Masterthesis: Modelling dependencies between functions of an automated vehicle

In the research project UNICARagil, new methods for the safety approval automated driving are being researched and applied in the development of automated vehicles. The aim is to approve modules individually. For this, it is necessary to know the exact dependencies between the functions of the modules in order to take these into account in module tests.

**Tasks:**

- Analysis of dependencies between functions of an automated vehicle in regard to a modular safety approval
- Development of a methodology for modelling the dependencies using UML or other model based languages
- Implementation of the developed methodology to model dependencies of the automated vehicle in UNICARagil
- Evaluation of the method in comparison to existing methods and a simulation environment

**Requirements:**

- Readiness for theoretical approaches and abstract thinking
- Knowledge in model based systems engineering helpful
- Good understanding of the functions of an automated vehicle

**Supervisors:** Björn Klamann, M. Sc. (bjoern.klamann@tu-darmstadt.de)

NOTICE: All projects and theses at FZD can be done in English or German, as preferred.

ANMERKUNG: Alle Projekte und Arbeiten bei FZD können wahlweise in Englisch oder Deutsch durchgeführt werden.