ISCAS 2026

2026 IEEE International Symposium on Circuits and Systems

CALL FOR PAPERS – WF-IoT 2025

We cordially invite you to submit your original contributions to IEEE World Forum on Internet of Things (WF-IoT) Low-Altitude Economy: Standards, Innovations, and Reliable Integrated Circuits for Emerging Applications - 2025, which will take place as a cross society special session within IEEE ISCAS 2026, to be held in Shangai, China on May 24 - 27, 2026.

WF-IoT 2025 is the legacy of being the premier event hosted by the IEEE IoT Technical Community, uniting diverse expertis expertise intrinsic to the IoT domain. Please check the workshop website https://wfiot2025.iot.ieee.org/authors/call-for-workshop-papers and the general conference web page https://wfiot2025.iot.ieee.org for more details.

The rapid growth of China's low-altitude economy (LAE)—projected to reach 1.5 trillion RMB by 2025—creates urgent demand for dedicated integrated circuit solutions to address mission-critical challenges in urban air mobility, including UAVs, eVTOLs, medical delivery, and aerial logistics. This special issue highlights application-specific integrated circuits (ASICs) designed for LAE, with a focus on three pillars: **security**, through tamper-resistant hardware modules and lightweight encryption; **reliability**, via fault-tolerant architectures and advanced hardware technologies; and **standardization**, promoting interoperability and energy-efficiency benchmarks across platforms. By bringing together experts from academia, industry, and standardization bodies, this session aims to foster innovations that will enable scalable, safe, and reliable deployment of LAE applications.

WF-IoT 2025 is highly relevant to the **ISCAS 2026**, which has long been at the forefront of circuits and systems innovations that bridge theory, devices, and real-world applications. LAE presents a new frontier where reliable, secure, and energy-efficient IC design is critical for enabling UAVs, eVTOLs, and aerial logistics. These challenges directly align with ISCAS innovation themes as enablers of scalable and global deployment. The scope of WF-IoT 2025 includes, but is not limited to the following topics:

- Ultra-low-power ICs for UAV sensing and navigation
- Integrated UAV electronic systems.
- On-chip AI accelerators for autonomous decision-making.
- Certification frameworks for LAE chips.
- UAV resilience in high-altitude environments.
- Attitude Control Algorithm for UAV.
- Hardware-level encryption and tamper-proofing for UAVs
- Mixed-signal and analog designs for flight control and stabilization
- Energy-harvesting and power management circuits for aerial platforms
- Ultra-long-range high-bandwidth wireless communication chips.
- UAV energy efficiency metrics and communication protocols.
- High-Precision Inetial Navigation circuit and system for UAV.
- RF/mmWave front-ends for air-to-ground and inter-UAV communications
- Omnidirectional Vision-Based Projectile Trajectory Prediction and Interception UAV
- Security and reliability architectures for mission-critical UAV systems
- IC design for cooperative UAV swarms and aerial IoT systems
- Standards and interoperability challenges in LAE ecosystems

IEEE Internet of Things

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