MAHCI 2018: The 1st Workshop on Multimedia for Accessible Human Computer Interface

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ABSTRACT

In the developing of advanced Human-Computer Interaction, multimedia technology plays a fundamental role to increase usability, and accessibility of computer interfaces. The first workshop on Multimedia for Accessible Human Computer Interface (MAHCI) provides a forum to both multimedia and HCI researchers to discuss the accessible human computer interface design, development, and evaluations with the state-of-the-art multimedia technology. It also enables multimedia community to expand its interaction with the HCI industry and broaden the scope of deploying multimedia technology in practical applications. The workshop features 5 papers which cover a number of novel applications and new methodologies in a half day program.

CCS CONCEPTS

• **Human-centered computing** → **Accessibility** • Information systems → Information systems applications → Multimedia information systems

KEYWORDS

Accessibility, Multimedia, Human-computer interaction

1. Introduction

The research on accessible human computer interface provides benefits for a wide range of people, especially for elderly people, children and individuals with disabilities, in substantial life activities, including the use of services, products, and information.

In recent year, advances in multimedia technologies have prompted a wave of developing new intelligent HCI devices. For example, many HCI devices equipped with virtual reality, speech recognition and augmented reality are developed, which significantly enhanced users' ability to interact with the world. More recently, much fruitful achievement, such as video captioning, object detection and image syntheses, have been made in the multimedia community. These latest advance has provided enormous opportunities in developing intelligent HCI that is accessible to all individuals.

MAHCI provides a forum to both multimedia and HCI researchers to discuss the possibility for accessible human computer interface design, development, and evaluations with the state-of-the-art multimedia technology. It also enables multimedia community to expand its interaction with the HCI industry and broaden the scope of deploying multimedia technology in practical applications.

We believe that the topic of MAHCI is interesting to both multimedia community and HCI community to exchanging ideas and discussing collaborations, and that the workshop will also attract the attention from industry and promote the industrialization of latest multimedia advance.

2. Scope and Topics

MAHCI aims at capturing the recent advances in multimedia technology (audio, video, image, and text) for human computer interface design, development, and evaluations that is accessible to all individuals.

The topics of this workshop include, but not limited to:

● HCI for individuals with disabilities and older adults
● Computer interfaces for education and e-learning

- Audio processing, systems and applications on accessible HCI
- Video processing, systems and applications on accessible HCI
- Computer vision based HCI interactions
- Natural language processing based interactions
- Mobile and wearable interfaces
- Multi-model interfaces and applications
- Ubiquitous computing for assistive HCI applications

3. Review Process

Papers are reviewed in a double-blind manner, where both the authors and reviewers do not know the identity of each other. To ensure the review process double-blind, authors must not reveal their identities and affiliations in the submissions. Each paper receives at least three independent reviews from reviewers recommended by the workshop organizers. The reviewers are selected from a broad range of expertise with one half from the multimedia community and the other half from the HCI community. Final decision is made by the workshop organizing committee based on the reviews.

4. Workshop Organizers

The organizers of the workshop have a broad range of relevant expertise in the topics of the workshop including multimedia, HCI, accessibility, and computer vision, as well as extensive experience in organizing and running successful workshops.

Dr. Xueliang Liu is an associate professor in Hefei University of Technology, China. He received his Ph.D and MSc from EURECOM France and USTC China in 2013 and 2008 respectively. His research interests include social media analysis, multimedia retrieval and object detection. He has authored over 30 journal and conference papers in these areas. He has been serving the technical program committees of numerous multimedia and information retrieval conferences including ACM Multimedia (MM), ACM SIGIR, International Conf. on Multimedia Retrieval (ICMR) and International Conf. on Multimedia and Expo (ICME). In addition, he is the organizing chair of ICIMCS 2013, MMM 2016 and PCM 2018.

Dr. Rui Min is a senior engineer at Google, USA. His recent research mainly focuses on computer vision and its applications on creating novel tools/methods for accessible human computer interface. Prior to Google, his research spans from face recognition to medical image analysis, and authored more than 15 journal/conference papers and book chapters. He received his PhD from Telecom ParisTech in France and worked as a researcher in EURECOM, University of North Carolina at Chapel Hill, and University of Southern California.

Dr. Benoit Huet is Assistant Professor in the multimedia information processing group of Eurecom (France). He received his BSc degree in computer science and engineering from the École Supérieure de Technologie Électrique (Groupe ESIEE, France) in 1992. In 1993, he was awarded the MSc degree in

Artificial Intelligence from the University of Westminster (UK) with distinction, where he then spent two years working as a research and teaching assistant. He received his DPhil degree in Computer Science from the University of York (UK) for his research on the topic of object recognition from large databases. He was awarded the HDR (Habilitation to Direct Research) from the University of Nice Sophia Antipolis, France, in October 2012 on the topic of Multimedia Content Understanding: Bringing Context to Content. He is associate editor for IEEE Multimedia, Multimedia Tools and Application (Springer) and Multimedia Systems (Springer) and has been guest editor for a number of special issues (EURASIP Journal on Image and Video Processing, IEEE Multimedia). He regularly serves on the technical program committee of the top conference of the field (ACM MM/ICMR, IEEE ICME/ICIP). He is chairing the IEEE MMTC Interest Group on Visual Analysis, Interaction and Content Management (VAIG). He has co-authored over 150 papers in Books, Journals and International conferences. His current research interests include Large Scale Multimedia Content Analysis, Mining and Indexing - Multimodal Fusion - Socially-Aware Multimedia. He obtained the best demo and brave new idea awards in ACM MM 2017.

Dr. Jia Jia is an associate professor in Department of Computer Science and Technology, Tsinghua University. She got bachelor degree at Tsinghua University in 2003, and received her Ph.D. degree from Tsinghua University in 2008. Her main research interest is social affective computing and human–computer interaction. She has been serving the technical program committees of numerous multimedia conferences including ACM Multimedia and International Conf. on Multimedia and Expo (ICME). In addition, she is serving as the area chair of ACM MM 2018 and ICME 2018. She has been awarded ACM Multimedia Grand Challenge Prize (2012) and Scientific Progress Prizes from the National Ministry of Education twice (2009, 2016). She has authored about 70 papers in leading conferences and journals including IEEE Transactions on Multimedia, IEEE Transactions on Affective Computing, IEEE Transactions on Audio Speech and Language Processing, IEEE Transactions on Knowledge and Data Engineering, ACM Multimedia, AAAI, IJCAI, etc.