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UF/IFAS AI AND DATA SCIENCE SEMINAR SERIES

WEDNESDAY, FEBRUARY 4, 2026
12:00P.M. - 01:00P.M.

ZOOM:
https://go.ufl.edu/yb2zhl0

AI-Enabled Robotics for Precision Agriculture: From Perception to Field Deployment

DR. LIRONG XIANG

Advances in artificial intelligence and robotics are creating new opportunities to transform precision agriculture by enabling more timely, accurate, and scalable crop monitoring and intervention. In this talk, Dr. Lirong Xiang will present research from the Automation and Robotics Lab that integrates AI-driven perception with field-deployable robotic systems to address key challenges in crop production and plant health management. The talk will also discuss how digital twins and domain-aware AI can bridge the gap between laboratory innovation and reliable on-farm deployment, with broader implications for sustainable and resilient agriculture. By enabling early and accurate detection of diseases and weeds, as well as targeted, data-driven interventions, Xiang's research supports improved crop yields, reduced labor and input costs, and increased resilience of agricultural production systems.

BIO

Dr. Lirong Xiang is an Assistant Professor in the Department of Biological and Environmental Engineering at Cornell University. She was previously an Assistant Professor in the Department of Biological and Agricultural Engineering at NC State University, with affiliations in the Department of Electrical and Computer Engineering and the NC Plant Sciences Initiative. Dr. Xiang received her Ph.D. in Agricultural and Biosystems Engineering from Iowa State University and her B.S. in Biosystems Engineering from Zhejiang University. She currently serves as a guest editor for Computers and Electronics in Agriculture, as an associate editor for the Journal of the ASABE, and as an associate editor for The Plant Phenome Journal. Dr. Xiang's research interests include robotics, computer vision, and machine learning, with a focus on developing innovative and sustainable solutions for crop production, plant health monitoring, and agricultural system optimization.

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