

SEMINARIO DE GEOMETRÍA ALGEBRAICA

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Equivariant Saito duality and monodromy zeta functions
of dual invertible polynomials.

Resumen.

Saito duality is a duality between rational functions of the form $\phi(t) = \prod_{m|d} (1 - t^m)^{s_m}$ with a fixed positive integer d . The Saito dual of ϕ with respect to d is $\phi^*(t) = \prod_{m|d} (1 - t^{d/m})^{-s_m}$. Dual (in the sense of Arnold's strange duality) exceptional unimodular singularities have Saito dual characteristic polynomials of the classical monodromy operators (with d being the quasidegree of their quasihomogeneous representatives). Arnold's strange duality can be extended to so called invertible polynomials: polynomials in n variables containing n monomials and having an isolated critical point at the origin. For some pairs of dual polynomials roots of certain degrees of the monodromy transformations are Saito dual. It appears that this can be explained through an equivariant version of the Saito duality which can be regarded as a Fourier transformation on Burnside rings. The talk reflects joint results with W.Ebeling