Special Issue

"Sky–Air–Land–Water" Cross-Domain Heterogeneous System: Unleashing the Agricultural Intelligent Ecosystem

Message from the Guest Editors

The integration of disparate systems across the sky (satellites, GNSS), air (drones, aerial sensors), land (IoT networks, robotics, soil sensors), and water (aquatic drones, underwater sensors) is creating unprecedented opportunities for a holistic, intelligent, and sustainable agricultural ecosystem. This cross-domain, heterogeneous approach enables seamless data acquisition, synergistic analysis, and autonomous decision-making at an unprecedented scale and granularity. This Special Issue aims to compile cutting-edge research that explores the integration, challenges, and transformative applications of "Sky–Air–Land–Water" (SALW) cross-domain heterogeneous systems in agriculture. We seek to foster interdisciplinary dialogue among researchers in precision agriculture, robotics, remote sensing, computer science, networking, artificial intelligence, and environmental science. The goal is to present a comprehensive collection of original research and review articles that address the theoretical foundations, technological innovations, and practical implementations of these integrated systems, ultimately paving the way for the next generation of smart farming.

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