

Title: Recent Advances in Selective Auditory Attention

Abstract: Humans have a remarkable ability to pay their auditory attention only to a sound source of interest, that we call selective auditory attention, in a multi-talker environment or a Cocktail Party. However, signal processing approach to speech separation and/or speaker extraction from multi-talker speech remains a challenge for machines. In this talk, we study the deep learning solutions to monaural speech separation and speaker extraction that enable selective auditory attention. We also introduce their applications in speech recognition, speaker recognition, and hearing aids. We discuss the computational auditory models, technical challenges and the recent advances in the field.