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31st IEEE International Conference on Emerging Technologies and Factory Automation

Call for Papers - SS 5 – Software Engineering for Cyber-Physical Production Systems (SECPPS)

Organized and Chaired by

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FOCUS.With the emergence of Cyber-Physical Production Systems (CPPSs), systems engineers are currently facing a dramatic increase in the complexity of developing and operating systems. In particular, software plays an increasingly important role in the effective and efficient operation of CPPSs. Despite the tremendous progress in software engineering approaches and technologies, these approaches and techniques do not seem to reach industry. More comprehensive and systematic views on all aspects of systems and their development process are required. The 4th Edition of the Special Session on Software Engineering for Cyber-Physical Production Systems (SECPPS) aims to discuss challenges in adopting state-of-the-art software engineering tools and techniques to CPPSs and highlight new approaches and methods for the design of software for production systems. The following list of topics is of interest for this special session. However, we also invite submissions on related topics, i.e., this list is by no means exhaustive. If in doubt, feel free to ask the organizers.

TOPICS

- Consistency within CPPS engineering artifacts and workflows
- Deployment, operation, evolution, and management of CPPS software (e.g., DevOps)
- Product Lines and Variability Management in CPPS Engineering
- Interdisciplinary collaboration in the engineering and operation of CPPS software
- Safe integration of generative AI in CPPS engineering workflows
- Software engineering education for CPPS engineers
- Software engineering improvements for and transfer of best practices to CPPSs (e.g., agile methods)
- Software Methods and Techniques for explainable and trustworthy AI in CPPS engineering
- Software modeling and languages for CPPSs (e.g., model-driven engineering)
- Sustainability, resilience, and security of CPPS software by design
- Usability of software development environments for CPPS engineering

SS Program Committee

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- **AIM.** This Special Session aims at bringing together professionals from industry and academia to share cutting-edge concepts, recent developments, research results, and practical achievements in the area of software engineering for factory automation.
- **CONFERENCE FORMAT**. The conference will comprise multi-track sessions for regular papers, to present significant and novel research results with a prospect for a tangible impact on the research area and potential implementations.

AUTHOR'S SCHEDULE (2026)

Regular and special sessions papers

Submission deadline	April 19
Acceptance notification	May 25
Deadline for final manuscripts	July 4

Work-in-progress/Industry practice papers

Submission deadline	May 31
Acceptance notification	June 19
Deadline for final manuscripts	July 4