Faculty of Mechanical Science and Engineering

The Institute of Power Engineering, Chair of Thermal Power Machinery and Plants offers a position as

Research Associate
(Subject to personal qualification are employees remunerated according to salary group E 13 TV-L)

starting at the next possible date. The position is initially limited for one year with the option of extension by additional 3 years. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG). The position offers the chance to obtain further academic qualification.

Subject of the scientific work are experimental and numerical investigations on the influence of thermally and mechanically induced stress gradients on fatigue life. These loadings are representative for high temperature components. The scientific work build on a successfully completed predecessor project. A unique test facility is available for the anisothermal Low Cycle Fatigue (LCF) tests of the scientific work. However, it needs to be adapted to the specific loading conditions of the planned tests.

Tasks: The scientific work comprises both experimental investigations and numerical simulations. The tasks are the following: design of the test specimen with component feature, structural and fluid mechanical layout; adaptation of specimen heating, cooling and test rig control & measurement; commissioning of the adapted test facility, proof of performance, quality assurance for testing; planning and implementation of anisothermal LCF tests; evaluation of experimental data and generalisation (modelling).

Requirements: university degree in Engineering Sciences, preferably in Applied Mechanics, Simulation Methods, Measurement and Automation Technology or Material Science. Besides knowledges and skills for the experimental material investigations, we also expect knowledges in the field of control technology (preferably LabVIEW®) for adaptation of the test facility to the particular loading conditions. Above-average academic achievements, high self-motivation and ability to independent working are desired. In addition, communication, and team skills are important to us for the joint research with the partners from industry and science.

Applications from women are particularly welcome. The same applies to people with disabilities. Please submit your comprehensive application including the usual documentation by 21.02.2020 (stamped arrival date of the university central mail service applies) by mail to: TU Dresden, Fakultät Maschinenwesen, Institut für Energietechnik, Professur für Thermische Energiemaschinen und -anlagen, Herrn Prof. Dr.-Ing. Uwe Gampe, Helmholtzstr. 10, 01069 Dresden or preferably via the TU Dresden SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf document to energietechnik-tea@mailbox.tu-dresden.de. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis