



Universität Stuttgart

Institut für Flugmechanik und Flugregelung

ASTRONE KI

Observability-augmented Trajectory Planning

Project

Astrone is an ongoing project at the iFR consisting in a mission to an asteroid with the aim of maximizing the scientific return through multiple surface relocations.

In this framework, one goal is to increase observability of the system to improve the navigation performance. This would be done by analyzing different metrics, and including them in the trajectory optimization problem.

Tasks

- Nonlinear observability's understanding
- Comparison of different observability optimization metrics
- Set up of open-loop and closed-loop simulations
- Integration of the algorithm in the project simulator

Requirements

- Good knowledge of Matlab/Simulink
- Knowledge of optimal control theory is an advantage
- Ability to work independently
- Working hours: 48h/month

Start date: approximately October, 1st.

If interested, send your CV and transcript of grades.

Contact

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