



SOHOMA'20: 10th Workshop on Service Orientation in Holonic and Multi-Agent Manufacturing for the Industry of the Future.
1-2 October 2020. Paris, France

Session title: Digital Twins for Manufacturing and Beyond

Organisers:

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Short presentation:

The notion of Cyber-Physical Systems is closely related to the development of a Cyber model of the system on which data are gathered, simulations are performed and calculations are made. This Cyber model is generally referred as the Digital Twin of the product or the system. In the field of manufacturing, Cyber-Physical Production Systems inherit from this characteristic that conforms to the expectations of next generation industrial systems, such as in Industry 4.0 for example. It is meant to be the basis element enabling efficient development of tools such as virtual or augmented reality, cloud manufacturing, data mining or machine learning for maintenance, online simulation, etc.

While the notion of the Digital Twin in itself is still not clearly defined and very few proofs of concept can be found, the idea has sparked interest across multiple domains - leading to several projects involving academia and industry all around the world. It becomes now crucial to foster the emergence of a global picture of the Digital Twin that could be accepted by the largest community and show the benefits of the application of such a tool in operations. There also then exists an opportunity for the holonic and multi-agent systems community to play a leading role in the development of the Digital Twin concept – both at the conceptual and implementation level – within and beyond the manufacturing domain.

This session aims at bringing together multiple actors of this concept in order to foster convergence, innovative tools and applications. All the aspects of the implementation of a Digital Twin, within and beyond the manufacturing domain, are targeted. Position papers and applications feedback are particularly welcome. Works on the generic architecture of a Twin are of great interest, as well as applications and proofs of concepts in industry or learning factories.

Keywords: Digital Twin, Digital Shadow, Digital Model



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Important dates:

- Full paper submission: April 15th
- Notification of acceptance: May 25th
- Final, camera-ready paper submission: June 25th
- Early registration and fee payment: July 25th
- Workshop days: 1-2 October 2020