

14th International Workshop on Service -Oriented, Holonic and Multi-Agent Manufacturing Systems for Industry of the Future (SOHOMA 2024)

Augsburg Technical University of Applied Sciences– Augsburg, Germany
September 26 – 27, 2024



Call for Spot Light Session Papers:

TRUSTWORTHY INDUSTRIAL ARTIFICIAL INTELLIGENCE

It is our pleasure to invite you to the *14th International Workshop on Service-Oriented, Holonic and Multi-Agent Manufacturing Systems for Industry of the Future (SOHOMA2024)*, organized by the Augsburg Technical University of Applied Sciences (Germany), in collaboration with University Politehnica of Bucharest (CIMR - Research Centre in Computer Integrated Manufacturing and Robotics), Polytechnic University Hauts-de-France (LAMIH - Laboratory of Industrial and Human Automation Control, Mechanical Engineering and Computer Science) and Polytechnic Institute of Bragança (CeDRI - Research Centre in Digitalization and Intelligent Robotics).

The main objective of SOHOMA workshops is to foster innovation in and developments towards a data-driven Industry of the Future that seamlessly integrates engineering and operations of manufacturing, logistics systems and (dynamic) supply chains. In this context, the workshop focuses on concepts, methods, and solutions for the digital transformation of manufacturing through service orientation in holonic and agent-based control with distributed artificial intelligence.

The theme of the SOHOMA 2024 Workshop is **"Industrial Artificial Intelligence in the data-driven Industry of the Future: Models, Architectures, and Applications"**. In this edition, the workshop focuses on exploring the intricacies of cross-enterprise data sharing and the strategic use of artificial intelligence (AI) within manufacturing systems. Thereby, the workshop focuses on (but is not limited to) methods, tools, and architectures for the value-adding application and integration of AI in industrial production and logistics for the transformation to a data-driven industry of the future.

What is a Spot Light Session?

Spot Light Sessions are a novel and optimized form to provide a larger space for discussion and exchange of scientific results and topics. They are a combined form of oral presentation and panel discussion participation. They are a combined form of a traditional oral presentation and joint final panel discussion with all spot light presenters. Accepted Spot Light papers will be part of the workshop proceedings like regular papers.

SLS-03: Trustworthy Industrial Artificial Intelligence for the Industry of the Future

Trust is a critical element in the successful integration of Artificial Intelligence (AI) in industrial applications especially in context of a data-driven economy. Building trust in cross-enterprise data sharing means that stakeholders, including manufacturers, consumers, and regulators, must have confidence in the reliability, security, and ethical foundations of AI systems. In addition, the transition to a data-driven economy also means that data will be used and integrated not only provided by internal systems, but also (in a cyber-physical way) from outside a production system and possibly also from systems external to the company. In this case, trust in the data is obvious, but several questions arise, for example (i) how trustworthy the data and data sources are, (ii) how this can be assessed automatically, and (iii) what the consequences are if the data and/or data sources have limited trust.

Furthermore, trustworthy AI emphasizes the need for robust cybersecurity measures, transparent algorithms, and accountability mechanisms to ensure that AI is deployed with integrity and reliability.

In this session we focus on the discussion and exchange about challenges, solutions, and experiences on how to establish trust in the context of industrial AI and data-driven enterprises and ecosystems. We welcome papers providing novel scientific and practical insights on any aspect of trustworthy industrial AI in context of data-driven economies and the Industry of the Future. This includes architectural approaches and considerations, multi-agent system applications, algorithmic advancements and industrial case studies ranging from (multi-cloud) to embedded micro-controller environments.

Paper Submission

Papers must be submitted in via the submission menu on the SOHOMA 2024 website. The paper content must be original work not published or being considered elsewhere. The workshop language is English. Papers are limited to 12 pages formatted in the Springer book series "Studies in Computational Intelligence" according to the instructions given on the workshop's website.

All papers accepted and duly presented at the workshop will be included in the SOHOMA 2024 post-conference proceedings volume published in the Springer series "Studies in Computational Intelligence", indexed Web of Science, Scopus, ISI Proceedings and DBLP Computer Science. Selected, extended papers will be proposed for publication in special issues of journals representative for the workshop's domain.

Important Dates

Submission of Spot Light Session Papers	June 30, 2024	extended to July 7, 2024
Notification of acceptance	August 1 st , 2024	
Early-bird registration until	August 30, 2024	
Final paper submission	September 8, 2024	
SOHOMA 2024 Workshop	September 26 - 27, 2024	

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Registration Fees

	Before August 30, 2024	After August 31, 2024
Students*	200 €	300 €
Academia	350 €	450 €
Industry	400 €	500 €

* Students must provide a valid university ID