

Meeting: 1004, Bowling Green, Kentucky, SS 15A, Special Session on Recent Advances in Noncommutative Algebra

1004-16-152 **Ian M. Musson*** (musson@uwm.edu), Department of Mathematical Sciences, UW-Milwaukee, Milwaukee, WI 532110413. *An Equivalence of Categories for Deformations of Type A Kleinian Singularities.*

Let $H_{\mathbf{k}}$ be a symplectic reflection algebra corresponding to a type A Kleinian singularity, and $U_{\mathbf{k}} = eH_{\mathbf{k}}e$ the spherical subalgebra of $H_{\mathbf{k}}$. We show that for suitable \mathbf{k} there is a filtered Λ -algebra B such that

- (1) There is an equivalence of categories $U_{\mathbf{k}}\text{-mod} \simeq B\text{-qgr}$;
- (2) There is an equivalence of categories $grB\text{-qgr} \simeq Coh(Hilb_{\Gamma}\mathbb{C}^2)$.

where $Coh(Hilb_{\Gamma}\mathbb{C}^2)$ is the category of coherent sheaves on the Γ -Hilbert scheme. and for a graded algebra R , we write $R\text{-qgr}$ for the quotient category of generated graded R -modules modulo torsion.

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