



Technische
Universität
Braunschweig

Institut für
Flugführung



SE²A

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

Integrated Design of Control Methods within an Air Traffic Simulation

Temporary 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 Institut für Flugführung (IFF, www.tu-braunschweig.de/iff) in Braunschweig. The entry date is as soon as possible, and the duration is initially limited until December 2025. The position is part-time suitable, but should be occupied 100%. For all doctoral researchers of the cluster, an active participation in SE²A's own qualification programme is mandatory, the time effort for this training measure entails 10% of the working time. 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 scientists 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:

- Integration and maintenance of SE²A reference aircraft into the Institutes Flight Physics Simulation Environment LADAC
- Development of a distributed sensor network for assessing the bending state of a flexible aircraft wing
- Integration of an emulated sensor network into the Flight Physics Simulation Environment LADAC

- Development of a flight guidance and a flight management functionality for the Flight Physics Simulation Environment LADAC
- Enhancement of an Air Traffic Simulation framework
- Publication of results
- Collaboration with other partners within the ICA-A2 and ICA-B2.3 project as well as within the SE²A cluster
- The possibility for a PhD thesis is given

Who we are looking for:

- Persons with completed Masterstudies in Air and Space Sciences or similar
- Knowledge of Air Traffic Management processes and good programming skills are essential
- In-Depth knowledge of flight mechanics and flight controls as well as MATLAB/Simulink are mandatory
- Knowledge in aerodynamics are welcome
- Good English (in writing and speaking) is mandatory, knowledge of German language is desirable

Application Process:

Applications should be sent by e-mail to m.steen@tu-braunschweig.de or by regular post to Institut für Flugführung, TU Braunschweig, Hermann-Blenk-Str. 27, 38108 Braunschweig and must contain the following documents:

- 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. Meiko STEEN on +49 (0) 531 391-9837.