

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



12th September

09h00	Plenary Session 3, Prof. Peter Wriggers <i>Virtual Elements for Multi-Physics Problems with Application to Homogenization @Auditorium</i>		
10h00	Coffee Break		
	Auditorium	Room A	Room B
	Session Chairman@ Auditorium: Anna Majtyka-Pilat	Session Chairman@Room A: Francisco Pires	Session Chairman@Room B: Henar Herrero
10h20	2.1.1 Alberto Carmine Dadduzio , <i>A novel three-dimensional dual-scale method for contact mechanics problems</i> , University of Padua_#274	2.1.6 Lucia Nicola , <i>Modeling plastic deformation and wear in contact problems by means of a multi-scale approach</i> , University of Padova_#277	2.2.33 Antonis Marousis , <i>A Multicomponent Transversely Isotropic Viscoelastic Model for Vascular Smooth Muscle Cells: The contribution of actin filaments and microtubules</i> , University Of Patras_#256
10h40	2.1.2 Jundong Yin , <i>Experimental and micromechanical modelling studies of the precipitate size effect on the creep response of P91 martensitic steels</i> , #216	2.1.7 Sergio J. Yanez , <i>Modeling of High Strain Rate Effects on the Mechanical Behavior of Concrete Using Smooth Particle Hydrodynamics</i> , Universidad de Santiago de Chile_#279	2.1.12 Tom Mitchell , <i>Modelling the Impact of Insufficient Base Cleaning on Fresh Concrete Flow within Bored Piles using CFD</i> , Swansea University_#225
11h00	2.1.3 Anna Majtyka-Pilat , <i>DFT investigation of the structure, elastic and optical properties of mineral gatranaït</i> , University of Silesia_#292	2.1.8 Lifeng Gan , <i>Multi-Scale Modelling and Characterization of Heterogenous Deformation in Austenitic Stainless Steel Welded Joints at Different Temperatures</i> , Harbin Institute of Technology, Shenzhen_#222	2.1.13 Henar Herrero , <i>A Schwarz alternating collocation method for turbulent Rayleigh-Bénard</i> , Universidad de Castilla-La Mancha_#231
11h20	2.1.4 Farshid Mossaiby , <i>Modular Supercomputing for High-Performance Simulation of Diblock Copolymer and Solvent Mixtures</i> , Helmholtz-Zentrum Hereon_#278	2.1.9 Maximilian Kannapinn , <i>Data-driven Derivation of Digital Twins from Conjugate, Multi-phase Food Processing Models</i> , Technical University of Darmstadt_#283	2.1.14 Shan Zhong , <i>Investigating and predicting the permeability of porous media under compression</i> , Swansea University_#223
11h40	2.1.5 Yannis Dimakopoulos , <i>A Multiphase Finite Element Poro-Viscoelastic Model for Soft Biological Cells</i> , University Of Patras_#257	2.1.10 Arman Shojaei , <i>Peridynamic Elastic Wave Propagation in Infinite 2D Domains: Designing Nonlocal Dirichlet-Type Absorbing Boundary</i> , Helmholtz-Zentrum Hereon_#233	2.1.15 Francisca Alves , <i>On the modeling of particle cavitation in rubber-toughened amorphous polymers</i> , Faculdade de Engenharia da Universidade do Porto_#275
12h00	2.2.21 Juan Carlos Pina , <i>Investigation into the hygro-viscoelastic properties of fibre Reinforced polymer composites via an asymptotic homogenization approach</i> , Universidad de Santiago de Chile_#273	2.2.22 Rolf Dietrich Mahnken , <i>Downwind and upwind approximations for model adaptivity of heterogeneous media</i> , Paderborn University_#228	2.1.16 EMRE CENK ERSAN , <i>Comparison of Hemodynamic Characteristics of Localized Aortic Valve Calcifications under Uniform and Helical LVOT Flows</i> , ISTANBUL TECHNICAL UNIVERSITY_#240
12h20	Lunch Break		
14h00	Plenary Session 5, Prof. Zhuo Zhuang <i>Data-driving and mechanics modeling for defect bone reconstruction @Auditorium</i>		
15h00	Plenary Session 4, Doctor Ricardo Lebensohn <i>FFT-based methods for modelling and data reduction of micromechanical experiments performed by advanced characterization techniques @Auditorium</i>		
16h00	Coffee Break		
	Auditorium	Room A	Room B
	Session Chairman @ Auditorium: Mikhail Itskov	Session Chairman @Room A: Artur Chrobak	Session Chairman @Room B: Masoud Ahmadi
16h20	2.2.16 Mikhail Itskov , <i>Data-driven constitutive modeling with symbolic regression</i> , RWTH Aachen University_#224	2.2.23 Artur Chrobak , <i>Thermodynamic equilibrium of large scale Monte Carlo magnetic simulations</i> , University of Silesia_#266	2.2.28 Christian Peco , <i>Unleashing Emergent Behavior: from Slime Molds to Swarm Robotics</i> , Penn State University_#264
16h40	2.2.17 Ivan A Gonzalez , <i>A numerical model for heat transfer coefficient in flow boiling and condensation in a horizontal straight tube with zeotropic mixtures</i> , Universidad Tecnica Federico Santa Maria_#293	2.2.24 Linfeng Li , <i>A DG-FEM Method for Fluid-structure Interaction Using Machine Learning Package</i> , Imperial College London_#245	2.2.29 Masoud Ahmadi , <i>Computational Homogenisation of CNT Reinforced Nanocomposite Undergoing Large Deformation Considering Different Periodic Boundary Conditions</i> , University of Glasgow_#295
17h00	2.2.18 Kai Wang , <i>Multiphase flow coupled modelling in deformable dual-porosity media: theoretical derivation and numerical case</i> , University of Leeds_#281	2.2.25 Honghan Du , <i>Physics informed neural network for solution of multispecies contaminant transport with variable parameters</i> , Tianjin University_#284	2.2.30 Yixin Li , <i>Physics-informed neural network for diffusion wave problem</i> , Tianjin University_#282
17h20	2.2.19 Shuai Shu , <i>A Case Study to Validate Drag Models by ANSYS Fluent and CFD-DEM Simulation</i> , Swansea University_#235	2.2.26 Katarzyna Halina Filipecka-Szymczyk , <i>Structural properties of azopolymers for optoelectronic applications</i> , Jan Dlugosz University_#294	2.2.31 Tiago Silva Sabino , <i>Solving Adhesive Contact Problems based on a Primal-Dual Active Set Strategy</i> , Faculty of Engineering of University of Porto_#297
17h40	2.2.20 Yanpeng Gong , <i>A Finite Element-Boundary Element Coupling Method for Elastoplastic Analysis of Multiscale Structures in Electronic Packaging</i> , Leibniz Universitat Hannover_#234	2.2.27 Laura Moreno Corrales , <i>Crossing scales in constitutive modeling of damage in elastomers</i> , ETSIAE, Universidad Politécnica de Madrid_#265	2.2.32 José L. P. Vila-Chã , <i>A Laminate-based Model for Semi-crystalline Polymers</i> , Faculty of Engineering of University of Porto_#298
18h00	2.2.34 Sarika S Bangar , <i>Viscoelastic Drop Breakup in Cross Flow: A Numerical Study</i> , Indian Institute of Science Bangalore_#287	2.2.35 Thota Srinivas , <i>Effect of density ratio on the concentration wave in a dusty vortex</i> , Indian Institute of Science Bengaluru_#286	2.1.11 Rui Coelho , <i>On the Validation of Models for TRIP Steels with Bayesian-based Parameter Identification</i> , Faculty of Engineering of the University of Porto_#276
18h20	2.2.36 Surya R. Kalidindi , <i>Accelerated development of materials using high-throughput strategies and AI/ML</i> , Georgia Institute of Technology, Atlanta USA_#268		
18h40			
	Departure from Conference Venue		
19h00	Conference Dinner @ Casa da Música		