The University of Bremen is a mid-sized German university with 290 professorships and almost 20,000 enrolled students, offering a broad range of subjects and internationally renowned research. The junior research group for “Modelling of Technical Systems” is currently inviting applications to

1 Full PhD Student/Scientific Assistant Position (TV-L 13, 100%)
Working towards a doctorate in Computer Science

for the duration of three years, starting as soon as possible. The position is offered under the condition of successful administrative allocation of the project’s funds

The position is offered as part of the project “Reactive Synthesis of Graphical User Interface Program Code”, funded by the German Science Foundation (DFG). The aim of the project is to research the algorithmic foundations for scalable methods to automate the synthesis of graphical user interface program code. The synthesized code coordinates the events occurring in graphical user interfaces with the main computation threads of a program.

An M.Sc. or Diploma degree in Computer Science or a closely related subject is required. The project focuses on developing algorithms with relationship to automata theory, so the applicant should have a strong interest in developing novel and efficient algorithms to solve computational problems. A fair level of proficiency in an arbitrary commonly-used programming language is also needed, as the project involves the implementation of the developed algorithms in academic prototypes.

Knowledge from the field of formal methods is helpful, but not required. In particular, the following areas of research are relevant for the project.

- Automata theory (over infinite words)
- Reactive synthesis & games of infinite duration
- Satisfiability (SAT) and Satisfiability Modulo Theory (SMT) Solving

The successful applicant is expected to become proficient in the areas not already familiar with during the project. A little bit of experience with the development of event-based programs with a graphical user interface would also be helpful.

The results from the project are expected to be published at international conferences and in international journals. A good command of English is needed for this purpose. Travel expenses for conference presentations are covered by the project’s funds.

The open position does not have any teaching obligations. Knowledge of German is not needed, and applications from candidates with a migratory background and international applications are welcomed. The international office of the University of Bremen offers a comprehensive set of services for international students, which the successful international applicant can make use of whenever needed.

The University of Bremen intends to further increase the share of women in academic employment; women are explicitly encouraged to apply. Disabled candidates will receive preferred consideration over equally qualified contenders.

Salary is according to the German Federal pay scale (TV-L 13, approx. EUR 42.000 p.a.).

Potential applicants with questions regarding the scope of the project, the requirements of the open position, or the working environment at the department of computer science at the University of Bremen in general are encouraged to direct these questions to Prof. Ruediger Ehlers (ruediger.ehlers@uni-bremen.de).

Please send your application which includes 1) a motivation letter that explains your interest for this open position, 2) a CV including contact details of two references if possible, 3) scans of university/college transcripts (and certificates, if possible), and 4) a brief summary or abstract of your thesis and previous research projects (if applicable), mentioning reference number A235/16 till October, 31st, 2016 to:
Prof. Rüdiger Ehlers,
Modelling of Technical Systems Junior Research Group,
Faculty of Mathematics & Computer Science,
University of Bremen, Bibliothekstraße 1
28359 Bremen, Germany

Alternatively, applications can be sent by e-mail to
ruediger.ehlers@uni-bremen.de

For paper-based application, please make sure to only send document copies as all received application material will be destroyed after the selection process.

The homepage of the junior research group can be found at http://motesy.cs.uni-bremen.de