The **Institute of Artificial Intelligence** of the **Faculty of Engineering and Computer Science** of the **University of Ulm** is seeking applications for a

**Postdoctoral Researcher / Doctoral Research Assistant**

*(Computer Science, 13 TV-L)*

The position is full time, available immediately, and is limited to 24 months. The successful candidate will be associated with the Institute of Artificial Intelligence and will work on the project "Live Ontologies" funded by the German Research Foundation. The goal of the project is the development of new ontology reasoning algorithms that can deal efficiently with distributed and dynamically changing OWL ontologies. Within the past 3 years a number of interesting results have been obtained in this project, for example, a reasoning procedure that can update results incrementally after changing the ontology, and a procedure that can generate explanations for the produced results by means of rules. The new procedures have been implemented and tested in system ELK, which is used in many applications and won multiple awards. Due to the overall success, the project has been funded for further 2 years. The main focus of the project extension is the development of reasoning procedures that can deal with linked ontologies by means of communication between reasoning nodes, as well as the extension of the new procedures to more expressive ontology languages.

**Tasks:**
- Development and theoretical analysis of new distributed algorithms for ontology reasoning
- Implementation and evaluation of the developed algorithms within the system ELK
- Preparation of publications and scientific presentations

The position can be used for further scientific qualification (PhD or habilitation).

**Requirements:**
- Candidates must have a degree in computer science, mathematics or a related field (diploma, MSc or PhD)
- Very good knowledge of written and spoken English
- Good programming skills, particularly in Java
- Some experience with development of algorithms and data structures
- Ideally, the candidate has some knowledge of formal logic
- Ideally, the candidate has some knowledge of distributed algorithms, such as map-reduce

**We offer:**
- Intensive supervision of the doctoral studies or the scientific works
- Good contacts and cooperations within Germany and internationally
- A young and enthusiastic team

The University of Ulm is committed to increase the share of women in research and teaching positions and therefore explicitly encourages female candidates to apply. The application deadline is **July 31st, 2015**, but applications will continue to be considered until the position is filled. Please send your application under the reference number **54** via email to **sylvia.simonsen@uni-ulm.de**. Your application should include:
- CV
- Degree certificates
- A reference letter or nomination of referees

Please address any questions regarding the position or project to Dr. Yevgeny Kazakov (yevgeny.kazakov@uni-ulm.de). Job sharing is always possible for full time positions. Physically disabled applicants receive favorable consideration when equally qualified. The appointment is made by the central university administration.

---

2. [http://elk.semanticweb.org](http://elk.semanticweb.org)