

## Special session proposal for IJCIEOM 2025 conference SPS7

**1. Session title:** Mitigating Rebound Effects in the Circular Economy: Advancing Sustainable Solutions

### **2. Session objectives:**

The Circular Economy (CE) is a sustainability model that challenges the traditional linear economy by emphasizing resource regeneration, waste reduction, and sustainable product lifecycles. It aims to support sustainable development and net-zero targets, fostering innovative business models and demanding progressive regulations and standards. However, implementing CE strategies may lead to unintended negative consequences known as rebound effects (RE). These effects occur when the environmental or resource-saving benefits of CE are offset by behaviours or outcomes that counteract the original objectives, impacting economic, environmental, and social sustainability. Rebound effects within CE remain an underexplored area requiring advanced measurement and preventive methods. This session will examine RE from theoretical and empirical perspectives, offering insights on detection, mitigation, and strategic design to enhance CE outcomes.

Key topics include:

- Analysing rebound effects within manufacturing sectors through case studies and theoretical frameworks.
- Designing CE solutions and production systems that account for potential RE impacts.
- Developing methodologies to assess both the positive and negative impacts of CE practices.
- Exploring the role of technology in detecting and mitigating RE within various industries.
- Investigating how consumer attitudes and behaviours contribute to RE.
- Designing novel typologies and accounting frameworks to studying the mechanisms and drivers of RE.

This session aims to provide a comprehensive understanding of CE rebound effects, advancing the development of resilient, sustainable circular economy practices.

### **3. Organizer(s):**

(Name, affiliation, email address)

- Mariantonietta Ferrante, Politecnico di Bari, [m.ferrante6@phd.poliba.it](mailto:m.ferrante6@phd.poliba.it)
- Benjamin H. Lowe, Sheffield University Management School, [benjamin.lowe@sheffield.ac.uk](mailto:benjamin.lowe@sheffield.ac.uk)
- Andrea Genovese, Sheffield University Management School, [a.genovese@sheffield.ac.uk](mailto:a.genovese@sheffield.ac.uk)
- Daniela C. A. Pigosso, Technical University of Denmark, [danpi@mek.dtu.dk](mailto:danpi@mek.dtu.dk)
- Claudio Sassanelli, Politecnico di Bari, [claudio.sassanelli@poliba.it](mailto:claudio.sassanelli@poliba.it)