



**PhD-Researcher Position (m/f/d) within the SE<sup>2</sup>A Research Cluster**  
***Total Thermal Management Design and Optimization***  
**Temporary Position (up to 3 years), 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 for Thermodynamics (<https://www.ift.uni-hannover.de>) in Hannover. 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 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.

**Tasks:**

- *Development of physical / mathematical models for thermal management components and cycles for next generation aircrafts.*
- *Development of an optimization methodology to derive the optimal configuration of thermal management systems for various types of aircrafts.*

- *Communication and interdisciplinary work with different cluster areas.*
- *Possibility to prepare a PhD thesis and to publish results in academic journals.*

**Who we are looking for:**

- *Successfully completed master's degree in Mechanical Engineering or a closely related field.*
- *Expertise and deeper knowledge in the fields of thermodynamics, heat transfer and numerical modeling.*
- *Experience in Modelica/Dymola, Matlab/Simulink and EES.*
- *Very good oral and written communication skills in English and German.*

**Application Process:**

Applications should be sent by e-mail to [kabelac@ift.uni-hannover.de](mailto:kabelac@ift.uni-hannover.de) or to

*Leibniz Universität Hannover  
Institut für Thermodynamik  
Gebäude 8143 (G3), 1. Etage  
An der Universität 1  
30823 Garbsen*

and must contain the following documents<sup>1511</sup>:

- 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

S. Kabelac+49 511 762 2277/2877.