



**Journal of Ambient Intelligence and Humanized
Computing (AIHC)
Special Issue on
*Media Computing and Applications for Immersive
Communications*
CALL for Papers**

<http://www.springer.com/engineering/computational+intelligence+and+complexity/journal/12652>

AIHC is a Science Citation Index (SCI) indexed Journal and the first impact factor will be released at April 2016

1. Introduction

Inter-person communication is essential in our lives. With the fast development of Internet, web communications, e.g., instant messenger, voice chat, video telephony and social networks, becomes dominant means of telecommunication. However, current prevalent technologies are still limited the communication ways to exchanging text messages and streaming audio/video captured by a simple camera or a microphone. It fails to provide an immersive “in-the-same-place” experience for the communicators involved and lacks of ambient intelligence. With recent advances in media computing and Internet of things (IoT), we are currently able to collect big data (e.g., facial expression, eye gaze, head movement, expressive speech, body gestures, audio scene and various types of sensory data) from multiple and cheap sensors. Hence we are on our fast way to realize immersive display of a scene (e.g., 3D auditory and visual space) with these collected rich data and enhance the sense of immersive communication with ambient intelligence.

The vision of **media computing for immersive communication** is to enable natural interactions via media technologies among people who are geographically distributed. Recently, various research communities have been studying on audio/visual and signal processing for immersive environments, including 3D audio rendering, audio/speech/video capture/synthesis/recognition/enhancement, 3D visual construction and multimodal multimedia interaction. The proliferation of tele-presence systems, which is a form of immersive communication enabling effective remote collaboration through realistic audio and video reconstruction of participants and their environments, demonstrates the important of immersive communication.

The goal of this special issue is to bring together researchers and technologists engaged in the development of media computing technologies and applications, and to highlight the potential and special character of immersive communication. The scope will focus on original/unpublished research papers that report novel algorithms, systems and new applications. 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:

- Immersive audio communication:
 - Audio and speech recognition under immersive and adverse environments, including robust front-end processing and back-end processing for speech recognition, speaker recognition, audio scene classification
 - Immersive audio and speech rendering, including loudspeaker and headphone reproduction of spatial sound and speech synthesis
 - Sound source localization and tracking, room geometry estimation etc.
- Immersive visual communication:
 - 3D visual representation and reconstruction
 - Effective object segmentation, tracking and recognition
 - Novel video/image retrieval, indexing and ranking
 - Understandings in diverse modalities of images in specific domains
 - Virtual and augmented reality technologies
- Multi-modal interaction and multi-sensory fusion
 - Audio-visual speech synthesis, talking avatars and virtual humans
 - Audio-visual interaction based on gaze, visual prosody and gestures
 - Emotion analysis and recognition through audio and visual and sensory cues
- Immersive communication applications and tools

3. Tentative Schedule

New deadlines:

Submissions due: May 31

Notification of the first round review: July 15, 2016

Final manuscript due: October 31, 2016

Publication date: Spring 2017 (Tentative)

4. Guest Editors

Lei Xie (Corresponding Guest Editor)

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5. Submission Guidelines

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Prospective authors should strictly follow the author guideline from:

<http://www.springer.com/engineering/computational+intelligence+and+complexity/journal/12652>

for the preparation of submissions. Submitted papers will go through a strict peer review procedure. A separate cover letter, that provides a clear summary of authors and the article, is required when making the submission. All the papers should be submitted to online submission system at

<https://www.editorialmanager.com/aihc/default.aspx> and by choosing S.I.: Media Computing and Applications for Immersive Communications. See below.

The screenshot shows the 'New Submission' page of the Journal of Ambient Intelligence & Humanized Computing submission system. The page has a red header with the journal title and 'Editorial Manager' logo. Below the header, there are navigation links: HOME, LOGOUT, HELP, REGISTER, UPDATE MY INFORMATION, JOURNAL OVERVIEW, MAIN MENU, CONTACT US, SUBMIT A MANUSCRIPT, and INSTRUCTIONS FOR AUTHORS. On the right side of the header, there is a 'Role:' dropdown menu set to 'Author' and a 'Username:' field. The main content area is divided into two sections. The left section, titled 'New Submission', contains a 'Select Article Type' button and an 'Enter Title' input field. The right section, titled 'Please Select an Article Type', contains a warning message: 'Before submitting please make sure you have adhered to the journal's instructions for authors.' Below this, it says 'Choose the article type of your manuscript from the pull-down menu.' There is a 'Choose Article Type' label above a dropdown menu that currently shows 'S.I. : Media Computing and Applications for Immersive Communications'. A 'Next' button is located at the bottom of this section.