

Speaker: Martin Djukanovic

Title: Split Jacobians with isogenous components

Abstract. I present a criterion for deciding when an N -isogeny between elliptic curves E and E' induces (n, n) -isogenies between $E \times E'$ and a Jacobian of a curve C of genus two, assuming the ground field is of characteristic zero and the two elliptic curves do not have complex multiplication. This explains the origin of some interesting families of genus-2 curves that have appeared in the literature and predicts many other such families in general. I also exhibit explicit families for $n = 2$ and $n = 3$.