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Nota di contenuto	Concept and Implementation of a Software Architecture for Unifying Data Transfer in Automated Production Systems -- Social Science Contributions to Engineering Projects: Looking Beyond Explicit Knowledge Through the Lenses of Social Theory -- Enable learning of Hybrid Timed Automata in Absence of Discrete Events through Self-Organizing Maps -- Anomaly Detection and Localization for Cyber-Physical Production Systems with Self-Organizing Maps -- A Sampling-Based Method for Robust and Efficient Fault Detection in Industrial Automation Processes -- Validation of similarity measures for industrial alarm flood analysis -- Concept for Alarm Flood Reduction

Sommario/riassunto

This open access work presents selected results from the European research and innovation project IMPROVE which yielded novel data-based solutions to enhance machine reliability and efficiency in the fields of simulation and optimization, condition monitoring, alarm management, and quality prediction. The Editors Prof. Dr. Oliver Niggemann is Professor for Artificial Intelligence in Automation. His research interests are in the fields of machine learning and data analysis for Cyber-Physical Systems and in the fields of planning and diagnosis of distributed systems. He is a board member of the research institute inIT and deputy director at the Fraunhofer Application Center Industrial Automation INA located in Lemgo. Dr. Peter Schüller is postdoctoral researcher at Technische Universität Wien. His research interests are hybrid reasoning systems that combine Knowledge Representation and Machine Learning and applications in the fields of Cyber-Physical systems and Natural Language Processing.

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