

**Research Assistant/  
Postdoctoral Researcher**  
in the EU-funded project

**SHARE-it: Supported Human Autonomy for Recovery and Enhancement  
of Cognitive and Motor Abilities Using Information Technologies**

(TV-L 13, approx. € 35,000 to € 50,000 p.a. gross)

The position is available from 01 August 2008 until 31 December 2009 (extension is possible) and are under condition of job release.

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. The focus is the development of an adaptive biosensor-based module that measures biometric data, learn to classify them in order to conclude about changes in affectives states like stress.

**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
- signal processing
- multi-sensor user activity profiles/ multisensory information processing
- processing of biometrical and physiological data
- knowledge-based systems and uncertainty management

Additional knowledge that would be appreciated:

- interdisciplinary background
- experience with international research projects
- interest in psychological/medical applications

The successful applicant of the position is expected to autonomously communicate and interact with the European cooperation partners that jointly develop the SHARE-it modules and platforms. The requisites for the position is 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.

Please address questions about the positions and send your application under the reference number

A 111/08 (preferably by email) to:  
Ingrid Schulz <ischulz@informatik.uni-bremen.de>

Cognitive Neuroinformatics  
Universität Bremen  
Enrique-Schmidt-Straße 5  
28359 Bremen / Germany



Application deadline: 30<sup>th</sup> July 2008 (or until a suitable candidate is found).

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.