conduct research at ETH Zurich (Switzerland) prior to joining the faculty at Washington University.

Her research has been recognized with honors including the Best Science Paper of the Year published in Environmental Science & Technology (2016), the Paul V. Roberts/AEESP Outstanding Doctoral Dissertation Award (2017), and an NSF CAREER Award (2021).