SEMINARIO DE GEOMETRÍA ALGEBRAICA

Jueves 31 de enero de 2008, 13:00, Seminario 238

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Impartirá la conferencia

Stringy Hodge numbers for a class of strictly canonical non-degenerate singularities

Summary. In 1997, Batyrev defined the stringy E-function for complex algebraic varieties with Gorenstein canonical singularities. If the variety Y is projective and if the stringy E-function is a polynomial, then Batyrev defined the stringy Hodge numbers of Y , essentially as the coefficients of this polynomial. They satisfy analogous properties as usual Hodge numbers of smooth projective varieties and coincide with them for smooth Y . However, for singular Y it is from the definition not at all clear that they are nonnegative. This was conjectured by Batyrev. In this talk we first explain how to obtain the stringy E-function of a hypersurface from the motivic zeta function of Denef and Loeser. Then we describe a class of strictly canonical non-degenerate hypersurface singularities that give rise to a polynomial stringy E-function. Moreover, Batyrev's conjecture is true for projective varieties with such singularities.