



Vehicle Dynamics

Semi Active Suspension: Mechanical

Green Innovation meets performance

Our Project

Formula Electric Belgium is a student-based race team that pushes green innovation to performance. We design and build our own electric race car each year to participate in the international Formula Student competitions. This year, we are looking for pioneers to challenge the status quo and bring our top-notch electric race car to the next level. As a postgraduate student, you will research, design, test your systems together with a group of highly motivated, ambitious students. You will work together with your team members and numerous companies to develop new innovations.

Function

As a Vehicle Dynamics engineer, you will be responsible for all aspects regarding the handling of the vehicle. This consists of designing the suspension and steering system, determining spring rates, choosing a good base set-up, all while ensuring that the design is rule-compliant.

Since a couple of years research has been done to implement a semi active suspension. Your task will be to optimize this system mechanically. You will improve the pressure drops across the different hydraulic systems while also reducing the weight. You will also be in charge of the testing and validation of this system. This will include 4-poster testing, data collection and processing.

Furthermore, you will choose the suspension layout. This includes finite element simulations on rocker designs and different valve blocks for the semi active suspension.

Profile

- Bachelor/Master Engineering Science, Engineering Technology or Business Engineering
- Knowledge of vehicle dynamics (dampers)
- Experience with Matlab and CAD design
- Willing to learn quickly about different aspects of vehicle dynamics

Returns

- Deep insight in a double wishbone suspension
- Insight into different algorithms
- Gain exposure to cutting-edge technologies and industry-leading organizations
- Possibility to network and cooperate with (motorsport related) stakeholders
- A summer packed with international racing competitions!

Up for the challenge?



Submit your **resume** and **motivation letter** (one page)
to recruitment@formulaelectric.be