University of Stuttgart
Collaborative Research Center 1667 ATLAS

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Master Thesis Opportunities

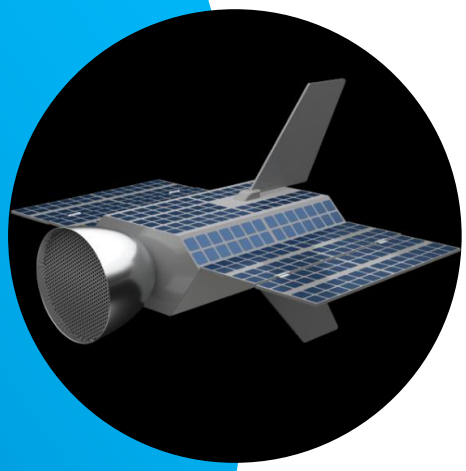
Satellite Aerodynamics for Orbit Control

The Collaborative Research Centre 1667 "Advancing Technologies of Very Low-Altitude Satellites (ATLAS)", funded by the German Research Foundation DFG, 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 indispensable satellite services of our modern knowledge, information and communication society. Additionally, access to VLEO offers the opportunity to operate satellites without exposure or contribution to the increasing contamination of traditional orbits with space debris.

Potential topics

- Development of a preparation routine for aerodynamic coefficients from a newly developed gas-surface interaction model for use in manoeuvre optimization
- Aerodynamic optimization of satellite geometries with a newly developed gas-surface interaction model and verification in PICLas
- Generation of aerodynamic databases of complex satellite geometries using PICLas simulations
- ...

Applications with a short statement, transcript of records and CV are very welcome!



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