

AERO UC3M PhD Position Open on Stochastic Optimal Control

Research task

The **task** will be related to **stochastic optimal control** applied to **trajectory optimization in aerospace engineering**.

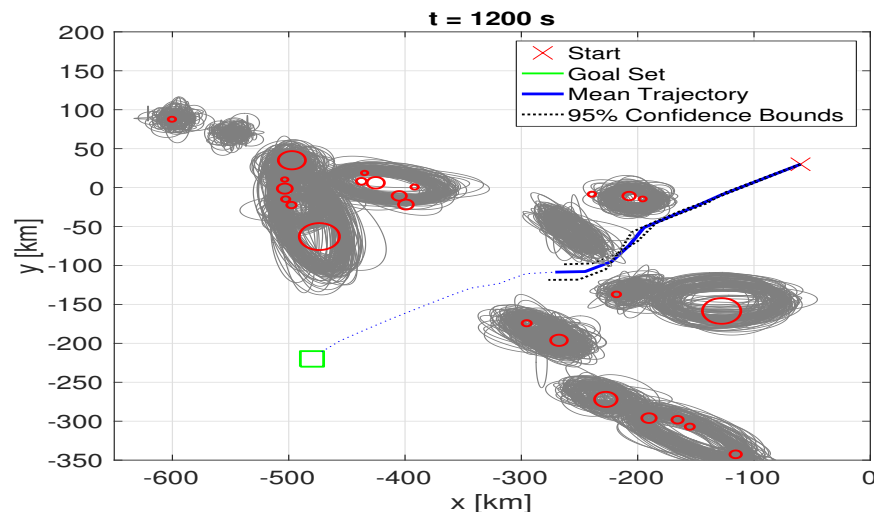
Arising applications of optimal control in aerospace engineering are vast. e.g., commercial aircraft trajectory planning, UAV mission planning, and space mission planning. The focus will be on commercial aircraft trajectory planning under uncertain meteorological phenomena, e.g., thunderstorms, windshear, etc. The PhD will continue to investigate a research line linked to SESAR H2020 European Project TBO-Met - <https://tbomet-h2020.com/>- and Spanish National Science Project Opt-Met - <https://optmet.wordpress.com/>-

Candidate skills and Requirements

The ideal candidate will have:

- A university degree (**Master's level or equivalent**) **mathematical sciences, atmospheric sciences, or aerospace /aviation engineering**
- Skills on control, optimization and algorithmic programming (python preferred)
- Solid skills in both written and spoken English.
- Great dose of imagination, problem solving skills, passion, and eagerness to learn.
- A strong academic record and international experience.

Outstanding students with only a partial match to this list are encouraged to apply. Women are strongly encouraged to apply.



Benefits and conditions

The successful candidate will be enrolled in the Department of Bioengineering and Aerospace Engineering (Area of Aerospace Engineering) of the University Carlos III de Madrid (UC3M). In particular, she/he will work within ASAP (dynamics and control of aerospace systems) research group - <https://aero.uc3m.es/DynamicsAndControlAerospaceSystems.html>.-

The conditions are as follows:

- Salary and duration of the appointment are those determined by UC3M for PhD students (typically 14k to 18k € gross per year and 3-4 years).
- Additional salary complements for the participation in both European and National research projects (see TBO-Met and OptMet as examples), and in contracts with different companies, e.g., Boeing Research and Technology.
- Additional elements: laptop computer; and Health Insurance Covered by the Spanish health system.
- International secondments in prestigious universities and research centers will be granted. Our PhD students have visited in the past, e.g., ETH Zürich, ENAC, ESA, and University of Illinois Urbana-Champaign.
- Opportunity to travel to international conferences (Europe and overseas) and present research activities. Publication in top quality journals.
- Become part of a young, dynamic, highly qualified, collaborative team.
- Flexible working environment and schedule.
- The possibility to develop a unique career outside of mainstream: academia, research centers, international environment, private companies and start-ups.
- An agile working methodology; ASAP recently implemented JIRA/Scrum and all the research is done on a collaborative wiki/Confluence.

To Apply

Email directly to Assistant **Prof. Sanjurjo** (msanjurj@ing.uc3m.es) and Assistant **Prof. Soler** (masolera@ing.uc3m.es) with: 1) **a CV**; 2) **a motivation letter** indicating your interest in the topic. Moreover, recommendation letters (or the name and contact info of recommendation person) are welcomed (though not mandatory).

Deadline

Call for applications will remain open until an adequate candidate is found. Expected **start will be in September**. Ideally, we would like to do the selection process **no later than May**.