

Several fully funded Doctoral Researchers & One PostDoc

Job description: **Several fully funded Doctoral Researchers & one Postdoctoral Researcher position @ Institute AIFB, KIT, Germany. Researchers are hired as scientific staff, for two years, with renewal possible.**

**** Position 1 ****

Connected to an upcoming European project, which aims at machine learning of cross-modal knowledge representations from audio, video and text, the researcher might be dedicated to:

- Distributional semantics of different modalities
- Cross-media retrieval and annotation
- Latent representations of multi-modal data

**** Position 2 ****

Connected to the European XLike project, which aims at machine learning of a cross-lingual knowledge representation from multilingual news texts, the researcher might be dedicated to:

- Semantic parsing of text from social media
- Semantic annotation of statements from multilingual text
- Inducing cross-lingual latent representations

**** Position 3 ****

Connected to an upcoming European research project, which aims at developing large scale adaptive methods to enable pervasive modeling, monitoring, and predicting of events from sensors and social media, the researcher might be dedicated to:

- Semantic enrichment of data from sensors and different modalities
- Learning and inference in dynamic probabilistic models of object-relational domains
- Large-scale distributed learning and anytime response algorithms

**** Position 4 ****

Connected to an upcoming European research project, which aims at machine learning of an ontology in the nano-technology domain, the researcher might be dedicated to:

- Indexing and monitoring nanotechnology-related text resources
- Semantic text annotation and ontology learning
- Open information extraction and semantic parsing

Qualification: The ideal candidate holds a **MSc level degree** (in case of highly qualified applicants with a **completed PhD** we will consider hiring one PostDoc) in

- computer science
- applied mathematics
- computational linguistics
- or similar

which provides some educational background and hands-on data analytics skills in

- linear algebra
- graph theory
- probability theory
- or natural language processing

Beneficial is experience in research areas like

- machine learning on large-scale graphs
- structured statistical models
- semantic technologies and Linked Data
- or natural language processing

and methods like

- representation, inference and learning in probabilistic graphical models
- latent topic models
- or matrix factorization

Further, we require general competencies which qualify you for **scientific work**, active participation in **research projects** and assistance in the guidance of students and **lecturing**. The postdoctoral researcher needs additional competencies in acquisition and coordination of research projects, for the guidance of Ph.D. students, and for participation in lecturing.

The positions require **fluent English** language skills. German is a plus.

Institute: The Knowledge Management research group at the Institute of Applied Informatics and Formal Description Methods (**AIFB**)¹ is an interdisciplinary team of computer scientists and related disciplines and among the leading international institutions in the field of semantic technologies.

Karlsruhe Institute of Technology (**KIT**)² is one of the leading universities in natural science and engineering in Europe and one of the largest research institutions in the world.

Our group offers a first class and international research environment with various interdisciplinary but related research topics and projects. The close cooperation with the **FZI** Research Center for Information Technology in Karlsruhe³, the Karlsruhe Service Research Institute (**KSRI**)⁴ and a large network of industry partners allows for the combination of fundamental and applied research and a fast transfer of research results into practice.

¹ <http://www.aifb.kit.edu/web/Wissensmanagement/en>

² http://www.kit.edu/mediathek/print_forschung/Flyer_KIT_en.pdf

³ <http://www.fzi.de/en/startseite/>

⁴ <http://www.ksri.kit.edu/Default.aspx?PagelD=273&lang=en>

- Salary:** Remuneration is at E 13 TV-L (German public service salary scale⁵) for doctoral positions and TV-L E 14 for postdoctoral researcher.
- Contract duration:** Limited to two years; renewal possible.
- Starting date:** October 1st, 2013 or later.
- Application up to:** Open until positions are filled. We are planning to review incoming applications every month, starting in August 2013.
- Contact person:** For technical questions concerning your application, please contact Beate Kühner (*kuehner@kit.edu*). For informal inquiries with respect to the positions, please contact Dr. Achim Rettinger (*rettinger@kit.edu*).
- Application:** Candidates should submit an application including
- a 500 word research proposal on one of the above mentioned topics (own choice)
 - a 250 word explanation of why their skills, experience, and plans for the intended research make them a particularly suitable candidate for this position
 - a CV
 - publications, if available
- Please submit your application, preferably electronically as a **single PDF** file, to **kuehner@kit.edu** or to:
Karlsruhe Institute of Technology, Prof. Dr. Rudi Studer, Institut AIFB
- 11.40, 76128 Karlsruhe, Germany
- KIT is an equal opportunity employer. Women are especially encouraged to apply. Applicants with disabilities will be preferentially considered if equally qualified.

Karlsruher Institute
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management

⁵ <http://oeffentlicher-dienst.info/tv-l/west/>