



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



31st International Conference on Flexible Automation and Intelligent Manufacturing

— Call for Papers —

A Special Session on Advanced Manufacturing Processes for Defense Applications

Technical Focus

The advanced manufacturing processes are revolutionizing the status quo of defense industries. Manufacturing of lightweight structures, systems and materials is of particular interest to defense sectors. Defense industries aim to seamlessly integrate manufacturing processes, system operations, and workforce for high-quality products and cost-efficient operations. To achieve this goal, defense industries are designing new materials and structures, implementing novel manufacturing processes, monitoring and controlling every operation of each manufacturing process; every run of each single manufacturing cell; every move of each piece in its global supply chain, and integrating new trainings in workforce preparation.

This special session aims to serve as a forum for presenting the latest research advances in the areas of **additive manufacturing, multi-axes machining, friction stir processing, coating, etc. advanced manufacturing processes to modernize defense systems, improve material readiness, and enhance warfighter innovation and capability.**

Specific topics of interest for this special issue include, but are not limited to the following:

- Modeling and simulation of processes in additive manufacturing, multi-axes machining, and friction stir welding, etc.
- Design new materials using additive manufacturing, friction stir processing, and coating, etc.
- Process advanced materials using additive manufacturing, machining, friction stir processing, and coating, etc.
- Equipment and machine tools for additive manufacturing, machining, friction stir processing, and coating, etc.
- Novel monitoring and control techniques for additive manufacturing, machining, friction stir processing, and coating, etc.
- Measurement and metrology in additive manufacturing, machining, friction stir processing, and coating, etc.
- AI/ML in additive manufacturing, machining, friction stir processing, and coating etc.
- 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 , email: 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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