

Invited Session on “Intelligent Methods and Tools supporting Decision Making in Manufacturing Systems and Supply Chains”

Invited Session Code => **ffm51**

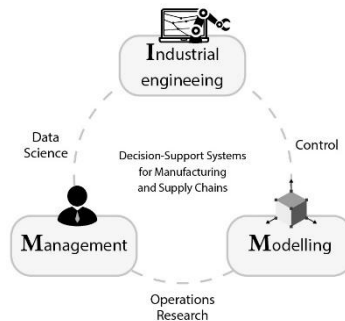
IFAC MIM 2022

Nantes, France

Chairs:

- Prof. Dr.-Ing. Michael Freitag, University of Bremen, Bremen, GERMANY
- Prof. Dr.-Ing. Enzo Morosini Frazzon, Federal University of Santa Catarina, BRAZIL
- Prof. Dr.-Ing. Carlos Eduardo Pereira, Federal University of Rio Grande do Sul, BRAZIL

This track is concerned with the development of management decision-support systems in digital, resilient and sustainable manufacturing and supply chain systems in the era of Industry 4.0 based on combination of Industrial Engineering, OR and Data Science:



Source: <https://tc.ifac-control.org/5/2>

In this context, the integration of manufacturing and logistics along supply chains leads to increasing complexity, so that operational planning needs to be supported by proper decision-making models, methods, and software tools. Such systems can be based on simulation, optimization, data analytics, machine learning and combinations of these. At the same time, these systems are connected to sensors for data acquisition and as well as communication systems to exchange data and information both in vertical and horizontal direction. The proper exchange of data between the physical process and intelligent systems allows for the emergence of adaptive, agile and resilient manufacturing systems and supply chains.

Keywords: Modeling of manufacturing operations; Production planning and control; Logistics in manufacturing

Track topics:

The track chairs invite scientists, engineers and decision makers from government, industry and academia to contribute with theoretical and applied research papers. The session will cover the integration of different supply chain tasks, such as: production planning, scheduling and control, transportation and logistics planning, scheduling and control, inventory planning and warehouse management and operations, manufacturing systems operations as well as coupled services and technologies which can lead to improved manufacturing systems and supply chains. The aim of this session is to attract high-quality papers in these areas including topics such as: Modeling, simulation, analysis, and control of manufacturing processes; Monitoring, diagnosis and maintenance of manufacturing systems; Smart manufacturing systems and Industry 4.0 technologies. Special attention will be directed towards practical relevance and approaches that can foster innovation in manufacturing and supply chains.

Submission

For author guidelines, please refer to www.ifac-control.org. All papers must be submitted electronically at <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 on line. Submission details are available on the conference website. All submissions must be written in English. All papers that conform to submission guidelines will be peer-reviewed by IPC members.

The corresponding authors need to submit their paper online (pdf format) as Invited Session Paper. Submission as an Invited Session Paper requires the use of the **code ffm51**.

Draft paper submission	25 January 2022
Notification of acceptance/rejection	15 February 2022
Camera-ready final manuscripts	15 March 2022