

**Invited Session on “Viable and Reconfigurable Supply Chains, Intertwined Supply Networks and Ecosystems”  
for IFAC MIM 2022**

**Invited session identification code**  
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. Jennifer Blackhurst, University of Iowa, USA
- Prof. Dr. Weiwei Chen, Rutgers University, USA

*Viability is a specific capability at the scale of survivability to avoid supply chain and market collapses and to secure the provision of goods and services (Ruel et al. 2021). According to Ivanov and Dolgui (2020), ‘viability is a behavior-driven property of a system with structural dynamics. It considers system evolution through disruption-reaction balancing in the open system context. The viability analysis is survival-oriented at a long-term scale’. Ivanov (2020b) defines viability as an ‘ability of a supply chain to maintain itself and survive in a changing environment through a redesign of structures and replanning of performance with long-term impacts’.*

*The viability in the light of Industry 5.0 comprises of the supply chain itself; the intertwined supply network (ISN), which is an ‘entirety of interconnected supply chains which, in their integrity secure the provision of society and markets with goods and services’ (Ivanov and Dolgui 2020); a digital supply chain (Ivanov and Dolgui 2021); and a human-centric ecosystem responsible for securing society’s needs.*

*Angles of sustainability and resilience are integrated within the viable supply chain model and extended toward survivability. Moreover, viability takes the ecosystem perspective. For example, it is concerned with intertwined supply networks (ISN) ‘that encapsulate entireties of inter-connected supply chains, which, in their integrity, secure the provision of society and markets with goods and services’ (Ivanov and Dolgui 2020). From the position of viability, the ISNs as a whole provide services to society (e.g., food service, mobility service, or communication service). The example of the COVID-19 pandemic illustrates viability as a new and distinct construct.*

*The viable supply chain model is based on adaptable structural supply chain designs for situational supply-demand allocations and, most importantly, the establishment and control of adaptive mechanisms for transitions between the structural designs (Ivanov 2021). The reconfigurable supply chain framework can be considered a part of future Industry 5.0 developments (Dolgui et al. 2020, Ivanov 2021). Supplementing the reconfigurable manufacturing concept, the reconfigurable supply chain adds three specific features, namely active behavior of network elements, networking effects across multiple structures and their dynamics (i.e., organizational, information, financial, technological, and energy), and network complexity (i.e., multi-echelon supply chains).*

**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:

*SC viability, Viable supply chain model, Reconfigurable SC, Supply chain risk analytics; Digital technology for supply chain resilience, Intertwined supply networks, Ripple effect and systemic risks in SCs.*

**Submission**

For author guidelines, please refer to [www.ifac-control.org](http://www.ifac-control.org). All papers must be submitted electronically using Symposium Manuscript Management System (CMMS). 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** . 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