



Technische Universität  
Braunschweig



## **PhD Student Position (wissenschaftliche/r Mitarbeiter/in)**

**in the field of**

### **Design of Reconfigurable Computer Platforms for Space Applications**

The Spaceborne Computers Group of the Institute for Computer & Communication Engineering offers a possibility to work as “wissenschaftliche/r Mitarbeiter/in” at the Institute on research topics related to reconfigurable digital systems.

The group is active in design of computers and mass memories for space applications since 40 years and has contributed to many international space missions (ESA, NASA, JAXA) with electronics units. More information can be gained on the web site of the institute ([www.ida.ing.tu-bs.de](http://www.ida.ing.tu-bs.de)).

Currently the technology for spaceborne computers is based on use of radiation hardened processors, which provides only small to medium processing power. Reconfigurable computing is provided by software means, only.

For future systems the possibility to reconfigure the computer hardware will be a main requirement to cover high processing power needs by dedicated hardware solutions and being able to adapt e.g. processing algorithms in-flight. Such systems are based on reprogrammable FPGA's. The working group is currently developing such platforms on basis of design studies addressing the complete development and implementation framework (i.e. network-on-chip communication, failure tolerance and on-board maintenance aspects).

We are looking for excellent, just graduated students with university degree in electrical engineering or computer science, who are experienced in related topics like firmware design in VHDL/System C and are also skilled in general electronics design such as PCB hardware layout. As working language German or English is required, the willingness to improve German language skills - if not provided - would be appreciated.

The position is fully paid according to the German tariff for civil servants (TvdL 13). It is dedicated to the work in research projects of the group and includes the possibility to achieve a doctoral degree in Engineering of the Faculty of Electrical Engineering, Information Technology and Physics at the Technische Universität Braunschweig.

Interested persons should contact:

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