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Face Algebras of Hyperplane Arrangements, Lattice Cohomology, and Quivers

Abstract for the Combinatorics and Algebra Seminars 2005 March 10

This talk will consist roughly of three parts. In the first part I will define the the face algebra of a hyperplane arrangement and mention some motivation for its study. In the second part I will define a new (co)homology construction on posets and specialize the construction to geometric lattices of hyperplane arrangements. In the third part I will present the definition of the quiver of a basic algebra (the face algebra is a basic algebra) and describe the quiver of the face algebra. Finally, we will see how the three parts of the talk are connected. It should be fun.