

An algebraic formula for the index of a 1-form on a real quotient singularity

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Abstract

We consider a finite abelian group G acting (linearly) on real n -space and thus on its complexification, the complex n -space, and a real analytic 1-form invariant with respect to the action of G .

We give an algebraic formula for the radial index of this 1-form on the real part of the quotient of the complex n -space by G . It is shown that this index is equal to the signature of a certain quadratic form, generalizing the classical theorem of Eisenbud-Levine-Khimshiashvili.

This is joint work with Sabir Gusein-Zade.