Cognitive Modeling: How Humans Learn Complex Linguistic Systems

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Models of cognition are concerned with understanding how humans solve problems of learning and reasoning. This talk focuses on how children learn generalizations about the complex knowledge systems of their native language. We will examine the English stress system as a realistic case study, since this system involves multiple interacting parameters and the available data are very noisy. Discussion will include the difficulties associated with learning the correct generalizations in a complex linguistic system, the performance of data filtering strategies where the child learns only from a subset of the available data, and psychologically plausible adaptations of probabilistic learning.