Fraunhofer-Institut für Integrierte Schaltungen - Institutsteil Entwicklung Adaptiver Systeme

Fraunhofer IIS

The Fraunhofer-Gesellschaft is one of the world's leading applied research organizations. 76 institutes develop cutting-edge technologies for our economy and society – more precisely: 32 000 people working in technology, science, administration and IT. They know: If you join Fraunhofer, then you are able to promote change. For themselves, for us and for the markets of today and tomorrow. Welcome to the Fraunhofer Institute for Integrated Circuits IIS! As the largest institute within the Fraunhofer-Gesellschaft, Fraunhofer IIS has been conducting cutting-edge research in key technologies such as artificial intelligence, microelectronics, sensor systems, and signal processing for over 30 years. At our Dresden site, we develop adaptive systems that intelligently respond to their environment and evolving requirements—essential for the industry, mobility, and communication systems of tomorrow.

Thesis/Student Job/ Internship (all genders): Development of Layout Parasitic Estimator Technology for innovative Analog Design Automation Approach Intelligent IP

City: Dresden; Starting date (earliest): At the earliest possible;
Remuneration: Gesamtbetriebsvereinbarung zur Beschäftigung der Hilfskräfte

Working field

Intelligent IP has been in use for several years and is constantly being adapted to new requirements. You are welcome to support us in the context of an internship, a thesis or as a student assistant for the above topic, which includes:

- State-of-the-art analysis for layout parasitic estimation techniques
- Analysis and implementation of efficient and precise estimation algorithm for parasitic layout capacitances and resistances
- Investigation of design flow integration of estimated parasitic elements
- Design and Intelligent IP implementation of benchmark analog circuitry for CMOS technologies from 180nm down to 22nm
- Benchmarking against commercial and scientific layout parasitic extraction solutions
- Optional: evaluation of development in productive Analog/Mixed-Signal design project

Requirements

In your application, please tell us your area of interest and the scope of your work. We can discuss further details individually.

Prerequisites are:

- enrollment in a degree program with corresponding previous knowledge
- you already have good knowledge with programming language Phyton and experience with Analog-IC Design software or layout
- an independent way of working, but also the ability to work together in a team
- fluent in either German or English (written and spoken) is advantageous but not mandatory

What we offer

- a well-equipped workplace in our new institute building in Dresden
- support from your colleagues during the orientation phase
- Flexibility in working hours for an optimal combination of studies and practice
- close cooperation in a committed and interdisciplinary development team
- an open and cooperative working environment-
- interaction in a cross-organizational network of science and practice
- an innovative and exciting topic, with the chance to contribute your own ideas
- the freedom to develop yourself according to your interests and skills

We will agree your start date and weekly working hours with you individually. You can reduce your hours before exams and increase them during semester breaks. You can flexibly determine the working days of your fixed-term employment contract. After your studies, there are attractive opportunities to join the institute on a full-time or part-time basis.

We value and promote the diversity of our employees' skills and therefore welcome all applications - regardless of age, gender, nationality, ethnic and social origin, religion, ideology, disability, sexual orientation and identity. Severely disabled people are given preference if they are equally qualified.

Ready for change? Then apply now and make the difference!

Once we've received your application, you will automatically receive a confirmation email. We will then get in touch as soon as possible to inform you about the next steps.

Do you have questions about the application process? Our recruiters Lydia and Patricia will be happy to assist you: personal@eas.iis.fraunhofer.de

Application

Contact person: Lydia and Patricia

By internet: https://short.sg/j/57257083

More information at https://stellenticket.de/195764/LUH/
Offer visible until 24/08/25