

**Advertisement for a full-time University Assistant at the Chair of Mechanical Engineering at the Department Product Engineering at the earliest possible date in a three-years fixed-term contract REFID2105WPA**

**One vacant** position for a full-time University Assistant at the Chair of Mechanical Engineering at the Department Product Engineering at the earliest possible date in a three-years fixed-term contract. Salary Group B1 of the Austrian labor agreement, monthly minimum excl. supplements € 2.971,50 for 40 hours per week.

Artificial intelligence (AI)-based methods allow the evaluation of large amounts of data and the detection of previously unseen patterns and trends. In the field of fatigue assessment, extensive investigations are often carried out, resulting in correspondingly large data sets. In addition, due to the complexity, usually only individual influencing factors are examined. The combination and interaction of the individual influencing factors can often not be examined due to the disproportionate testing effort. A future approach here is the use of AI-based methods in order to be able to better recognise interactions and previously unseen patterns based on already existing data sets and selected supplementary test series. A comprehensive body of knowledge regarding fatigue properties and fatigue assessment methods is already available at the institute. Based on this, the possibilities and opportunities of AI-based methods are to be investigated in a strategic research project (dissertation/PhD project) in order to develop innovative scientific approaches in an interdisciplinary manner.

**Requirements:**

- Completed technical or scientific university studies (at master level): mechanical engineering, physics, materials science, applied computer science, technical computer science, software engineering, or an equally valuable education in terms of the desired qualification
- Interest in the scientific processing of technical tasks in testing, analysis and simulation
- Motivation to familiarise oneself with various technical and scientific topics in an interdisciplinary manner
- Motivation, ability to work in a team and independence
- Command of the German and English languages, both written and spoken
- Willingness and ability to carry out scientific work in research including the associated publication work with the possibility of writing a dissertation/PhD and participation in teaching

**Desired additional qualifications:**

Due to the interdisciplinary nature of the task, experience in one of the following fields is an advantage:

- Knowledge of digital data processing
- Basic knowledge in code design with Matlab, Python, C or others
- Knowledge of machine learning (TensorFlow, PyTorch or others)
- Basic knowledge of mechanics / materials technology / mechanical engineering

**Tasks:**

- Collaboration in the fatigue strength group within the framework of industrial research projects
- Further development of research in the area of AI-based methods in the field of fatigue assessment
- Scientific publications and lectures at home and abroad
- Support of teaching activities at the university

**Reference ID: 2105WPA**

**End of Application: 2021-05-24**

The Montanuniversitaet Leoben intends to increase the number of women on its faculty and therefore specifically invites applications by women. Among equally qualified applicants women will receive preferential consideration.

For the application please use the online form on the homepage: <http://www.unileoben.ac.at/jobs>