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El Departamento de Matemática y Física Aplicadas tiene
el agrado de invitar al seminario

Adaptive numerical strategies for the Darcy-Forchheimer model in porous media

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Fluid flow through porous media plays a central role in a wide range of scientific and engineering applications. The Darcy-Forchheimer model provides an accurate description of flow regimes where inertial effects become significant, typically at moderate to high velocities.

In this talk, I will present two adaptive numerical strategies based on the model's primal-mixed and dual-mixed formulations. Both approaches rely on reliable a posteriori error estimators to guide mesh refinement and improve computational efficiency.

I will show numerical experiments to assess the performance of the proposed methods. In addition, I will present a validation against data from a real-world wood-drying application, highlighting its practical relevance and predictive capability.

This is joint work with Frédéric Hecht (Sorbonne Université) and Hiram Varela (Universidade da Coruña).

Martes 24 de Marzo 2026, 16:00 hrs.
Auditorio San Agustín (Facultad de Ingeniería)

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