Meeting: 1001, Evanston, Illinois, SS 13A, Special Session on Algebraic Topology: Interactions with Representation Theory and Algebraic Geometry

1001-55-99 **Julie Bergner*** (jbergner@nd.edu). *Complete Segal spaces as models for simplicial categories.* Preliminary report.

Given any simplicial category (category enriched over simplicial sets), Rezk has defined a functor assigning to it a complete Segal space, which is a simplicial space satisfying nice properties. We will discuss the characterization of the corresponding complete Segal space for any simplicial category and the main ideas behind describing an up-to-homotopy inverse functor. We will then describe work in progress toward obtaining a chain of Quillen equivalences between the appropriate model category structures. (Received August 16, 2004)