

## **Ph.D. position**

The *Software Engineering Group* headed by Prof. Dr. Rainer Koschke at the University of Bremen invites applications for

### **One 2-year Ph.D. position**

in a research project funded by Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) with the title

#### **Recognition and Validation of Security Design Patterns in Software**

Salary is according to the German federal employee scale TVL-13 (100%) and this position is limited to a term of 24 months. The position is open from June 2016.

#### **Work content**

Your task in the project will be to undertake the tasks specified in the work programme under the guidance by the two principal investigators Prof. Dr. Rainer Koschke und Dr. Karsten Sohr. Specifically, you will

- survey the relevant scientific literature
- determine relevant design patterns for software security used in practice and proposed in the literature
- characterize these design pattern with respect to attributes for automated recognition
- develop methods and tools to recognize these patterns in real programs
- embed such methods and tools in security audits for software
- evaluate all aspects of the methods, tools, and processes empirically
- publish the results in international scientific conference and journals
- make the data, tools, and other results available to the research community

You should strive for a PhD in the theme of the research project. In addition to that we expect that you be willing to contribute to related research themes in our group and co-operate with other members of our team. More on our research group can be found at <http://www.informatik.uni-bremen.de/st/>.

The position is currently limited to two years, but we will apply for additional funding for another two-year period.

#### **Requirements:**

- M.Sc. degree or equivalent in computer science, software engineering, or related fields (above average)
- Skills in program analysis
- Knowledge in software security
- Skills in scientific writing and good presentation skills
- Fluent in English (both in written and oral form)

Working environment: We are offering a pleasant and lively working atmosphere in a dynamic research team.

## General

The University of Bremen is among the top universities in Germany. It is one of the few winners of the German Excellence Initiative. The aim of the Excellence Initiative is to promote outstanding research projects and institutions at German universities and to provide a boost to the overall development of a select group of hosting German universities. Founded in 1970, the University of Bremen ranks 26 of all international universities world-wide younger than 50 years according to the ranking by "Times Higher Education". It provides a stimulating, international, and pleasant work environment.

As the University of Bremen intends to increase the proportion of female employees in science, women are particularly encouraged to apply. In case of equal personal aptitudes and qualification priority will be given to disabled persons. Applicants with a migrant background are particularly invited to apply.

**The application deadline is June 8th 2016.** The positions will remain open until filled. The application should include details of relevant qualifications and experience, CV, copies of transcripts.

Please send your application with the reference number A51/16 to:

Prof. Dr. Rainer Koschke  
Fachbereich 3  
Universität Bremen  
Postfach 33 04 40  
28334 Bremen  
Germany

or via Email to [koschke@informatik.uni-bremen.de](mailto:koschke@informatik.uni-bremen.de) (phone: +49-421-218-64481).

Please do not send original documents, your application will not be sent back but discarded. Further inquiries regarding the position may be directed to the same address.