Modeling phonological variation

Andries Coetzee
(University of Michigan)

Existing approaches to phonological variation differ in the role that they ascribe to grammar. Some assume no role for grammar, considering variation as the result of non-grammatical factors impacting the categorical output of phonological grammar. Others assume that grammar and non-grammatical factors contribute equally to variation. Yet others attempt to account for all aspects of variation with grammar alone, allowing no room for non-grammatical factors. In this talk, I will develop a fourth possible model with the following features: (i) Grammar itself is variable and hence contributes to variation. (ii) Non-grammatical factors also contribute. (iii) But the model is grammar dominant – grammar defines the space of possible variation and non-grammatical factors can only influence how variation is realized within this grammar-delimited variable space. The model will be implemented in Harmonic Grammar, and will be applied to English variable t/d-deletion (west bank ~ wes bank) and variable cross-word nasal place assimilation (green boat~greem boat), focusing on the interaction of grammar with factors such as usage frequency, lexical competition/priming, and speech rate.