



**University of Stuttgart**

Institute for Parallel and Distributed Systems

Analytic Computing Department

The Analytic Computing group at University of Stuttgart, Germany, invites applications for a full-time position as a

**doctoral researcher/PhD student (100% TV-L E 13)**

Your research will involve the development of knowledge representation and reasoning methods for applications in architectural design and construction of buildings. This involves the design of core ontologies for architectural design processes and belief representation methods that allow reasoning about design processes at different levels of abstraction. Another focus is on the development of methods for detecting and repairing inconsistencies and constraint violations in designs. The position offers some flexibility and stronger focus can be given to more fundamental or more application-oriented questions depending on your interests. The duration of the position is initially limited to 3 years.

#### **What We Will Offer**

We provide you with a friendly, but challenging interdisciplinary research environment and support your academic career towards accomplishing your Ph.D. The targeted work will happen in collaboration with a team of architects.

#### **What You Will Contribute**

You will work on core ontologies for architecture, engineering and construction, on formal logic operators that support different stages of the engineering process and corresponding formal reasoning methods. You will advise and tutor bachelor and master students in the computer and data science programs of the department in topics related to your research.

#### **Eligibility**

Applicants for the position are required to have an MSc in computer science or in a related field. You should possess knowledge in logics and/or ontologies and/or formal artificial intelligence. First experience with KR methods like knowledge graphs, semantic web technologies (e.g. RDF, SPARQL, SHACL), or logical knowledge representation methods (e.g. belief revision, description logics) is required for the position. Good social and communication skills are a must.

#### **Salary**

The salary amounts to German TV-L E 13, which starts at approx. 50,000 Euro income per year (before taxation).

#### **More Information**

Personal inquiries can be directed to Prof. Staab.

#### **Application**

Please submit your application in one PDF file including a letter of motivation, a curriculum vitae and scans of all your original final transcripts and diploma certificates from each university degree (or stamped, official translations). Applications submitted before October 31 will receive preferential treatment. Applications will be accepted until the position is filled. Send your application with the subject "Logics-based Semantic Technologies" to:

[ac\\_info@ipvs.uni-stuttgart.de](mailto:ac_info@ipvs.uni-stuttgart.de)

**Open Position**

**Doctoral  
researcher/  
PhD student**

**Task: Logics-based  
Semantic Technologies**