

AUTOMORPHIC PARAMETRIZATION OF FERMAT CURVES

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The ground-breaking research on the parametrization of curves by meromorphic functions was conducted over the course of the 19th century. Nevertheless, there are not many examples of algebraic curves for which an explicit parametrization is known. We shall obtain an explicit parametrization of the Fermat curves $F_n : X^n + Y^n = Z^n$, for each $n \geq 4$, by means of an explicit construction of automorphic functions. The results are based in part on the description of each Riemann surface $F_n(\mathbb{C})$ as the quotient of the complex disk by a Fuchsian group Γ_n .

This is joint work with Jordi Guàrdia.

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