

SEMINARIO

Sistemas Dinámicos de Santiago Dynamical Day

Primera Sesión: 14:30 hrs.

Speaker: Mike Todd (University of St Andrews, United Kingdom).

Title: Phase transitions and limit laws.

Abstract: The ‘statistics’ of a dynamical system is the collection of statistical limit laws it satisfies. This starts with Birkhoff’s Ergodic Theorem, which is about averages of some observable along orbits: this is a pointwise result, for typical points for a given invariant measure. Then we can look for forms of Central Limit Theorem, Large Deviations and so on: these are about how averages fluctuate, globally, with respect to the invariant measure. In this talk, I’ll show how the form of the ‘pressure function’ for a dynamical system determines its statistical limit laws. This is particularly interesting when the system has slow mixing properties, or, even more extreme, in the null recurrent case (where the relevant invariant measure is infinite). I’ll start by introducing these ideas for simple interval maps with nice Gibbs measures and then indicate how this generalizes. This is joint work with Henk Bruin and Dalia Terhesiu.

Segunda Sesión: 15:45 hrs.

Speaker: Alejandro Kocsard (Universidade Federal Fluminense, Brazil).

Title: Cociclos sobre dinámicas hiperbólicas, exponentes de Lyapunov y aplicaciones.

Abstract: Las orbitas periódicas de los sistemas uniformemente hiperbólicos concentran gran parte de la información dinámica de los mismos. De esta forma, muchas veces es posible estudiar diversas propiedades de cociclos sobre estos sistemas (e.g. exponentes de Lyapunov) observando tan sólo lo que sucede sobre las órbitas periódicas. En esta charla discutiremos los alcances y limitaciones de este enfoque y algunas aplicaciones.

Tercera Sesión: 16:50 hrs.

Speaker: Alexis Moraga (Pontificia Universidad católica de Chile).

Title: Cohomology Equation for isometries of Gromov Hyperbolic spaces.

Abstract: Thesis defense.

LOCATION: PUC, Auditorio Bralic, Facultad de Matemáticas, Av. Vicuña Mackenna 4860, Macul, La Florida.

ANNOUNCEMENT http://www.sistemasdinamicos.cl/conferences/dynamicalday2_2018