



**PhD-Researcher Position (m/f/d) within the SE<sup>2</sup>A Research Cluster**

***Life Cycle Engineering of Future Aircraft Systems***

**Temporary Position (up to 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 Chair of Sustainable Manufacturing and Life Cycle Engineering of the Institute of Machine Tools and Production Technologies in Braunschweig (<https://www.tu-braunschweig.de/iwf/nplce>). 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:**

- Developing methods and tools for the sustainability assessment of different emerging technologies for future aircrafts.
- Derivation tools and know-how to support engineering activities involved in the development of modern aircraft technologies

- Coordination of the research activities of the Chair at the interface between the SE<sup>2</sup>A cluster of Excellence

Who we are looking for:

- You understand the great sustainability challenge ahead of us and are eager to look for consistent solutions
- Completed university studies in the field of engineering (mechanical engineering, mechatronics, energy technology, industrial engineering, environmental engineering, computer science or in a related field)
- Good knowledge of common statistical methods and experience with the analysis of large datasets,
- Very good knowledge of English, both written and spoken. Ideally, but not essential, also a good knowledge of German.
- You show initiative and enjoy working independently on a daily basis in a highly motivated team.
- Good collaborative and networking abilities
- Interest and ideally previous experience in one or more of the following fields:
  - Analysis and sustainability assessment of technical systems in the context of electromobility,
  - Use of methods and tools for modeling energy and material flows and performing life cycle assessments
  - Scientific programming with python, R or Matlab
  - Development of decision support tools for research, industry and policy

Applications should be sent by e-mail to (c.herrmann@tu-braunschweig.de) and must contain the following documents until 30.11.2022. Physical applications can be sent to: Professor Dr.-Ing. Christoph Herrmann, Langer Kamp 19b, 38106 Braunschweig

- 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 Dr.-Ing. Felipe Cerdas on +49 (0) 531 391-7177 or write an email to f.cerdas@tu-braunschweig.de.