



## PhD position (m/f/d) for Millimeter wave and THz circuits for MIMO Systems

Job-ID: 5107/22 | Department: Circuit Design | Salary: as per tariff (TV-L) | Working Time: 40h/week (part-time work option) | Limitation: initially 2 years with option of extension for three more years | Starting Date: November 1, 2022

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 350 people. It operates a pilot line for technological developments and the preparation of high-speed circuits with 0.13/0.25  $\mu\text{m}$ -SiGe-BiCMOS technologies, located in a 1500 m<sup>2</sup> cleanroom that meets the highest industrial nanotechnology requirements.

### The position:

As a member of the research group 'Millimeter Wave Terahertz Sensing' within the Circuit Design department you will contribute to research in wireless and noninvasive sensing and radar technologies. Your tasks will include design of integrated circuits of wireless sensors and radar systems at very high frequencies (30-300 GHz). An international team of 7 researchers within a department of more than 25 scientists and engineers with broad area of experience is looking forward to you. Flat hierarchies and mutual support are important to us. We see diversity of perspectives as a great advantage for our team. We strive for a balanced gender mix in our team.

### Your main research topic:

The main research topic with the working title "*Development of mmw and sub-THz MIMO chipsets for radar applications*", is intended to develop the next phase of the IHP MMW and THz MIMO radar frontends. An opportunity to pursue a PhD degree is strongly supported by an experienced supervisor. Doctoral thesis is initially planned and encouraged to be concluded within 4-5 years within a framework of a supervision agreement. After one and a half years, the topic will be finally defined and the contract duration will be adjusted accordingly by mutual agreement to the foreseeable doctoral period.

### Your qualifications:

You hold a Master's degree in electrical engineering or a comparable study area with strong background in integrated circuits implementation. You are already experienced in CAD tools, e.g. Cadence or ADS, HFSS or CST. You have very good communication skills as well as team player capabilities.



/IHPFFO



/waferffo



/company/ihp



Ideally, but not mandatory you have an experience in lab equipment and measurement capabilities as well as in radar imaging and sensing systems. Finally, you have also an experience in electromagnetic simulation techniques.

We are looking for a team player, who is able to structure his or her own work and to bring a well-organized and systematic way of working into the cooperation with creative minds. You are an ideal match for this position, when you have experimental, analytical and problem-solving skills, very strong communicative skills and the ability to quickly learn how to operate the latest technical equipment including various software. It is necessary that you confidently handle the English language. Knowledge of the German language is very welcome. The consolidating of German language skills is expected and highly encouraged, for example in in-house language courses and intensive courses.

**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. An orientation guide will help you to quickly integrate into the institute and to familiarize yourself with the field.

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.

**Your application:**

Have we sparked your interest? Then we look forward to receiving your application **until October 31, 2022** via our [online application form](#).

For further information regarding the position please contact Dr. Gunter Fischer: [career@ihp-microelectronics.com](mailto:career@ihp-microelectronics.com).

