IHP GmbH - Leibniz-Institut für innovative Mikroelektronik

Das IHP ist ein Institut der Leibniz-Gemeinschaft und betreibt Forschung und Entwicklung zu siliziumbasierten Systemen, Höchstfrequenz-Schaltungen und -Technologien einschließlich neuer Materialien. Es erarbeitet innovative Lösungen für Anwendungsbereiche wie die drahtlose und Breitbandkommunikation, Sicherheit, Medizintechnik, Industrie 4.0, Mobilität und Raumfahrt. Das IHP beschäftigt ca. 330 Mitarbeiterinnen und Mitarbeiter. Es verfügt über eine Pilotlinie für technologische Entwicklungen und die Präparation von Hochgeschwindigkeits-Schaltkreisen mit 0,13/0,25 µm-BiCMOS-Technologien, die sich in einem 1000 m² großen Reinraum der Klasse 1 befindet.

Research Associate/Developer for IHP Open Source Assembly Design Kit (ADK) (m/w/d)

Job-ID: 70710/25 | Department: Technology | Salary: as per tariff TV-L | Working time: 40 h/week (part-time work option) | Limitation: initially 2 years with option of extension | Entry Date: as soon as possible

City: Frankfurt (Oder); Starting date (earliest): At the earliest possible; Remuneration: TV-L; Reference number: 70710/25

Working field

The position:
IHP was the first European semiconductor manufacturer to release an open-source Process Design Kit (PDK) in early 2023. Unlike the other two prominent open PDKs—Google/SkyWater's 130nm CMOS and GlobalFoundries' 180nm CMOS—the IHP PDK is based on a BiCMOS technology platform, featuring one of the fastest silicon-germanium (SiGe) heterojunction bipolar transistors (HBTs) currently available. This allows support for a wide range of applications, from digital and mixed-signal circuits to high-frequency designs reaching up to 100 GHz.
As a member of the Research & Prototyping Services group, you will play a key role in expanding open-source EDA tool support for innovative chip design projects. In the context of new heterogeneous and chiplet integration efforts, we are developing an ADK alongside open-source EDA tool interfaces. Your primary focus will be the integration of electromagnetic, thermal, and mechanical simulation tools—all open-source—into the ADK design flow, enabling advanced multi-technology and multi-die design environments.

Requirements

Your profile:
You hold a Master's degree in physics, electrical engineering, or computer science and bring knowledge in semiconductor technology and devices, as well as experience in IC design and programming. Specialized expertise in packaging techniques, device simulation, and modeling is highly desirable. You are proficient with Linux, GitHub, and

scripting languages such as Python, Perl, or Tcl. You are organized, capable of managing multiple projects in parallel, and maintain a clear overview in dynamic settings. With strong communication skills, you serve as a reliable and engaging contact for partners and collaborators.
You are also a strong team player. We are looking for a team member, 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 welcome.
The consolidating of German language skills is expected and highly encouraged, for example in in-house language courses and intensive courses.

What we offer

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. 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.

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 | Parent-child room as a possibility to work with a child in case of childcare bottlenecks | 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 | Canteen with
breakfast and lunch | On-site health services | Company family and care guides | Free, confidential counselling by an external service provider in a wide variety of challenging private or professional situations, for example on how to reconcile work and family life or in psychosocial emergencies | Structured induction and actively supported integration into the institute (welcome workshop, intercultural workshop, joint leisure activities)

Application

Reference number: 70710/25

By internet: https://www.ihp-microelectronics.com/career/vacancies/online-application-form?job=70710/25#c977

More information at https://stellenticket.de/196300/LUH/
Offer visible until 13/08/25