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: **Sustainable Manufacturing and Logistics**

Organisers:

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Short presentation:

This session addresses sustainability as a huge challenge in manufacturing and logistics systems and in particular reducing energy consumption.

In fact, industrial and logistics operations are energy-consuming and impact the environment negatively. The vision of the fourth industrial revolution is not only to optimize production and minimize costs but also to control the consumption and cost of energy in manufacturing. The production system must be stable and robust in the face of all kinds of disruptions, whether internal like "machine failure" or " random job arrival" or external such as dynamic variation in energy availability, different price of energy source, etc.

Also, in logistic systems, energy-efficient freight transport needs to be approached to avoid empty running thus reduce CO2 emission, etc.

This session aims at bringing together reflections and innovative ideas on methodology and solutions to get an energy-efficient manufacturing and logistics systems.

It is important to take in consideration energy efficiency from the design level of intelligent control tools. It is important to design a tool to measure in real time the energy consumption of manufacturing and logistics activities and to apply artificial intelligent techniques to analyse this data to predict the future consumption.

Main research lines in this session are:

- Collaboration between energy producers and energy consumers
- Multi agent architecture to control energy consumption
- Scheduling an rescheduling methods with energy constraints
- Energy efficient approaches in logistics
- Machine learning techniques to analyse and predict energy consumption
- Machine learning techniques to predict renewable energy production
- Management and control of energy production and distribution

Keywords: sustainability, energy efficiency, logistics, manufacturing, artificial intelligence, multi agent system

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Important dates:

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