



Research Associate (m/f/d) for Digital Design for Reliable Systems

Job-ID: 3036/22 | Department: System Architectures | Salary: according TV-L | Working time: 40h/week (part-time work option) | Limitation: initially 2 years with option of extension | Earliest Entry Date: July 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 Design & Test Methodology within the department System Architectures you will contribute to research projects aiming at the development of digital or mixed-signal systems for space applications. Your tasks will include the development of innovative design solutions and the implementation of embedded software, hardware IPs, and FPGA/ASIC designs for complex system developments. You will investigate methods, circuits, and architectures ensuring the resilient operation of the ASIC in the target environment. An international team of very experienced scientists, engineers and supporting staff 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 qualifications:

You are holding a Master's degree or a PhD in Electrical Engineering, Computer Engineering or a comparable study area. You have a strong background in the design of digital circuits and a theoretical knowledge of fault-tolerant design. You are already experienced in at least one HDL (VHDL or Verilog) and one programming language (C/C++). Ideally, but not mandatory, you have knowledge of SystemC, SystemVerilog, or other hardware/system specification or embedded programming languages. Moreover, skills in front- and back-end ASIC design flow, respective tool chains (Cadence, Mentor, and Synopsys) and very good oral and written skills in English are highly appreciated. Prior experience (industry or academia) of at least 2 years in related domain is mandatory.

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 deepening of German language skills is expected and highly encouraged, for example in in-house language courses and intensive courses.

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.

Your application:

Have we sparked your interest? Then we look forward to receiving your application until **May 23, 2022** via our [online application form](#).

For further information about the position, please contact Oliver Schrape: career@ihp-microelectronics.com.