



**TECHNISCHE
UNIVERSITÄT
DRESDEN**



The *laboratory of Measurement and Sensor Systems at the Institute of Circuits and Systems* offers a position as

PhD Student / Postdoc Research Associate

(Subject to personal qualification employees are remunerated according to salary group E13 TV-L)

starting as soon as possible. The position entails up to 100% of the fulltime weekly hours. The position is limited for 3 years, initially. The period of employment is governed by Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz-WissZeitVG). The position offers the chance to obtain further academic qualification (e.g. PhD / habilitation thesis).

Tasks: Within a project funded by the German Research Foundation a novel ultrasound imaging system is to be developed and applied on low-temperature metal melts in order to unveil transient flow phenomena from the complex interaction of conductive liquids with magnetic fields. The research focuses on the implementation of novel digital **signal processing** exploiting the capabilities of **artificial neuronal networks (ANN)** and **compressed sensing (CS)** on **FPGA** and **GPU** accelerated platforms. The goal is to achieve real time imaging with high frame rates and a high spatial resolution. The research task includes the implementation and characterization of the measurement system and conducting experiments at a cooperating research institute (Helmholtz-Zentrum Dresden-Rossendorf). Furthermore, your scope of activity involves publications in international research journals as well as supervising Bachelor and Masters students.

We offer: A diverse, current and ambitious research topic; a young and interdisciplinary team; creative possibilities; visits at international conferences and contacts to partners in research and industry. Within our group, you will find profound support as well as professional training.

Requirements: an university degree / an PhD in electrical engineering, mechanical engineering, physics or similar studies with knowledge in signal processing; ability for working autonomously and goal-driven within a team; great commitment, analytical thinking and taking joy in practical work and basic research are expected.

Applications from women are particularly welcome. The same applies to people with disabilities. Please submit your comprehensive application including the usual documents to:

TU Dresden, Fakultät Elektrotechnik und Informationstechnik, Professur für Mess- und Sensor-systemtechnik, Helmholtzstr. 10, 01069 Dresden

or/preferably as a single pdf-document to grp-mst-sekretariat@mx.tu-dresden.de

(Please note: We are currently not able to receive electronically signed and encrypted data.)

Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.