

1102-11-134

Jennifer Paulhus* (paulhusj@grinnell.edu). *Decomposing Jacobian varieties.*

Jacobian varieties which have many elliptic curves as factors in their decompositions 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 explain techniques used to decompose these Jacobians if the monodromy of the covering $X \rightarrow X/G$ is known. We also discuss some recent results obtained from these techniques. Particularly, new computational advances allow us to determine these decompositions for curves in high genus, and we use that to find new examples of completely decomposable Jacobians. (Received July 26, 2014)