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Jennifer Paulhus* (paulhus@math.ksu.edu), Department of Mathematics, 138 Cardwell Hall, Kansas State University, Manhattan, KS 66506. *Decomposing Jacobian varieties using automorphism groups.*

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 $Q[G]$ lead to decompositions of the Jacobian of X . In this talk we briefly explain the techniques involved and some recent results obtained from these techniques. (Received August 22, 2009)