



DEPARTAMENTO DE
GEOMETRÍA Y TOPOLOGÍA



GOBIERNO
DE ESPAÑA

MINISTERIO
DE CIENCIA
E INNOVACIÓN



Instituto de
Matemática
Interdisciplinar

Sistemas dinámicos y geometría: tres aproximaciones

Periodo de concentración 2009-2010

Serge Cantat
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“Holomorphic dynamics in several variables” (Part I)

Abstract:

Let f be a holomorphic transformation of a complex projective manifold M . What can be said on the dynamics of f ? Hodge theory and potential theory have been successfully used to study this question. I will survey some of the results in the simplest cases, namely holomorphic diffeomorphisms of surfaces, and a few specific examples of rational mappings.

PART I

First week: During the first week I shall explain some basic facts about holomorphic dynamics; the main goal is to describe how the dynamics is related to the action on the cohomology.

Wednesday 3: Examples of holomorphic transformations

Thursday 4: Entropy and Gromov's upper bound

Friday 5: Automorphisms of projective surfaces”

Second week: During the second week, I shall describe the classification of holomorphic diffeomorphisms of complex projective surfaces. The main ingredients come from algebraic geometry.

Last lecture of the first part we will provide more examples and/or introduce the lectures of March.

Organizado por el Departamento de Geometría y Topología, los Grupos de Investigación UCM “Geometría de las variedades proyectivas”, “Análisis funcional no-lineal en espacios Banach” y “Teoría de la forma y la dinámica topológica”; el Proyecto i-math, el Proyecto MTM2007-61124 y el IMI

**Febrero 2010: Miércoles 3, jueves 4, viernes 5, lunes 8,
miércoles 10, viernes 12 y lunes 15 de 15.30 a 17.30**

Seminario 225, Facultad de Ciencias Matemáticas, UCM