

Marie Curie ESR position: coupled state/input/parameter estimation for multi-actuated ground vehicles

PhD/ESR position for an early stage researcher. You are part of a bigger European project where you share knowledge, travel and learn from the other project partners.

Function

Flanders Make takes part in the Interdisciplinary Training Network in Multi-Actuated Ground Vehicles (ITEAM). The objective for Flanders Make is to propose novel model-based approaches for coupled state/input/parameter estimation for the Multi-Actuated Ground Vehicle (MAGV). The developed estimators will serve to make available all necessary information for advanced vehicle dynamics control systems.

The main challenge concerns the development of the dynamic model(s) for the estimation purpose. The MAGV architecture must be exploited, and the developed methodology should allow to fuse all available sensor information from the vehicle to obtain reliable and accurate estimation with limited computational requirements. We are looking for an early stage researcher to take up this challenge in an international learning environment.

More specifically, you will:

- investigate and develop novel model-based approaches for coupled state/input/parameter estimation for MAGVs.
- validate the developed algorithms on a real MAGV demonstrator
- frequently attend workshops with the other researches of ITEAM and contribute to the knowledge exchange.
- report to the Site manager.

Profile

You have

- An Engineering degree, preferably in mechatronics;
- A broad technical background;
- In-depth knowledge of:
 - Applied Dynamics
 - Control Engineering
 - Physical modeling of mechatronic systems
 - Simulation (Matlab/Simulink)
 - Design of Experiment

- A first experience or a strong interest in;
 - Vehicle Dynamics
 - Automotive Control Systems
 - Autonomous Vehicles
 - Driver Assistance Systems
 - Electric Vehicles
 - Computational Intelligence
 - Hardware-in-the-loop simulation

You are

- Interested in new technologies;
- Result oriented;
- A team player;
- A good communicator;
- Willing to travel to other countries;
- Eager to learn.

Eligibility criteria (in short)

We are seeking an early-stage researcher that holds an Msc degree in Engineering and has less than 4 years of experience. Moreover, candidates should not have resided or carried out her/his main activity in Belgium for more than 12 months in the 3 years immediately prior to her/his appointment.

Offer

We offer a challenging and varied job with a lot of industrial interactions in an informal atmosphere and in close collaboration with KU Leuven.

The possibility is offered to pursue a PhD degree on this topic.

The assignment is in Belgium at Flanders Make, site Lommel.

As this position is part of a European training network the position includes several secondments of some months abroad with partner organisations (Skoda/ Czech Republic, Université de technologie de Compiegne/France, KULeuven/Leuven).

Flanders Make

Flanders Make is the strategic research centre in Flanders 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.

To achieve this mission, Flanders Make conducts industry-driven joint projects and contract research assignments in the following research programs: *Clean Energy-efficient Motion Systems, Smart Monitoring Systems, Autonomous Systems, Intelligent Product Design Methods, Design & Manufacturing of Smart and Lightweight Structures, Additive Manufacturing for Serial Production, Manufacturing for High Precision Components, Agile & Human-centered Production & Robotics Systems.*

www.flandersmake.be

How to apply

Please send your motivation letter and cv to: humanresources@flandersmake.be