



Technische
Universität
Braunschweig



PhD-Researcher Position (m/f/d) within the SE²A Research Cluster

Development of Medium-fidelity Capabilities for Aerostructural analysis and optimization

Full-time Position (up to 3 years), up to Salary Level EG 13 TV-L, 100%

Background:

The Cluster of Excellence *SE²A - Sustainable and Energy-Efficient Aviation* is a DFG-funded interdisciplinary research center investigating technologies for a sustainable and eco-friendly air transport system. Scientists from aerospace, electrical, energy and chemical engineering as well as economics and social science are working on the reduction of drag, emissions and noise, life-cycle concepts for airframes, improvements in air traffic management and new technologies for energy storage and conversion. Technische Universität Braunschweig, the German Aerospace Center (DLR), Leibniz University Hannover (LUH), the Braunschweig University of Art (HBK) and the National Metrology Institute of Germany (PTB) have joined forces in this extraordinary scientific undertaking. The overall project is structured into the three core research areas “Assessment of the Air Transport System”, “Flight Physics and Vehicle Systems” and “Energy Storage & Conversion”.

(www.tu-braunschweig.de/en/se2a)

Employment:

The position is located at *the Institute of Aircraft Design and Lightweight Structures* (www.tu-braunschweig.de/en/ifl) in *Braunschweig*. The entry date is as soon as possible, and the duration is initially limited until the end of 2025. The position is part-time suitable, but should be occupied 100%. Active participation in SE²A's own doctoral program complementary to the programs of the institutions is an integral part of this position. The payment is made according to task assignment and fulfillment of personal requirements up to salary group EG 13 TV-L. International applicants may have to successfully complete a visa process before hiring can take place. Applications from international scientist are welcome. The Cluster SE²A aims to increase the share of women in academic positions. Applications from female candidates are very welcome. Where candidates have equal qualifications, preference will be given to female applicants. Candidates with handicaps will be preferred if equally qualified. Please enclose a proof.

Task:

- *Development of methodologies for medium-fidelity aerostructural optimization with future airframe technologies*
- *Multi-disciplinary design and optimization of a family of wing planforms for aircraft using developed methodologies*

- *Collaboration with other research groups within the Cluster of Excellence and work on joint projects*

Who we are looking for:

- *Successfully completed master's degree/diploma in mechanical or aerospace engineering*
- *Experience in fields of aerodynamic/structural analysis and optimization*
- *Knowledge of programming languages: Matlab, Python*
- *Good written and spoken English*
- *Experience in publishing scientific articles in an advantage*

Application Process:

Applications should be sent by e-mail to Staniislav Karpuk (s.karpuk@tu-braunschweig.de) and must contain the following documents until 25.11.2022.

- Motivation Letter
- Curriculum Vitae including complete address, phone number, email address, educational background, language skills, and work experience
- Copies of bachelor and master diploma and transcript of grades in original language and in English or German translation
- Additional Documents must be provided on request

All documents should be in PDF format, preferably in a single file. Personal data and documents relating to the application process will be stored electronically.

Please note that application costs cannot be refunded. For the purpose of carrying out the application process, personal data will be stored.

For more information, please call [*first and last name*] on +49 (0) 531 391-9922.