Call for Papers
SS07- Software Engineering for Cyber-Physical Production Systems (SECPPS)

Organized and Co-Chaired by

Kevin Feichtinger[1], Kristof Meixner[2], Felix Rinker[2], Klaus Schmid[3]

[1] Karlsruhe Institute of Technology, Germany, kevin.feichtinger@kit.edu
[2] TU Wien, Austria, kristof.meixner@tuwien.ac.at, felix.rinker@tuwien.ac.at
[3] University of Hildesheim, Germany, schmid@sse.uni-hildesheim.de

FOCUS

With the emergence of Cyber-Physical Production Systems (CPPSs), systems engineers are facing a dramatic increase in the complexity of the development and operation of such systems. However, software plays a crucial role in the effective and efficient operation of CPPSs. Yet, Software Engineering for CPPSs poses several challenges, such as the integration of multiple disciplines, the unclear semantics and variability of engineering artifacts, support of AI for CPPSs, or the continuous testing and deployment to heterogeneous systems. Hence, it requires novel approaches to a large range of problems to address these challenges. More comprehensive and systematic views on all aspects of CPPSs and their development are required. The Special Session on *Software Engineering for Cyber-Physical Production Systems* aims to discuss challenges for software engineering approaches and technologies to CPPSs, including their adoption, and highlight novel methods for the design of CPPS software.

TOPICS

❖ Model-based software and languages for the engineering and operation of CPPSs (e.g., DSL)

❖ Operation, evolution, and management of CPPS software (e.g., DevOps, agile methods)

❖ Approaches to monitor and improve CPPSs (e.g., Digital Twins, metrics, self-adaptability)

❖ Interdisciplinary collaboration in the engineering and operation of CPPS software

❖ Security, resilience and sustainability of CPPS software by design

❖ Testing, validation and verification of CPPSs

❖ Artificial intelligence and LLMs for the engineering and operation of CPPSs

❖ Software engineering education for CPPS engineers

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.

SOLICITED PAPERS

♦ Original Research (Regular) ♦ Surveys ♦ Industry practice ♦ Work-in-progress
The working language of the conference is English, For submission rules, please refer to the Author's Instruction on the conference website.

PAPER ACCEPTANCE

Accepted, registered, and presented papers will be copyrighted by IEEE and published in the conference proceedings. The proceedings will be available in the IEEE Xplore® Digital Library. The final manuscript must be accompanied by a registration form and a registration fee payment proof and it is mandatory that at least one author attends and presents the paper at the conference. Failure to adhere to these guidelines may result in paper exclusion from post-conference distribution via IEEEXplore by the ETFA 2024 Organizing Committee. All conference attendees must pay the conference registration fee and cover their own personal expenses for travel and accommodations.

AUTHOR'S SCHEDULE 2024

❖**Regular and special sessions papers**

Submission deadline	**April 28th**
Acceptance notification	May 31st
Deadline for final manuscripts	July 1st

❖**Work-in-progress/ Industry practice papers**

Submission deadline	**May 26th**
Acceptance notification	June 17th
Deadline for final manuscripts	July 1st