Special Issue

Sensor-Based Time-Series Analysis Empowered by Artificial Intelligence

Message from the Guest Editors

Rapid advances in Artificial Intelligence and Network Science are reshaping sensor-based time-series modeling, with broad applicability across domains and settings. Current research spans self-supervised and generative learning, efficient long-sequence modeling, dynamic graphs, and topological structure learning. Meanwhile, common challenges in real-world data, such as long-range dependencies, asynchronous/irregular sampling, low SNR with structured artifacts, and covariate or concept drift, raise higher demands on generalization, interpretability, and engineering deployment.

This Special Issue centers on "sensor data-driven time-series methods and systems", in alignment with the scope of *Sensors*. It welcomes application-agnostic research aimed at advancing foundational theory, algorithmic methods, and efficient systems for time-series analysis. We especially encourage work at the intersection of Sensor-based Time Series × Artificial Intelligence × Network Science and place no restrictions on application areas, welcoming signal-analysis submissions from diverse domains and settings (for instance, biomedical signals, physiological monitoring and brain-computer interface).

Guest Editors

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Message from the Editor-in-Chief

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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