

**Postgraduate Position: Junior Researcher & Teaching Assistant
SFB/TR 8 Spatial Cognition, Universität Bremen**

Project R1-[ImageSpace] - Mental Representations of Spatial Environments

- Under the condition of job release / reference number: A 172/07 -

Project Description:

Mental reasoning about spatial environments often involves specific and task-sensitive spatio-analogical or quasi-pictorial mental representations. Mental processes dynamically construct and explore these representations to obtain desired spatial information and they do so with restricted working memory capacities. One goal of the project R1-[ImageSpace] is to build a cognitive architecture which comprises the components and processes necessary to accurately model human spatial cognition. A second focus is on how to best employ such architectures in applications that assist humans in spatial cognition tasks (e.g., in architectural design and spatial planning). Eye tracking and other behavioral methods are used to clarify the theoretical basis of the modeling (such as the role of visual attention in mental spatial reasoning). In addition, eye tracking methods are employed in the developed application systems. More information on the project can be found at www.sfbtr8.spatial-cognition.de/project/r1/

Qualifications:

Successful applicants will have expertise in computer science / artificial intelligence and cognitive science and will hold an excellent master or diploma degree in computer science, cognitive science, or a related field. They will be committed to interdisciplinary, team-based research and be fluent in spoken and written English.

Ideally, an applicant will also have good knowledge of / expertise in more than one of the following areas: mental representations and processes in human spatial cognition and visual perception; visual attention; eye movement tracking; qualitative spatial reasoning; architectural design / design studies; human problem solving; human-computer interaction; user interface design. Additional training will be provided on the job.

Work profile:

- * Applying cognitive models to spatial reasoning assistance scenarios.
- * Contributing to conceptual and computational modeling of mental and diagrammatic reasoning about space.
- * Managing a visual perception & diagrammatic reasoning lab, including eye tracking facilities.
- * Teaching assistance for undergraduate and graduate courses.
- * Preparing manuscripts for publication in international journals / at conferences.

The successful applicant is expected to work on obtaining a doctoral degree in the scope of this position.

Conditions of Employment:

Salary is according to the German Federal pay scale (TV-L 13, approx. EUR 34,000 p.a.). The position is available from April 2008 until the end of 2010. Extension is possible. Application deadline: 1. February 2008 (or until a suitable candidate is found).

As the University of Bremen intends to increase the proportion of female employees in science women are particularly encouraged to apply.

In case of equal personal aptitudes and qualification disabled persons will be given priority.

Please address questions about the position and send your application under the reference number (preferably by email) to:

Sven Bertel <bertel@informatik.uni-bremen.de>
SFB/TR 8 Spatial Cognition
Universität Bremen
P.O. Box 330 440
28334 Bremen / Germany

For a paper-based application, please make sure to only send document copies as all received application material will be destroyed after the selection process.