



**CNH Industrial** is a global leader in the capital goods sector with established industrial experience, a wide range of products and a worldwide presence. Each of the CNH Industrial's brands is a major international player in its specific industry: Case IH, New Holland Agriculture and Steyr for tractors and agricultural machinery; Case and New Holland Construction for earth moving equipment; Iveco for commercial vehicles; Iveco Bus and Helieuz Bus for buses and coaches; Iveco Astra for quarry and construction vehicles; Magirus for firefighting vehicles; Iveco Defence Vehicles for defence and civil protection; and FPT Industrial for engines and transmissions. More information can be found on the corporate website: [www.cnhindustrial.com](http://www.cnhindustrial.com)

**FPT Motorenforschung AG** in Arbon has around 250 highly qualified employees working with commitment and acknowledged success. As the main innovation center for FPT Industrial, the site is involved in developing FPT Industrials' future powertrain solutions (not only in electrified powertrains, hybrids and fuel cells, but also novel engines concepts and alternative fuels) and is therefore at the forefront of a transition towards a future of alternative propulsion systems.

As part of this transition, we are forming a new cluster of teams dedicated to foundation innovation. One of these teams is dedicated to data driven innovation and controls. Working at the interface between the world of classical mechanical and powertrain engineering, and the data-driven world of controls, simulation, and optimization.

## Advanced Controls Engineer

As a member of the Advanced Controls Concept Team, you will be part of a highly skilled team driven to exploit the full potential of our future powertrains in real-use scenarios.

### Your tasks

- Developing advanced powertrain control functions using model-based control and online optimization.
- Develop energy management functionalities that exploit predictive information.
- Derive control-oriented physical models; and empirical / machine learning models.
- Evaluate the potential of (new) powertrain components and control approaches and create benchmarks for the subsequent control function development, by solving optimal control problems.
- Plan, coordinate, and execute measurement campaigns to evaluate and validate developed functions in simulation, in HiL environments, and on engine/powertrain test benches.
- Implement and maintain Matlab/Simulink-based development tools for powertrain simulation and for calibration of physical models and control functions.
- Support problem solving and troubleshooting activities.
- Communicate results and make presentations that describe analysis and solutions.
- Collaborate closely with various internal departments / laboratories and universities.

### Your profile

- You are a control system engineer with a university degree (MSc or PhD) in mechanical engineering, electrical engineering, or equivalent field
- Strong background in model-based control system design or optimal control
- Ideally, you have experience in modelling and/or control of powertrains (hybrid powertrains, combustion engines, fuel cells, electric drives)



- Experience in physical modelling of thermal and electrical systems
- Experienced in implementing object-oriented Matlab code and in using Simulink for function development. Familiarity with C/C++ is a plus
- You have an innovative and creative mindset and are willing to drive new ideas and methodologies
- You are a team-player with very good communication skills.
- Fluent in English (spoken and written).

**Interested?**

Please apply here: <https://cnhindustrial-emea.mua.hrdepartment.com/hr/ats/Posting/view/16178>

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