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 the necessary production technologies and materials, especially electrically conductive inks, are to be developed. Your research includes the development of scalable production technology for various DE electronic components and circuits as well as the participation in the design of necessary basic circuits. The focus is on various printing technologies for the production of DE sensors, actuators, switches and signal processors. Furthermore, the necessary electrically conductive inks will be developed, produced and optimised. The aim is to investigate the influence of various potential solvents and fillers with regard to their influence on the fluidic, electrical and piezoresistive properties of inks and the electrodes made from them. In cooperation with colleagues of the research group, inks and processes for the production of complex DE-circuits will be optimised. The results shall be published at international conferences and in renowned journals.

Requirements: above-average university degree in the fields of electrical engineering, microsystems technology, chemical engineering, material science or related disciplines and experience in the fields of technology development in microsystems technology, biomimetics, soft robotics; ability to work independently and goal-oriented; high commitment; fluent in English language as well as passion and interest in practice-oriented, interdisciplinary collaboration with project partners. Willingness to travel internationally is required. Experience in fields of microsystems engineering, bio- or continuum mechanics, micro technologies 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.