IHP GmbH -
Innovations for High Performance Microelectronics/
Leibniz-Institut für innovative Mikroelektronik

Research associate for Process Design Kit Development (m/w/d) – Project leader and developer for Open Source Process Design Kits for SiGe-BiCMOS technologies

Job-ID: 70313/22 | Department: Technology | 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 µm-SiGe-BiCMOS technologies, located in a 1500 m² cleanroom that meets the highest industrial nanotechnology requirements.

The position:

As a member of the research group Research & Prototyping Service you will develop Process Design Kit for IHP's BiCMOS technologies and new future technology modules.
IHP plans to offer open-source PDK access to one of its high-performance BiCMOS technologies, similar to Google/Skywater's PDK approach (https://skywater-pdk.readthedocs.io). Your detailed tasks will focus on supporting open source tools and their integration into our new design and verification flow. Creating device descriptions, user guides and test cases are important aspects of your work. Implementation of new devices and investigations of new design tools and flows will give this position room for research activities. Further IHP intents to contribute to national and international open source software research projects. Management of such projects offers you interesting development opportunities.

An international team of 20 researchers including very experienced senior and junior scientists as well as PhD students is looking forward to welcoming you in their team. Flat hierarchies and mutual support are important to us. We see diversity of perspectives as a great advantage for our team and strive for a balanced gender mix.

Your qualifications:

You hold a Master's degree in computer science with background in semiconductors, physics or electrical engineering. Your specialized knowledge preferably covers digital and analogue ASIC design flow and programming skills in scripting languages (e.g. Python, Perl or TCL). Experience with Linux and knowledge of semiconductor devices is a plus. Experience with design environments such as Cadence Virtuoso, Mentor/Siemens Tanner, or KeySight ADS is also an advantage.

You are well organized and always keep the overview even with many parallel projects. Basic project management skills are beneficial. Thanks to your skillful communication you are a binding and reliable contact person for our partners. It is necessary that you confidently handle the English language. Knowledge of the German language is welcome. The consolidating of German language skills is expected and highly encouraged, for example in in-house language courses and intensive courses.

Our Offer:
Conducting 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 April 30, 2022** via our **online application form.**

For further information regarding the position please contact Dr. René Scholz: career@ihp-microelectronics.com.