MINIMUM CLASSIFICATION ERROR RATE PATTERN RECOGNITION APPROACH FOR SPEECH AND LANGUAGE PROCESSING

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ABSTRACT
Minimum classification error (MCE) rate pattern recognition approach is a fast moving research area and broadly applied to pattern recognition problems in speech and language processing. In this talk, we will give an overview of the basic MCE classifier design algorithms as well as the more advanced extensions of the MCE approach. We differentiate the classifier design by way of distribution estimation and by way of the discriminant function methods according to the minimum classification error rate paradigm. We study the practical issues in system implementation and highlight the application perspectives of applying MCE classifier design to practical speech and language processing systems.

ABOUT THE SPEAKER
Dr. Wu Chou is the technical manager of dialogue system research group at Avaya Labs Research, Avaya Inc. He received M.S. degree in mathematics in 1986, M.S. degree in electrical engineering in 1987, the M.S. degree in statistics in 1988, and the Ph.D. degree in electrical engineering in June 1990, all from Stanford University, California, USA, respectively. He joined the speech research department of AT&T Bell Laboratories in July 1990. Since joining Bell Labs, he has been working extensively in the areas of speech recognition and understanding, intelligent dialogue systems for multimodal/multimedia communication and interaction, natural language call routing, acoustic modeling, large vocabulary speech recognition, speaker adaptation, vector quantization, acoustic assisted image coding and animation, signal processing and oversampled sigma-delta modulation. Since October 2000, he moved to Avaya Labs Research leading a group on dialogue systems and multimodal/multimedia communication. He was an associate editor for IEEE Transactions on Speech and Audio Processing, the general chair of 2002 IEEE International Conference on Computer, Communication and Networking (IC3N'02), editor and the group chair of EMMA (Extensible Multimodal Annotation), a standard of W3C (World Wide Web Consortium). He received several honors including Bell Labs President's Gold Award in 1997. He authored or co-authored more than 80 technical papers, three book chapters, one edited book and holds 18 US and International patents.