

Arithmetic of Low-Dimensional Abelian Varieties

Simons Collaboration Lightning Talks

June 4, 2019

Division by 1 - ζ on superelliptic curves and jacobians

Vishal Arul, MIT

Serre weights and Kisin varieties in dimension three.

Eran Assaf, King's College London

Computing Coleman integrals on superelliptic curves

Alexander Best, Boston University

The Birch--Swinnerton-Dyer conjecture and Schur indices

Matthew Bisatt, University of Bristol

Wild Galois representations of elliptic curves

Nirvana Coppola, University of Bristol

Stratifications of Shimura Varieties in the Torelli Locus

Ravi Donepudi, University of Illinois, Urbana-Champaign

Restrictions on endomorphism rings of Jacobians

Pip Goodman, University of Bristol

Homogeneous Severi-Brauer varieties over Abelian varieties and theta groups

Nathan Grieve, Michigan State University

Databases of Rational Points

Sachi Hashimoto, Boston University

Number of points on simple abelian varieties over small fields

Borys Kadets, MIT

The p-adic integral geometry formula

Avi Kulkarni, Max Planck Institute for Mathematics in the Sciences

Computing abelian varieties over finite fields

Stefano Marseglia, Utrecht University

Minimal differentials on hyperelliptic curves

Simone Muselli, University of Bristol

L-functions of universal false elliptic curves over quaternionic Igusa curves.

Tung Nguyen, The University of Chicago

Computing model for genus 0 modular curves

Fnu Rakvi, Cornell University

Abelian Varieties in the L-functions and Modular Forms Database

David Roe, MIT

Examples of genuine QM surfaces which are modular

Ciaran Schembri, University of Sheffield

Computing Elliptic and Hyperelliptic Belyi Maps

Sam Schiavone, Dartmouth College

Non-monogenic Division Fields

Hanson Smith, University of Colorado Boulder

Conductors and minimal discriminants of hyperelliptic curves

Padmavathi Srinivasan, Georgia Tech/University of Georgia

Restriction of Scalars, Chabauty's Method, and $\mathbb{P}^1 \setminus \{0, 1, \infty\}$.

Nicholas Triantafillou, MIT/University of Georgia

How to compute a regulator (based on older work in PhD thesis) / hyperbolicity in families

Raymond van Bommel, Johannes Gutenberg-Universität Mainz

Perfectoid Covers of Abelian Varieties

Peter Wear, University of California, San Diego

K3 surfaces associated to Mumford's family of fourfolds

Yuwei Zhu, Brown University