



Departamento
de Matemática
Aplicada



CURSO DE DOCTORADO

Doctorado de Investigación Matemática—UCM
Mención hacia la excelencia MEE2011-0021
Doctorado en Ingeniería Matemática, Estadística e
Investigación Operativa—UCM

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Data Assimilation: a global approach for geophysical flows

Predicting the evolution equation of geophysical flows: atmosphere, oceans, continental water is of great importance for societal purposes. All these flows are governed by non linear partial differential equations deduced from laws of conservation. The forecast is based on the integration of these equation: it's the Cauchy's problem. Therefore it's necessary to provide an initial condition it should be deduced from the various observations of the Earth. Determining an "optimal" initial condition is known as the problem of Data Assimilation.

In this courses we will present the methods based on Calculus of Variations or Optimal Control. The courses will be divided into several parts:

- Introduction to Data Assimilation
- Optimization and Control for DA.
- Propagation of errors and uncertainties
- Second order methods
- Sensitivity analysis and evaluation of covariances
- Applications in hydrology : sedimentation and infiltration
- Assimilation of Images

Organizado por el IMI y el Departamento de Matemática Aplicada,
con la colaboración del grupo UCM MOMAT

Fecha: días 15, 16, 17 y 18 de noviembre de 2016
Horario: 15:00 a 17:05 horas
Lugar: Aula 209 (Seminario Alberto Dou)
Facultad de CC Matemáticas, UCM