



Adaptive Pointing Control for Spacecraft



Project Objective: Design an Adaptive Control system which self adjusts to different operating conditions. In particular we want to track a moving target with the laser beam in spite of external disturbances such as vibrations, measurement noise and uncertainties of the inertia matrix.

Research/Thesis Topics:

- Mathematical modeling of a mechanical system with flexibilities
- On line identification of model parameters and frequencies of the disturbances
- Design and simulation of an Adaptive Controller using Simulink
- Implementation on a Spacecraft

Recommended Coursework: Courses in the Control tracks in Mechanical and Electrical Engineering

