**The predictive processes of sentence comprehension in elders and aphasia patients**

Successful reading comprehension involves multiple cognitive and neural mechanisms, from the bottom-up lexical retrieval of individual words to the top-down semantic integration and contextual-based prediction. Studies have suggested that the comprised ability in utilizing the contextual information for sentence comprehension in elders may relate to the structural and functional deterioration of the frontal lobe in normal aging. In this talk, I will present a series of ERPs and fMRI studies, which manipulated high- versus low- cloze probability of the ending words in sentences, to examine the predictability effect of sentence comprehension in young adults, health elders, and aphasic patients. Specifically, I will propose a theoretical neural network of sentence comprehension to account for the increasing weightings of prefrontal cortex as the cognitive functions declined or comprehension abilities were impaired.