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*Special Issue: Measurement, control, and analysis of motion using ICT and AI*

# Preface to the Special Issue

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In recent years, the rapid advancement of ICT (Information and Communication Technology) and AI (Artificial Intelligence) has led to increased research activity in the measurement, control, and analysis of various moving entities, including humans and machines. These technologies are being applied across a wide range of fields, including construction, agriculture, manufacturing, healthcare, and sports, driving the development of innovative methodologies.

In the field of measurement technology, advancements in sensors and IoT (Internet of Things) have enabled real-time and highly precise data collection. For example, on construction sites, precise tracking of heavy machinery and workers contributes to improved safety and operational efficiency. In agriculture, drones and robots are being utilized to monitor crop growth, facilitating the advancement of precision farming.

In the domain of control technology, autonomous driving and robotics have made significant progress, enabling the independent operation of moving entities in diverse environments. In the manufacturing sector, AI-driven robotic control is enhancing productivity and reducing labor burdens. Similarly, in healthcare, the integration of AI into surgical support robots is enabling more precise medical procedures, marking a transformative shift in medical technology.

In the area of motion analysis, researchers are analyzing collected data to understand behavioral patterns and convert tacit knowledge into explicit knowledge. In sports science, motion analysis of athletes is aiding in performance enhancement, while in the medical field, research is being conducted to quantify rehabilitation effectiveness, facilitating more effective treatment strategies.

This special issue aims to gather the latest research findings on the measurement, control, and analysis of moving entities across various domains and to foster innovation through interdisciplinary and cross-sector collaboration. By facilitating knowledge exchange and cooperation among researchers and engineers from different fields, further technological advancements can be expected. We hope that this special issue will contribute to the continued evolution of both academic and technological frontiers.

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