

Seminari de Geometria Algebraica 2009/2010 (UB-UPC)

Divendres 16 d'octubre a les 15h. a l'aula T2

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## A refined Bernstein-Kušnirenko estimate

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A theorem of Kušnirenko and Bernštein (also known as BKK theorem) shows that the number of isolated solutions in a torus to a system of polynomial equations is bounded above by the mixed volume of the Newton polytopes of the given polynomials, and this upper bound is generically exact. We will present an improvement of this result based on refined combinatorial invariants of polynomials and a generalization of the mixed volume of convex bodies: the mixed integral of concave functions.

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