

The Application of Speaker Recognition on Trusted Identity Authentication and the Research Challenges

Prof. Fang Zheng, Tsinghua University, China

Abstract:

With the rapid development of information technologies and telecommunication technologies, the mobile applications have been becoming so popular that the cyberspace which human beings depend on has been greatly extended. In this situation, the cyberspace security is very important and the trusted identity authentication can be regarded one of the most important security issues in cyberspace security. In this talk, as a specific form of trusted identity authentication, the unsupervised identity authentication (USIA) will be studied, covering two related scenarios, self-services in certain physical space and activities in whole cyberspace. Many researchers and developers have been making efforts based on biometric recognition technologies, including fingerprint, face, iris, and voice. However, two issues have brought great attention from people, one is the anti-spoofing problem and another is the privacy protection problem.

This talk includes the following sub-sections. 1. The state-of-the-art plans of trusted identity authentication in several countries. 2. Analysis on technical requirements of unsupervised identity authentication (USIA). 3. Analysis on the reason why speech technologies can be a good solution to USIA. 4. Brief introduction to related speech technologies to USIA, including speaker recognition, speech recognition, emotion recognition. 5. Research challenges of speaker recognition, including several environment-related, speaker related, and application-oriented robust issues.