



ΠΑΝΕΠΙΣΤΗΜΙΟ ΙΩΑΝΝΙΝΩΝ

ΤΜΗΜΑ ΜΑΘΗΜΑΤΙΚΩΝ



Εβδομαδιαίο Σεμινάριο

COMBINATORIAL CHARACTERIZATION OF THE WEIGHT MONOIDS OF SMOOTH AFFINE SPHERICAL VARIETIES

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Spherical varieties form a remarkable class of algebraic varieties equipped with an action of a complex reductive group G , which includes toric, flag and symmetric varieties. Smooth affine spherical varieties are the local models of multiplicity free (real) Hamiltonian manifolds.

A natural invariant of an affine spherical variety X is its weight monoid $\Gamma(X)$. It is the set of irreducible representations (or dominant weights) of G that occur in the coordinate ring of X , which is a multiplicity free G -module. In the 1990s F. Knop conjectured that it is a complete invariant for smooth affine spherical varieties, and in 2006 I. Losev proved this conjecture. I will discuss joint work with G. Pezzini in which we use the combinatorial theory of spherical varieties and a smoothness criterion of R. Camus to characterize the weight monoids of smooth affine spherical varieties.

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Μετά την ομιλία ακολουθεί καφές και συζήτηση στο εντευκτήριο του Τμήματος