Organized Session 19

Smart Agriculture with Robots and ICT in Japan

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Concept of Organized Session

In Japan, smart agriculture with robots and internet communication technologies (ICT) had been begun in actual fields since 2019. At present, robot tractor, robot transplanter, robot combine, and drone are used in rice-production. In addition, they connect to the farm management information system (FMIS) directly and collect the big data of plants, machines, and operations with sensors. And then, smart agriculture is expected to practice the best crop management while decreasing labors and energy based on those data.

This session aims to highlight the latest researches and applications in robotics and ICT relevant to the smart agriculture. The main topics of the special issue are as follows:（1）Agricultural robots, (2) Automatic navigation, (3) UAV in agriculture, (4) Object detection and perception for agricultural robot, (5) Artificial intelligence in agriculture, (6) Sensors and sensing, (7) IoT and data management for agriculture

**Keywords:** Agricultural robot, precision agriculture, internet of things, artificial intelligence, farm management information system