Call for Papers

Special Issue for Unmanned Systems

Advanced Air Mobility: Enabling Technologies and Applications

In recent years, a trend has been witnessed that unmanned aerial vehicles (UAVs) will become an integral part of future smart cities. UAVs delivering food and goods to doorsteps or transporting passengers across nearby cities are coming to the real life. To ensure the safety of airspace and ground properties, the advanced air mobility (AAM) envisions a transformative aviation transportation system that can safely and efficiently integrate UAVs into the airspace. However, enabling such a system requires addressing many new challenges. For example, small UAVs are usually constrained in their sensing, control, communication, computing, and energy capabilities, making them sensitive to environmental disturbances, prone to attacks, and harder to stabilize. Moreover, UAV types, missions, and trajectory patterns are very heterogeneous, variable, and uncertain. Air traffic management and control solutions that rely on human controllers to constantly monitor and manage individual UAV trajectories are not feasible. It is envisioned that AAM is shifting toward more distributed solutions and autonomous systems will play more important roles. This special issue calls for papers that develop innovative enabling technologies for safe and efficient AAM and those that explore its new applications.

Topics of interests include, but are not limited to:

- Unmanned Aircraft Systems Traffic Management (UTM)
- Urban Air Mobility (UAM)
- Airspace capacity management
- Contingency management
- UAV guidance and control
- UAV path planning and mission planning
- UAV detection and collision avoidance
- Multi-UAV coordination
- Cooperative UAV sensing
- AAM cooperative decision making
- UAV communication and networking
- UAV-based airborne computing
- Weather studies for AAM
- UAV Security and privacy
- AAM Hubs, vertiports, and infrastructure Design
- Human system design for AAM
- Energy-efficient AAM and power management
- Security, privacy, and trust issues for AAM
- AAM testbed development
- UAV applications

Deadline for Submission: ~~March 31, 2023~~ extended to April 30, 2023

Publication of the special issue: January 1, 2024

Interested authors should submit their manuscripts for possible inclusion as a special issue paper through the journal online submission system at www.editorialmanager.com/us/. Please choose the option for the corresponding special issue when uploading your manuscript.

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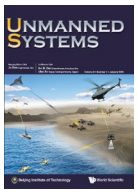

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