

## Vacancy Notice 48/2020

The Otto von Guericke University Magdeburg (OVGU) is an internationally oriented and regionally networked university with a strong research profile.



The Faculty of Electrical Engineering and Information Technology seeks to fill the following vacancy at the Institute of Information Technology and Communications, Chair **Hardware-Oriented Technical Computer Science**:

### PhD student position

Salary Scale:	Date commencing:	Fixed term:	Contract status:
13 TV-L	next possible date	24 months	100 %

You will work in an interdisciplinary and international team on interesting scientific topics and find optimal conditions to obtain a PhD degree. An open working atmosphere, very good supervision of the doctoral students and versatile support of your research potential characterizes the chair. Depending on your interests, you can focus on fundamental research or industry-related research. It is expected that you support the chair in its teaching commitments (tutorials, practical courses).

#### Main responsibilities:

We offer you the opportunity to obtain a PhD degree one of the following areas:

- Systematic **design space exploration** for 2D and 3D System-on-Chips (**SoCs**)
- On-chip communication architectures, in particular Network-on-Chips (**NoCs**) for 3D SoCs
- Design of hardware accelerators with VHDL/Verilog for **FPGAs** (or ASICs) for the following application domains:
  - Database systems
  - Convolutional Neural Networks (**CNNs**)
- Acceleration of compute-intensive applications with **GPUs**, programming of GPUs with **OpenCL**
- Design of **heterogeneous compute systems** (CPU with GPUs and/or FPGAs)
- **High-level synthesis** with C, C++, SystemC oder OpenCL

The exact topic of the doctorate will be defined together with you according to your research interests.

#### Requirements for the position:

- Very good Diploma/Master's degree in electrical engineering, computer science, or a similar course
- Excellent knowledge in the areas of digital circuit design, computer architecture and hardware-oriented programming
- Profound knowledge of modeling, optimization methods, and parallelization is also helpful
- High level of independence, very good command of English, ability to work within an international team, wish to obtain a PhD
- Willingness to learn German

According to the German Part-Time Work and Fixed-Term Employment Act (TzBfG), the position has an unfounded fixed term of up to two years. The precondition is that the applicant has not been employed by the federal state of Saxony-Anhalt (*Land Sachsen-Anhalt*) before (this also includes student assistant positions). Fee agreements and apprenticeship contracts remain unaffected.

For further information about the position, please contact Prof. Pionteck at: phone: +49 (0) 391/67-57148 or via email: [thilo.pionteck@ovgu.de](mailto:thilo.pionteck@ovgu.de).

Applications from disabled persons will be given priority in the case of equal suitability, ability and professional expertise. The Otto von Guericke University aims to increase the proportion of women researchers within the university and specifically encourages women to apply.

Please note the information for storage of personal data: [https://www.uni-magdeburg.de/Datenschutz\\_Bewerber.html](https://www.uni-magdeburg.de/Datenschutz_Bewerber.html).

Applications will be reviewed starting from now, until the position is filled. Recruitment is planned for the next possible date, but may be negotiable.

Please send your complete application (cover letter, curriculum vitae, references) quoting reference number **48/2020** to the address below: