

David Eisenbud: **Higher Matrix Factorizations for Complete Intersections: An introduction and an application**

Higher matrix factorizations for complete intersections, introduced in my joint work with Irena Peeva, generalize the matrix factorizations of an element in a commutative ring---the case of a hypersurface. They give insight into the properties of minimal free resolutions that generalize the eventual periodicity of resolutions over a hyper surface. I'll explain this structure, and an application of it discovered in joint work with Peeva and Frank-Olaf Schreyer.