Instituto de Matemáticas

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SEMINARIO

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"Orbifold zeta functions for dual invertible polynomials"

Abstract: An invertible polynomial in n variables is a quasihomogeneous polynomial consisting of n monomials so that the weights of the variables and the quasi-degree are well defined. In the framework of the construction of mirror symmetric orbifold Landau--Ginzburg models, P. Berglund, T. Hübsch and M. Henningson considered a pair (f,G) consisting of an invertible polynomial f and an abelian group G of its symmetries together with a dual pair (f˜,G˜). There were observed some symmetries between analytic and topological properties of f and f˜ and also between (f,G) and (f˜,G˜). The orbifold zeta function of a function-germ with a (finite) group of its symmetries codify all zeros and/or poles of the usual zeta function plus so called age (or fermion) shifts. It turns out that the (reduced) orbifold zeta functions of dual pairs (f,G) and (f˜,G˜) either coincide or are inverse to each other depending on the number n of variables.
The talk is based on a joint work with W. Ebeling.

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