



Unmanned Aircraft Systems with Autonomous Navigation, 2nd Edition

Guest Editors:

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Deadline for manuscript
submissions:

closed (31 December 2025)

Message from the Guest Editors

Dear Colleagues,

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.





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Editor-in-Chief

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Message from the Editor-in-Chief

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