High-Fidelity Modelling and Design of a 1U CubeSat Communications Mission

Master Thesis

**Task Description**

- as successor to the successful UWE 1-4 missions, a possible UWE 5 mission could focus the demonstration of an advanced, reconfigurable comms platform
- the additional demand of electrical power, as well as the need for aperture to host the communications payload antennas have large impact on satellite design
- goals of this thesis: use high-fidelity simulation tools to validate the feasibility and to establish a first top-level mission/communications co-design for UWE 5

**Skills / Interests**

- Satellite mission modeling with AGI STK
- Communication systems modeling with Keysight System Vue
- Co-Simulation between STK and System Vue

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