

## Algebraic Geometry Seminar

### *Homology of finite free complexes*

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**Abstract:** The problem that gave rise to the research to be reported in this lecture is the following: Given a (finite) group  $G$  and a finite dimensional topological space  $X$ , can  $G$  act freely on  $X$ ? In the early 1980's Gunnar Carlsson, Bill Browder, Steve Halperin, and others found a number of interesting algebraic obstructions to free actions.

In my talk, I will present certain aspects of recent work in commutative algebra that is motivated by, and perhaps clarifies, some of their results. This is based on joint work with Avramov, Buchweitz, and C. Miller, and reported in our paper "Homology of perfect complexes", arXiv: math/0609008.

Thursday, November 5 at 4:00 PM in SEO 636