

The Department of Linguistics

is pleased to present

Dustin A. Chacón

University of Georgia

speaking on

**Seeing the forest and the trees: Linking
comparative syntax, psycholinguistics, and the
brain**

Tuesday, February 27, 2024

11:40 AM

Location: HUM 1 - Room 210

Abstract:

Studying language in the brain is hard. Although we have a clear picture of the brain's language network, understanding each area's contribution to representing grammatical structure and supporting parsing is less clear. I propose two ways forward. First, we can systematically compare sentence processing phenomena across languages to characterize how the parser reflects demands of different grammars, and which brain areas reflect different parser states. In an MEG study in Hindi and Nepali, I show that case and agreement show similar patterns of activation in left fronto-temporal regions, but distinct patterns in left temporo-parietal regions. I argue that these similarities and differences directly relate to these languages' grammatical descriptions. Conversely, we can refine theories of brain function by (non)replication of previous findings in new languages. In an MEG study on morphologically complex words in Bengali, we show that morphological processing effects look different in Bengali than in previously-studied languages, suggesting boundary conditions on theories of word-reading. The second way forward is to rethink the parameters of modality in language processing experiments. Language is flexible, and our psycholinguistic theories should not be overfit to laborious, serial, word-by-word reading. In a series of parallel reading studies in EEG in English, Urdu, and Mandarin, in which sentences appear briefly for ~200ms, I show that case, word order, and wh-elements are processed ~300ms post-sentence onset. Each grammatical feature occupies a different region of the scalp. By comparing modalities and languages, we could begin identifying how specific grammatical features are represented in the brain.