

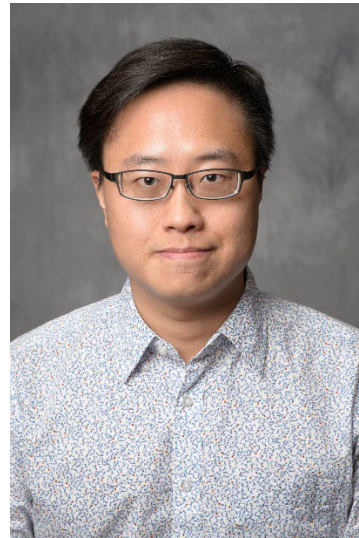
EEE Research Seminar

Date: March 8, 2022 at 10:30 AM

Location: POTR 234 (Fu Room)

Jen-Yi Huang

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Courtesy appointment in Environmental &
Ecological Engineering
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Achieving Sustainable Food Systems from Farm to Fork

Abstract

As we move toward the year 2050, the challenge will be how to feed the projected 9.7 billion global population with an estimated increase in food demand by 70%. Although various efforts are being made worldwide to strengthen food security, their environmental consequences and potential tradeoffs need to be holistically evaluated to ensure food system sustainability. This seminar will summarize several life cycle assessment studies on different approaches to addressing the challenges of food security and sustainability: (1) intensifying food production, (2) reducing food losses, and (3) providing nutritious food. First, the environmental performance of different types of indoor farming operations will be compared, covering recirculating aquaculture systems, hydroponics and aquaponics. Second, the environmental feasibility of applying nanocomposite packaging as emerging preservation technologies for food waste reduction will be assessed. Third, different recommended healthy eating patterns will be analyzed for identification of environmentally sustainable and nutritionally adequate diets. This seminar will provide a systems level perspective of different food supply chains, which is important to develop integrated and trans-disciplinary solutions for sustainable development.

Bio

Dr. Jen-Yi Huang is an Associate Professor of Food Science with a courtesy appointment in Environmental and Ecological Engineering. He holds bachelor's and master's degrees from National Taiwan University. He received his doctorate from the University of Cambridge, and research fellowship from National University of Singapore. Dr. Huang's research focuses on assessing the environmental sustainability of food and agriculture systems through life cycle approaches, aiming to ensure food, energy and water security for an ever-growing population. He is also specialized in sustainable food processing, including micro-nano bubbles, nonthermal plasma and electro-membrane technologies.