NEGARIN MOHAMMADI, Simon Fraser University

Explicit Prym Constructions of $(1,2)$*-Polarized Abelian Surfaces*

The Prym variety associated to a bielliptic genus-3 double cover is an abelian surface with a natural polarization of type $(1,2)$. Barth proved that over an algebraically closed field, all $(1,2)$-polarized abelian surfaces can be realized in this way. Abelian surfaces with a $(1,2)$-polarization also arise as the quotient of a principally polarized abelian surface, for instance, a genus-2 Jacobian. We describe an explicit construction to express the surface as a bielliptic Prym over any field of characteristic not equal to 2, under some mild generality assumptions. This is joint work with Nils Bruin and Katrina Honigs.