

11th IFAC Conference on Manufacturing Modelling, Management and Control – IFAC MIM2025

<http://conferences.ifac-control.org/mim2025/>

Open Invited Track - Proposal

**Modelling Collaborative Human-Centric Manufacturing Network**

Organized by:

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**IFAC TC5.2 "Management and Control in Manufacturing and Logistics"**

**IFAC TC5.1 "Manufacturing Plant Control"**

The widespread implementation of Human-Robot/Human-Machine Collaboration (HRC/HMC) solutions, coupled with a growing emphasis on employee well-being, is driving the development of safer and more effective manufacturing structures. This trend arises from ongoing global changes, including conflicts, pandemics, technological advancements, and an increasing focus on human-centric development. Ensuring the reliability and robustness of production processes in such a dynamic environment requires new mechanisms for enhancing and developing manufacturing through the integration of advanced technologies, particularly within Collaborative Human-Centric Manufacturing (CH-CM) networks. Starting with workplace safety and human well-being as the foundation, the implementation of collaborative platforms and new HRC/HMC models in production systems helps identify the main challenges for effective CH-CM networks and their modeling. Consequently, this session will cover the following issues: modeling collaborative platforms and their integration into production, modeling resources and business processes, creating effective collaborative, flexible, and sustainable manufacturing environments, addressing ethical issues, monitoring safety and well-being in manufacturing environments, and balancing automation with employment.

Authors are invited to submit full papers describing original research work associated with challenges to Collaborative Human-Centric Manufacturing related problems in areas including, but not limited to:

- Data-Driven Decision-Making Systems,
- Human-Machine Collaboration,
- Human-Robot Collaboration,
- Ethical issues in Human-Robot/Human-Machine Collaboration,
- Manufacturing Knowledge Management,
- Flexible and Adaptive Manufacturing,

- Workforce Adaptation and Training,
- Trust and Acceptance,
- Sustainable production and eco-friendly production.

Both theoretical and applied research contributions are welcome.

### **Submission**

For authors guidelines please refer to <https://www.ifac-control.org/conferences/author-guide>. All manuscripts must be electronically submitted through the PaperPlaza Conference Manuscript Management System at: <https://ifac.papercept.net>. Please use the official IFAC instructions and template to prepare your contribution. Regular papers must be between 4 (minimum) and 6 (maximum) pages in the final version. Submissions details are available on the conference website: <https://conferences.ifac-control.org/mim2025/>. All submission must be written in English. Please submit your contribution online by 30.11.2024. All papers that comply with the submission guidelines will be peer-reviewed by IPC members. The corresponding author submits the paper online (pdf format) as an Open Invited Track paper. Submissions as an invited paper requires the Open Invited Track code: **89c49**

### **Important dates**

- Draft paper submission deadline: **30.11.2024**
- Notification of acceptance: 30.01.2025
- Final paper submission deadline: 28.02.2025
- Conference date: 30.06-03.07.2025