

## Signal Processing Research Engineer for Smart Machines

**You develop advanced signal processing techniques to grasp smart machine behavior in technology research projects for the machine and vehicle of the future.**

- ❖ *Will you help us to build a yarn arrival “stopwatch” in a textile machine or a crop quality estimator in an agricultural machine?*
- ❖ *Will you help us to tell autonomous vehicles and AGV’s where they are, or predict motion sickness with passengers using vibration measurements in a car?*
- ❖ *Do you want to test and validate your results on the actual machines and vehicles available in our test labs or at the customer, in the field?*

### Function

In the machine and vehicle of the future the process is monitored in no time, at any time.

As a signal processing research engineer, you will:

- work together in a small research team which combines expertise in machine dynamics modelling, signal processing and experimental field testing.
- play a key role in designing signal processing algorithms and testing them, taking into account controller and actuator requirements. Sensor fusion, virtual sensing, advanced filtering, algorithms for self-diagnostics and condition monitoring, physical modelling and feature extraction are in the scope of your research activities.
- work with different machines and/or vehicles and with different sensor signals (vibration sensors, accelerometers, torque sensors, temperature sensors, ... ).
- work in close collaboration with experts from our industrial partners and have regular contacts with experts from knowledge centres in Belgium and abroad.
- become a sparring partner for our leading companies in their innovation process.
- trace and present industrial challenges and new research opportunities.

### Profile

You have

- Master's degree or a Phd in Engineering (Mechanical, Electronical, Electrical)
- At least 4 years of experience in industry or in a research environment
- Deep knowledge in the field of signal processing and modeling of dynamic systems
- Experience with modeling software (Matlab, Simulink) and measurement systems (Labview, dSPACE)

You are

- Passionate about research and new technologies
- Result oriented, responsible, self directing and team player
- A good communicator
- A good listener
- Eager to learn

### Offer

- Flanders Make gives 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.

The assignment is in Belgium at Flanders Make, site Leuven. In the frame of our flexible workplace policy, it is also possible to work some days per week in Flanders Make, site Lommel.

### Flanders Make

*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.

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](http://www.flandersmake.be)

### How to apply

Please send your motivation letter and cv to: [humanresources@flandersmake.be](mailto:humanresources@flandersmake.be)