Distributional semantic phrases vs. semantic distributional nonsense:  
Adjective modification in compositional distributional semantics

In this talk, I discuss the ability of compositional distributional semantics to model adjective modification. I present three studies that explore the degree to which semantic intuitions are grounded in the distributional representations of adjective-noun phrases, as well as provide insight into various linguistic phenomena by extracting unsupervised cues from these distributional representations. First, I investigate degrees of adjective modification: intersectively used color terms, subsectively used color terms, and intensional adjectives. Next, I propose an approach to characterize semantic deviance of composite expressions using distributional semantic methods. I present a set of simple measures extracted from distributional representations of words and phrases, and show that they are more significant in determining the acceptability of novel adjective-noun phrases than measures classically employed in studies of compound processing. Finally, I use compositional distributional semantic methods to investigate restrictions in adjective ordering. Specifically, I focus on properties distinguishing adjective-adjective-noun phrases in which there is flexibility in the adjective ordering from those bound to a rigid order. I explore a number of measures extracted from the distributional representation of such phrases which may indicate a word order restriction. Overall, this work provides strong support for compositional distributional semantics, as it is able to generalize and capture the complex semantic intuition of natural language speakers for adjective-noun phrases, even without being able to rely on co-occurrence relations between the constituents.