# ALGEBRA
# SEMINAR

## *Infinitesimal Deformation Theory and Grothendieck Topologies*

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**Abstract:** To probe the infinitesimal structure of a moduli space of geometric objects, one seeks to understand families of those objects over "fat points". Understanding such families frequently yields a great deal of information about the moduli space. Remarkably, these deformation problems tend to admit cohomological solutions of a common form: obstructions in H 2, deformations in H 1, and automorphisms in H 0. I will offer an explanation for this common form, coming from some exotic Grothendieck topologies. We will see how this point of view works in several examples. No prior knowledge about Grothendieck topologies or deformation theory will be assumed.

Wednesday, October 10, 2012, 3:00 pm
Mathematics and Science Center: W306

# MATHEMATICS AND COMPUTER SCIENCE
# EMORY UNIVERSITY