

Parallel Sessions P2 (Wednesday, 4th Sept.)

	Session 1 (Location: Auditorium)	Session 2 (Location: Acts room)	Session 3 (Location: Senate room)
	TS1-2: "Composites modelling: characterization, behaviour and structures" <i>L. A. Távara, V. Mantic</i>	Other topics in Numerical Methods in Engineering-2-2 <i>Chair: Hugo Rodrigues</i>	TS5-2: "Computational engineering empowered by model order reduction and machine learning" <i>F. Chinesta, E. Cueto, A. Huerta</i>
15:00	Non-linear computational modeling of multilayered bending plates: The 2D+ multiscale approach Pablo Wierna, Daniel Yago, Oriol Lloberas-Valls, Alfredo Huespe, Javier Oliver <i>Oriol Lloberas-Valls</i>	Predicting failure of structures with second-order homogenisation and non-local damage models Guilherme Fonseca Gonçalves, Igor André Rodrigues Lopes, Francisco Manuel Andrade Pires <i>Guilherme Fonseca Gonçalves</i>	Preconditioning iterative solvers via reduced-order modelling for the simulation of lattice structures Raul Rubio, Alex Ferrer, Joaquin Alberto Hernandez <i>Raul Rubio</i>
15:15	Embedded structures in continua David Portillo, Guanfeng Zhang, Wenjie Xie, Ignacio Romero <i>David Portillo</i>	A proposal of a numerical tool to design traditional timber pavements during inspection – A contribution Filipe Silva, Jorge Pinto <i>Jorge Pinto</i>	Recent advances in Thermodynamics-informed Graph Neural Networks Carlos Bermejo-Barbanoj, Alicia Tierz, Mikel Martínez, Pedro Martins, Pau Urdeix, Francisco Chinesta, Elías Cueto <i>Carlos Bermejo-Barbanoj</i>
15:30	Strain-gradient-plasticity for epoxy resins in micro-scale models of fibre-reinforced composites Igor A. Rodrigues Lopes, Nathan Klavzer, Carolina Furtado, Francisco M. Andrade Pires, Pedro P. Camanho, Thomas Pardoën <i>Igor A. Rodrigues Lopes</i>	Análisis de Estabilidad de Cavernas de Sal en Formaciones Salinas Estratificadas para el Almacenamiento de Hidrógeno Verde Andrés Soage, Fermín Navarrina, Ruben Juanes, José París, Ignasi Colominas, Luis Cueto-Felgueroso <i>Andrés Soage</i>	Thermodynamics-informed Graph Neural Networks for Flow Estimation around Arbitrary Geometries Carlos Bermejo-Barbanoj, Alberto Badías, David González, Francisco Chinesta, Elías Cueto <i>Carlos Bermejo-Barbanoj</i>
15:45	Nuevo elemento singular para grietas en las interfases de tipo Winkler. Aplicación a grietas de interfase en composites Luis Távara, Alberto Vázquez, Mar Muñoz-Reja, Vladislav Mantic <i>Luis Távara</i>	Variational methods for the simulation of hydrogen transport in metals Eva M. Andrés, Ignacio Romero, Javier Segurado <i>Eva M. Andrés</i>	Physics-based training-set enrichment for the POD formulation of the incompressible Navier-Stokes equations Alba Muixí, Sergio Zlotnik, Matteo Giacomini, Pedro Díez <i>Alba Muixí</i>
16:00	Phase-field damage models via homogenization Gerard Villalta, Àlex Ferrer, Fermín Otero <i>Gerard Villalta</i>	Análise numérica sobre o impacto das propriedades viscoelásticas na deflexão de painéis de vidro laminados simplesmente apoiados e agraçados Hugo Delgado, Sandra Jordão, Carlos Rebelo <i>Hugo Delgado</i>	Thermodynamics informed Graph Neural Networks for domain dependent problems Alicia Tierz, Iciar Alfaro, David Gonzalez, Francisco Chinesta, Elías Cueto <i>Alicia Tierz</i>
16:15	Algoritmo para la predicción de la delaminación dinámica en composites utilizando el Principio de Mínima Energía Total sujeto a una condición de Tensión Mar Muñoz-Reja, Roman Vodička, Luis Távara, Vladislav Mantic <i>Mar Muñoz-Reja</i>		Accuracy assessment of a Reduced Order Model for the evaluation of collapse risk in metastatic vertebrae Blai Gandía Vañó, F.X. Garcia-Andrés, E. Arana, E. Nadal, José Manuel Navarro-Jiménez, J.J. Ródenas <i>J.J. Ródenas</i>