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CALL FOR ABSTRACTS

Special session on
Advanced maintenance decision-making for complex systems

Description

In the context of Industry 4.0, industrial systems become more and more complex. They could be an integration of many components of different natures with their complex interconnections and dependencies (e.g. cyber-physical systems). This special session focuses on the maintenance decision-making including maintenance modeling and maintenance optimization of such complex systems. The discussion will be also opened to the geographically-distributed systems where the maintenance resource allocation would be a big issue in such context.

Motivation

The maintenance-decision making of the complex systems has to face many challenges due to a large number of components, their interactions, and the allocation of the

maintenance resources such as operators in a geographically distributed environment. Advanced maintenance models (predictive maintenance, dynamic grouping/opportunistic/routing maintenance) and maintenance optimization methods (Metaheuristic optimization) should be developed to overcome all these above challenges.

Objective

This session aims to provide researchers, industrial experts and practitioners the opportunity to present and discuss recent solutions to the above-mentioned issues, as well as to share new perspectives. The topics of interest include, but are not limited to:

- Maintenance strategies for complex systems (Multi-level maintenance decision-making, Dynamic grouping/opportunistic maintenance, Predictive maintenance decision-making etc.)

- Maintenance modeling of complex systems (system modeling, dependence modeling)

- Maintenance operator routing

- Metaheuristic optimization for the maintenance decision-making

- Case studies and applications of maintenance-decision making for complex systems

Organizer

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