

Abelian varieties & Galois actions

July 25 - 27, 2017

*Collegium Minus
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ABSTRACTS

Speaker : Jeff Achter

Title : *Distinguished models of intermediate Jacobians*

Abstract: Consider a smooth projective variety over a number field. The image of the associated (complex) Abel-Jacobi map inside the (transcendental) intermediate Jacobian is a complex abelian variety. We show that this abelian variety admits a distinguished model over the original number field, and use it to address a problem of Mazur on modeling the cohomology of an arbitrary smooth projective variety by that of an abelian variety. We also recover an old theorem of Deligne on intermediate Jacobians of complete intersection varieties, and describe new invariants of derived equivalent threefolds. (This is joint work with Sebastian Casalaina-Martin and Charles Vial.)