Faculty of Electrical and Computer Engineering

At the **Institute of Semiconductors and Microsystems**, the **Chair of Microsystems** offers a position as

Research Associate / PhD Student

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

starting **01.06.2020**, in the Emmy Noether Junior Research Group "MEiTNER - Multifunctional dielectric elastomer electronics for next generation soft robotics", until 31.05.2023. 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).

The Chair of Microsystems offers the opportunity to contribute to the development of multifunctional dielectric elastomers for compliant and collaborative robotics in a prosperous and dynamic environment with excellently equipped laboratories and to gain valuable project experience in an interdisciplinary environment.

Tasks: Within the framework of an interdisciplinary Junior Research Group, which includes engineers and biomedical scientists, novel concepts for flexible electronics, based on dielectric elastomers (DEs) as well as complex circuits for flexible sensors, actuators and signal processing units are to be designed, optimised and their properties investigated. Your research includes the development, production and characterisation of basic DE electronic components and circuits, as well as the design of complex circuits. For this purpose, different printing technologies and polymer inks are used, which are developed simultaneously within the research group. Furthermore, the necessary electrically conductive inks are to be characterised and optimised. The aim is to develop and characterise a library of different, flexible electronic basic circuits and to demonstrate their functionality in simple adaptive, bionic robot components. In cooperation with colleagues of the research group, the inks and processes for the production of complex DE-circuits will be optimised. The results will be published at international conferences and in renowned journals.

Requirements: above-average university degree in the fields of mechatronics, electrical engineering, bioengineering microsystems technology, or related fields and experience in the fields of technology development in microsystems technology, bionics, soft robotics; ability to work independently and goal-oriented; high commitment; confident command of the English language as well as pleasure and interest in practice-oriented, interdisciplinary cooperation with cooperation partners. Willingness to travel internationally is required. Experience in at least the fields of microsystems engineering, bio- or continuum mechanics, microtechnologies and design of circuits is an advantage.

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

Please send your application with the usual documents by **04.05.2020** (stamped arrival date of the university central mail services applies) preferably via the TU Dresden SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf document to **markus.henke@tu-dresden.de** or by post to **TU Dresden, Fakultät Elektrotechnik und Informationstechnik, Institut für Halbleiter- und Mikrosystemtechnik, Professur für Mikrosystemtechnik, z.H. Herrn Dr. E.-F. Markus Henke, 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.