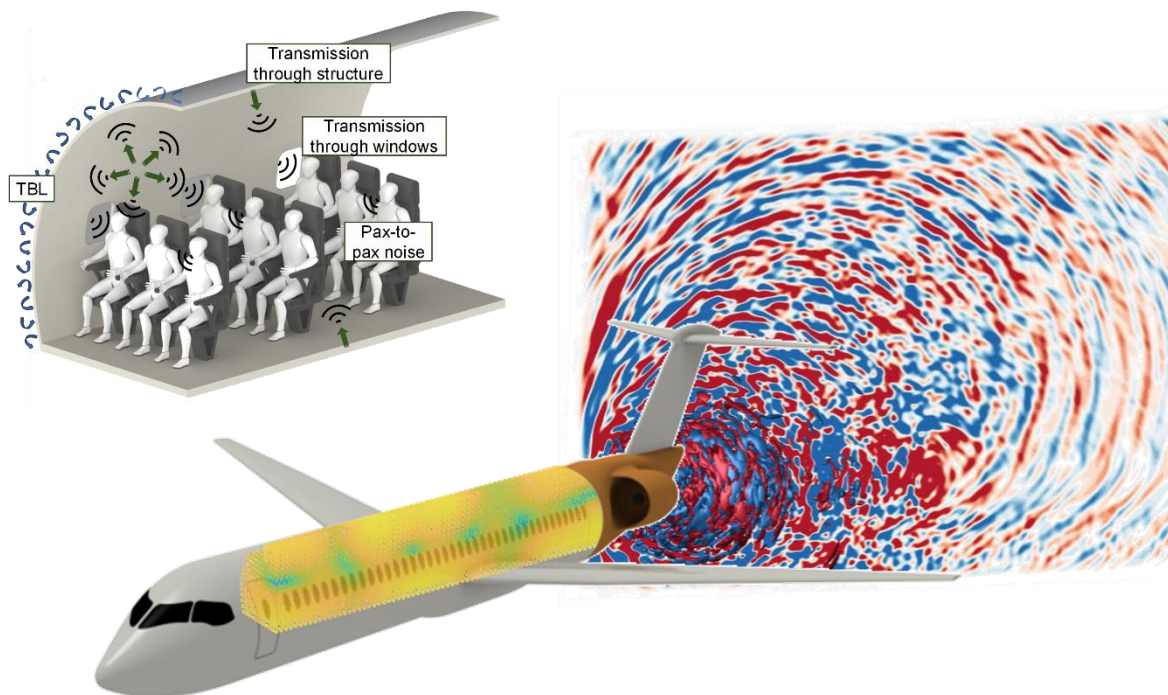


Research Internship (International Female Program):

Cabin noise of integrated and distributed propulsion

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.



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

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.