

Special Issue

Unmanned Aircraft Systems with Autonomous Navigation, 2nd Edition

Message from the Guest Editors

The aim of this Special Issue is to seek high-quality contributions that highlight novel research results and emerging applications addressing recent breakthroughs in UAS autonomous navigation and related fields, such as flight mechanics and control, structure design, sensors design, etc. The topics of interest include the following:

- 2D and 3D mapping, target detection, obstacle avoidance;
- Active perception of targets in cluttered environments (foliage, forest, etc.);
- Vision-based and optical flow techniques;
- Sensors and sensor fusion techniques;
- Design models for guidance and controlled flight;
- State estimation, data analysis and filtering techniques (KF, EKF, particle filtering, fuzzy logic, etc.);
- Path planning and path management;
- Optimal control and strategies (neural networks, fuzzy logic, reinforcement learning, evolutionary and genetic algorithms, AI, etc.);
- Navigation in GPS-denied environments;
- Autolandings, safe landing area definition (SLAD);
- Environmental effects on UAVs (wind, etc.);
- Autonomous UAV or MAV swarms, distributed architectures;
- BVLOS autonomous navigation.

Guest Editors

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Prof. Giuseppe Del Core

Dr. Salvatore Ponte

Dr. Gennaro Ariante

Deadline for manuscript submissions

closed (31 December 2025)



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About the Journal

Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guestedited by leading experts in selected topics of interest.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.4 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the second half of 2025).