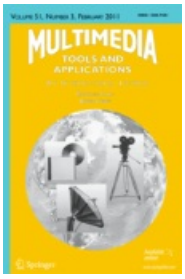

Multimedia Tools and Applications Journal

Special Issue on ***Multimodal Joint Information Processing in Human-Machine Interaction: Algorithms, Applications and New Trends***

Springer, (SCI, 2011 Impact Factor 0.617)

http://www.springer.com/computer/information+systems+and+applications/journal/11042

1. Introduction

Human-human interaction is a multimodal process in nature, which integrates sensory modalities such as hearing, vision, gesture, touch and etc. Therefore, not surprisingly, conventional uni-modal human-machine interactions (such as audio-only interaction) lag in performance, naturalness and robustness as compared with human-human interactions. Recently, there has been increasing research interest in jointly processing information available in multiple modalities and mimicking human-human multimodal interactions. For example, human speech production and perception are bimodal in nature: visual cues have a broad influence on perceived auditory stimuli. Therefore, research in speech processing has shown that integration of audio-visual speech information, i.e., acoustic speech combined with facial and lip motions, achieves apparent performance improvement in tasks such as speech recognition and speaker identification. However, information from difference modalities often has diverse characteristics, heterogeneous representations, asynchronous and loosely-coupled relations. Therefore, how to effectively integrate and jointly processing information from different modalities is essential to the success of such multimodal interactive systems. At the meantime, multimodal applications are becoming increasingly important, especially for mobile computing and digital entertainment scenarios, such as natural user interfaces on smartphones and motion sensing gaming.

Therefore, it holds great promise and challenge to use multimodal information to achieve more natural and robust human-machine interfaces. This special issue aims to bring together researchers and technologists engaged in the development of multimodal technologies for information processing, emerging multimedia applications, and user-centric human computer interaction.

This special issue will focus on original/unpublished research papers that report novel algorithms and new applications in the area of multimodal joint information processing and human computer interaction. It will also consider survey articles that focus on the state-of-the-art technologies and new trends and challenges in this area. All submitted papers will be peer reviewed and will be selected on the basis of their quality and relevance to the main theme of this special issue.

2. Topics

The scope of special issue includes, but not limited to:

- ✧ Models for multimodal Information integration
- ✧ Audio-visual speech synthesis and talking avatars
- ✧ Audio-visual speech recognition
- ✧ Multimodal human behavior analysis
- ✧ Facial expression and gesture recognition and understanding

- ✧ Multimodal telepresence and computer supported cooperative work
- ✧ Multimodal user interfaces and tools
- ✧ User-centric human computer interaction
- ✧ Data mining from multimodal data
- ✧ Multimedia signal and information processing, algorithms and applications
- ✧ New areas that involve multimodal joint information processing, e.g. meetings, social gatherings, social media, etc.

3. Tentative Schedule

Submissions due:	February 28, 2013
Notification of the first round review:	April 15, 2013
Final acceptance notification:	May 31, 2013
Final manuscript due:	June 30, 2013
Publication date:	Winter 2013 (Tentative)

4. Submission Guidelines

The authors are required to follow the Author's Guide for manuscript submission to the Multimedia Tools and Applications Journal:

https://www.editorialmanager.com/mtap/

Original manuscripts should be submitted through the online submission system. Should you have any questions, please feel free to contact the corresponding guest editor.

5. Guest Editors

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http://www.springer.com/journal/11042

Multimedia Tools and Applications
An International Journal
Editor-in-Chief: Furht, B.
ISSN: 1380-7501 (print version)
ISSN: 1573-7721 (electronic version)
Journal no. 11042