Mathematics, Statistics, and Computer Science **@ UIC**

Algebraic Topology Seminar

Model Structures on non-reduced operads and the Baez-Dolan Stabilization Hypothesis

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Abstract: We will recall the usual method, introduced by Schwede and Shipley, of transferring a model structure on a monoidal model category M to the category of T-algebras where T is some monad on M. We'll then discuss what hypotheses are needed on M in order for this to work for the situations where T arises from a cofibrant operad, from the commutative monoid operad, and from the non-reduced operad monad. We introduce the commutative monoid axiom and prove that the latter two situations inherit model structures from M in the presence of this axiom. We then include a discussion of when T-alg is left proper, and an application to proving the Baez-Dolan Stabilization Hypothesis.

Monday, March 16 at 3:00 PM in SEO 1227