

International Journal of Human-Computer Interaction

Call for Papers – Special Issue

Current Trends in Brain-Computer Interface (BCI) Research and Development

You are cordially invited to make a contribution to a special issue of the *International Journal of Human-Computer Interaction (IJHCI)*, “**Current Trends in BCI Research and Development.**” The primary goal of this special issue is to present the state of the art in research and development related to brain-computer interface technology by including contributions from researchers from different disciplines.

As a non-muscular communication system that does not depend on the brain’s normal output pathways of peripheral nerves and muscles, BCIs have shown robust possibilities in providing people, including those who cannot use their muscles but are cognitively intact, with alternative methods for interacting with the outside world. However, BCI research and development is still in its infancy. Further improvements to BCI technology are necessary to ensure that they can meet the needs of specific user groups. BCI applications should allow for increased independence and hence, improved quality of life for people with severe neuromuscular disorders.

We are seeking theoretical, methodological, and particularly empirical papers dealing with different topics that include, but are not limited to:

- (1) Basic BCI research and development issues, including invasive and noninvasive methods to monitor and obtain brain signals, effective signal processing techniques that extract signal features, and innovative algorithms that translate extracted signal features into device commands;
- (2) Empirical evaluation of particular BCIs in particular applications with users who have severe motor disabilities;
- (3) Theoretical frameworks for testing the usability of BCI systems in real-world contexts, or empirical evaluations of such tests;
- (4) Improved user interfaces for established BCI systems (e.g., integration of word prediction in spelling applications, innovative spelling systems, adaptive user interfaces, etc.);
- (5) Effective integration of BCI communication or control functions with other (e.g., muscle based) behaviors;
- (6) Novel control interfaces or approaches to interaction that improve the speed, bandwidth, or accuracy of BCI systems and applications; and
- (7) New applications for BCI control (robotics, wheelchairs, assistive technology software or hardware).

SCHEDULE FOR SUBMISSION

- Manuscript Submission Deadline: November 16, 2009
- Notification of 1st review outcome: January 31, 2010
- First Revision Due: March 1, 2010
- Notification of 2nd review outcome: May 15, 2010
- Final Manuscript Due: June 15, 2010
- Expected publication: Late 2010 or early 2011

GENERAL INSTRUCTIONS FOR PROSPECTIVE AUTHORS

- Prepare manuscripts according to the Publication Manual of the American Psychological Association (5th edition, 1994).
- Only original manuscripts will be considered for publication in this special issue of the International Journal of Human-Computer Interaction.
- Review the IJHCI “Instructions for Authors” Web page (<http://www.tandf.co.uk/journals/journal.asp?issn=1044-7318&linktype=44>) for more specific instructions.
- Manuscripts are restricted to 7,000 words (i.e., no more than 24 double-spaced pages), and will be subject to the standard IJHCI review (i.e., each paper will go through THREE rigorous peer reviews) prior to acceptance. Word counts are based on the counting feature in Microsoft Word and include all material (title page, abstract, bios, etc.) EXCEPT references, figures, and tables. They typically have no more than 8 tables and/or figures and a reference section of no more than 1,500 words.
- Manuscripts should be submitted electronically to <http://www.editorialmanager.com/ijhc/>; indicate that this is a special-issue submission when you upload your paper. OR Manuscript should be forwarded to the Special Issue Editor, **Dr. Chang S. Nam** (cnam@uark.edu) by email as attached files in MS Word or PDF format.

SPECIAL ISSUE GUEST EDITORS

Please direct any inquiries, including the suitability of the work, to the Special-Issue Guest Editors: **Chang S. Nam**, University of Arkansas, cnam@uark.edu; **Gerwin Schalk**, Wadsworth Center, schalk@wadsworth.org; and **Melody Moore Jackson**, Georgia Institute of Technology, melody@cc.gatech.edu.