

Sustainable Supply Chains in the Era of Crises and Disruption: Challenges and Opportunities

Code: b62x8

Global supply chains have been undergoing profound changes driven by economic, political, social, and technological factors. On the one hand, the growing concerns about environmental and social issues, e.g., climate change and environmental justice, have intensified consumers' calls for action by governments and corporations toward more environmentally sustainable and socially responsible supply chains. On the other hand, supply chains have experienced severe and unprecedented disruptions due to the COVID-19 pandemic and shifts in global geopolitical and economic conditions, e.g., the rise of protectionism, trade restrictions, and armed conflicts. Furthermore, disruptive technologies such as electrified transportation, Artificial Intelligence (AI), Internet of Things (IoT), blockchain, Physical Internet (PI), and Digital Twins (DT) are revolutionizing the supply chain industry and enabling substantial gains in efficiency, security, safety, and reliability. These factors, among others, present serious challenges but also promising opportunities for policymakers and practitioners to open new venues for research.

This session aims to bring together a group of researchers who have investigated these topics and will have them share their research work with the community with the goal of fostering future research on these key issues. The session also aims to establish a bridge between scientific communities sharing research interest in new supply chain technologies, risk assessment and mitigation strategies, dealing with the dynamic and uncertain nature of modern supply chains, the impacts of government environmental policies and consumers' preferences, etc. Studies that apply Operations Research, Machine Learning, and Data Analytics (descriptive, predictive or prescriptive) techniques are strongly encouraged, if useful managerial insights could be drawn from their results.

Original research papers, methodological papers, case studies, and short communications on the theme of this session are welcomed. Topics may include but are not limited to:

- Environmental sustainability and social responsibility in supply chain operations
- Impact of global crises (economic, environmental, political) on sustainable supply chains
- Supply chain disruption, interruption, and resilience
- Risk assessment and mitigation in supply chain design and operation
- Reverse and closed-loop supply chain
- Integrating new technologies (blockchain, digital twins, physical internet) within supply chain operations
- Supply Chain and Industry 4.0
- Cold chains for perishable products
- Design for sustainable manufacturing-distribution systems
- Triple Bottom Line (financial, environmental, and social) in supply chain logistics
- Vaccine and Personal Protective Equipment (PPE) supply chains during epidemics
- Disaster relief logistics (preparedness, response, recovery and mitigation)

Guidelines for the preparation of manuscripts are on the conference website at: <https://conferences.ifac-control.org/mim2025/>

Paper submission: <https://ifac.papercept.net/conferences/scripts/start.pl> Find MIM 2025, proceed as an invited paper, and indicate the **invited session identification code XXXX**. If you experience any difficulties, please contact one of the organizers.

Submission Deadline: November 30, 2024

Final paper submission deadline: February 28, 2025

Invited session chairs and contact information:

Dr. Ahmed SAIF (Dalhousie University, Canada) ahmed.saif@dal.ca

Dr. Majid TAGHAVI (Saint Mary's University, Canada) majid.taghavi@smu.ca

