

Special Issue

Next-Gen Drone Safety: Intelligent Systems, LLM Analytics and Operational Risk

Message from the Guest Editors

This Special Issue aims to gather high-quality original research and review articles that explore and evaluate novel methodologies combining AI technologies, specifically LLMs, with structured human-factors frameworks for UAV safety enhancement. We welcome submissions related to the application, validation, and advancement of AI-driven approaches for incident analysis and human-factor identification in UAV operations. The topics submitted to the special issue include, but are not limited to:

- Comparative evaluations of AI-assisted UAV incident analysis versus traditional methods;
- AI methodologies for extracting human-factor insights from UAV narrative reports;
- Case studies demonstrating AI applications in UAV accident investigations;
- Systematic AI-driven approaches to proactive UAV risk management;
- Field Validation Frameworks for AI-Based UAV Safety Systems;
- AI-based UAV safety monitoring system design;
- Intelligent safety control and advanced AI technology for multiple UAVs;
- AI-based fault-tolerant flight control systems in complex environments;
- Safe Autonomous navigation using intelligent technologies.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Drones is an international open access journal focusing on advancing research in drone science, policy, technology, and applications. Today, drones have become indispensable for policymakers, regulatory authorities, mapping agencies, start-ups, and established firms. Their expanding societal and economic relevance is reflected in the rapid development of new sensors, upgraded platforms, specialized software, and novel applications. The journal provides a central forum for scholars in drone research and applications to exchange findings and innovations. With growing demand for high-quality research, our Editorial Board comprises international leaders and experts across relevant scientific areas. We offer rigorous peer review and rapid publication of papers from across all areas of drone science. We welcome you to submit your next paper to *Drones* and to contribute to the continued advancement of and innovations in the field of drones.

Editor-in-Chief

Prof. Dr. Diego González-Aguilera

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