

In a joint appointment procedure, the **German Aerospace Center e.V. (DLR)** and the **Faculty of Mechanical Engineering, Electrical and Energy Systems of the Brandenburg University of Technology Cottbus – Senftenberg (BTU)** invite applications for a

University Professorship (W3) Electrified Aero Engines

The successful candidate will be appointed to the BTU as soon as possible with reduced teaching obligations (2 semester hours per week) and simultaneous leave of absence (Jülich model) to the DLR at Cottbus as

Director of the Institute of Electrified Aero Engines (female/male/x)

The DLR Institute of Electrified Aero Engines was founded in 2020 with a research focus on low-emission electrified aircraft propulsion systems with high potential for increased climate friendliness and noise reduction. The scientific focus is on alternative aircraft engines requiring intelligent control due to the high system complexity.

In this context, the institute is dealing with questions on increasing the power density of electrical systems, on electrical compatibility, and on good compatibility of engine components at high altitude. This addresses topics like energy conversion, operational safety, and certification capability.

Special research focuses of the DLR Institute of Electrified Aero Engines are in the following areas:

- Development and modelling of components of electrified propulsion systems
- Research on modelling of novel propulsion system architectures and adequate energy systems
- Concepts and technologies for control of novel hybrid-electric, pure electric, and fuel cell electric powertrains
- Studies on operational safety of electric propulsion systems in cases of emergency and critical weather-, environmental and flight conditions
- Studies on environmental compatibility of novel propulsion systems with focus on best energy efficiency and minimization of acoustic signature
- Validation of theoretical models by means of experimental testing

The professorship is located at the BTU Institute of Transport Engineering (IVT). Close cooperation with the BTU Center for hybrid-electric and electric systems (CHESCO) is desired. CHESCO's focus is on production processes and experimental verification of hybrid-electric and electric propulsion systems. Furthermore, collaboration with other professorships of the faculty and the university beyond the IVT is aspired.

We are looking for a personality who is internationally recognized in the research fields of propulsion technology and energy conversion with excellent expertise in research and development on several topics mentioned above as well as good contacts to relevant industry and research community. Initialization and realization of projects for developing revolutionary and innovative technologies for alternative aircraft engines are expected in the context of multidisciplinary collaboration with industry and research partners. The future holder of the position is expected to look back on long-standing industrial activities and experience in building and leading larger teams as well as having excellent

didactic skills and commitment to teaching. In teaching, participation in the courses of study in mechanical engineering and energy technology as well as in other engineering and international courses of study is expected. Furthermore, adequate contribution to the 'Structural enforcement and transformation process of the local coal region' should be defined and ensured.

For further information, please contact:

apl. Prof. Dr. -Ing. habil. Bernd Beirow

T +49(0)355 69 4872

E beirow@b-tu.de

Dr. Werner Etzenbach

T + 49(0)601 3064

E werner.etzenbach@dlr.de

Further duties result from the requirements set by § 42 Brandenburgisches Hochschulgesetz (Higher Education Act of the State Brandenburg - BbgHG) in conjunction with § 3 BbgHG. Please refer to §§ 41 paragraph 1, No. 1-4a and 43 BbgHG for prerequisites and conditions of employment. A prerequisite for employment at DLR is willingness to undergo a security check in accordance with the national security check law (Sicherheitsüberprüfungsgesetz §8 ff SÜG).

BTU and the DLR strive for increasing the proportion of women in teaching and research and especially encourage qualified female scientists to apply.

As a family-oriented University, BTU offers a Dual Career Service. Persons with a severe disability are given preferential consideration if they are equally qualified.

Please send your application with proof of qualifications, a tabular presentation of your professional career, a list of publications as well as proof of pedagogical aptitude, a list of project responsibilities as well as a presentation of the research concept by e-mail in a summarized pdf file of max. 7 MB by **28.02.2022** to:

**Dean of the Faculty of Mechanical Engineering, Electrical and Energy Systems
BTU Cottbus – Senftenberg, Postfach 101344, 03013 Cottbus**

Email: fakultaet3+bewerbungen@b-tu.de

and

**Mrs Prof. Dr.-Ing. Kaysser-Pyzalla, Chair of the DLR Executive Board
German Aerospace Center (DLR), Linder Höhe, 51147 Cologne**

Email: berufungen@dlr.de

When sending your application by unencrypted e-mail, please be aware of the risks of confidentiality and integrity of your application contents. Please also note the data protection information on the BTU and DLR websites. Your personal data are processed on basis of a contract between BTU and DLR according to Article 26 or 28 DSGVO, respectively.



The BTU carries the seal of quality of The German Association of University Professors and Lecturers (Deutscher Hochschulverband, in short DHV). She is thus honored for her fair and transparent negotiations on the appointment of new professors.