

COLLOQUIUM BY MING LI

PARALINGUISTIC SPEECH ATTRIBUTE RECOGNITION AND MULTIMODAL BEHAVIOR SIGNAL ANALYSIS

TIME: 10:30AM-11:30PM, MONDAY, 5 JUNE 2017

VENUE: ACADEMIC BUILDING 1079

Paralinguistic speech attribute recognition and multimodal behavior signal analysis

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ABSTRACT:

Speech signal not only contains lexicon information, but also deliver various kinds of paralinguistic speech attribute information, such as speaker, language, gender, age, emotion, channel, voicing, psychological states, etc. The core technique question behind it is utterance level supervised learning based on text independent speech signal with flexible duration. I will introduce our recent works from features to representation and to modeling. Furthermore, we try to combine these paralinguistic speech attributes recognition tasks together into one problem, and use end-to-end deep learning methods to solve in order to reduce the need of prior domain knowledge. Finally, I will introduce our works in multimodal behavior signal analysis and interpretation. We apply signal processing and machine learning technologies to human behavior signals, such as audio, visual, physiological and eye tracking data to provide objective and quantitative behavior measurements or codes for assistive autism diagnose.

BIO:

Ming Li received his B.S. degree in communication engineering from Nanjing University, China, in 2005 and his M.S. degree in signal processing from the Institute of Acoustics, Chinese

Academy of Sciences, in 2008. He joined the Signal Analysis and Interpretation Laboratory (SAIL) at USC on a Provost fellowship in 2008 and received his Ph.D. in Electrical Engineering in May 2013. He is currently an assistant professor at SYSU-CMU Joint Institute of Engineering, an associate professor at School of Electronics and Information Technology at Sun Yat-Sen University. His research interests are in the areas of speech processing and multimodal behavior signal analysis with applications to human centered behavioral informatics notably in health, education and security. He has published more than 70 papers and served as scientific committee members and reviewers for multiple conferences and journals. Works co-authored with his colleagues have won awards at Body Computing Slam Contest 2009, IEEE DCOSS 2009, Interspeech2011-Speaker State Challenge, Interspeech2012-Speaker Trait Challenge, and ISCSLP 2014 best paper award. He received the IBM faculty award at 2016.

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