



Interspeech 2018 - Plenary Speaker-3

Helen Meng

Department of Systems Engineering and Engineering Management, Chinese University of Hong Kong



Webpage

<http://www.se.cuhk.edu.hk/people/hmmeng.html>

Title: Speech and Language Processing for Learning and Wellbeing

Abstract

Spoken language is a primary form of human communication. Spoken language processing techniques must incorporate knowledge of acoustics, phonetics and linguistics in analyzing speech. While great strides have been made in the community in general speech recognition, reaching human parity in performance, our team has been focusing on the problems of recognizing and analyzing non-native, learners' speech for the purpose of mispronunciation detection and diagnosis in computer-aided pronunciation training. In order to generate personalized, corrective feedback, we have also developed an approach that uses phonetic posterior-grams (PPGs) for personalized, cross-lingual text-to-speech synthesis given arbitrary textual input, based on voice conversion techniques. We have also extended our work to disordered speech, focusing on automated distinctive feature (DF)-based analyses of dysarthric recordings. The analyses are intended to inform intervention strategies. Additionally, voice conversion is further developed to restore disordered speech to normal speech. This talk will present the challenges in these problems, our approaches and solutions, as well as our ongoing work.

Biography

Helen Meng is Patrick Huen Wing Ming Professor and Chairman of the Department of Systems Engineering & Engineering Management, Chinese University of Hong Kong (CUHK). She is the Founding Director of the CUHK Ministry of Education (MoE)-Microsoft Key Laboratory for Human-Centric Computing and Interface Technologies, Tsinghua-CUHK Joint Research Center for Media Sciences, Technologies and Systems, and CUHK Stanley Ho Big Data Decision Analytics Research Center. She has also established the CAS-CUHK Shenzhen Institute of Advanced Technology Ambient Intelligence and Multimodal Systems Laboratory and served as its Director between 2007 and 2011. Previously, she has served as CUHK Faculty of Engineering's Associate Dean (Research), Editor-in-Chief of the IEEE Transactions on Audio, Speech and Language Processing, ISCA Board Member, Member of the IEEE SPS Board of Governors and Hong Kong-Guangdong ICT Expert Group member. Presently, she is serving as ISCA International Advisory Council Member, elected Chairperson of ISCA's Special Interest Group on Chinese Spoken Language Processing (since 2014) and elected Standing Committee Member of the China Computer Federation Task Force on Speech, Dialogue and Auditory Processing. Her appointments by the Hong Kong SAR Government (HKSARG) include Research Grants Council Member, eHealth Record Sharing Steering Committee Member, and Chairlady of the Working Party for the Manpower Survey of the Innovation & Technology Sector. She was APSIPA's inaugural Distinguished Lecturer 2012-2013 and ISCA Distinguished Lecturer 2015-2016. Her awards include the Ministry of Education Higher Education Outstanding Scientific Research Output Award 2009, Hong Kong Computer Society's inaugural Outstanding ICT Woman Professional Award 2015, Microsoft Research Outstanding Collaborator Award 2016, IEEE ICME 2016 Best Paper Award, IBM Faculty Award 2016, HKPWE Outstanding Women Professionals and Entrepreneurs Award 2017 and Hong Kong ICT Award 2018 Silver Award for Smart Inclusion. Helen received all her degrees from MIT and is a Fellow of HKCS, HKIE, IEEE and ISCA.