Special Issue

Industrial Soft-Sensing Technology Based on Data-Driven and Artificial Intelligence Technologies

Message from the Guest Editors

The advent of data-driven and artificial intelligence (AI) technologies has revolutionized the landscape of industrial soft-sensing, offering unprecedented opportunities for enhancing process monitoring, control, and optimization. Traditional hard-sensing technologies often face limitations in terms of cost, installation complexity, and real-time data acquisition. In contrast, soft-sensing technologies leverage data analytics and AI algorithms to infer critical process variables, providing a cost-effective and efficient alternative. By integrating data-driven approaches and AI, industrial soft-sensing can achieve higher accuracy, adaptability, and robustness, thereby significantly improving the overall performance and reliability of industrial systems. This Special Issue aims to explore the latest advancements and applications of data-driven and AI-based soft-sensing technologies in various industrial sectors, with a focus on promoting innovative solutions that drive efficiency, sustainability, and intelligent automation.

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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