

EEE Faculty Candidate Seminar

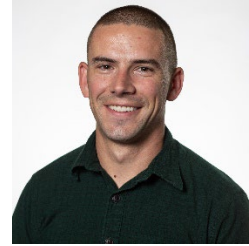
Date: February 7, 2024, at 10:30 AM

Location: POTR 234 (Fu Room)

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Degrowth Praxis, Engineering Practice: Research and Teaching for True Sustainability

Abstract

Engineers are in the practice of making technological systems more efficient. That means designing products and equipment that deliver more services with less resource inputs. Engineers have been improving productivity and designing out waste for centuries, but it is only now – as society faces climate change and other ecological crises – that this role takes on a global scope. How can the practice of engineering help to address the problem of reducing ecological impacts at a planetary scale?

In this talk, I will discuss how engineering has generally approached the problem of sustainability through traditional tools of product-level efficiency improvement. We have more efficient cars, light bulbs, HVAC systems, and recycling schemes all designed in the name of a clean, green, and circular economy. But these efforts do not add up to global-scale reductions in ecological impacts such as climate change because the global economy is constantly growing. Thus, resources freed up by efficiency improvements will not actually be “saved”, they will be reutilized elsewhere in the economy.

I will argue for engineers to consider degrowth – a deliberate reduction in the size of the economy – as the context in which more efficient technologies will deliver true and lasting reductions in ecological impact. This shift in perspective will require an evolutionary process (a praxis) of updating terms, methods, and analytical frameworks; ideally starting in the fields of environmental and ecological engineering. I will support my argument with research findings, personal stories from a career in sustainability, and the collective experience of Degrowth Coffee Hour, an effort to pursue degrowth praxis within the engineering practice, right here at Purdue.

Bio

John Mulrow (he/him) is a Visiting Assistant Professor of Environmental and Ecological Engineering. Read about his research group, teaching activities, and environmental advocacy work at www.jmulrow.org.