Special Issue

Sensing Motion Decoding Behavior: Sensor-Driven Machine Learning for Next-Generation Gait Analysis

Message from the Guest Editors

This Special Issue aims to gather cutting-edge research on sensor-driven gait analysis, encompassing a wide spectrum of sensing platforms, including wearable devices (e.g., IMUs, pressure insoles, and EMG) and contactless systems (e.g., radar, LiDAR, Wi-Fi, infrared, and RGB/depth/thermal cameras). These technologies offer varying trade-offs in accuracy, intrusiveness, scalability, and privacy, opening new possibilities in both controlled and unconstrained environments. We invite the submission of original contributions that push the boundaries of sensor design, multimodal learning, and intelligent inference for gait-related tasks. Topics may include biometric recognition, soft biometric estimation, behavioral understanding, anomaly detection, and health monitoring. By promoting interdisciplinary dialog across computer vision, pattern recognition, biomedical engineering, and ubiquitous computing, this Special Issue seeks to inspire next-generation innovations in gait analysis and advance the field toward broader deployment and impact.

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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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