Invited Session on "The ripple effect, supply chain viability and COVID-19 pandemic" for IFAC MIM 2022

Invited session identification code fc654
IFAC MIM 202, June 22-24, 2022, Nantes, France

https://ifac.papercept.net/

Session Chairs:

- *Prof. Dr. Alexandre Dolgui, IMT Atlantique, FRANCE*
- *Prof. Dr. Dmitry Ivanov, Berlin School of Economics and Law, GERMANY*
- *Prof. Dr. Mohan Sodhi, Bayes Business School, UK*
- *Prof. Dr. Aseem Kinra, University of Bremen, GERMANY*

The ripple effect occurs when a disruption, rather than remaining localized or being contained to one part of the supply chain (SC), cascades downstream and impacts the performance of the SC. This impact might include lower revenues, delivery delays, loss of market share and reputation, and stock return decreases— the cost of all of which could be devastating.

Ripple effect *describes the impact of a disruption propagation on SC performance and disruption-based scope of changes in SC structural design and planning parameters. As the result of the ripple effect SC structures change. It is different from the bullwhip-effect that affect the SC at the operational level by mismatching demand and supply without structural changes in the SC design, i.e., without SC structural dynamics*

The Invited Session aims at delineating major features of the ripple effect and the viability in supply chains and methodologies to mitigate the SC disruptions and recover in case of severe disruptions such as COVID-19 pandemic. The methodologies comprise mathematical optimization, simulation, game theory, control theoretic, data-driven analytics, network complexity and reliability theory research. Even though a variety of valuable insights has been developed in the said area in recent years, new research avenues and ripple effect taxonomies need to be identified for the near future.

Session 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:

Ripple effect and systemic risks in SCs, SC viability, Viable supply chain model, reconfigurable SC, planning SC performance under uncertainty, network robustness and resilience, disruption propagation in the SCs, resilient SC design, SC recovery policies, Supply chain risk analytics; digital technology applications to supply chain risk management; optimization, simulation, game theory, reliability theory, control theory.

Submission

For author guidelines, please refer to **www.ifac-control.org**. All papers must be submitted electronically using *https://ifac.papercept.net/*. All papers must be prepared in a two-column format in accordance with the IFAC manuscript style. Please use the official IFAC instructions and template to prepare your contribution as full-length draft paper and submit it online by **December 25, 2021**. Submission details are available on the symposium website. All submissions must be written in English. All papers that conform to submission guidelines will be peer-reviewed by IPC members. The corresponding author submits the paper online (pdf format) as **an invited session paper**. Submission as an invited paper requires the **invited session code fc654.** Several international journals (IJPR, ANOR, FMS Journal, IJISM) are associated with the MIM 2022 for publication of special issues.

Important dates:

December 25, 2021	Deadline for the submission
February 15, 2022	Notification of acceptance/rejection
March 15, 2022	Deadline for the final submission