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NORTHWESTERN  
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**Northwestern Institute on Complex Systems  
invites you to its  
Weekly Seminar**

**Speaker:** Robert van Rooij, Institute for Logic, Language and Computation (ILLC), University of Amsterdam

**Title:** Signaling Games: Quantity Implicatures and Stereotypes

**When:** Wednesday, April 18, 2007

**Where:** Chambers Hall, 600 Foster Street, Lower Classroom Level

**Time:** 12:00 – 1:00

***NICO Coffee Hour will follow for questions, networking, and collaboration***

**Abstract**

In this talk I will show how signaling games can be used to address questions concerning language use and language structure.

Gricean implicatures play a prominent role in theories of *language use*. Based on Grice's maxim of Quality, we can derive that the speaker (thinks he) knows that what he asserts is true, while based on Grice's maxim of Quantity, we can derive from the speaker's answer that John came to the question *Who came?*, that he doesn't know that Mary came. Schulz & van Rooij (2004, 2006) have formalized these maxims in terms of a pragmatic interpretation function GRICE to be able to derive these implicatures, and they show that if we additionally assume that the speaker is an expert, we can also derive standard scalar implicatures and exhaustive interpretations. In this talk I will discuss how to derive the function GRICE within a signaling game framework, and a framework (called 'Optimal assertions') closely related to it. I also show how stronger implicatures follow, if in the game we assume that the speaker is an expert.

In a recent paper (Jaeger & van Rooij, 2007) it is shown how signaling games can be used to derive prototypes of adjectives within a vector based semantics. The analysis assumes that the utility function is based on a distance function, and the prototypes are always predicted to be at the center of the descriptive meaning of an adjective (like colors). I will argue that this analysis misses something crucial about how we (stereotypically) interpret adjectives: that the stereotype meanings of several contrary adjectives are always as far away as possible. In this talk I will sketch a signaling game that derives this result (without making use of a distance function!) as the (unique) equilibrium outcome.