

PhD positions in MEMS/NEMS-based sensors

Introduction of TU Braunschweig

- The research group “Micro-/Nano-Electro-Mechanical-Systems (MEMS/NEMS)” of Assoc. Prof. Dr. rer. nat. Erwin Peiner (Akad. Dir.) at the Institute of Semiconductor Technology (IHT), Technische Universität Braunschweig (TU BS), Germany opens some positions for doctoral (PhD) candidates.
- TU Braunschweig is one of the leading technical research universities in Germany, as it has been included in the TU9 (<http://www.tu9.de/en/>).

PhD topics

- The offered PhD topics have a strong focus on the developments of wearable/portable silicon MEMS/NEMS-based sensor systems for various applications, which are including:
 - Topic 1: High-speed tactile sensor systems for surface roughness and geometrical characterizations of high-aspect-ratio microstructures
 - Topic 2: Wearable sensor systems for smart environment (i.e., mainly combination of gas and airborne nanoparticle sensing applications)
 - Topic 3: High-temperature vibration sensor systems for oil drilling applications
 - Topic 4: Novel microforce sensor systems for micro/nanometrology (i.e., calibration standards)
- The PhD students will be directly supervised by Dr.-Ing. Hutomo Suryo Wasisto and Assoc. Prof. Dr. rer. nat. Erwin Peiner (Akad. Dir.) during their research studies in Germany.

Requirements for PhD candidates

- High academic qualification, in particular a Master's degree in electrical engineering, electronics, computer science, information systems, mechanical engineering, semiconductor engineering, physics, chemistry, or related fields with very good overall grades
- Interest in MEMS, sensor systems, smart systems, semiconductor technology, environment sensing, microcontroller, integrated circuit (IC), Internet of Things (IoT), control systems, etc.
- Research experience in the areas of control systems, computer science or IT, semiconductor sensors (backgrounds in semiconductor micro/nanomachining and electronic circuitry are a plus)
- Good programming skills in at least one common purpose programming language
- Very high proficiency in English (and preferably also in German)
- Very good scientific English writing skills (i.e., PhD candidate should publish at least four journal papers, which are indexed by Scopus with high impact factors)
- Committed, self-motivated, self-driven, and proactive team player with good communication and interpersonal skills (i.e., eager to learn new things)
- Scholarship recipient (i.e., the PhD candidate has been awarded or will apply for scholarships from either his/her home country's government or the German Academic Exchange Service (DAAD))

Offered position

- Time-limited doctoral positions (i.e., 3 – 4 years depending on the awarded scholarships)
- Young and dynamic team at one of the leading universities in Germany
- Participation in research projects with international partners and industry worldwide

Submission and contact

- Applicants should submit a full CV, list of publications, transcripts, statement of purpose (topic), two recommendation letters, and award/other certificates (if available) to:
Dr.-Ing. Hutomo Suryo Wasisto
E-mail: h.wasisto@tu-bs.de
Web: www.iht.tu-bs.de