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Jacobian variety decompositions

Jacobian varieties which can be factored into the product of elliptic curves have interesting applications to rank and torsion questions. Given a curve X with automorphism group G, idempotent relations in the group ring $\mathbb{Q}[G]$ lead to decompositions of the Jacobian of X. In this talk we discuss some recent results obtained from these techniques. Particularly, new computational advances and the study of intermediate covers allow us to determine these decompositions for curves in high genus, and we use that to find many new examples of completely decomposable Jacobians, including families of such curves.