



FACULTAD DE CC.
MATEMÁTICAS

Curso avanzado



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Some problems and methods of Affine Algebraic Geometry

Descripción del curso: Affine Algebraic Geometry is the study of affine spaces A^n and of algebraic varieties which resemble A^n . The objective of these lectures is to give an introduction to this field by presenting some of its open problems and by developing some algebraic tools which are used for investigating these problems.

Programa:

- Overview of some famous open problems: The Cancellation Problem (Zariski), Characterizations of A^n , Automorphisms of automorphisms of A^n (Nagata), Embeddings of A^m in A^n and Recognition of variables.
- Algebraic tools. Basic theory of locally nilpotent derivations; Makar-Limanov invariant.
- Solution of the case $n = 2$ of the characterization and cancellation problems.
- Embeddings of A^m in A^n and recognition of variables: Abhyankar-Moh-Suzuki Theorem (case $(m,n)=(1,2)$) and Kaliman's Theorem (case $(m,n)=(2,3)$).

Fecha: Jueves 3, 10 y 17 de abril de 2008 de 15:00 a 17:00 horas.

Lugar: Seminario 238, Facultad de Ciencias Matemáticas, UCM.

El curso se organiza en colaboración con el Departamento de Álgebra.

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