

Counter-examples of high Clifford index to Prym-Torelli.

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Abstract

For an étale double cover of smooth curves, the Prym variety is essentially the “difference” between the jacobians of the two curves. The Torelli problem for the Prym map asks when two double covers have the same Prym variety. It is known that the Prym map from the moduli space of double covers of curves of genus g at least 7 to principally polarized abelian varieties of dimension $g-1$ is generically injective. Counter-examples to the injectivity of the Prym map were, up to now, given by Donagi’s tetragonal construction and by Verra’s construction for plane sextics. It was conjectured that all counter-examples are obtained from double covers of curves of Clifford index at most 3. I will discuss counter-examples to this conjecture constructed by myself and Herbert Lange.

*joint work with Herbert Lange.