DEPARTAMENTO DE MATEMÁTICA APLICADA

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Convergence analysis of local time discretization for wave equations

In this talk we present and analyze a time discretization strategy for linear wave propagation that aims at using locally in space the most adapted time discretization among a family of implicit or explicit centered second order schemes. The domain of interest being decomposed into several regions, different time discretization can be chosen depending on the local properties of the spatial discretization (mesh size and quality, order of the finite elements) or the physical parameters (high wave speed, low density). We show that, under some conditions on the time step, the family of time discretization obtained combined with standard high order finite element method ensures second order convergence in time and space.

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Lugar	Aula Magna - Facultad de Matemáticas
Hora	11:00
Idioma	Inglés

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