

## EEE Research Seminar

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Location: via Zoom

<https://purdue-edu.zoom.us/j/94926748593>

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## Understanding the environmental implications of the circular economy

### Abstract

The concept of circular economy has emerged in response to the need for decoupling the economic growth from resource consumption and environmental impacts. Aiming to maximise resource efficiency, it represents an alternative to the current linear ‘take-make-use-dispose’ economic model. Transitioning to a circular economy will require a systemic change across supply chains, involving both technological and business model innovations. This in turn will necessitate a whole systems approach and life cycle thinking to capture and address the complex interrelationships between different aspects of a circular economy. One of the complexities is that ‘circular’ does not necessarily mean ‘sustainable’. Hence, we need to be able to understand the full implications of a switch from the ‘linear’ to ‘circular’ economic models. Focusing on environmental impacts of that switch, this presentation will discuss how we can measure the ‘circularity’ on a life cycle basis and what that may mean in practice, considering examples in the food, energy and plastics sectors.

### Bio

Adisa Azapagic MBE FREng is Professor of Sustainable Chemical Engineering at the University of Manchester where she leads the Sustainable Industrial Systems group. She specialises in sustainable production and consumption, helping industry, policy makers and other stakeholders identify and implement sustainable solutions to current sustainability challenges. She has over 200 publications in the field, including three books. Adisa is also the founding Editor-in-Chief of Sustainable Production and Consumption