Intersection of Arithmetic Cycles and Automorphic Forms

Generic Abelian varieties are not Jacobians

S.-W. Zhang szhang@math.columbia.edu Department of Mathematics Columbia University 2990 Broadway New York, NY 10027 USA

Abstract

I will explain a proof of the following statement: any Hilbert modular variety of dimension g > 4 can't be included in the modular space of curves of genus g. Combined with my work on equidistribution on CM-points, this result implies the finiteness of certain curves with CM Jacobians.

This is a report of a joint work in progress with Johan de Jong.