

Seminari de Geometria Algebraica 2014/2015 (UB-UPC)

Divendres 20 de març a les 15 hs, aula B1 FM-UB

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## Affine plane curves with minimal discriminant

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Let  $k$  be a field of characteristic zero. We prove that the degree of the discriminant of a polynomial  $F \in k[x][y]$  is lower bounded by  $d - 1$  where  $d$  is the degree of  $F$  in the variable  $y$ . Thanks to the embedding line theorem of Abhyankar-Moh, we show that the set of *monic* polynomials with minimal discriminants coincide with the  $G$ -orbit of  $y$  where  $G$  is the group of polynomial automorphisms of the affine plane. Then, we will discuss the generalization of such a description to the case of non monic polynomials. This is a joint work with Denis Simon.

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