## IHP GmbH - Leibniz-Institut für innovative Mikroelektronik

IHP is an institute of the Leibniz Association and conducts research and development of silicon-based systems and ultra-high-frequency circuits and technologies including new materials. It develops innovative solutions for application areas such as wireless and broadband communication, security, medical technology, industry 4.0, automotive industry, and aerospace. IHP employs approximately 400 people. It operates a pilot line for technological developments and the preparation of high-speed circuits with 0.13/0.25 µm-SiGe-BiCMOS technologies, located in a 1500 m² cleanroom that meets the highest industrial nanotechnology requirements.

# Research Assistant / PhD position (m/f/d) for AI in Wireless Communications and Sensing

Job-ID: 3011/26 | Department: System Architecture | Working Time: 40 h/week| Salary: E13 TV-L | Limitation: 2 years with option of extension | Entry Date: as soon as possible

City: Frankfurt (Oder); Starting date (earliest): At the earliest possible; Duration: 2 years with option of extension; Remuneration: E13 TV-L; Reference number: 3011/26

### Working field

The position:
We are looking for a motivated researcher to join our team to work on Wireless Communication and Sensing Systems.
This position offers interesting work in both algorithmic developments as well as prototypic implementations, bridging the gap between analytical work and real-world implementations. It is anticipated, the candidate will work towards a PhD. Your detailed tasks will include:

- Development of next generation AI for edge intelligence in ICAS systems, with a focus on SNNs
- Develop of AI models for RADAR signal processing and object detection
- Integration of AI algorithms into ICAS system simulation and verification with real channel models
- Real-time implementation of SNN algorithms on FPGA and integration with mmWave ICAS platform

### Requirements

Your qualifications:
You hold a Master's degree in computer science, electrical engineering, or a related field. You have good knowledge and experience in developing AI algorithms and models, preferably CNNs and SNNs. Significant experience with FPGA implementation of processing algorithms is requested, as well as programming experience in Python, C and Matlab.
Additionally, knowledge about signal processing algorithms for wireless data

communication and RADAR processing is essential.
You will also be a strong team player. We are looking for a team member who can structure their own work and bring a well-organized and systematic approach to working with creative minds. You will be an ideal fit for this position if you have experimental, analytical, and problem-solving skills, very strong communication skills, and the ability to quickly learn how to use the latest technical equipment, including various software. You must be fluent in English. German language skills are welcome. Further development of German language skills is expected and strongly encouraged, e.g. through in-house language courses and intensive courses.

**What we offer**

Our Offer:
Conduct research in a challenging, multinational environment giving you excellent career opportunities. You will have the chance to establish international reputation at the edge of top-notch technologies.
It is important to us to support the individual career developments (e.g. conferences, advanced trainings) as well as the personal needs of our employees by offering flexible working hours and the possibility to work off-site. The compatibility of work and family is highly valued. More information about our scientific excellence and the working environment at IHP can be found on our website.
IHP is TOTAL E-QUALITY-certified for equal opportunities for women and men at work and actively pursues the equality of all gender and all groups of people. We promote the professional development of women and strongly encourage them to apply. Disabled applicants, qualified according to the above criteria, will be given preference over other candidates with equivalent relevant qualifications.

Further advantages:
30 days holiday | special annual payment | Company pension scheme (VBL) | Flexible working hours, also part-time (no core working hours) | Possibility to work up to 40 % independent of location according to company agreement | A wide range of further training opportunities in-house or within the framework of business trips | Discounted company ticket with monthly allowance of € 15 for various fare zones | Good transport connections, free parking at the institute | Structured induction and actively supported integration into the institute (welcome workshop, intercultural workshop, joint leisure activities)

**Application**

Have we sparked your interest? We look forward to receiving your application in German or English via our online application form

More information at https://stellenticket.de/200918/TUBS/
Offer visible until 20/02/26