

Springer

**International Journal
Universal Access in the Information Society
UAIS**

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Call for Papers

Special Issue

COGNITIVE SYSTEMS FOR ASSISTIVE ENVIRONMENTS

About the UAIS Journal

The UAIS Journal solicits original research contributions addressing the accessibility, usability and acceptability of Information Society Technologies by *anyone, anywhere, at anytime, and through any media and device*. Universal access refers to the systematic effort to proactively apply principles, methods and tools of universal design, in order to develop Information Society Technologies, which are accessible and usable by all citizens.

The Journal's unique focus is on theoretical, methodological, and empirical research, of both technological and non-technological nature, that addresses equitable access and active participation of potentially all citizens in the Information Society.

For further information, please, refer to the "Aims and scope" section on the Website of the UAIS Journal.

Aims and scope of this special issue

The diffusion of computing technology into everyday life continues at an exponential rate. Technology is becoming increasingly embedded in artifacts and environments to address important social and healthcare issues. People's living environments are particularly important in an increasingly crowded and complex world in which inclusiveness and connectivity with the rest of the world are critical. Cognitive systems for assistive environments address the fact people increasingly rely on technology in their own homes. The key area of this special issue is technology targeted to assist people who have health care needs in their every day routine, by using sensors (camera-based sensors, touch sensors, heat sensors etc), databases, personal area networks, ubiquitous connectivity, distributed intelligence and adaptive easy-to-use interfaces and interactions. Researchers working in the area of cognitive systems and assistive environments are invited to submit their original research findings to this UAIS special issue.

Main topics

This special issue will focus on research work addressing the design, development, evaluation, and use of emerging cognitive systems for assistive environments. Authors of submissions should carefully explain how the work and results presented contribute to facilitating and promoting the usability and acceptance of assistive environments. Contributions are solicited on, but not limited to, the following topics:

- Tools, infrastructures, architectures and techniques for designing, implementing and deploying cognitive applications in assistive environments
- Sensor networks for cognitive and pervasive health care
- Reasoning systems and machine learning for assistive environments
- Game design for cognitive assessment and social interaction studies
- Sensor data stream fusion, feature extraction and pattern analysis
- Sensing of affect, emotion and cognitive state
- User cognitive modeling
- Behavior-driven assistance and affect-aware interfaces
- Virtual and augmented reality environments for assistive applications

- Computer vision for assistive environments
- Data modeling, ontologies and information management for pervasive assistive environments
- Business cases and cost analysis of cognitive assistive environments
- Drug evaluation and discovery through behavioral pattern analysis
- Clinical and brain health correlation to behavior
- Machine learning and data mining tools for decision making
- Wearable, ambient and home based health and wellness measurement and monitoring technologies
- Context aware mobile networks
- Social impact of the use of cognitive technologies on the user in pervasive assistive environments
- Usability and methodologies for assessing the utility, accessibility and user satisfaction of assistive environments
- Socially and ethically aware design of cognitive assistive applications and systems

Important dates

Submission deadline: September 30, 2011

Deadline for the completion of reviews and selection of papers: December 31, 2011

Deadline for the submission of modified papers (according to reviews): March 31, 2012

Final Decision and minor corrections April 30, 2012

Date for submitting the material to the publisher June 30, 2012

Authors should submit their manuscripts electronically as PDF files to the Guest Editors of the special issue: Ilias Maglogiannis (University of Central Greece), Filia Makedon (University of Texas at Arlington), Margrit Betke (Boston University), and Grammati Pantziou (TEI of Athens) (e-mails: imaglo@ucg.gr; makedon@uta.edu; betke@cs.bu.edu; pantziou@teiath.gr)

Manuscript preparation

Please, refer to the "Instructions to authors" section on the Website of the UAIS Journal.

Reviewing process

All papers will be peer reviewed by three reviewers, experts in the field, appointed by the Guest Editors of the issue in consultation with the Editor-in-Chief of the Journal.

Copyright information

Submission of an article implies that:

- the work described has not been published before, except in form of an abstract or as part of a published lecture, review, or thesis;
- it is not under consideration for publication elsewhere.

For further information, please, refer to the "Copyright information" section on the Website of the UAIS Journal.