

Special Session on:

Data-driven simulation modelling for production control systems

Proposed by:

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Short presentation: A main goal of managers in industry consists to solve the design of their production control systems in an optimal way. For this, production control systems must have a flexible and optimal design in order to reduce the costs while respecting constraints (delays...) and objectives (agility, quality...).

In order to evaluate the new approaches or to choose a management production organization rather than another, the simulation modelling is widely used. In general, simulation is a practical methodology for understanding the high-level dynamics of a complex manufacturing system. While simulation has much strength, there are some limitations for evaluation of several control policies, without a complete simulation model redesign. We need to an underlying modelling discipline or structured approach to reduce time and efforts for maintaining and adapting simulation models

The Data-driven modelling techniques provide the possibility to reduce adaptation work and make simulation models more long-lasting and robust. In this way we can use data imported from ERP system, MES, CAPP system or directly from sensors... in order to design and/or maintain these simulation models. The variety of relevant tools and systems leads to many innovative issues in the field of simulation models of flows in complex systems using data-driven approaches. This session aims to present the latest contributions in this topic. Papers, which contribute to the solving of these problems, are welcome in this session. The context of study can concern (but are not limited to):

- Closed-Loop Simulation,
- Knowledge-based modeling approaches,
- Learning machines,
- Information management and decision making process modeling,
- Dynamic data-driven application simulation,
- Automatic model generation
- Data mining and knowledge extraction,
- Industrial case study
- ...

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Important Dates:

- **Full paper submission:** March 1st, 2013
- **Notification of acceptance:** May 15th, 2013
- **Camera ready submission:** June 15th, 2013

For authors guidelines, please refer to <http://www.iesm13.org/>