# Student Assistant / Thesis

Service-Oriented Model-based Control

Problem Statement

In times of increasingly networked devices, the main challenges of control and automation technology are to enable adjustments of control systems both offline and at runtime, to enable flexible system integration, and to keep the increasingly complex control systems maintainable.

The SOMC (Service-Oriented Model-based Control) project researches a novel software architecture based on services, whose interfaces are defined by the requirements they need and the guarantees they give. These services can be dynamically switched out to adapt a system to changing conditions, or to facilitate system upgrades at runtime.
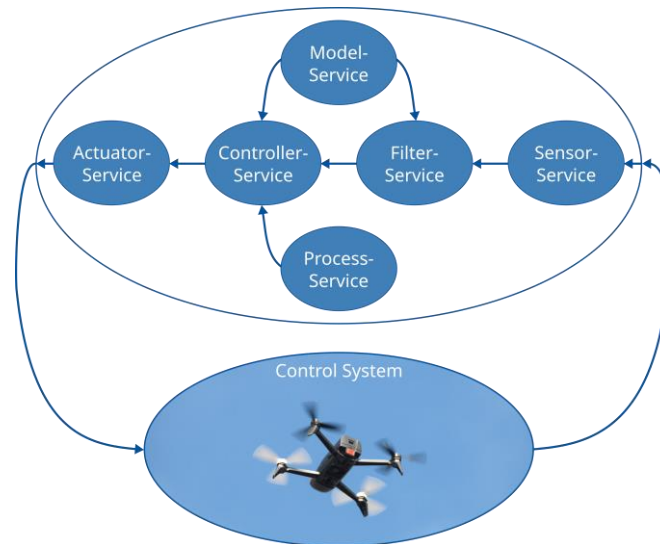
Your Tasks

- ▶ Development on the framework itself, its tooling and on control systems using it
- ▶ Your own topic suggestions are welcome and will be discussed

Your Profile

- ▶ Knowledge of C++ or a similar language
- ▶ Interest in learning & applying best practices for software development
- ▶ General understanding of control systems is a plus, but not required
- ▶ Student of Computer Science, Automation/Mechanical Engineering or a similar study program

Our Offer

Positions are to be filled as soon as possible and are limited to 3 months. If suitable, an extension is possible/desired. The regular weekly working hours are 7-9 hours.

Contact

Please include in your application: transcript of records (Bachelor and possibly Master), CV, and certificates. *Important:* Use the subject line "Application CPM - Master Thesis/Bachelor Thesis/Student Assistant/PhD Position" (delete as applicable)

Ole Greß, E-Mail: gress@embedded.rwth-aachen.de