CALL FOR ABSTRACTS

Fleet-based Prognostics and Health Management of Industrial Assets

Description
Fleet-based analytics aims to intelligently leverage and exploit knowledge across several assets to extract new insights for maintaining and optimizing the behavior of the fleet as a whole as well as the individual assets that are part of it. Taking this fleet-based knowledge across assets into account also offers new opportunities to improve or extend current state-of-the-art approaches for diagnostics and prognostics related to health monitoring, degradation modelling and benchmarking.

Motivation
Increasingly, knowledge (such as SCADA data, maintenance logs, etc.) is gathered on fleets of industrial machinery, i.e., sets of (nearly) identical industrial assets deployed in different operating contexts, such as wind or solar parks, steam turbines, heat pumps, compressors, trucks, robots, etc. This information is used by OEM to plan future maintenance interventions or enhance future product design, and by asset owners, e.g., to monitor their performance. Understanding and optimising the operational behaviour of such fleets is crucial but challenging, since it often involves complex systems operating in heterogenous and dynamic environments. Leveraging the knowledge that is available from the fleet offers new opportunities to overcome a number of these challenges. Furthermore, it offers new opportunities for improving existing PHM approaches for condition monitoring, diagnostics and prognostics for individual industrial assets by incorporating knowledge on similar assets in the fleet.

Objective
The aim of this session is to present and discuss state-of-the-art PHM methodologies and techniques that leverage the knowledge of the fleet in order to improve the prognostics and health management of industrial assets. Topics of interest include, but are not limited to, diagnostics and prognostics approaches related to health monitoring, degradation modelling and benchmarking within fleets of industrial assets. Also industrial case studies (irrespective of the domain) demonstrating effective solutions tackling the specific challenges and issues in real applications involving fleets of industrial assets are welcome.

Please submit your abstract by February 22, 2020

Please submit your abstract through the conference website, http://phmeurope.org/2020/. Also, please send a copy of the abstract by email to the special session organizers.

Organizer
Mathias Verbeke, EluciDATA Lab, The Data and AI Competence Lab of Sirris, mathias.verbeke@sirris.be
Wannes Meert, DTAI, KU Leuven, wannes.meert@cs.kuleuven.be
Alessandro Murgia, EluciDATA Lab, The Data and AI Competence Lab of Sirris, alessandro.murgia@sirris.be
Bart Vandevelde, IMEC, bart.vandevelde@imec.be