



Technische  
Universität  
Braunschweig



**PhD-Researcher Position (m/f/d) within the SE<sup>2</sup>A Research Cluster**  
***Data-driven understanding of aviation PEM fuel cells***  
***under reliability aspects***  
**Temporary Position (3 years), up to Salary Level EG 13 TV-L, 100%**

**Background:**

The Cluster of Excellence SE<sup>2</sup>A - *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](http://www.tu-braunschweig.de/en/se2a))

**Employment:**

The position is located at the *Institute of internal combustion engines* ([www.tu-braunschweig.de/ivb](http://www.tu-braunschweig.de/ivb)) 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 SE<sup>2</sup>A'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 SE<sup>2</sup>A 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:**

- *Collaboration in the project "Data-driven understanding of aviation PEM fuel cells under reliability aspects"*
- *Simulation of fuel cells and construction of a fuel cell test bench*
- *Supervision of final theses*
- *Participation in the courses according to § 31 NHG and in the performance examinations*

**Who we are looking for:**

- *Successfully completed master's degree/diploma in mechanical engineering*
- *Experience in the field of fuel cells is necessary, e.g. in the simulation/experiments of the operating behaviour of fuel cells, in particular also from the system point of view*
- *Good written and spoken English (German advantageous)*
- *Ansys/ Matlab/ Simulink knowledge is an advantage*
- *Publications are an advantage.*

**Application Process:**

Applications should be sent by e-mail with subject [H2\_002] to [m.heere@tu-braunschweig.de](mailto:m.heere@tu-braunschweig.de)

or via mail to

Technische Universität Braunschweig  
Institut für Verbrennungskraftmaschinen  
z. Hd. M. Heere  
Hermann-Blenk-Straße 42  
38108 Braunschweig

and must contain the following documents until 08.11.2022.

- 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 Michael Heere on +49 (0) 531 391-66902