

Harvard-M.I.T. Algebraic Geometry Seminar

JACOBIANS OF MODULAR CURVES AND MOD P MULTIPLICITY ONE

KEVIN BUZZARD
Imperial College and Harvard

Abstract:

The Jacobian of a modular curve is an abelian variety and is hence isogenous to a product of simple abelian varieties. In his work connecting the modularity conjecture to Fermat's Last Theorem, Ribet needed to know some subtle facts about the exact nature of this decomposition of the Jacobian. I will explain what is now known about this decomposition, as well as what is not known. I will end with an arithmetic application (verification of some cases of a conjecture of E. Artin), but for most of the talk I will not assume too much arithmetic knowledge from the audience.

Tuesday, October 8
3:00 p.m.
MIT Room 4-370

<http://www-math.mit.edu/~jstarr/02sem/>.