

The **Faculty of Mechanical Engineering, Electrical and Energy Systems of Brandenburg University of Technology (BTU) Cottbus-Senftenberg** invites candidates in a common appellate proceeding with the **German Aerospace Center e.V. (DLR)** to the next possible date to apply for a

UNIVERSITY PROFESSORSHIP LOW-CARBON INDUSTRIAL PROCESSES (W3)

with an appointment to the BTU with reduced teaching obligations (2 semester hours per week) with simultaneous leave of absence (Jülich model) to the DLR in Cottbus/ Zittau as

DIRECTOR OF THE INSTITUTE OF LOW-CARBON INDUSTRIAL PROCESSES

The formation of the following main research topics with regard to energy-intensive industrial processes is planned:

- Development of CO₂-reduction strategies
- Development of high-temperature heat pumps and their integration into energy conversion and storage concepts of the future energy system
- Use of synthetic fuels and low-carbon reducing agents with a focus on reactor design in the raw materials industry
- Modelling and simulation of multi-phase, non-isothermal reactive flows with focus on reaction processes at phase boundaries; scientific computing with regard to virtual design and “digitaltwins” of complex overall systems

Founded in 2019, the DLR Institute for Low-Carbon Industrial Processes, located in Cottbus and Zittau, Germany, builds up 120 scientists working on the conversion of fossil power plants into low-carbon energy sources, the provision of renewable high-temperature heat for energy-intensive processes in key industries, and the decarbonization of energy-intensive production processes. In this context, technology-interconnecting and sector-coupling aspects are taken into account.

The professorship is located at the BTU Institute of Energy Systems. Furthermore, a close cooperation with the BTU Center for Flow and Transport Phenomena is desired which aims at focusing on fluid mechanics in the interdisciplinary research between engineering, environmental science, mathematics, physics and process engineering

Relevant experience and expertise in applied research in several of the above-mentioned research areas is expected, as well as the willingness to participate in joint research projects with other departments of the university and the DLR.

We are looking for a management personality with proven leadership experience who will represent the research field comprehensively in research and teaching and who is very well networked nationally and internationally. The future holder of the position should have experience in the acquisition and implementation of cooperation projects with partners from industry and science, as well as experience in large-scale research and, if possible, in industry. Very good didactic skills as

well as commitment to teaching and academic self-administration are also expected. 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, an appropriate participation in the process "Structural Strengthening and Transformation of Coal Regions" should be defined and ensured.

For further information contact:

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Other 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.

BTU and the DLR strive to increase the proportion of women in teaching and research and specifically 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 suitable.

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 September 27, 2020** simultaneously to:

E-Mail: fakultaet3+bewerbungen@b-tu.de

Dean of the Faculty of Mechanical Engineering, Electrical and Energy Systems

BTU Cottbus - Senftenberg, Postfach 101344, 03013 Cottbus

and

E-Mail: energie-verkehr@dlr.de

Prof. Karsten Lemmer, Board Member for Energy and Transport

Postal address: Linder Höhe, 51147 Köln

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.



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.