2 Postdoctoral Researchers / Doctoral Research Assistants
in the EU-funded project


(BAT IIa, approx. € 35,000 to € 50,000 p.a. gross)

The goal of the project SHARE-it is to develop a scalable, adaptive system of add-ons to sensor and assistive technology so that they can be modularly integrated into an intelligent home environment to enhance the individual’s autonomy. The system will be designed to inform and assist the user and his/her caregivers through monitoring and mobility help. Thus, we plan to contribute to the development of the next generation of assistive devices for older persons or people with disabilities so that they can be self-dependent as long as possible. We focus on add-ons to be compatible with existing technologies and to achieve an easier integration into existing systems. We also aim at adaptive systems as transparent, and consequently, easy to use to the person as possible. Scalability is meant to include or remove devices from the system in a simple, intuitive way.

At Universität Bremen, the work in SHARE-it concentrates on the development of a) an adaptive biosensor-based cognitive assistance module (position 1) and b) a cognitive performance model as a basis for interaction models tailored to individual users' requirements (position 2). Fluent written and spoken English is a prerequisite.

Position 1: Biosensor-based assistance module

The applicant will develop an adaptive biosensor-based assistance module. First typical cognitive, sensory, and motor deficits in a target population have to be assessed and have to be represented in a knowledge base. Second online information will be received from a biosensor module sensitive to the emotional and attentive states of the user. Based on both types of information a profile of the user will be generated, continuously updated and used for the adaptive user support. A platform for this assistance module will be an intelligent walker and an autonomous wheelchair developed in SHARE-it.

Practical experience in a number of the following areas is desired:

- software design and development
- interest in psychological/medical applications
- multi-sensor user activity profiles/ multisensory information processing
- knowledge-based systems and uncertainty management

Additional knowledge that would be appreciated:

- processing of biometrical and physiological data
• interdisciplinary background
• experience with international research projects

Position 2: Cognitive performance module
To the tasks of the applicant belong the development of the cognitive models and interaction models that describe the users’ capabilities (both with and without impairments) and the quality and degree of assistance provided by the interactive systems.

Practical experience in the following areas is desired:
• cognitive computational modeling
• software design and development
• cognitive architectures and modeling tools (e.g., ACT-R)

Additional knowledge that would be appreciated:
• knowledge in cognitive psychology / cognitive science
• interdisciplinary background in spatial cognition research
• experience with international research projects

The successful applicants of both positions are expected to autonomously communicate and interact with the European cooperation partners that jointly develop the SHARE-it modules and platforms. The requisites for both positions are a graduation in a relevant area or a master / diploma in computer science as well as interest in basic and applied research, and/or experience in a similar project field.

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.

The advertised positions are available from 01 December 2006 for a period of 36 months and are under condition of job release. Application deadline: 17 November 2006 (or until a suitable candidate is found).

Please address questions about the positions and send your application under the reference number A 149/06 (preferably by email) to:

Marion Stubbemann <cosy@informatik.uni-bremen.de>
FB 3 - Informatics
Universität Bremen
P.O. Box 330 440
28334 Bremen / Germany

The project SHARE-it is funded by the EU within the 6th Framework Programme.

We would be very grateful, if you could submit your application documents as copies (no folders), we can not send your documents back because of cost reasons; after the application process the documents will be destroyed.