Faculty of Electrical and Computer Engineering

Since 2012 the Technische Universität Dresden is a part of the elected group of eleven Universities of Excellence in Germany. Furthermore, the Dresden location features the "Silicon Saxony", which is the largest microelectronics cluster in Europe.

In the frame of the DFG project ADAMIS, the Chair of Circuit Design and Network Theory at the Institute of Circuits and Systems offers a job position for a

Research Associate / PhD Student / Postdoc in High Frequency Circuit Design

(Subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

The position starts at 1. April 2019 and is fix termed until 31. March 2022. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG). The position offers the chance to obtain further academic qualification (e.g. PhD or habilitation thesis).

The Chair of Circuit Design and Network Theory is a leading Chair in the design of radio frequency and millimeter-wave integrated circuits and has received several world records and awards (e.g. the Vodafone Innovation Award).

In ADAMIS, a transmitter frontend with frequencies up to 270 GHz is designed in leading-edge BiCMOS technology. We want to explore novel architectures for millimeter-wave transmitters which can be tuned according to actual performance needs to allow an optimum situation-specific trade-off between data-rate (up to 50 Gb/s), transmission distance (up to 10 m) and dc power consumption by applying adaptivity at system, circuit and device level. The project is e.g. in cooperation with the Karlsruher Institut für Technologie.

Tasks: Your task will be the development (analysis, simulation, layout, measurement and optimization) of the adaptive integrated chip frontend in BiCMOS technology. Among the key components of the transmitter to be developed are the power amplifier, the up-mixer, the vector modulator for beamforming control and the oscillator interface. Furthermore you contribute to system integration and tests, will publish scientific papers and attend project meetings and conferences.

Requirements: We are looking for a candidate with a very good or good university degree and if applicable a doctorate in electrical engineering, communications technology or information technology with profound knowledge in analog circuit design. For that, skills are especially needed in CAD-based circuit simulations and circuit layout. Knowledge in radio frequency and if possible millimeter-wave circuit design would be advantageous. Interest in new technologies, independent and flexible way of working, communication and teamwork skills, good English, innovative and analytical thinking and high commitment are expected.

The job offer provides an excellent platform for interdisciplinary cooperation and the ability to push your personal scientific development. Postdoctorates have the opportunity to lead prestigious research projects.

Applications from women are particularly welcome. The same applies to people with disabilities.

Please send your complete application including copies of your CV and certificates until 10.12.2018 (stamped arrival date of the university central mail service applies) preferably via the TU Dresden SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf document to
frank.ellinger@tu-dresden.de or to TU Dresden, Fakultät Elektrotechnik und Informationstechnik, Institut für Grundlagen der Elektrotechnik und Elektronik, Professur für Schaltungstechnik und Netzwerktheorie, Herrn Prof. Ellinger, Helmholtzstr. 10, 01069 Dresden. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis