



Large Engines  
Competence Center

## Become part of our team!

### We search for a **PHD Student** (m/f/d)

**Research focus:**  
Towards zero greenhouse gas emissions through carbon capture and storage for large engines running on carbon-based fuels

#### Task description

We are looking for a motivated and innovative research engineer to investigate and develop advanced carbon capture and storage (CCS) solutions for large engine applications running on carbon-based fuels. The goal is to optimally integrate latest CCS technology into a selected large engine application and to demonstrate the resulting overall system on LEC's new multi cylinder system test bed. In addition, a technical, economic and ecological assessment of the overall system compared to conventional systems without CCS and systems based on alternative fuels such as hydrogen and ammonia shall be performed. With the support of the team, you will apply and optimally combine design tools, simulation tools and experimental investigations for an effective and efficient goal achievement.

#### Responsibility

- Compare and evaluate existing CCS technologies based on literature review
- Determine the most suitable technology for a natural gas-based engine application
- Develop a system concept for the application
- Perform process simulations
- Plan, design and procure the resulting CCS system for demonstration in interaction with the engine on the multi cylinder engine test bed
- Prepare and execute the investigations on the test bed
- Perform system simulations
- Analyze and interpretate the results of simulation and testing
- Communicate the project results
- Disseminate the project results in the form of scientific publications and develop 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 (Dipl.-Ing, MSc) in mechanical engineering, process engineering or related field
- Know how in process engineering
- Experience in working with simulation tools and engine test bed operation preferred
- Strong analytical skills and technical writing skills
- Strong interpersonal skills, initiative, creativity and perseverance
- Fluent in German and/or English
- Valid work permit in Austria required

#### Our offer

- Doctoral thesis related to an exciting research project
- Outstanding research infrastructure
- Independent work in an excellent team and with international partners
- 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](http://www.LEC.at)