Computer-based Lip-reading using Motion Templates

ABSTRACT:

Imagine moving your lips silently to a computer and watching the unspoken utterances roll out on the screen - the ability to control computers without making a sound or touch-typing. This illustrates one of the main benefits of computer-based lip-reading. This technology invites the possibility of recognizing speech based on the movement of the human lips. A general overview of such computer-based lip reading approaches will be presented in this talk followed by a detailed description of the motion templates-based technique to recognize utterance without evaluating the sound signals. Potential applications for lip-reading technologies include human computer interface (HCI) for mobility-impaired users, defense applications that require voice-less communication, in-vehicle systems, and improvement of speech-based computer control in noise-filled environments.

SPEAKER:

Wai Chee Yau received the B.E. (Hons) Electronic degree from the Multimedia University, Malaysia in 2004. She has recently completed her doctoral degree in Electronic Engineering from RMIT University, Australia in 2008. Her research interests include visual speech recognition, image analysis, pattern recognition, and machine learning. Her PhD project is on computer-based lip-reading. The outcome of her research has been published in a book chapter, 3 journal papers and a number of conference papers.

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