

Special Issue on
Optimal Control Techniques in Aircraft Guidance and Control

CALL FOR PAPERS

Currently, research and development efforts in air transportation are focusing on increasing the environmental sustainability of aviation and, at the same time, improving its safety, cost effectiveness, and operational efficiency.

New concepts of operations have been devised which establish that air traffic management must be converted into an integrated and collaborative system, allowing more efficient management of the airspace through more accurate navigation and higher levels of automation.

To implement these new capabilities, new ground-based and airborne communication, navigation, and surveillance in air traffic management and avionic systems are required. With these systems, aircraft will be able to fly user-preferred optimal flight paths, limiting the function of the air traffic control to high-level supervision and emergency interventions.

The key enabling systems include avionics and ground-based systems featuring real-time 4D trajectory generation including multiobjective optimization, negotiation, and validation and precise 4D trajectory tracking.

This special issue intends to bring recognition to the contribution of optimal control techniques to this aircraft guidance and control and will provide a forum to disseminate the latest research work with the aim of further stimulating interest in this area of great potential.

Potential topics include but are not limited to the following:

- ▶ Optimal control techniques in aircraft guidance
- ▶ Optimal aircraft control
- ▶ Stochastic optimal control approach to aircraft trajectory optimisation
- ▶ Robust optimal control techniques in aircraft
- ▶ Optimal control applications to air traffic management
- ▶ Optimal control applications to manned and unmanned aircraft
- ▶ Verification and validation of solutions for onboard aircraft 4D guidance

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ijae/octag/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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