

# Design the mechanics and actuation for a DRS system for the rear wing

## OUR PROJECT

Formula Electric Belgium is a student-run electric race team which competes in Formula Student, the world's largest competition for engineering students. We aim to push the limits of performance, innovation and sustainability within electric racing every year, which is only possible with the help of our Thesis students. These pioneers are responsible for performance-defining innovations within the team, and we would love for you to join our team of highly ambitious and motivated engineers. As a Thesis student, you will research, design, prototype and test your innovations alongside the full-time members which make sure the team pushes itself and the car to new heights.

### AIM AND OBJECTIVE

In Formula Student, rear wings are designed to generate high downforce in corners, at the cost of increased drag on straights. A Drag Reduction System (DRS) allows the rear wing to switch to a low-drag configuration, improving straight-line performance while maintaining cornering capability.

The objective of this thesis is to design the mechanical system and actuation of a DRS for the rear wing. The work includes the definition of a suitable kinematic concept, the design of the mechanical components, and the selection and integration of an actuation system compliant with Formula Student regulations.

Different concepts will be evaluated based on mass, stiffness, reliability, response time, and manufacturability. The final design will be developed in CAD and verified using basic structural analyses, with the goal of delivering a robust and manufacturable system ready for integration on the car.

### PROFILE

- Basic knowledge of fluid dynamics
- Basic knowledge of CAD
- Interested in CFD simulations

### RETURNS

- Practical experience in a high-end engineering context
- Work with the newest technologies and innovative companies
- Developing your hard- and soft-skills in a company-like environment
- Participation in the biggest student competition in the world

### INTERESTED?



Send us your contact details and field of interest to

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