

Technische Universität Braunschweig - Institut für Akustik und Dynamik



With around 16,000 students and 3,800 employees, the Technische Universität Braunschweig is one of Germany's leading institutes of technology. It stands for strategic and performance-oriented thinking and acting, relevant research, committed teaching, and the successful transfer of knowledge and technologies to the economy and society. We consistently advocate for family friendliness and equal opportunities. Our research focuses are mobility, engineering for health, metrology, and city of the future. Strong engineering and natural sciences are our core disciplines. These are closely interconnected with economics, social and educational sciences and humanities. Our campus is located in the midst of one of the most research-intensive regions in Europe. We work successfully together with over 20 research institutions in our neighborhood as we do with our international partner universities.

Research Internship (International Female Program): Cabin noise of integrated and distributed propulsion

(6 months, EG 13 TV-L, 50 % of full time + german class) With the major goal of climate-neutral flying, we are exploring potentials and synergies through highly integrated aircraft development in numerous sub-projects at TU Braunschweig, University of Stuttgart, LUH Hannover and DLR Braunschweig in the new research centre SynTrac. We use interactions between the disciplines of aerodynamics, acoustics, flight physics, structural mechanics and thermodynamics through a multidisciplinary, cross-system view of the aircraft development process to develop future highly efficient aircraft through innovative approaches. The acoustic project B05 "Cabin noise of integrated and distributed propulsion" is based at the Institute for Acoustics and Dynamics in Braunschweig. The project focuses on the early assessment of cabin noise in aircraft development for different aircraft models and different sound sources within SynTrac.

City: Braunschweig; Starting date (earliest): 01/03/26; Duration: 6 months;
Remuneration: EG 13 TV-L; Closing date: 16/01/26

Working field

You can support the project by conducting research during your internship. The project focuses on aircraft models and transmission paths. This will require familiarisation with aircraft acoustics and the finite element method, both of which are essential for the project. Based on this research, a vibroacoustic simulation model will be further developed to investigate how sound is transmitted into the aircraft cabin for different aircraft types under various loads. Sensitivity and parameter studies will then be used to determine the main influencing factors and the required level of fidelity.

Requirements

- Master's degree in Mechanical Engineering, Aerospace Engineering or a related technical subject

- Solid understanding of vibroacoustic and finite element method
- Experience with finite element analysis (FEA) (e.g. ANSYS, Abaqus)
- Experience with programming or scripting languages preferable (e.g. Python, MATLAB)
- Ability to work effectively in a multidisciplinary team environment
- High proficiency in written and spoken English

What we offer

- Work on exciting future-oriented research topics in an inspiring work environment as part of the university community
- A vibrant campus life in an international atmosphere with lots of intercultural offers and international cooperations
- Payment in accordance with the collective agreement TV-L (a special payment at the end of the year as well as a supplementary benefit in the form of a company pension, comparable to a company pension in the private sector) including 30 days vacation per year
- Flexible working and part-time options and a family-friendly university culture, awarded the "Family-friendly university" audit since 2007
- Special continuing education programs for young scientists, a postdoc program, as well as other offerings from the Central Personnel Development Department and sports activities.

Application

We welcome applicants of all nationalities. At the same time, we encourage people with severe disabilities to apply. Applications from severely disabled persons will be given preference if they are equally qualified. Please attach a proof of disability to your application. We are also working on the fulfilment of the Central Equality Plan based on the Lower Saxony Equal Rights Act (Niedersächsisches Gleichberechtigungsgesetz—NGG) and strive to reduce under-representation in all areas and positions as defined by the NGG. Therefore, applications from women are particularly welcome in this case.

The personal data will be stored for the purpose of processing the application. By submitting your application, you agree that your data may be stored and processed electronically for application purposes in compliance with the provisions of data protection law. Further information on data protection can be found in our data protection regulations at <https://www.tu-braunschweig.de/datenschutzerklaerung-bewerbungen>. Application costs cannot be reimbursed.

Contact information

Please send your application, including your CV, transcript of records and letter of motivation to Prof. Dr.-Ing. Sabine Langer (s.langer@tu-braunschweig.de).

The entry date is March 2026, and the duration of employment is limited to 6 months. The position is part-time with 50 % of the regular weekly working time (currently 19,9 h). In addition to the scientific work, the programme also offers participants the opportunity to take part in intensive German courses.

At the end of the research internship, participants should ideally have gained sufficient research experience and German language skills to be able to continue their research career as a doctoral candidate in Germany or even within the SynTrac project.

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. Candidates with handicaps will be preferred if equally qualified. Please enclose a proof. The position is part of the SynTrac International Female Program, so only applications by female students of non-German universities are possible.

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.

More information at <https://stellenticket.de/200303/TUBS/>
Offer visible until 16/01/26

