## SEMINARIO DE GEOMETRÍA ALGEBRAICA

## Jueves 24 de abril de 2008, 13:00, Seminario 238

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Impartirá la conferencia

## A refinement of the Berstein-Kushnirenko estimate

Summary: A theorem of Kushnirenko and Bernstein (also known as the 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 improve on this result by introducing refined combinatorial invariants of polynomials and a generalization of the mixed volume of convex bodies: the mixed integral of concave functions. The proof is based on new techniques and results from relative toric geometry.

Joint work with Patrice Philippon (Paris)