

**Invited session: “Low Cost Industrial Monitoring Approaches”**  
**4<sup>th</sup> 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 recent advances in monitoring technologies significantly improve the observability of engineering systems towards improved system controllability and reliability. Monitoring is one of the most significant opportunities for companies in the manufacturing and infrastructure sectors to improve their products, processes and services. One of the critical challenges of monitoring is how to support the adoption of the technologies in sectors characterised by limited capital investment and research potential. Whilst there is significant body of knowledge in this area it is mostly focused on relatively expensive solutions which are often unaffordable to most of the companies in manufacturing and infrastructure sectors. This session will therefore address a common concern that recent developments in monitoring are unlikely to be accessible by most companies owing to the associated capital cost of upgrading industrial computing and communication environments. The session will focus on low cost monitoring technologies and tackle the challenges associated with integrating these safely and securely into manufacturing or infrastructure environments, and their impact on reliability, maintenance and asset management.

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):

- Low Cost Monitoring Methods & Approaches
- Conceptual models and reference architectures for low cost monitoring
- Hardware for low cost monitoring
- Low cost sensors and data acquisition systems
- Modelling for low cost monitoring
- Software / libraries for low cost monitoring
- Pathways to achieve industrial monitoring standards of security, safety and interoperability
- Low Cost Monitoring Applications

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

<b>INVITED SESSION CODE: xpnxm</b> 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: <a href="https://ifac.papercept.net/conferences/scripts/start.pl">https://ifac.papercept.net/conferences/scripts/start.pl</a>	<b>IMPORTANT DATES:</b> <b>31<sup>st</sup> Jan 2020:</b> Paper submission <b>15<sup>th</sup> Mar 2020:</b> Author notification <b>10<sup>th</sup> May 2020:</b> Final paper submission <b>09<sup>th</sup> Jun 2020:</b> Early bird registration <b>10<sup>th</sup>-11<sup>th</sup> Sept 2020:</b> Workshop
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