
ADVANCED ROBOTICS Call for Papers

Special Issue on Aerial Robots

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Aerial robots or unmanned aerial vehicles (UAVs), are expected to play a great role in various applications such as search and rescue, surveillance, infrastructure maintenance, field operations, and 3D (Dangerous, Dirty, Dull) tasks. The area of aerial robotics has experienced remarkable progress in the last decade due to technological advancements and the minimization of onboard sensing and computing. Aerial robots generally fly autonomously or are remotely operated via a human and may be categorized into four different types: fixed wing, rotary wing, lighter-than-air (LTA), and flapping wing.

This special issue will present recent advancements in research and development on aerial robots and related technologies including mechanisms, actuation, sensing, and control. Papers on all aspects of aerial robotics are invited, including but not limited to the following topics:

- UAV and Micro-Aerial Vehicle (MAV) design, such as:
 - Flapping wing actuation methods
 - Vertical Take-Off and Landing (VTOL) systems
- Model analysis, including:
 - Flight and fluid flow dynamics
 - Post-stall maneuvers
- Estimation and control methods for aerial robots
- Autonomy for aerial robots:
 - Collision avoidance
 - Navigation and exploration
 - Multi-robot cooperation

Submission: **Pdf format file** of the complete manuscript should be sent by August 31, 2012 to the office of Advanced Robotics, the Robotics Society of Japan through our homepage (http://www.rsj.or.jp/AR/index_e.html). Sample form of the manuscript is available at the homepage, too. Additionally, please send the same file to Assoc. Prof. Atsushi Konno (konno@space.mech.tohoku.ac.jp), Prof. Koki Kikuchi (kouki.kikuchi@it-chiba.ac.jp), and Res. Assist. Prof. Nathan Michael (nmichael@seas.upenn.edu) for the confirmation.