

Conferencia

SANTALÓ 2014

La *Facultad de Ciencias Matemáticas* y la *Revista Matemática Complutense* patrocinan la conferencia anual Santaló, impartida cada año por un profesor de reconocido prestigio. Esta conferencia marca el inicio de la actividad docente e investigadora de la Facultad en cada año académico. El conferenciante de este año es:

Lajos Horváth

University of Utah

Statistical Inference from Curves

Functional data analysis is concerned with observations which are viewed as functions defined over some set. For example, a satellite image processed to show surface temperature may be modeled as a function defined on a subset of a sphere. Other examples include price curves derived from high trade volume stocks, readings from physical instruments, including magnetometers and spectrometers, and energy usage in a given city, just to name a few. This presentation describes how Hilbert space theory can be combined with statistical principles to analyze random curves. A detailed account of projection based methods (principle component analysis) and fully functional techniques is given, and their properties are compared. In many cases, for example in most financial applications, functional data objects are obtained by breaking continuous records into shorter hourly or daily curves which gives rise to the study of functional time series. The long run covariance operator and its estimates, which play a crucial role in the analysis of dependent curves, are introduced and it is explained how the choice of the estimator can greatly affect the power of statistical procedures. The talk is illustrated by several real life examples.

JUEVES, 16 DE OCTUBRE DE 2014 — 13:00 HORAS
AULA S-118 "MIGUEL DE GUZMÁN"
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