

Metadata

Job Title: ATLAS A05-a: Robust design of attitude control systems under uncertain aerodynamic conditions

Position-ID: NNN

Faculty/Facility: Aerospace Engineering and Geodesy

Institute/Facility: Aerospace Engineering and Geodesy: iFR – Institute for Flight Mechanics and Controls

Research Association: CRC 1667: Advancing Technologies of Very Low-Altitude Satellites (ATLAS)

Teaching Obligation: No

Application Deadline: 31/03/2024

Anticipated Start Date: 01/04/2024

About Us

The DFG-funded Collaborative Research Centre (CRC) 1667 “Advancing Technologies of Very Low-Altitude Satellites” (ATLAS) at the University of Stuttgart (Germany) addresses the fundamental scientific and engineering challenges of rendering Very Low Earth Orbit (VLEO, about 200 km to 450 km altitude) accessible. These orbits are particularly beneficial for satellite services that have become indispensable to our modern knowledge, information, and communication society and enable the operation of satellites without exposing them or contributing to the increasing contamination of traditional orbits with space debris. The research programme encompasses 17 distinct scientific subprojects that are organised into three project areas, focusing on exploring the Gas-Surface Interactions, Enabling Subsystems, and Mission-related Challenges that are respectively critical towards ultimately achieving sustained VLEO operations. Striving towards this common goal, the CRC ATLAS encompasses an especially broad range of research disciplines as well as experimental, numerical, and analytical methods.

For its doctoral researchers, the CRC ATLAS offers an ambitious structured interdisciplinary training programme with joint supervision by experienced researchers from different disciplines. At the end of their doctorate, selected candidates will likely find themselves in an exceptionally good starting position for their continued future career in academia or industry.

Please refer to <https://www.sfb1667.uni-stuttgart.de> for further information on the CRC 1667 ATLAS and its individual research projects.

Your Tasks

- Research to the topic of *robust design of attitude control systems under uncertain aerodynamic conditions* within the CRC;
- Presentation of scientific results in national and international conferences as well as journal articles;
- Communication with researchers within the Institute of Flight Mechanics and Controls as well as in the CRC.

Your Profile

Successful candidates possess an M.Sc. or equivalent scientific university degree in aerospace engineering, engineering cybernetics, computer science, mathematics, or an equivalent field of science relevant to the research topic above. Candidates should have basic knowledge of linear, robust, and/or nonlinear control engineering. Experiences with machine learning and satellite control design are beneficial. Additionally, candidates should have excellent writing skills. Fluency in English is required; command of German is appreciated. Active support of and participation in the CRC program is expected.

Our Benefits

All vacancies for Ph.D. positions include a full- or part-time position for a period of 3.75 years. Remuneration is based on the TV-L statutory scale and its associated public sector benefits. The earliest possible start date is April 1st, 2024.

A complete application includes a letter of application, a detailed CV, and a list of publications (if applicable). Applications are accepted until the respective position is filled; a first application deadline is set to February 15th, 2024.

Employment and compensation information

<i>Maximal Funding Period or Duration of Employment:</i>	3.75 Jahre
<i>Type of Funding:</i>	Position as Employee of the University of Stuttgart
<i>Compensation:</i>	EG TV-L 13
<i>Percentage of weekly working hours (usually 39.5 h = 100%):</i>	100
<i>Employment at the cooperation partner:</i>	No
<i>Location:</i>	Stuttgart, Campus Vaihingen
<i>If Location other than Stuttgart or additional location(s):</i>	N/A

Contact

<i>Contact person:</i>	Walter Fichter
<i>Mail:</i>	fichter@ifr.uni-stuttgart.de
<i>Phone:</i>	0711 685-67060
<i>Remarks:</i>	-