1132-16-252 **X Chen** and **A Eshmatov*** (alimjon.eshmatov@utoledo.edu), Department of Mathematics and Statistics, University of Toledo, Toledo, OH 43606, and **F Eshmatov** and **V Futorny**.
Noncommutative deformations of Kleinian singularities.

Associated to a finite cyclic subgroup G of $SL_2(\mathbb{C})$, there is a family of noncommutative algebras $O^\tau = O^\tau(\mathbb{C}^2//G)$ representing a universal deformation of the coordinate ring of the classical Kleinian singularity $\mathbb{C}^2//G$.

Earlier, in his thesis, F. Eshmatov constructed an isomorphism between the moduli space of rank one projective modules (noncommutative line bundles) over O^τ and a certain class of Nakajima quiver varieties M^τ associated to G via the McKay correspondence. He showed that the varieties M^τ carry a natural action of the automorphism group $Aut[O^\tau]$ of the algebra O^τ, and the above isomorphism is equivariant under this action. In this talk, we will prove that the action of $Aut[O^\tau]$ on M^τ is actually transitive, and will use this result to give a geometric classification of algebras Morita equivalent to O^τ. We will also compute the Picard group of auto-equivalences of the abelian category of O^τ-modules. (This is joint work with X. Chen, F. Eshmatov and V. Futorny) (Received July 24, 2017)