



Co-Sponsored CogSci, IBACS, and BIRC Seminar

Friday, February 18th at 4pm ET

Grammar, Incrementality, and fMRI Timecourse

John Hale, University of Georgia



Abstract: What is the physical basis of human language comprehension? What sort of computation makes a stream of words come together, one after another, to yield a communicative or literary experience? This question sets up a scientific challenge for the brain and cognitive sciences. With functional neuroimaging, it is possible to extract a timecourse of brain activity from particular regions and ask how well alternative (psycho)linguistic theories account for the measured signal. This can be done over prolonged periods of time, for instance during the spoken recitation of a literary text. On the basis of such timecourses, this talk argues that our conceptualization of grammar should go beyond simple word-sequences and naive phrase structure. It presents an incremental parsing strategy that is more consistent with neuroimaging data than the simple ones presented in books like Hale (2014). The overall methodology can serve as a positive example of how brain data, syntactic theory and parsing algorithms may productively co-constrain one another.

Bio: John Hale, the Arch Professor of World Languages and Cultures at the University of Georgia, is a professor in the Department of Linguistics at UGA. A computational linguist, he has made significant contributions to the theory of sentence processing over the past two decades and is the author of a valued textbook in the field (*Automaton Theories of Human Sentence Comprehension*, 2014). Strongly committed to cultivating the vital and also changing character of intellectual pursuit in current times, Professor Hale collaborates with DeepMind and has been active in promoting interaction between industry and academia as a way of getting to the bottom of questions about the nature of mind.

Remote access Registration: <https://bit.ly/34GBdw6>

Please note: You *must* register in advance via Zoom

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