

# Vehicle Dynamics

## Simulation Engineer



**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 international Formula Student competitions. 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, and test your systems together with a group of highly motivated students. You will innovate together with your team members and numerous companies to develop our next generation formula student race car.

## Function

As a simulation engineer, you will be responsible for setting up a robust and reliable simulation framework in which newly developed algorithms can be virtually tested before being deployed on the actual car. You will develop a **high-fidelity vehicle model** that enables meaningful sensitivity analyses and the definition of clear key performance indicators. This means that you will also work extensively with the performance engineer.

In addition, you will work on the **development** of a **lap time simulator** and a **driver-in-the-loop simulation**, allowing you to realistically evaluate vehicle behavior and performance and to truly get a feel for the car. This role combines strong **theoretical understanding** with **hands-on implementation**. An understanding of vehicle dynamics is essential, along with solid programming skills. Experience with MATLAB and C++ is considered a strong advantage.

## Up for the challenge?

## Profile

- Bachelor/Master in a STEM field or equivalent
- Basic knowledge about vehicle dynamics
- Experience using MATLAB and preferably C++ as well
- Out-of-the box thinking and good problem solving skills

## Returns

- A unique engineering experience
- Developing your hard- and soft-skills in a company-like environment
- Work with the newest technologies and innovative companies
- Work in a team with a network of well over 120 partners
- A summer season packed with competitions all over Europe
- An experience of a life-time!



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