

Invited session: “Digital twins for maintenance”

4th IFAC Workshop on Advanced Maintenance Engineering, Services and Technologies, 10-11 September 2020, Cambridge, UK

Session proposers:

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Description and topics:

The development of computer modelling, simulations and connectivity between products introduces new and unique opportunities to elicit service value through optimised decision making. Through improved connectivity and integration of data across the product lifecycle a Digital Twin can be created, which generates information to improve decision making processes. This could reduce lifecycle costs and improve information available to stakeholders. Applications of digital twins for the in service phase of the product have focused on the evaluation of modification effects, health management and predicting and extending lives. The opportunities, risks, development procedures, and requirements of digital twins are not fully understood.

To discuss these aspects, this invited session calls for high-quality contributions that investigate main research challenges, technology developments and advancements, case studies, and applications related to the following topics (but not limited to):

- Design of digital twins
- Methods to manage data within digital twins
- Integration of technologies within digital twins
- Case studies on applications of digital twins
- Use of digital twins for life cycle analysis
- Fast development of digital twins
- Methods for efficient maintenance of digital twins

Contributions consisting either of empirical studies, collaborative projects and action researches in an industrial context are particularly welcome.

INVITED SESSION CODE: g5i3u

Please submit your paper as an “invited paper” to the papercept system, and provide this code in order to associate your paper to the invited session:
<https://ifac.papercept.net/conferences/scripts/start.pl>

IMPORTANT DATES:

31st Jan 2020: Paper submission
15th Mar 2020: Author notification
10th May 2020: Final paper submission
09th Jun 2020: Early bird registration
10th-11th Sept 2020: Workshop