

The Physikalisch-Technische Bundesanstalt (PTB) is the national metrology institute of the Federal Republic of Germany with scientific and technical service tasks. It furthers progress and reliability in metrology for society, the economy, and science.

The [Technische Universität Braunschweig \(Technical University of Braunschweig\)](#) (TU BS), with its 18,500 students and 3,700 members of staff, is the largest technical university of northern Germany. It stands for strategical and performance-oriented research, committed teaching, and successful knowledge and technology transfer to industry and society.

Within the scope of a joint selection procedure, PTB and TU BS are looking for a candidate to fill the following position for a maximum of six years, starting on 1 March 2022:

Head of a Scientific Junior Research Group on Infrasound

Remuneration Group up to 14 [TVöD Bund](#) ◦ full-time ◦ fixed-term contract

Your tasks:

The energy transition is causing an increasing number of large-scale nuclear and fossil-fired power stations to be replaced by smaller energy converters that are operated in a decentralized way. Operating such facilities often causes noise emission in the infrasonic range. Due to the acoustic properties of infrasonic waves, which are fundamentally different from other types of sound waves, there are as yet no measurement and assessment possibilities and no legal regulations for infrasound in order to protect the population from noise-related nuisance. As a result, a fear of the effects of ultrasound has led to one of the main obstacles to operating and constructing energy converters. This obstacle also affects the energy transition.

This Junior Research Group is expected to produce scientific findings to find solutions to these problems. Potential key aspects of research include:

- Determining and modeling the infrasound source strengths (e.g. directly at the place of measurement, developing a drone for this purpose)
- Investigating the propagation of infrasound towards humans and their dwellings (e.g. by characterizing the penetration of walls, windows, and doors metrologically and numerically)
- Determining the exposition parameters in buildings and rooms at such low frequencies
- Investigating the perception of infrasound (in particular with realistic signals in realistic rooms – e.g. using neuroimaging methods as well as virtual acoustics)

Your profile:

- You have completed your university studies (German *Diplom* or Master's) in physics, physical engineering, electrical engineering, IT, mechanical engineering or a comparable subject.
- You are able to perform scientific work autonomously, which is proven by your excellent doctoral thesis in a field relevant to this position.

- You have expert as well as experimental or theoretical knowledge in the fields of acoustics and acoustic metrology.
- You also have in-depth expert knowledge in at least one of the following fields: infrasound, psychoacoustics, the physiology of hearing and audiology, building acoustics.
- You are able to set up an independent scientific research working group and to take accountability for managing it.
- You present and convey scientific facts convincingly both verbally and in print.
- You are a strong team player with excellent communication skills.
- You are willing to deliver lectures to academic classes and to supervise employees as well as students.
- You are able to communicate openly and constructively within the working group and with external partners.
- You have experience with raising third-party funds.
- You are a born researcher with the ability to hold constructive discussions, but you are also able to deal with dissent and to have a critical view of your own results.
- You have a very good command of written and spoken English and a fair command of German, both written and spoken.

We offer:

- A working environment which supports excellent scientific research in many different ways
- Two doctoral candidates who will support your team's work
- The possibility to compile your own teaching contents (e.g. in psychoacoustics) for your academic lectures
- The possibility to participate in both TU Braunschweig's and PTB's research in key areas (e.g., the city of the future and metrology)

For further information with regard to this position, please contact:

Prof. Dr.-Ing. S. Langer, phone: +49 531 391-8770, email: s.langer@tu-braunschweig.de or
Dr. C. Koch, phone: +49 531 592-1600, email: christian.koch@ptb.de.

PTB and TU BS both promote the professional equality of women and men and are thus especially interested in applications from women.

Within the scope of the official feasibilities, PTB and TU BS offer flexible part-time work schemes in order to support in particular the compatibility of work and family life.

Disabled persons will be given priority if they have the same occupational aptitude.

By applying for this position, you implicitly agree to your documents being accessed by all members of the selection committee.

Please use our [online application form](#). Alternatively, you can post your application to us at the following address:

Physikalisch-Technische Bundesanstalt
Referat "Personal"
Reference number 21-339-1
Bundesallee 100
38116 Braunschweig
Germany

Unfortunately, we cannot accept applications sent via email.

Applications can be submitted from 5 July 2021 until 25 August 2021.



UNTERZEICHNET

