

## Aerodynamics



## What is it about?

When developing our aero package, we focus most on downforce due to the tracks with very tight corners on which the competition takes place. Every season we try to increase the downforce as much as possible by implementing new aero components and continuously adapting old components. In addition to downforce, drag and sensitivities on the track also play a role.

Component development is an iterative process between the design in CAD and the CFD simulation. Here, not only one driving condition is considered, but also the influence of other flow angles, speeds and deflections of the vehicle. In order to be able to simulate the components, we first need a representation of the flow around the vehicle that is as efficient and realistic as possible. The further development of CFD simulation is therefore also an important area of aerodynamics. Finally, it is necessary to check whether the components behave in exactly the same way on the track as in the simulation. Visual validation methods can be used for this, but sensors can also be used to obtain quantifiable results. Irrespective of the sub-areas listed, it is also the task of the aerodynamics group to bring the aerodynamics package to the car in internal carbon production. Please list in your application which area of aerodynamics appeals to you the most if you have any preferences.

## What could be your tasks?

- Design and Simulation of a component
- Development of the CFD-Simulation
- · Validation of the aerodynamics package
- Collaboration on mechanical tasks (e.g. manufacturing)
- Collaboration on cross-group tasks (e.g. tests, quizzes)

## What are our requirements for you?

- Motivation and team spirit
- Interest in Aerodynamics & CFD-Simulation
- · Participation in weekly appointments
- Preferably studies in the field of mechanical engineering, physics, CES, computer science
- Ideally prior knowledge of CFD-Simulation, CAD and Aerodynamics



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