



SOHOMA

Latín America 2020



1st Latin-American Workshop on Service-Oriented, Holonic and Multi-agents Manufacturing Systems for Industry of the Future

Pontificia Universidad Javeriana, Bogota, Colombia

August 26 – 27, 2020

CALL OF PAPERS

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Presentation

It is a pleasure for the SOHOMA Steering committee and the SOHOMA Executive Committee to invite you to the the **1st Latin-American Workshop on Service-Oriented, Holonic and Multi-Agent Manufacturing Systems for Industry of the Future (SOHOMA Latin America 2020)**, organized by the Industrial Engineering Department from Pontificia Universidad Javeriana, at Bogota, Colombia. The Workshop is organized in collaboration with the University Politehnica of Bucharest (CIMR Research Centre in Computer Integrated Manufacturing and Robotics), the Université Polytechnique Hauts-de-France (LAMIH Laboratory of Industrial and Human Automation Control, Mechanical Engineering and Computer Science) and the Polytechnic Institute of Bragança (CeDRI Research Centre in Digitalization and Intelligent Robotics). The LA-SOHOMA 2020 workshop has scientific support from the IEEE-IES Technical Committee on Industrial Agents and from the GdR MACS-IMS2 Research Group on Intelligent Manufacturing Systems and Services.

SOHOMA Latin America 2020 will take place at the Pontificia Universidad Javeriana (Bogota, Colombia), on August 26-27, 2020. The objective of SOHOMA Workshops is to foster innovation in smart and sustainable manufacturing and logistics systems and promoting concepts, methods and solutions for the digital transformation of manufacturing through service-oriented, holonic and agent-based control with distributed intelligence.

Call for Papers

The main theme of the SOHOMA Latin America 2020 Workshop is: **"Manufacturing as a Service – virtualizing and encapsulating manufacturing resources and controls into cloud networked services"**. "Manufacturing as a Service" or shortly MaaS stands for new models of service-oriented, knowledge-based smart manufacturing systems optimized and reality-aware, with high efficiency and low energy consumption that deliver value to customer and manufacturer via Big data analytics, Internet of Things communications, Machine learning and Digital twins embedded in Cyber-Physical System frameworks. From product design to after-sales services, MaaS relies on the servitization of manufacturing operations that can be integrated into different manufacturing cloud services such as Design as a Service (DaaS), Predict as a Service (PRaaS) or Maintain as a service (MAaaS).





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Latin america



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Workshop Topics

The workshop will cover theoretical and applications of Service-oriented, Holonic and Multi-Agents for industry of the future, including (but limited to) the following topics:

- Cyber-Physical Production Systems and Industry 4.0
- Multi-robot systems in manufacturing.
- Multi-Agent Systems the industry of the future
- Digital Twins/Shadows for resource and product virtualization
- Product intelligence concepts/architecture/ implementation
- Operational Research for the industry of the future
- Analytics and Data mining for the industry of the future
- Artificial intelligence for the industry of the future
- Scheduling and Project management for the industry
- Modelling of discrete event systems in manufacturing
- Distributed control in the industry
- Holonic Manufacturing Execution Systems
- Industrial Internet of Things / Physical Internet
- Swarm intelligence the industry of the future
- Industrial Internet and digital manufacturing
- Dynamic and green systems for sustainable manufacturing
- Predictive resource maintenance and risk management
- Agent-based Modelling for the industry of the future
- Simulation in Advanced Manufacturing and Industry 4.0
- Simulation in Augmented and Virtual Environments
- Modelling and Simulation as a Service
- Simulation for Cyber-Physical Systems
- Mixed production planning and scheduling
- Virtual factory, supply chains and logistics
- Intelligent Manufacturing Systems
- Cloud Manufacturing and resource virtualization
- Edge and Fog Computing for Industrial Internet of Things
- Computing and Service Oriented manufacturing
- Servitization and Product-Service Systems
- Bio-inspired technologies for smart manufacturing
- Big Data and the contextual enterprise
- Performance evaluation of industrial emerging behaviour
- Holonic hybrid supervised control of industrial processes
- Humans in Industry 4.0

Paper Submission

Prospective authors are invited to submit a full-length paper for oral presentation at the LA-SOHOMA2020 workshop. The manuscript submitted for presentation at the workshop must be original, not published or being considered elsewhere. The working language is English. Papers are limited to 12 pages formatted for the Springer book series "Studies in Computational Intelligence" according to the instructions at <http://www.springer.com/series/7092>. Papers may be submitted in Word or Latex format

Publication

All papers accepted for presentation will be included in an electronic preprints volume and distributed to the participants at the conference. Papers presented at the Workshop will be proposed by the SOHOMA Latin America 2020 conference chairs for publication in the Springer series "Studies in Computational Intelligence", ISI and DBLP Computer Science database indexed. In addition, a selected set of papers will be proposed for publication in an issue of the journal "Ingeniería y Universidad. Engineering for development, indexed in Scopus:

<https://revistas.javeriana.edu.co/index.php/iyu/>

Important dates

Proposal of Special Sessions	March 20, 2020
Full paper submission	May 25, 2020
Notification of Acceptance/Rejection	June 22, 2020
Final camera-ready paper submission	June 30, 2020
Early registration and fee payment	July 10, 2020
LA- SOHOMA Workshop	August 26 – 27, 2020

Registration Fees *

	Early	Late
Students **	USD\$ 195	USD\$ 295
Academics	USD\$ 245	USD\$ 390
Practitioners	USD\$ 390	USD\$ 485

* Registration will be charged in Colombian Currency

** Students must provide valid University ID

Scientific and Academic partners



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