5th Workshop on Management for Industry 5.0 – MFI5.0
IEEE/IFIP Network Operations and Management Symposium 2024
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IMPORTANT DATES

Submission deadline:
~~January 19th, 2024~~
February 2nd, 2024
Author notification:
March 1st, 2024
Final submission:
March 15th, 2024

QUESTIONS?
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DESCRIPTION

The transition from ISA-95 to RAMI4.0/IIRA based automation for production automation in Industry 4.0 is ongoing. This includes the integration of legacy OT with emerging IT technologies. Another aspect is automation/digitalization across value networks involving a multitude of stakeholders in complex relationships. Consequently, Management for Industry 5.0 covers three thematic themes: (1) connectivity, infrastructure, and security, (2) the autonomous evolution and challenges of System of System (SoS) in cyber-physical systems (CPS), and (3) the human in the loop.

Recent advancements in communication technology, especially wireless, are transforming the industrial landscape. This necessitates the integration of wireless LAN, PAN and cellular technology, especifically 5G/6G, into both OT and IT communications, offering greater flexibility and challenging traditional industrial communication and security paradigms. This shift extends beyond industry 5.0, benefiting fields like agriculture and logistics. Key requirements such as privacy, dependability, and trustworthiness drive service- and data-driven automation in various production domains.

The future will bring large System of Systems (SoS) involving IoT, AI, Analytics, Big data, and legacy technology, distributed among multiple stakeholders. The success of these production systems hinges on incorporating human actors and addressing challenges like trust in autonomous systems, human-robot collaboration, competence development, and knowledge management. This encompasses explainable AI in production and workplace integrated learning in smart factories.

While architectures like RAMI4.0 and IIRA have been proposed, they are still in their early stages. Implementation platforms and frameworks are also in their infancy, particularly in managing complex automation and digitalization solutions across all levels of abstraction. These architectures and technologies will be instrumental in autonomically controlling digitalized production infrastructures, requiring trustworthy and reliable data. Trust in industrial AI varies among stakeholders, impacting management and organizational aspects. Technology and organizational adaptation are critical, potentially leading to organizational reconfiguration.

FOCUS ON:

The workshop will focus on several core engineering and management issues, focus topics are:

- Migration Management
- Technology Acceptance
- Technology and Organizational Adaptation
- Operational Management
- Security Management
- Deployment Management
- Management of Networked Components in Industry 4.0/5.0 scenarios
- Technology and Certification Integration in CPS
- Automation evolution Management and Engineering

- Transition of I4.0 to I5.0
- Product Life Cycle Management
- Product Planning Management
- Manufacturing Change Management
- Manufacturing Process Management
- Manufacturing Operations Management
- Management of Digital Twins
- System of System Challenges in Cyber Physical System
- New Return on Investment and Sustainability Approaches

Additional topics may be considered given adequate proposal, therefore.

SUBMISSION OF PAPERS:

Authors are invited to submit original contributions written in English that have not been published or submitted for publication elsewhere. Technical papers must be formatted using the IEEE 2-column format and not exceed 6 pages for full paper submissions or not exceed 4 pages for short paper submissions. Papers should be submitted through NOMS submission system.