

Philipps



Universität  
Marburg

At the Faculty of Mathematics and Computer Sciences in the lab of Prof. Dr. Gabriele Taentzer a 2-year PhD position for a

## Scientific assistant

is available starting in the next time. The position will be part of a DFG research. It can be prolonged by another year.

### Project background

Visual modeling languages play an important role for the understanding and construction of systems. This is true for hard- and software systems in computer science as well as other systems such as production systems. In model-driven software engineering, models are even treated as the central artifacts of software development. According to the goal of modeling, different modeling languages are needed, general and domain-specific ones as well as visual and textual ones.

### Tasks for the successful candidate

In this project, we focus on two complementary approaches to define visual modeling languages: meta-modeling and graph grammars. While meta-modeling represents a declarative language design, graph grammars define languages in a constructive way. To use the advantages of both paradigms, we aim to integrate them in a suitable way. Meta-models should be translated into equivalent model grammars, enabling a well-founded automated generation of instance models. As formal basis of this work we use the theory of algebraic graph transformation. This meta-model translation shall be used for the development of user-friendly model editors as well as for the systematic testing of model transformations. The newly-developed techniques shall be implemented based on the Eclipse Modeling Project and evaluated at two reference applications.

### Profile of the candidate:

We are looking for a motivated person interested in the topic above and with a German diploma, master, or a comparable degree in computer science or a related field. Candidates should have an excellent knowledge in model-driven software development, more specifically UML/OCL, EMF, and model transformation as well as knowledge on the formal foundation of graph transformation. Some knowledge of German is desirable.

Salary and benefits are according to a public service position in Germany (TV-H E 13) and amount to ca. 40.000 € a year depending on experience and family status. The University of Marburg advocates gender equality. Women are therefore strongly encouraged to apply. We welcome applicants with children - as the Philipps-Universität considers itself a family-friendly university. Working hours can be adapted to special family needs. Physically challenged applicants will be given preference in case of equal qualification.

Please only send photocopies of any documents as we cannot return the materials. Please also note that we cannot refund application and travel expenses.

For scientific enquiries contact Prof. Dr. Taentzer ([taentzer@mathematik.uni-marburg.de](mailto:taentzer@mathematik.uni-marburg.de)).

Please send your application mentioning registration number fb12-0007-wmz-2012 including a letter outlining your suitability for the post, a detailed CV, contact details of 2 referees, a copy of your diploma thesis and/or other exams, and, if applicable, a list of publications to Prof. Dr. Taentzer, Faculty of Mathematics and Computer Sciences of the Philipps-Universität Marburg, Hans-Meerwein-Straße, 35032 Marburg, Germany. Deadline is June 30th 2012.