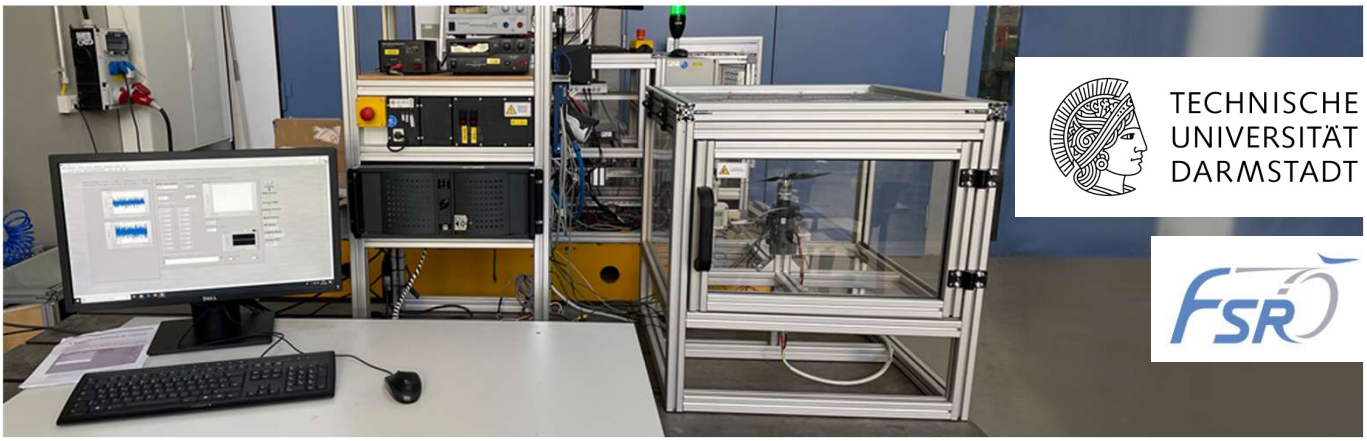
Aushang bis zum
01.05.2024



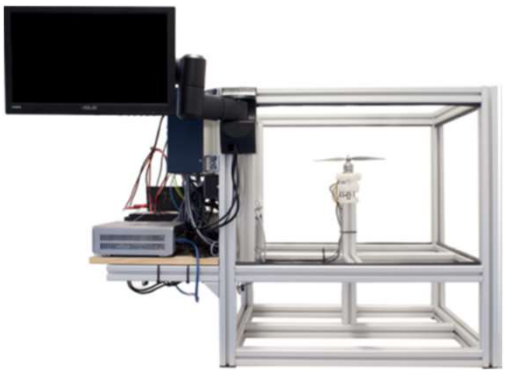
Advanced Design Project

Development of a tilt mechanism for a UAV drive train test bench

So-called Unmanned Aerial Vehicles (UAVs) are becoming increasingly important in aviation and can be used in various application scenarios, such as transport, surveillance or inspection. UAVs are typically controlled by several propellers driven by electric motors. To investigate the operating behavior of such an electric drive train, the FSR has a test bench with a wide range of measurement options.

Scope of this work:
The test rig has a wind channel that can be used to simulate the influence of different air flow velocities on the drive train. For the representation of real flight situations, it is also necessary to be able to realize different angles of attack between the rotor and the incoming air flow as well as different side slip angles. Therefore, the aim of this work is to extend the existing test rig to include a tilt and rotation mechanism that allows the rotor to be tilted and rotated and thus enables an investigation of the drive train within close to real life conditions.

Recommended prior knowledge:
- Fun and interest in design & construction
- Knowledge of CAD modeling is an advantage



Organizational details:
Start by arrangement (available immediately)

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