Special Issue

IMU-Based Gait Recognition and Analysis: Emerging Methods and Applications

Message from the Guest Editor

Inertial Measurement Units (IMUs) have become widely used tools for gait analysis, enabling accurate, low-cost, and portable assessment of human movement in both controlled and real-world environments. The possibility of obtaining continuous kinematic data has enhanced applications ranging from clinical gait evaluation to sports performance, rehabilitation, and daily activity monitoring. This Special Issue, "IMU-Based Gait Recognition and Analysis: Emerging Methods and Applications", aims at collecting original research and reviews focusing on methodological innovations, data-driven approaches, and interdisciplinary applications of IMU technology in the study of human gait. The topic aligns closely with the scope of Biomechanics by addressing quantitative movement analysis and its underlying mechanical principles through wearable sensing technologies. IMU-based gait analysis integrates experimental biomechanics, computational modeling, and data science, promoting new insights into human motion, motor control, and musculoskeletal function.

- IMU sensors
- gait analysis
- biomechanics
- wearable technology
- motion capture
- human locomotion
- gait cycle
- movement recognition

Guest Editor

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Message from the Editor-in-Chief

Biomechanics (ISSN 2673-7078) is an international, peer-reviewed, and open access journal devoted to the fast publication of the latest achievements of scientific research in the area of biomechanics. Both experimental and theoretical papers are published. We hope that the submission guidelines and submission template will assist you in your submission of your research to this journal, and that you will enjoy reading the articles in Biomechanics.

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