CALL FOR PAPERS - SPECIAL SESSION
"Explainability of data-driven methods in industrial processes"
for CODIT 2024
July01-04, 2023 ▪ Valletta, Malta

Session Co-Chairs:

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Session description:

This special session addresses the challenge of generating knowledge from historical data on industrial processes. Data-driven methods have been successfully applied to industrial systems over the past two decades. However, a key point moving forward is to better understand industrial operational data. The high dimensionality, non-linear and time-varying dynamics, uncertainty, and only partial knowledge, to name a few, make it challenging in practice.A better understanding of process data can lead to more reasonable, less complex, and more accurate data-driven methods. This, in turn, can benefit industrial operations in several ways: knowledgeimprovement, insightgeneration, innovation and commonly used tasks ofprocess modelling, control, monitoring and optimization. More specific examples include diagnostic tasks, energy efficiency, emission reduction, equipment lifespan, and new ways of operating processes. Ultimately, this could contribute to the development of more rational digital twins and cyber-physical systems (CPS). The purpose of this special session is to discuss ways to advance the transition from data to information to knowledge in relation to industrial operational data.

The topics of interest include, but are not limited to:

- Causal inference
- Counterfactual analysis
- Data preprocessing
- Data visualization
- Decision making
- Explainable AI

- Knowledge generation
- Large industrial datasets
- Model interpretability / explainability
- Trustworthy AI
- Real industrial case studies

SUBMISSION

Papers must be submitted electronically for peer review through PaperCept by **February 03, 2024:**
http://controls.papercept.net/conferences/scripts/start.pl.InPaperCept, click on the **CoDIT 2024 link "Submit a Contribution to CoDIT 2024" and follow the steps.**

IMPORTANT: All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).

DEADLINES

February03, 2024: deadline for paper submission
April 14, 2024: notification of acceptance/reject
May10, 2024: deadline for final paper and registration