Vehicle dynamics

OptimumK suspension models of previous cars

Green innovation meets performance

Our Project

Formula Electric Belgium is a team of engineering students who build a **Formula-Student racecar** to compete in international competitions. We design and build a brand-new car every year and compete with other teams in multiple worldwide competitions during the summer months. Formula Student is by far the biggest **engineering competition** in the world and continues to grow. From next year on, we will be competing in both the **electrical** and **driverless** competition. You can join the project as a volunteer. This allows you to contribute to the next race car whilst keeping a flexible schedule.

Tasks

In order to get the **maximum amount of grip** from the tyres, the **suspension kinematics must be optimal**. All our cars have **double wishbone suspension,** but the kinematics are slightly different for all of them. In order to better understand the kinematics of previous cars, they can be modelled in **OptimumKinematics**.

In this case, the **suspension of previous FEB cars will be modelled** in OptimumKinematics. **The kinematics will be simulated** to find out which of our previous cars had the **best suspension**. This will aid the team in the future when designing new suspension hardpoints.

Profile

- Basic knowledge about vehicle dynamics
- Basic knowledge about double wishbone
- suspensionExperience with multibody software (OptimumKinematics, Simcenter 3D or other)

Returns

- A unique engineering experience
- Applying your engineering skills on a real case
- Work in a team of young and motivated engineering students
- Learn about vehicle dynamics and race car design

Up for the challenge?

Want to perform a similar case-study within our team? Submit your **resume** and **motivation letter** (one page) to volunteers@formulaelectric.be