CASTS TALKS

CASTS Algebraic Geometry Summer Program

Poincare bundle of abelian varieties as Fourier-Mukai kernel

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2018 - 08 - 16 (Thu.)
10:00 - 11:00
103, Mathematics Research Center Building (ori. New Math. Bldg.)

Historically, the origin of the theory of Fourier-Mukai transforms is the following result due to Mukai, the Poincare bundle on the product of an abelian variety and its dual induced an derived equivalence between a projective variety A and another one, which may be non-isomorphic or even non-birational to A.
In this talk, we will sketch the construction of the dual of an abelian variety as well as the Poincare bundle, and then prove Mukai's result. Time permitting, we'll go further to show that the equivalence defined by Poincare bundle on a principally polarized abelian variety can be regarded as an autoequivalence.

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