

Actividades Formativas IMEIO/ Educational Activities IMEIO

Título/Title: An introduction to control and inverse problems for partial differential equations

Organizador/Organizer: Fabricio Macia (fabricio.macia@upm.es)

Profesores/Lecturers: Juan A. Barceló, Carlos Castro, Fabricio Macia, Cristóbal J. Meroño

Horas totales/Number of hours: 16

Lugar/Location: ETSI Caminos

Fechas/Dates: January/February 2022 (tentative)

Resumen/Summary: This course is an introduction to inverse and control problems for Partial Differential Equations (PDE) arising in Mathematical Physics, both from an analytical and numerical point of view. The non-standard background on Functional and Real Analysis and PDE will be presented throughout the lectures. The tentative program is:

- An introduction to inverse problems for PDE (C.J. Meroño).
- Scattering problems for Waves and Elasticity (J.A. Barceló)
- An introduction to distributed control problems and their Numerical Approximation (C. Castro)
- Control problems for dispersive PDE: a geometric approach. (F. Macia)

**¿Aceptarías que el curso se pudiera emitir por videoconferencia restringido a algunos alumnos del doctorado que no pudieran asistir presencialmente?
Would you accept that the course could be given by videoconference restricted to some doctoral students who could not attend in person? No**