1167-55-217 **Patricia Milham*** (pmilham@nevada.unr.edu). *An A_∞ analog of the Goldman-Millson Theorem in characteristic p.* Preliminary report.

Over fields of characteristic zero, the relationship between L_∞-algebras and formal deformation problems is established via the simplicial Maurer-Cartan functor. This functor assigns to each L_∞-algebra L a Kan simplicial set whose vertices are the solutions to the Maurer-Cartan equation in L. However, this equation is not well-defined over fields of positive characteristic. As a step towards resolving this, de Kleijn and Wierstra showed that there is an A_∞ analog to the Maurer-Cartan simplicial functor which can be used to study non-symmetric deformation problems in characteristic p.

In this talk, I will describe work in progress that establishes an A_∞ analog of the Goldman-Millson theorem in characteristic p, as conjectured by de Kleijn and Wierstra. In particular, I prove that the simplicial Maurer-Cartan functor for A_∞-algebras sends filtration preserving A_∞ quasi-isomorphisms between complete A_∞-algebras to weak equivalences of the corresponding Maurer-Cartan simplicial sets. (Received March 08, 2021)