

Researcher “Modelling, control and simulation of the autonomous vehicle”

As a vehicle dynamics control and motion expert, you execute research projects in advanced vehicle dynamics control and systems engineering for on the intelligent and autonomous vehicle technology.

Tasks:

- Derive and perform motion planning, tracking and control of the ego-vehicle under constrained environment and traffic conditions
- Definition and derivation of necessary/adequate models capturing the essence of the vehicle's surrounding
- Definition and identification of necessary/adequate vehicle models to be used in autonomous vehicle operation
- Develop and implement complex signal processing, fusion and control algorithms, using the derived models of the vehicle and environment in simulation environment
- Perform analysis of the vehicle's behaviour, optimize the design configuration and parameters as well as the controller/software design
- Use the developed algorithms “and/or models” to achieve fail safe and accurate vehicle handling in complex and difficult manoeuvres
- Validating the developed vehicle models and controllers in real-life test conditions
- Dissemination of the results in journals, conferences and seminars.

Profile:

You have

- Master's degree or PhD in Engineering (Automotive, Modelling & Simulation , Signal Processing & Control systems, Mechatronics, Robotics, ..)
- Deep knowledge in vehicle dynamics and motion control (modelling, signal processing, control algorithms, system simulation, vehicle sensors and actuators, vehicle standard transceivers, instrumentation,..)
- At least five years of relevant research experience in academic or industry;
- Experience in motion planning, tracking and control of land based vehicle and affinity with the automotive industry is a big plus;
- Experience with Matlab and Simulink, and possibly dSpace as well as C/C++.

You are

- passionate by research and new technologies;
- result driven and pro-active;
- open minded and a team player
- a good communicator who can build sustainable relationships.

Impact directly on top-technology, for smart and autonomous machines and vehicles

- Flanders Make offers you the opportunity to develop yourself in the network of top industry and universities and research institutes;
- An open-minded, flexible and challenging working environment;
- A warm atmosphere and top colleagues;
- An attractive salary with fringe benefits.

Flanders Make colleagues work together on projects in Belgium at site Lommel and at site Leuven (flexible workplace policy). For this position most assignments will be situated in Flanders Make, site Lommel.

Working at Flanders Make:

[This movie](#) shows what you can expect from an industry driven research project at Flanders Make.

<https://youtu.be/A5JWvIK0baU>

Flanders Make is the strategic research centre for the manufacturing industry. It combines the strengths of a team of application and system experts with the technological expertise of a range university labs that are an integral part of the Flanders Make network. The mission of the centre is to strengthen the long-term international competitiveness of the Flemish manufacturing industry by performing industry-driven, pre-competitive, excellent research in the technological domains of mechatronics, product development methods and advanced manufacturing technologies.

This research will result in applications for machines, vehicles, vehicle components and high-tech production systems at the participating companies.

Take a look at our research and our projects at Flanders Make. www.flandersmake.be

Convinced? Send your motivation letter and cv

Do you feel you can contribute to our research with your expertise? Do you share our values and our mission? We are looking forward to reading about your story, your interest for Flanders Make and for this job in particular.

To apply, please send your motivation letter and cv to humanresources@flandersmake.be