

V Annual Meeting of the Spanish Chapter

The V annual meeting and Spanish InterPore Chapter was held at the Red Cube of the Polytechnic City of Innovation, Technical University of Valencia Valencia on November 18th, 2024. The meeting featured two invited speakers Lluís Marsal (URV) who talked about *"Porous anodic alumina development and structural engineering"* and Pilar Bosch Roig (UPV) who presented her research *"New treatments to protect our cultural heritage: probiotics and antibiotics"*. The meeting also hosted the 2024 Kimberly-Clark Distinguished Lecture *"Fluids, fingers, fractures and fractals: Patterns in porous media"* given by Rubén Juanes. The scientific program was completed with four contributed talks from Daniel Dominguez-Vazquez, Douglas Moser, Eike Thaysen and Adrián López, and a poster session with thirteen presenters. Talks and posters addressed a variety of topics including the preservation of artistic heritage, hydrogen storage, the development of nanotechnology-based sensors, multiphase flow and reactive transport. The workshop provided a forum for knowledge exchange and creating new links between over 30 attendees from different porous media disciplines from academia and industry.

During the afternoon, the Spain Interpore Chapter General Assembly was held. The steering committee summarized last year activities and discussed future plans with the members. The chapter's Newsletter and [LinkedIN page](#) were presented. The next annual meeting will be held in Madrid in the fall of 2025.

V Annual Meeting Gallery





SCIENTIFIC PROGRAM

V Jornada del Capítulo Español de InterPore

Block 1.

Nuevos tratamientos para proteger nuestro Patrimonio Cultural: probióticos y antibióticos naturales. Pilar Bosch Roig. (Conferencia invitada.)

A deterministic description of mixing in Lagrangian form. Daniel Domínguez-Vázquez.

Advances in dam monitoring using distributed fiber optic sensors. Douglas Moser.

Porous anodic alumina development and structural engineering. Lluís Marsal. (Conferencia invitada.)

Block 2.

Fluids, fingers, fractures and fractals: Patterns in porous media. Rubén Juanes. Kimberley-Clark Distinguished Lecturer 2024.

Time-resolved 2D and 3D imaging of two-phase Hydrogen and brine injection into porous Clashach sandstone. Eike Thaysen.

Dispersion in non-linear flow through heterogeneous networks. Marco Dentz.

DAT4GM - Un módulo en Python para implementar modelos de transporte reactivo en COMSOL Multiphysics. Adrián López.

Posters.

- Thermo-hydro-mechanical modeling of lower-dimensional fractures in porous media. Sandro Andrés.

- The role of geomechanical heterogeneity in determining reservoir's friction coefficients. José Bastias

- Simulation of unsaturated flow and transport in soils using FENICS. Yajaira Castillo Gonzales.

- Simulación de flujos multifase en medios porosos mediante las ecuaciones isoterma de Navier-Stokes-Korteweg utilizando ecuaciones de estado que preservan la tensión superficial correcta. Javier Fernández-Fidalgo.

- Spreading and mixing of hydrogen in heterogeneous porous media. Alejandro Fernández Visentini.

- Hydro-Chemo-Mechanical simulations of an engineered concrete barrier in a deep geological repository for nuclear waste. Sebastián González Fuentes.

- Stochastic modeling of bacterial transport and retention in porous media. Juan J. Hidalgo

- Upscaling the migration of a dissolving CO gravity current in horizontally stratified porous media. Albert Jiménez-Ramos.
- Sustainable water storage and distribution in the Mediterranean (OurMED). Rafael Magnabosco.
- Direct numerical simulations of karst conduits. Ismail El Mellas.
- Pressure-saturation hysteresis in porous media. Animesh Nepal.
- Diffusion-limited reactions in fractured media. Eugenio Pescimoro.
- An improved scheme for the finite difference approximation of the advective term in the heat or solute transport equations. Jordi Petchame.