Special Issue

Sensor for Autonomous Drones

Message from the Guest Editors

In recent years, Unmanned Aerial Vehicles (UAVs) have been used in a variety of applications. Such drones are commonly equipped with a wide range of sensors, including GNSS, IMU, Gimbaled camera, optical flow, Lidar, and ultrasonic and stereo depth sensors. Yet, the vision of an autonomous swarm of drones that can perform applications such as door-to-door delivery in a danced urban region is still far from being a reality. This Special Issue will focus on general-purpose autonomous micro drones that can perform complicated missions such as robust and continuance SLAM, real-time 3D motion planning, swarm cooperation, and edge-based machine learning for sensor fusion. The Special Issue will cover but is not limited to the following:

- Adaptive sensor fusion methods for Autonomous UAVs and micro drones;
- In-air self-calibration and sensor failure diagnosis;
- Deep learning-based sensor fusion and state detection;
- Bio-inspired challenges: return to home (RTH), visual navigation, intelligent landing, sense and avoid;
- Indoor navigation and mapping;
- SWARM cooperation and transfer learning between drones;
- Case studies: on intelligent autonomous micro drones.

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Message from the Editor-in-Chief

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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