

1007-16-202

Anthony Giaquinto* (tonyg@math.luc.edu), Department of Mathematics, Loyola University Chicago, Chicago, IL 60620. *Diagram cohomology and deformations.*

A diagram of algebras is a functor from a small category to some category of algebras. A diagram has natural cohomology and deformation theories. The main results for the recently developed theory of diagrams of Lie algebras will be presented. An application of the theory in the associative algebra case is to explain how an absolutely rigid algebra (in the sense that its second Hochschild cohomology group vanishes) can appear as part of a continuous family of algebras. Several examples of this phenomenon will be presented. (Received February 21, 2005)