SEMINARIO DE GEOMETRÍA ALGEBRAICA Lunes 18 de febrero de 2008, 12:15, Seminario 238

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Impartirá la conferencia

Monomialization of polynomial mappings

Abstract: Morphism of algebraic varieties (such as $\mathbb{C}^n \to \mathbb{C}^m$) are locally represented as vectors of m polynomials in n variables. If the m polynomials are all monomials in coordinates of \mathbb{C}^n , then the morphism is called monomial.

Suppose that $f: X \to Y$ is a morphism of algebraic varieties. We discuss the problem of toroidalization; that is modifying X and Y by sequences of blow ups of non singular subvarieties $X_1 \to X$ and $Y_1 \to Y$ so that $f_1: X_1 \to Y_1$ becomes locally monomial (or toroidal). We discuss positive results, including our recent proof of toroidalization when X is a 3-fold.