



Technische Universität Berlin is currently advertising the following position(s):

## Student assistant (40 hours per month)

**Fakultät IV: Elektrotechnik und Informatik - Institut für Hochfrequenz- und Halbleiter-Systemtechnologien - Halbleiterbauelemente und Mikroelektroniksysteme**

**Reference number:** IV-SB-0081-2024 (starting at the earliest possible / closing date for applications 31/12/24)

### Working field:

Working field: "Computational Materials Design of Quantum Materials and Hardware for Artificial Intelligence"

The discovery and design of new materials has been the basis for groundbreaking new technologies ranging from computers and cell phones to aeroplanes and biomedical devices. This project will focus on utilizing quantum mechanical software like density functional theory to design novel functional materials for applications in next-generation information technology.

Of particular interest are (i) bio-inspired materials for applications in hardware for artificial intelligence (AI), and (ii) quantum materials that show interesting physical properties.

Supporting activities under supervision for the following tasks:

1. Conduct computational design of bio-inspired materials and hardware for artificial intelligence (40%)
2. Conduct computational design of novel quantum materials (40%)
3. Collaborate with an international, multi-disciplinary team to achieve our research agenda (10%)
4. Contribute to high-quality publications and publicly disseminate research results (10%)

### Requirements:

Must Criteria:

1. Very good knowledge of Applied Physics, Electrical Engineering, Material Science, Physics or a related field
2. Knowledge of, or exposure to, at least one of the following topics:
  - i) Computational materials science (including tools such as Quantum ATK or VASP etc.)
  - ii) Computational design of nanoscale materials or nanoscale devices
  - iii) Computational design of quantum materials or quantum devices
3. The ability to work in English (very good written and spoken English skills)

Can Criteria:

1. Interest in learning how to conduct independent and high-quality research
2. Deep interest in computational materials design, bio-inspired materials and quantum materials
3. Creativity, scientific passion and strong motivation to succeed
4. Strong communication, interpersonal, and organizational skills

**Party responsible for specialist area / point of contact for job posting:** Prof. Dr. Priyamvada Jadaun

**Period of employment:** At the earliest possible - 2 years

**Apply to:** [personal@tmp.tu-berlin.de](mailto:personal@tmp.tu-berlin.de)

Please submit your written application including cover letter, your CV, certificate of enrollment, and where applicable, current transcript of records, with the reference number to the place of employment indicated above.

In the interest of promoting equality opportunities for men and women, applications from women with suitable qualifications are particularly encouraged.

The vacancy is also available on the internet at <https://www.personalabteilung.tu-berlin.de/menue/jobs/>

