

THEMATIC SESSION: Noves tendències en Geometria Algebraica

Cyclic coverings of curves of genus 2

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We consider unramified cyclic coverings of odd degree d of curves of genus 2. By a result of Lange and Ortega, it is known that the corresponding Prym map P_d has degree 10 for $d = 7$, and Albano and Pirola proved that the generic fibers of P_3 and P_5 are positive dimensional. Moreover, Agostini proved that P_d is generically finite for $d \geq 7$. In this talk I will report on a proof of the generic injectivity for P_d for d prime. Our method is based on the study of the isogeny type of the Prym variety and the computation of the theta dual variety of some distinguished curves.

This is a joint work with A. Ortega and I. Spelta.