



With 11,000 employees worldwide, AVL is the world's largest independent company for the development, simulation and testing of powertrain systems (hybrid, combustion engine, transmission, electric drive, batteries, fuel cell and control technology) for passenger cars, commercial vehicles, construction, large engines and their integration into the vehicle.

Along with increasing complexity and demands of modern vehicles, further development and research of vehicle thermal management systems (VTMS) is becoming more and more challenging and complex. To overcome the complexity, advanced model-based systems engineering, and functional modelling methods are utilized.

We offer a Diploma Thesis:

Vehicle Thermal Management Simulation Predictive Thermal Control

TASKS

- Build-up of a functional vehicle thermal management model including consisting of a simplified powertrain model, multiple cooling fluid circuits, cooling package, vehicle cabin and air conditioning system
- Build-up and integration of a functional predictive control methodologies
- Analysis of the system with focus on optimization and performance improvement
- Documentation of the work and presentation to the team members

REQUIREMENTS

- You are interested in advanced thermal management systems of modern vehicle powertrains
- You are interested in system analysis by means of numerical modelling and simulation
- Basic knowledge in thermodynamics, fluid dynamics and control theory (desired)

GENERAL

- Preferred field of study: mechanical / automotive engineering, physics, or a similar field
- Start of the thesis: beginning of 2022
- Being part of an international team of experienced colleagues willing to help you (steep learning curve)
- Opportunity for future/continuous collaborations
- Solving of the challenging and attractive engineering problem
- Do not hesitate to apply and challenge yourself!

Remuneration: The successful completion of the thesis is remunerated with a one-time fee of EUR 2,600 before tax. According to the Austrian Employment of Foreign Nationals Act it is unfortunately not possible to assign graduate work to third-country citizens (Non-EU citizens) who study at a university abroad.

CONTACT

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