1135-14-2964 **Thomas B Hill*** (thomasbhill@comcast.net), **Shantel Spatig** (shantel.black@aggiemail.usu.edu) and **Andreas Malmendier** (andreas.malmendier@usu.edu). *Relations Between Theta Functions in Genus One and Two from Geometry.*

Genus-two curves with special symmetries are related to pairs of genus-one curves by two and three-sheeted coverings. This classical work dates back to early 20th century and is known as Jacobi and Hermite reduction. In turn, Jacobians of genus-two curves can be used to construct complex two-dimensional algebraic manifolds known as Kummer surfaces. On the other hand, the defining coordinates and parameters of both elliptic curves and Kummer surfaces can also be understood as Theta functions of genus one and genus two, respectively. This result goes back to the seminal work of Mumford in the 1980s. We use the geometric relation between elliptic curves and Kummer surfaces to derive functional relations between Theta functions of genus one and genus two along Humbert varieties of low discriminant. (Received September 26, 2017)