

pursues interdisciplinary long-term research in Spatial Cognition. Particular emphasis is given to:

- **Spatial Reasoning:** Knowledge representation, human spatial thinking, computational modeling, diagrammatic reasoning, cognitive and computational complexity, qualitative spatio-temporal calculi;
- **Action in Space:** Cognitive robotics, explorative localization and mapping, robot navigation, human navigation and wayfinding, sensorimotor representations of spatio-temporal structures, embodied cognition;
- **Communication and Interaction in Space:** Formal methods, spatial and linguistic ontologies, computational linguistics, environmental cognition, integration of spatial methods.

A description of the current research projects of the SFB/TR 8 can be found at  
[www.sfbtr8.uni-bremen.de](http://www.sfbtr8.uni-bremen.de)

The SFB/TR 8 is funded by the Deutsche Forschungsgemeinschaft (DFG).

The SFB/TR 8 advertises the following position:

### **1 Doctoral Research Assistant / Postdoctoral Researcher**

SFB/TR 8 project R1-[ImageSpace], Universität Bremen  
(BAT IIa, approx. € 35,000 to € 50,000 p.a. gross)

The research project R1-[ImageSpace] is concerned with the development of computational models of mental representations of spatial environments. Particular emphasis is given to the modeling of mental processes in the construction and inspection of such representations, and on mental reasoning. The project aims at designing, implementing, and computationally exploring a diagrammatic processing architecture. The resulting system will be applied in spatial task assistance scenarios.

The applicant should have a degree in computer science or in a related field (diploma, master's, or Ph.D.). Strong interest in cognitive science research and in interdisciplinary collaboration is expected.

Especially, the applicant should have qualifications and/or interests in the following fields:

- Artificial intelligence and cognitive science
- Cognitive/computational modeling and diagrammatic reasoning
- Knowledge representation, reasoning, and visuo-spatial information processing
- Functional programming (LISP)

We offer the opportunity to gain research experience in a modern and enthusiastic research environment with strong interdisciplinary and international links. Responsibilities include project work and research, publication of research results, supervision of student projects, participation in the activities of the SFB/TR 8, and contribution to research proposals.

The position is available immediately until the end of 2006. Extension is possible. Application deadline: 12 September 2004 (or until a suitable candidate is found). Universität Bremen is an equal opportunity employer. Women are especially encouraged to apply. Handicapped applicants with equal qualifications will be given preferential treatment.

More information about this project can be found at [www.sfbtr8.uni-bremen.de/r1](http://www.sfbtr8.uni-bremen.de/r1).

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

Dr. Thomas Barkowsky <[barkowsky@sfbtr8.uni-bremen.de](mailto:barkowsky@sfbtr8.uni-bremen.de)>

SFB/TR 8 - Spatial Cognition

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