GENERIC VANISHING AND MINIMAL COHOMOLOGY CLASSES ON ABELIAN VARIETIES

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Time：Fri, Dec 2nd, 14:00-14:30
Venue: Room 102, SCMS

Abstract:

Let (A,Θ) be an g-dimensional indecomposable ppav over the complex number field. Let $X \subset A$ be a closed, geometrically nondegenerate, GV-subscheme of dimension $1 \leq d \leq g-2$. Then, conjecturely, either (A,Θ) is the polarized Jacobian of a smooth projective genus g curve C, and X is identified with $\pm W_d(C)$, or (g,d)=(5,2), (A,Θ) is the intermediate Jacobian of a smooth cubic threefold Y and X is identified with the Fano surface of lines on Y.

The generic vanishing conjecture is known in dimension g up to 5 , and for d=1, g-2 in general. In this talk, I will introduce these known results and ideas of proofs (if time permits), especially given by Pareschi-Popa for d=1, g-2 case, and by Casalaina-Martin, Popa and Schreieder for abelian 5-folds. The conjecture is widely open for abelian g-folds for g≥6.