



With around 17,000 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 core research areas are Mobility, Engineering for Health, Metrology, and the City of the Future. A strong focus is placed on engineering and the natural sciences, with a close link of our core disciplines to the economics, social and educational sciences as well as the humanities.

Our campus is located in the middle of one of Europe's research hotspots, where we have established a successful working relationship—both with the more than 20 research facilities in our neighbourhood and our international partner universities.

The Institute of Computer and Network Engineering (IDA) is looking for a

Research Associate / Doctoral Candidate (m/f/d) in the field of Development of digital data processing units for scientific space missions

(full-time – fixed-term)

The position is to be filled on a fixed-term basis for an initial period of 2 years with the possibility of extension. The successful applicant will be given the opportunity to pursue a doctorate.

In addition to teaching in Bachelor's and Master's degree programmes, you will join the institute's newly founded robust hardware-software systems research group. Our institute has been involved for decades in the development and implementation of digital Data Processing Units (DPUs) for scientific space instruments and space-based semiconductor mass storage. High performance for complex algorithms in on-board data processing with minimum energy consumption and mass, and high reliability, radiation tolerance and flexibility (reconfigurability in orbit) are important. In a joint project between institutes of the DLR and the Max Planck Society, as well as IDA, a Data Handling Unit (DHU) is to be developed, implemented and qualified for ESA's EnVision mission to Venus. IDA is responsible for the hardware, the FPGA firmware with implementations for data compression and the software drivers for the hardware.

Make a Difference:

- You will carry out research and development in the area of spaceborne electronics and computer systems.
- You will present the results of your research and development in the project and cooperate with companies and other research institutions.
- You will publish research findings and participate in international conferences.
- You will be involved in teaching at the University (preparation and implementation of courses as well as supervision of students' work).
- You will pursue your problems independently in the team at the institute and actively participate in the consortium of the project.

Your Qualifications:

- You have a degree (Master's or equivalent) in electrical engineering, computer engineering or comparable scientific-technical courses of study.
- You have very good knowledge of the English language (written and spoken). German language skills are beneficial but not necessary.
- You have working knowledge of digital electronics and FPGA programming, as well as initial experience with processor systems and ideally knowledge of hardware-related programming.

- You work independently and in a structured manner on your topics.
- You are flexible, can perform under pressure and work well in a team.
- You are aiming for a doctorate.

Our Benefits:

- Pay in accordance with the collective agreement TV-L, pay grade EG 13, depending on the fulfilment of personal requirements (see <https://oeffentlicher-dienst.info/c/t/rechner/tv-l/west?id=tv-l-2023&matrix=1> for monthly income before taxes and social insurances, available only in German, row E13, the column depends on your level of relevant previous experience).
- A special payment at the end of the year as well as a supplementary benefit in form of a company pension, comparable to a company pension in the private sector.
- An interesting and varied job with independently organised work in a pleasant working atmosphere with a dynamic and motivated team.
- The opportunity for active, interdisciplinary collaboration with colleagues from other research institutions and companies.
- A workplace that is basically suitable for part-time work, although the position is to be filled full-time, as well as flexible working and part-time options and a family-friendly university culture, awarded the "Family-friendly university" audit since 2007.
- A wide range of continuing education and company health care programmes as well as a vibrant campus life in an international atmosphere.

What's more to know:

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 form of evidence of your handicap 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.

Questions and Answers:

For more information, you can contact Dr. Björn Fiethe (b.fiethe@tu-braunschweig.de) or Prof Dr. Andres Gomez (andres.gomez@tu-braunschweig.de) via email.

Closing date: 2023-11-15

Are you interested? Please send your application preferably via email (if possible, in one PDF file) to andres.gomez@tu-braunschweig.de

or via mail to

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