



Detroit - USA | June 19-23, 2022  
Annual Conference



31<sup>st</sup> International Conference on Flexible Automation and Intelligent Manufacturing

## — Call for Papers —

### A Special Session on Advanced Manufacturing Systems for Defense Applications

#### Technical Focus

New technologies and engineering systems have been transforming defense manufacturing industry into a collection of high-quality producers of reliable and precision products. The evolving state of the art of factory automation and computer-integrated manufacturing systems fueled by the more recent Industry 4.0 technological and methodological approaches have driven a much more diversified applications of advanced manufacturing systems in defense enterprises. Manufacturing systems are comprised of products, equipment, people, information, control and support functions for the economical and competitive development, production, delivery and total lifecycle of products to satisfy market and societal needs.

This special session aims to serve as a forum for presenting the state-of-the-art fundamental and applied research in advanced manufacturing at the system level to modernize defense systems, improve material readiness, and enhance warfighter innovation and capability.

#### **Topics of interest for this special session include, but are not limited to the following:**

- Factory and production network design, process planning, assembly planning, scheduling;
- Smart sensor networks, real-time monitoring, distributed system control;
- Human-machine interaction, human-robot collaborative assembly, operator ergonomics;
- Multi-physics modelling, simulation and optimization, virtual and augmented reality in manufacturing;
- Diagnosis and prognosis, predictive maintenance, lifecycle analysis, product-service systems;
- Design and operation for sustainability, energy efficiency in production and logistics;
- Global and regional production networks, material handling, logistics;
- Cyber-physical production systems, big data analytics and machine learning, industrial Internet;
- Systems issues related to additive and subtractive manufacturing, micro-electromechanical systems.
- Novel educational practice on teaching manufacturing processes for defense applications.

#### High visibility refereed publications

All accepted papers presented at FAIM 2022 will be published in *Lecture Notes in Mechanical Engineering* (Springer), indexed by Scopus. Alternatively, authors may opt for submission to *Robotics and Computer-Integrated Manufacturing* (Elsevier), *International Journal of Advanced Manufacturing Technology* (Springer) or *SME Journal of Manufacturing Systems* (Elsevier), following a special 'fast-track' reviewing process. Post-conference special issues for selected papers will appear in the *International Journal of Computer Integrated Manufacturing* (Taylor and Francis) and *Machines* (MDPI).

#### Paper Submission

Site: [www.faimconference.org](http://www.faimconference.org), email: [faim2022conference@gmail.com](mailto:faim2022conference@gmail.com).

Abstract submission: immediately (optional); Full paper submission deadline: February 14, 2022; Review results: March 31, 2022; Revised manuscript deadline: April 20, 2022; Final paper acceptance: April 30, 2022.

#### Additional Special Session Activities

To highlight advancements in this technical area, session organizers will:

- work to attract a high-profile international keynote speaker
- organize a special issue in the *International Journal of Advanced Manufacturing Technology* or *Robotics and Computer-Integrated Manufacturing*
- organize a state-of-the-art paper that will be the lead article in the special issue

#### Organizers

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