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**William Butske\*** (butske@rose-hulman.edu). *Sato-Tate Distributions for Genus 2 Curves.*

An abelian variety  $A$  has the structure of an abelian group and hence comes equipped with an endomorphism ring. A curve  $C$  can then be assigned a ring by considering the ring of endomorphisms of  $End(J(C))$ , where  $J(C)$  is the jacobian variety of  $C$ . We give computational results about the distribution of eigenvalues of Frobenius endomorphisms of  $J(C)$  as it relates to  $End(J(C))$  where  $C$  is a genus 2 curve. These results support a generalized version of the Sato-Tate Conjecture. (Received August 27, 2006)