

Computational Methods in Multi-scale, Multi-uncertainty and Multi-physics Problems



September 11th

08h00	Registration		
08h50	Welcome Remarks		
09h00	Plenary Session 1 _Prof. Francisco Chinesta_ <i>Bridging time and space scales and physics within the physics-based and data-driven hybrid paradigm</i> @Auditorium		
10h00	Coffee Break		
	Auditorium	Room A	Room B
	Session Chairman @ Auditorium : Chenfeng Li	Session Chairman @Room A: Alexander Hermann	Session Chairman @Room B: Israr Uddin
10h20	1.1_1_ Boyang Chen _Solving Multiphase Flow Problems using Intelligent Finite Element Methods_ Imperial College London_#258	1.1_7_ Alexander Hermann _Multi-Adaptive Framework for Computational Efficiency in Peridynamic Modeling: Applications in Material Science_ Helmholtz Zentrum Hereon_#232	1.1_13_ Guilherme F Gonçalves _Automatic Identification of Macroscopic Constitutive Parameters for Polycrystalline Materials based on Computational Homogenisation#291
10h40	1.1_2_ Loïc Chaix _Homogenized descriptions for the elastoplastic response of polycrystalline solids: mean-field approximations vs. full-field simulations for neutron-irradiated bainitic steel_ IRSN_#254	1.1_8_ Dun Li _A Constitutive Formulation for Styrene-Based Shape Memory Polymers That Incorporates the Mullins Effect_ Harbin Institute of Technology, Shenzhen_#229	1.1_14_ Tutku Ilgin Özcan _Investigation of Frictional Sliding Behavior of Rough Surfaces using Maxwell-slip Model_ METU_#285
11h00	1.1_3_ Qinghua Zhang _Model order reduction for thermo-mechanically coupled multiphysics simulations including damage_ RWTH Aachen_#218	1.1_9_ Fernando Alves Rochinha _An Auto-Regressive Deep Learning for Investigating Error Model in Computational Simulation of Contaminant Transport_ Universidade Federal do Rio de Janeiro_#280	1.1_15_ Yi Je Cho _Multiscale modeling of graphite oxidation in water ingress accidents of high temperature gas-cooled reactors_ Suncheon National University_#239
11h20	1.1_4_ Renato Zona _Dislocation-based finite element method for homogenized limit domain characterization of porous media and structured metamaterials_ Università della Campania Vanvitelli_#272	1.1_10_ Kwan Zhi Teh _Tri-phase Simulation of Cavitating Flow with Discrete Particles_ Rolls-Royce@NTU Corporate Laboratory_#241	1.1_16_ Israr Uddin _Multi-scale effective elastic properties homogenization and finite element simulation of origami-inspired foldable structures_ Khalifa University_#249
11h40	1.1_5_ Stephen Dixon _PTritium transport in multi-physics modelling of large scale components for nuclear fusion using the MOOSE finite element framework_ UKAEA_#253	1.1_11_ Samy Abu-Salih _Explicit Formulation of Adiabatic Viscoplastic Johnson-Cook Type Constitutive Models_ Braude College of Engineering_#220	1.1_17_ Lei Gan _On the integration of domain knowledge and branching neural network for fatigue life prediction with small samples_ Harbin Institute of Technology, Shenzhen_#244
12h00	1.1_6_ Shahed Rezaei _Application of Physics-Informed Neural Networks for Multiphysics Problems and Nonlinear Constitutive Material Behavior in Solids_ Access Technology_#255	1.1_12_ Issam Doghri _Multiscale modeling approaches for nonlinear porous thermoplastic polymers_ Université catholique de Louvain_#267	1.1_18_ Chenyi Luo _Phase-field modelling for drying-induced cracks: from homogeneous to localized damage_ ETH Zurich_#246
12h20	Lunch Break		
14h00	Plenary Session 2 Prof. Esteban Busso_ <i>A Novel Continuous Dislocation Density Field-Based Crystal Plasticity Approach: Application of Dislocation Pile-up and Boundary Layer Problems</i> @Auditorium		
	Auditorium	Room A	Room B
15h00	1.2_19_ Xiangyun Ge _Microstructure reconstruction using physics-aware multiscale VAE_ Swansea University_#221	1.2_20_ Carlos Felipe Guzman _Study on the Influence of Carbon Nanotubes on the Mechanical Behavior of a Cementitious Matrix Using a Multiscale Homogenization approach_ University of Santiago_#260	1.2_21_ Grzegorz Ziółkowski _Modeling of partially oriented spring-exchange magnetic composites_ University of Silesia_#250
15h30	Departure from de the Conference Venue Bus Circuit Around Porto		
16h45	Visit to Port Wine Cellars & Port Wine Tasting		