Faculty of Computer Science

At the **Institute of Artificial Intelligence** the **Chair of Knowledge Representation and Reasoning** offers a full

PhD position

starting at the next possible date. The current funding for the position is for two years, but we aim at an extension of the project. The period of employment is governed by § 2 Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG).

The position is part of the DFG Project „Parallel SAT Solving". A central goal of the project is to develop a parallel solving approach for the satisfiability testing (SAT) problem, and to implement an according system. To reach this goal, several sub goals should be achieved, whose solution can results in a PhD thesis. The group has contacts to the international research community, and systems of the group are already competitive. Hence, the position furthermore offers the opportunity for networking and international collaboration.

Tasks: designing an abstract reduction system for parallel SAT solving and an approach to emit unsatisfiability proofs for parallel SAT solvers with respect to the state of the art in modern SAT solving; proving properties of the proposed systems; designing parallel formula simplification techniques; participation at international conferences.

Requirements: very good or good university degree (master or equivalent diploma degree) in computer science or mathematics; good programming skills in imperative programming; experience with modeling abstract reduction systems/rewriting systems; experience in propositional logic; good programming skills in C/C++; very good English skills. Knowledge of the following fields is helpful: parallel programming, system programming, constraint programming, propositional proof complexity.

For further information visit: http://www.wv.inf.tu-dresden.de/research.html

Applications from women are particularly welcome. The same applies to people with disabilities.

Applications should include the following materials: a motivation letter, a detailed CV, a copy of your degree certificate and two reference letters.

Complete applications should be submitted preferably by e-mail as a single pdf-document to norbert.manthey@tu-dresden.de (preferably in an electronically signed form) or alternatively by post to: **TU Dresden, Fakultät Informatik, Institut für Künstliche Intelligenz, Professur für Wissensverarbeitung, Herrn Norbert Manthey, 01062 Dresden.** The closing date for applications is **15.12.2014** (stamped arrival date of the university central mail service applies). Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.