

Developer for Open Source Assembling Design Kit for IHP Hetereo- and Chiplet-Integration (m/w/d) –

Job-ID: 7090/24 |Dept.: Technology |Salary: according TV-L |Working time: 40h/week |Limitation: initially 2 years with option of extension | Entry Date: 02.01.2025

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, aerospace, biotechnology and medicine, automotive industry, security technology and industrial automation. 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:
IHP is the first European semiconductor manufacturer to introduce an open PDK in early 2023. Compared to the other two open PDKs (Google/SkyWater 130nm CMOS and GlobalFoundries 180nm CMOS), the IHP process is a BiCMOS technology that incorporates one of the fastest SiGe HBTs (heterojunction bipolar transistors). As a result, this open-source PDK is capable of supporting digital and mixed-signal designs, as well as high-frequency designs for future applications up to 100GHz. As a member of the Research & Prototyping Services group, you will be directly involved in developing open source EDA tool support for our design projects. For new hetero and chiplet integration projects, an open source Assembling Design Kit (ADK) and open source EDA tool interfaces will be developed. This will include the evaluation of suitable design tools for different ASICs on a common substrate, the ADK implementation itself and documentation. There will be a strong focus on mixed-signal and RF applications. In addition to working with open source tools, proprietary tools will also be considered throughout the design flow.

Your profile:
You have a Master's degree in Computer Science with a background in semiconductors, physics or electrical engineering. Knowledge of semiconductor devices and programming is an advantage. Your specialised knowledge preferably includes ASIC design environment and programming skills in Linux environment including scripting languages (e.g. Python, Perl or TCL). An understanding of chip packaging and board development concepts is also an advantage. You are well organised and able to keep track of many parallel projects. Your communication skills make you a reliable and trustworthy contact for our partners. You are also a strong team player and have a good command of German and English.

Our offer:
Do 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 task includes extensive model development within the framework of the standardized technologies of the IHP, as well as new developments. For motivated applicants, the position therefore also offers the potential for a PhD. 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:
We are looking forward to your application. Please apply **via our online portal until November 30th 2024.**
For further information regarding the position please contact Dr. René Scholz, leader of the group Research & Prototyping Service: career@ihp-microelectronics.com.