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"How the brain processes syntactic and referential dependencies in English and Korean"

In this talk, I provide some basic background information on what kinds of brain processes event-related potentials (ERPs) reflect, and how ERPs are collected, analyzed, measured, and interpreted. I then report on recent work showing that, in English, both intra-sentential syntactic dependencies (wh-questions) and cross-sentential discourse referential dependencies (wh-question-answer pairs) are processed in remarkably similar ways by the brain, raising questions about what linguistic commonalities they might share. I conclude that these brain responses index working memory constraints on syntactic and/or discourse relations between non-adjacent constituents, and general cognitive constraints on the delivery of information crucial to overall sentence interpretation. The similarities in brain response are likely triggered by the features of wh-dependencies in English, where wh-fillers precede and must be associated with their gaps in syntactic structure, just as wh-question words precede and must be associated with focused answers in discourse.