

The Equivariant K-Theory of Toric Varieties

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This is joint work with Mu-wan Huang and Mark Walker. Toric varieties are special varieties which arise from geometric objects called fans of strongly convex rational polyhedral cones. I will present a new proof of a theorem due to Vezzosi and Vistoli concerning the equivariant K-theory of smooth toric variety. In our approach, we treat $K_q^T(-)$ as a presheaf on the toric variety endowed with a topology and use the theory of sheaves on fans to recover the result. This technique further allows us to calculate the equivariant K-groups of some toric varieties that are neither affine nor smooth.