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CALL FOR ABSTRACTS

Special session on
*Digital twin approach in maintenance and
safety engineering*

Description

The recent advances in digitalization have paved the way to more efficient approaches for operations in different industries. Digital twins are regarded as the key to digital transformation, where a twin is not only a visualization of physical asset, but a common set of data and information can be shared across departments throughout the operations lifecycles of the asset. The digital twin approach is expected to be effective to monitor and estimate the performance of physical systems, and provide clues to the real-time decision-making on system operations.

Motivation

The digital twin approach is playing an active role in engineering fields, but to date, a gap is still existing between digital twin and most analyses and implementations with the purpose of advising on maintenance strategies and risk controlling measures for accident prevention.

Objective

The special session is proposed to share new algorithms, twinning methods and philosophies to integrate the considerations of production and maintenance, data collection, processing and maintenance-related decision-makings, risk issues and risk reduction measures into the digital twin approach, so as to increase system availability and productivity, and prevent accidents in a more cost-effective way.

Organizer

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The validation of the special sessions will be done under the responsibility of the technical and scientific committee. Organizers are invited to provide a list of reviewers that may be supplemented by TC members to ensure consistency in the evaluation process.