Brandenburgische Technische Universität Cottbus - Senftenberg

The **BTU** is a young university that is actively helping to shape the structural change in Lusatia to phase out lignite and is providing scientific support for transformation processes in many ways. In the coming decades, the region will be one of the most exciting real laboratories in Germany, from which groundbreaking development impulses are to emanate. Employment at the BTU therefore promises more than ever participation in development processes towards a sustainable and climate-friendly future.

Applications are invited for a full-time **Professor (W3)** as of 01.10.2023 at the **Faculty of Mechanical Engineering, Electrical and Energy Systems** with research orientation in the field of

Decentralized Energy Systems and Electrical Networks
(Dezentrale Energiesysteme und Elektrische Netze)

The announced position follows the succession of the professorship „Energy Distribution and High Voltage Engineering“ and „Decentralized Energy Systems“ of Prof. Dr.-Ing. Harald Schwarz. These chairs will be restructured as “Decentralized Energy Systems and Electrical Networks” and in a second announcement, „High Voltage Engineering and Electrical Systems“.

This chair has an important role in the realignment of the energy region Lusatia. In relation with this realignment several major projects are planned at the BTU within the frame of an “Energy Innovation Center”, e. g. in the area of “Scale-up Lab for Smart Grids”. The new professorship is supposed to participate actively in these projects and to cooperate with the new energy related institutes of DLR and Fraunhofer Gesellschaft in Cottbus. It is expected that the research of the chair is directed towards the restructuring of the production of electrical energy from fossil to renewable sources and eradiate especially into the area Lusatia.

We are looking for a personality who is able to comprehensively represent this field in research and teaching. In the context of the main research topic "energy transition and decarbonisation" at the BTU, the following main research topics are to be worked on:

- Integration of renewable decentralized generation (especially wind energy and PV) into the national / European electrical power grids from the perspective of grid stability in connection with static and dynamic frequency and voltage control,
- Power grid stability preventing operation and management of storage systems, sector coupling systems and controllable loads (also electro mobility),
- Modelling and simulation of smart grids in the distribution grid level as well as their management strategies to support the overlaid power grid operation,
- Grid restoration concepts based on an increasing number of decentralized energy systems, storage facilities and sector coupling systems and a simultaneous decline in conventional power generation,
- Modelling of electrical grids of all voltage levels for stationary, quasi-dynamic and dynamic grid calculations as well as their protection design and operation management optimization.

The professorship is responsible for the scientific and administrative management of several large-scale laboratories, such as the Power System Simulator in LG 3E and a Micro Grid in the power range of 50...200 kW.

The candidate is expected to have relevant experience in research in several of the above-mentioned areas and to be willing to participate in joint research projects with other departments of the faculty and the university and to continue ongoing research activities of the chair.

FAIRE UND TRANSPARENTE BERUFUNGSVERHANDLUNGEN – GÜTESIEGEL DES DHV

Die BTU trägt das Gütesiegel des Deutschen Hochschulverbandes (DHV). Sie wird damit für ihre fairen und transparenten Verhandlungen zur Berufung von neuen Professorinnen und Professoren ausgezeichnet.

www.b-tu.de/stellenangebote

In teaching, participation in German and English is expected in the courses of study in Energy Technology and Energy Economics, Power Engineering, Electrical Engineering and Industrial Engineering as well as other engineering courses of study. Transmission- and Distribution Grids of electrical Energy, Renewable Sources to produce Electrical Energy and the integration of Renewable Sources in Electrical Grids are assigned to this chair. Further developments of the teaching offers are expected.

For further information, please contact Prof. Dr.-Ing. Johannes Schiffer, Tel. +49 (0)355 69-2809 / email: schiffer@b-tu.de.

Other duties result from the requirements set by § 42 Brandenburgisches Hochschulgesetz (Higher Education Act of the State of 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 Cottbus-Senftenberg is committed to equal opportunities and diversity and strives for a balanced gender ratio in all employee groups. Person with a severe disability and their equals are given priority in the case of equal suitability.
As a family-oriented University, BTU offers a Dual-Career-Services.

The application, including academic certificates, curriculum vitae, a list of publications, as well as proof of teaching experience, should be sent by e-mail in a single pdf file with a max. 7 MB until **30.06.2022** 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

When sending your application by unencrypted e-mail, please be aware of the risks regarding the confidentially and integrity of your application content and please also note the data protection information on the BTU website.

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