Technische Universität Berlin

University lecturer - based on salary grade E15 TV-L Berliner Hochschulen

part-time employment may be possible

Faculty V - Mechanical Engineering and Transport Systems, Institute of Fluid Dynamics and Technical Acoustics / Fluid Dynamics
Reference number: V-399/25 (starting at the earliest possible / unlimited / closing date for applications 17/10/25)

Your responsibility:

The research in this department focuses on the area of pressure gain combustion, specifically that of rotating detonation combustion, and addresses questions related to fundamental physics, design, and development of these devices, including: the combustion of various fuels (foremost of which is hydrogen), the stabilization and propagation of detonation waves, and the application of these devices, particularly for gas turbine integration. In addition to these fundamental physical insights, the research focus aims to advance the development of this technology through innovative techniques and experimental methods in this extreme domain.

The profile of the university lectureship includes the following tasks to be performed independently:

- Supervision of undergraduate, Master's, and PhD students
- Independent supervision and procurement of research projects and third-party funding
- Writing, reviewing, and revising scientific publications and third-party funding proposals in the field of experimental combustion research, with a focus on Pressure-Gain- Combustion
- Planning and development of experiments related to rotating detonation combustion and other Pressure-Gain-Combustion (PGC) technologies
- Teaching activities in the fields of combustion, Pressure-Gain Combustion, thermodynamics, and compressible fluid mechanics
- Development and supervision of research facilities for PGC

Your profile:

- Fulfilment of the employment requirements in accordance with § 108 Berliner Hochschulgesetz (BerlHG)
- Excellent knowledge and practical experience in experimental combustion, detonation processes, and diagnostic techniques
- Experience with experiments in the department's energy laboratory, in particular with the rotating detonation burner
- Extensive publications in the field of rotating detonation combustion and PGC
- Experience with laser measurement technology and time-resolved imaging techniques
- Proven ability to acquire third-party funding in the field of RDC and other PGC-related topics
- Teaching experience in the fields of combustion, pressure gain combustion, thermodynamics, and compressible gas dynamics
- Ability to teach in English
- Strong teamwork skills and proven competence in science communication advantageous
- Proven networking skills in the scientific community advantageous
- Knowledge of relevant software such as MATLAB, SolidWorks, LabVIEW, etc. advantageous
- Business fluent German and English skills desirable; willingness to acquire the respective missing language skills.

How to apply:

Please send your application **with the reference number** and the usual documents **only by email** (single pdf file, max. 5 MB) to Prof. Dr.-Ing. C. O. Paschereit via **office@hfi.tu-berlin.de**.

By submitting your application via email you consent to having your data electronically processed and saved. Please note that we do not provide a guaranty for the protection of your personal data when submitted as unprotected file. Please find our data protection notice acc. DSGVO (General Data Protection Regulation) at the TU staff department homepage: https://www.abt2-t.tu-berlin.de/menue/themen_a_z/datenschutzerklaerung/.

To ensure equal opportunities between women and men, applications by women with the required qualifications are explicitly desired. Qualified individuals with disabilities will be favored. The TU Berlin values the diversity of its members and is committed to the goals of equal opportunities. Applications from people of all nationalities and with a migration background are very welcome.

The vacancy is also available on the internet at:
https://www.jobs.tu-berlin.de

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