

Job advertisement Junior Research Group Leader “Digital Intelligent Sensor Systems”

The Kurt Schwabe Institute for Measurement and Sensor Technology Meinsberg e.V. (KSI Meinsberg) is a non-profit research institution run as a state institute of the Free State of Saxony with proven, long-standing experience in basic and application-oriented research in the field of sensor technology, including research into new sensor materials and investigations into scientific instrumentation. KSI Meinsberg is a member of the DRESDEN-concept research alliance, works closely with the Technical University of Dresden (TUD) and other universities and is partner in clusters of excellence at the TUD.

KSI Meinsberg is currently setting up a **junior research group in the field of "Digital Intelligent Sensor Systems (DIS)"**. The technical focus is on the sustainable development of miniaturised and autonomously operating sensors and sensor systems for continuous use on site with intelligent data analysis and data transmission systems as well as sophisticated energy management.

In this context, the following position is to be filled immediately on a temporary basis for a maximum of five years:

Junior Research Group Leader (m/f/d) (Pay scale 100 % TV-L E14)

Your tasks:

- Planning, establishment and management of the junior research group with two additional staff members at the time of establishment
- Design and development of sensor platforms as a unit of sensor, electronic hardware and software as well as data transmission, storage and processing
- Special focus is on research into highly miniaturised, ultra-low-power systems for autonomous operation, their energy supply and their connection to cloud- or server-based data structures
- Opening up new areas of application for autonomous sensors, especially for use in environmental analysis, agriculture and medical technology, the latter for example as point-of-care diagnostics, wearable, attachable or as an implant
- Data analysis, classification and reduction with AI methods also as embedded AI
- Development and acquisition of further basic and application-oriented projects with national and European funding bodies

Your profile:

- Studies and doctorate in the fields of electrical engineering, computer engineering, medical technology or comparable.
- Proven expertise in a **selection of** the following areas:
 - Knowledge of analogue and digital circuit technology, especially for sensory applications, consisting of sensor control and signal acquisition
 - Development of highly miniaturised electronics for autonomous systems, also as integrated solutions (system-on-chip)
 - Communications engineering for near- and far-field communication between autonomous systems and cloud- or server-based databases
 - Energy supply of autonomous sensor platforms through batteries, energy harvesting or external energy transmission
 - Signal processing, feature extraction and classification of sensor signals with AI methods

- We expect a professionally convincing leader who forms the junior research group in a targeted manner and represents it externally
- Experience in acquiring public funding projects is desirable
- Very good written and spoken English and German

We offer:

- Interesting, wide-ranging and responsible activity with great creative freedom
- An excellent scientific environment with a well-developed equipment infrastructure, modernly equipped development workshop and long-standing experienced and competent staff at the institute
- Very good opportunities for scientific cooperation with universities and leading non-university research institutes
- Opportunities for professional qualification (habilitation)
- Pleasant working atmosphere with a highly motivated international team
- Employment, remuneration and social benefits according to the collective agreement for the public service of the Länder (TV-L)

In the event of equal suitability, ability and professional performance, applications from severely disabled persons shall be given special consideration in accordance with the provisions of the Social Code IX.

Applications including curriculum vitae, certificates, list of publications, references and the planned group concept should be sent by e-mail until **30. April 2024** to:

Prof. Dr.-Ing. Andreas Arndt
Kurt Schwabe Institute for Measurement and Sensor Technology Meinsberg e.V.
04736 Waldheim
Tel: 034327-608 103
bewerbung@ksi-meinsberg.de

resp.

Prof. Dr.-Ing. Andreas Arndt
Chair for System Integration and Scientific Instrumentation
Institute for Solid State Electronics
Dresden University of Technology
01062 Dresden
Tel: 0351-463 43782
andreas.arndt@tu-dresden.de