

EEE Research Seminar

Date: November 29, 2022 at 10:30 AM

Location via Zoom: <https://purdue-edu.zoom.us/j/96037188220?pwd=SDJ5eE5YcjdzTFp2QUhoTDUvbkxNdzo9>

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Infrastructure Systems: Complexity, Lock-in, & Resilience

Abstract

Infrastructure systems have legacies that continue to define their priorities, goals, flexibility, and ability to make sense of their environments. These legacies may or may not align with future needs and growing complexity, but – regardless of alignment – they restrict solution spaces. Lock-in can loosely be referred to as the constraints on these systems and their normative behaviors. By identifying domains of lock-in, recognizing the barriers they present, and assessing potential strategies to unlock infrastructure systems, managers can critically reflect and create roadmaps toward more resilient futures.

Bio

Dr. Alysha Helmrich (she/her) is an Assistant Professor in Environmental, Civil, Agricultural, and Mechanical Engineering at the University of Georgia. She labels herself as an 'urban systems engineer' with a BS and MS in Environmental and Ecological Engineering from Purdue University and a PhD in Civil, Environmental, and Sustainable Engineering from Arizona State University. Her research is focused on urban resilience and navigating periods of stability and instability. She has expertise in infrastructure systems, systems-thinking (specifically, complexity and social-ecological-technological systems (SETS) perspectives), and decision-making under uncertainty. Alysha is the lead coordinator and a co-host of the Future Cities Podcast, a podcast that aims to increase awareness of, and to catalyze action on, urban resilience. New episodes are streamed monthly wherever you get your podcasts!