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11th IFAC Conference on Manufacturing Modelling, Management and Control



Trondheim, Norway, 30 June - 3 July 2025

Invited session:

Supply Chain and Manufacturing Strategies for Resilience

Invited session chairs

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Abstract

The increasing frequency and severity of disruptions—exacerbated by events such as the COVID-19 pandemic and the Suez Canal blockage—highlight the need for resilience. Resilience is the ability to survive, adapt, and recover from disruptions, and it is essential for maintaining operational continuity. Current approaches for predicting risks and developing countermeasures often fall short of managing the impacts of unpredictable events. Consequently, there is a growing need for innovative strategies that not only address immediate recovery but also enhance the adaptability, viability, and sustainability of supply chains and manufacturing systems. Moreover, while prior studies have explored various dimensions of resilience, there is a lack of systemic frameworks that can combine such strategies across supply chain and manufacturing models.

This invited session aims to highlight recent research results on how resilience-oriented supply chain and manufacturing strategies can be applied from the shopfloor management level to the end-to-end supply chain management level. This session invites submissions on modeling and empirical studies, ideally motivated by a practical context, and exploring multifaceted relationships between resilience strategies and broader themes such as sustainability, circularity, and economic viability.

Topics

The session chairs invite researchers and decision-makers from academia, industry, and government to contribute theoretical and applied research papers in areas including but not limited to the following topics:

- The interfaces of resilience, sustainability, and circularity strategies
- The interfaces of shopfloor level resilience and supply chain level resilience
- Resilient supply chain and manufacturing strategies at the network level (e.g., MaaS, network-of-network)
- How various supply chain and manufacturing strategies are applied to reach a desired level of resilience
- Digital technologies (e.g., Digital Twins, AI) for improving supply chain and manufacturing resilience
- Uncertainty estimation and quantification in resilience modelling

Sponsors: This invited session is sponsored by the ACCURATE project (<https://accurateproject.eu/>).

INVITATION CODE: 1jg1p

Draft papers reporting original research (limited to 6 pages in IFAC format) are welcome.

When you submit your paper to the IFAC system, you will be required the **invitation code** in order to associate your paper to the invited track: <https://ifac.papercept.net>

IMPORTANT DATES:

Draft papers submission deadline: **30.11.2024**

Final papers submission deadline: **28.02.2025**

Early registration deadline: **28.02.2025**

Conference website: <https://conferences.ifac-control.org/mim2025/>

Accepted papers will be published open access in Elsevier's IFAC-PapersOnLine. Post-conference special issues for extended versions of accepted papers are planned in high-ranked journals.