

Special Issue

Navigation, Control and Mission Planning Advances for Safe, Efficient and Autonomous Drones

Message from the Guest Editors

In UAV swarms and formations, the challenges extend to the need for mission-level architectures to coordinate the path planning and path following using centralised or decentralised navigation, control and communication systems, including ground station–vehicle communications. The state-of-the-art methods used to address challenges in single and distributed drone systems are often based on advances in the navigation and control theory, increasingly based on machine learning, or a combination of those two approaches, such as artificial intelligence (AI)-enhanced navigation and control. Advances in new technologies such as the Internet of things and Detect and Avoid are also increasingly exploited to enhance navigation and control safety and performance. This Special Issue will therefore bring together papers which describe recent research in the navigation, control and mission planning of drones, including ground, air, marine or space vehicles. Papers with theoretical, simulation and practical experimental results in this field are all encouraged. This includes review papers, tutorials, as well as original research papers.

Guest Editors

Dr. Nadjim Horri
Dr. Samir Khan
Prof. Dr. Vaios Lappas

Deadline for manuscript submissions

closed (30 April 2025)



Drones

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 7.4



mdpi.com/si/141323

Drones
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
drones@mdpi.com

[mdpi.com/journal/
drones](https://mdpi.com/journal/drones)





Drones

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 7.4



[mdpi.com/journal/
drones](https://mdpi.com/journal/drones)



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

Cartographic and Land Engineering Department, Higher Polytechnic School of Avila, University of Salamanca, Hornos Caleros, 50 05003 Avila, Spain

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex and other databases.

Journal Rank:

JCR - Q1 (Remote Sensing) / CiteScore - Q1 (Aerospace Engineering)