Lehrstuhl für
Aerodynamik und
Strömungsmechanik

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Vehicle Aerodynamics

Offer for a research practice or/and master's thesis:

Description

We're seeking enthusiastic and motivated students with a passion for vehicle aerodynamics!

Vehicle aerodynamics affects not only design, efficiency and functionality, but also plays a major role in vehicle dynamics and stability. Our research group is investigating flow phenomena and their impact on vehicle performances. The tools we are using include, but are not limited to, computational fluid dynamic (CFD), machine learning and wind tunnel tests. Within these areas we have frequent thesis opportunities, which provide hands-on experience in the research field and offer the chance to contribute to the development of new methods and technologies.

Potential topics and general conditions can be tailored to each student's interests and skills. Details will be discussed in a personalized interview.

Desirable prior knowledge and potential research areas include:

- Experience in automotive aerodynamics or/and Cooling System understandings
- OpenFOAM or/and Smoothed Particle Hydrodynamics method
- Good programming skills, preferably in Python
- Familiarity with machine learning concepts, artificial neural networks and deep learning
- Experience with deep learning frameworks such as TensorFlow or PyTorch
- Windtunnel measurements or/and Leak testing

Supervision:

M.Sc. Philipp Schlichter
E-Mail: philipp.schlichter@tum.de

M.Sc. Matthew Sleight
E-Mail: matthew.sleight@tum.de

If you are interested, please send your CV and a brief statement of your expectations and relevant previous experience to one of us.