LIFTING DERIVED EQUIVALENCES OF ABELIAN SURFACES TO GENERALIZED KUMMER VARIETIES

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Venue:Room 102, SCMS

Abstract: In this talk, we study the G-autoequivalences of the derived category $D^b_G(A)$ of G-equivariant objects for an abelian variety A with G being a finite subgroup of $\mathrm{Pic}^0(A)$. We provide a result analogue to Orlov's short exact sequence for derived equivalences of abelian varieties. It can be generalized to the derived equivalences for a same G in general. Furthermore, we find derived equivalences of generalized Kummer varieties by lifting derived equivalences of abelian surfaces using the G-equivariant version of Orlov's short exact sequence and some "splitting" propositions. The talk is based on the paper https://arxiv.org/abs/2507.11358.