



COLOQUIO CRUZ DEL SUR

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(g, k) -Fermat Curves

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Resumen

Let S be a closed Riemann surface and let $\text{Aut}(S)$ be its group of conformal automorphisms.

We say that S is a (g, k) -Fermat curve, where $g, k \geq 2$ are integers, if there is a group $H < \text{Aut}(S)$, $H \cong \mathbb{Z}_k^{2g}$, acting freely on it, such that $R = S/H$ has genus g . In this case, we say that H is a (g, k) -Fermat group, that (S, H) is a (g, k) -Fermat pair and that S is a k -homology cover of R . By the Riemann-Hurwitz formula, S has genus $\gamma = 1 + k^{2g}(g - 1)$.

In this talk I will discuss some recent results concerning these types of Riemann surfaces.

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