LEC
Large Engines Competence Center

Become part of our team!

We search for a

PhD Student (m/f/d)

Research focus:
Integration of machine learning methods into numerical simulation

Task description

We are looking for a motivated and innovative PhD student to investigate integration of machine learning methods into numerical simulation and to build up in-depth knowledge of hybrid model approaches which combines physics-based models with data-driven methods.

The work within the scope of this position includes on the one hand fundamental research on novel combinations of numerical methods and machine learning approaches, and on the other hand applied research in the field of machine learning integration into computational fluid dynamics. Comprehensive knowledge in this area is already available at LEC so the candidate can build on existing models. Nevertheless, the creativity of generating smart methods and contributing novel ideas is obligatory. The scientific outcome of this work should be an improved understanding of hybrid modeling within the framework of energy systems. Furthermore, a profound knowledge about the potential and limitations of the application of data-driven methods in computational fluid dynamics should be elaborated.

Responsibility

- Identify possibilities for the integration of data-driven methods into the numerical simulation of energy systems
- Develop hybrid models which combine numeric methods and machine learning
- Elaborate a broad understanding of hybrid modeling
- Support the further development of the machine learning team at LEC
- Interact closely within the LEC's research team
- Communicate the project results in regular internal meetings and to project partners
- Disseminate the project results in the form of scientific publications and elaborate a doctoral thesis

The LEC supports equal opportunities and diversity.
We are looking for dedicated and motivated individuals with research talent.

Your profile

- Qualified degree (MSc, Dipl.-Ing) in applied mathematics, physics, computer science, telematics or similar
- Profound mathematical skills
- Interest for machine learning techniques
- Programming skills (Python, Matlab)
- Strong interpersonal skills with initiative and perseverance
- Technical writing skills
- Fluent in German and/or English

Our offer

- Doctoral thesis related to an exciting research project
- Outstanding research infrastructure
- Independent work in an excellent team and with international partners
- Excellent possibilities for further professional and personal development
- Personal and professional development opportunities
- Full-time position with a monthly gross salary of € 3.277,-
- Earliest starting date: immediatly

Contact:

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Become part of our LEC team!

We look forward to receiving your application.

www.LEC.at