Faculty of Electrical and Computer Engineering

At the **Institute of Circuits and Systems**, the **Chair of Circuit Design and Network Theory** offers a position as

**Research Associate / PhD Student
in Organic and Bio-electronic Circuit Design**
(Subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

The position is starting **March 1, 2021** and is limited to 3 years subject to financial commitment by the German Research Foundation (DFG), but further extensions could become possible in the future. 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).

Since 2012 the Technische Universität Dresden is one of eleven Universities of Excellence in Germany. Furthermore, the Dresden location features the "Silicon Saxony", which is the largest microelectronics cluster in Europe. The Chair of Circuit Design and Network Theory is a leading chair in the design of radio frequency and mixed-signal integrated circuits as well as flexible electronics, and has achieved several world records in these fields. More info can be found here: https://tu-dresden.de/ing/elektrotechnik/iee/ccn

This interdisciplinary research project is about developing organic/polymeric electronic technologies, devices and circuits for the application of nature conservation, which is a very new and important field for the future. In this project you will mainly collaborate with the Chair of Organic Devices of TU Dresden but also partly with biologists. This position offers you an excellent opportunity to develop yourself in a professional, research-oriented environment.

Tasks: You will be responsible for the conceptual planning, system architecture and circuit-level implementation of electronic systems. Your duties include e.g. electrical characterisation and modeling of carbon-based capacitive memory elements, transistors, and biological samples; design of adaptive ring oscillators, sensor circuits, and neuromorphic circuits for pattern recognition algorithms; PCB design; and performing experiments in the laboratory and in nature on some animals. You are required to publish scientific papers and attend project meetings and conferences.

Requirements: We are looking for a candidate with very good university Master´s degree or equivalent in electronics with profound knowledge in analog and mixed-signal circuit design; familiarity with electronic device physics and modeling, and interest to work in the field of nature conservation. You have experience with Spice circuit simulators, MATLAB, and preferably C or C++. Interest in new technologies, good communication and teamwork, excellent English (oral and written) as well as innovative and analytical thinking and high commitment are expected. Previous knowledge in biology or agriculture; and German language skills can be beneficial.

Applications from women are particularly welcome. The same applies to people with disabilities. Please submit your comprehensive application including copies of your CV and certificates until **February 5, 2021** (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 **bahman.kheradmand_boroujeni@tu-dresden.de** or by mail to **TU Dresden, Fakultät Elektrotechnik und Informationstechnik, Institut für Grundlagen der Elektrotechnik und Elektronik, Professur für Schaltungstechnik und Netzwerktheorie, z. H. Herrn Dr. Bahman K. Boroujeni, 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.