



Unmanned Aerial Vehicle Path Planning: Challenges, Solutions, and Future Directions

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Message from the Guest Editors

Dear Colleagues,

UAV applications and safe path planning capabilities are essential for their autonomous control systems. Autonomous UAVs must be able to compute feasible, computationally efficient, and collision-free safe paths in real time. Developing cost-effective and robust path planning solutions for UAVs can be challenging due to various technical, communication, infrastructure, and environmental factors.

Topics of interest for this Special Issue include, but are not limited to:

- UAV path planning and route optimization
- Energy-efficient algorithms for UAV path planning
- Collaborative path planning and task scheduling for UAV swarm
- UAV path planning in long-distance flights
- Challenges in dynamic obstacle avoidance in UAV flight
- Localization challenges in UAV flight
- UAV flight in “5G and beyond” environment
- Small-scale UAVs

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