

## lundi 4 juillet 2022

HEURES	ÉVÉNEMENT
08:00 - 09:00	Accueil / Registration - Accueil et enregistrement des participants
09:00 - 10:00	Discours introductifs (Room "Manon" (New Hotel of Marseille)) - P. Rossi, C. Le Quéré(AFGC), A. Sellier(AUGC), D. Ciancio(RILEM)
10:00 - 10:30	Pause café (Bar (New Hotel of Marseille))
10:30 - 11:00	Session plénière (Room "Manon" (New Hotel of Marseille)) - Chairman: P. Rossi
10:30 - 11:00	› Contribution of rib-scale modelling to study the bond mechanisms of reinforcement in UHPFRC - <i>Bruno Massicotte, Polytechnique Montréal</i>
11:00 - 12:40	Conférences invitées (Room "Manon" (New Hotel of Marseille)) - Chairman: M. di Prisco
11:00 - 11:25	› Relevance of behavior laws of homogenized reinforced concrete in the context of finite elements of different sizes - <i>Alain Sellier, LMDC, Université de Toulouse, INSA/UPS Génie Civil, 135 Avenue de Rangueil, 31077 Toulouse cedex 04</i>
11:25 - 11:50	› Numerical Model for Explosive Spalling of High-Strength Concrete and Carbonation during and after Fire Exposure - <i>Keitai Iwama, Yokohama National University</i>
11:50 - 12:15	› Multi-physical simulation of concrete hydraulic facilities affected by alkali-aggregate reaction: from material to structure - <i>Mahdi Ben Ftima, École Polytechnique de Montréal</i>
12:15 - 12:40	› Design Optimization of Concrete Railway Tracks by Using Non-Linear Finite Element Analysis - <i>Jean-Louis Tailhan, Université Gustave Eiffel</i>
12:40 - 14:40	Déjeuner (Restaurant (New Hotel of Marseille))
14:40 - 16:00	Session normale (Room "Manon" (New Hotel of Marseille)) - Chairman: M. Briffaut
14:40 - 14:55	› Fuzzy logic-based approach for the uncertainty modelling in cementitious materials - <i>Philipp Kunz, Technische Universität Dresden = Dresden University of Technology (remotely), Antonio Cibelli, Politecnico di Milano [Milan]</i>
14:55 - 15:10	› Modelling the nonlinear seismic performance of bridge piers - <i>Bruno Massicotte - Polytechnique Montréal</i>
15:10 - 15:25	› Long term prediction of the delayed behavior of concrete structures – The case of the Vercors mock-up of a nuclear containment - <i>Jean Michel Torrenti - department Materials and Structures</i>
15:25 - 15:40	› Numerical and Experimental Evaluation of Multi-Ion Kinetics Associated with Macro-Cell Corrosion by Pseudo-Concrete - <i>Zhao Wang - Yokohama National University</i>
15:40 - 15:55	› Numerical and experimental investigation of wall effect in concrete - <i>Takwa sayari, Fire Test Center of CERIB (Centre d'Etude et de Recherche de l'Industrie de Béton), Epernon, Université Paris-Saclay, ENS Paris-Saclay, CNRS, LMT - Laboratoire de Mécanique et Technologie, 91190, Gif-sur-Yvette</i>
16:00 - 16:30	Pause café (Bar (New Hotel of Marseille))
16:30 - 17:30	Session normale (Room "Manon" (New Hotel of Marseille)) - Chairman: E. Schlangen
16:30 - 16:45	› Numerical modeling of water transport in Ultra-High-Performance Fiber-Reinforced Concrete - <i>David Conciatori, Université Laval</i>
16:45 - 17:00	› Modeling C-S-H sorption at the molecular scale: effective interactions, stability and cavitation - <i>Fatima masara, Ecole Normale Supérieure Paris-Saclay</i>
17:00 - 17:15	› Artificial Neural Network-based methodology for optimization of low-cost green UHPFRC under ductility requirements - <i>Joaquin Abellan-Garcia, Universidad del Norte</i>

17:15 - 17:30	› A Three-Dimensional Coupled Probabilistic Lattice Model Approach to Corrosion Induced Crack Modelling in Reinforced Concrete to Optimize for Sustainability - <i>Melissa Zirps, Stanford University</i>
17:30 - 17:40	Pause (Room "Manon" (New Hotel of Marseille))
17:40 - 18:05	Conférences invitées (Room "Manon" (New Hotel of Marseille)) - Chairman: E. Schlangen
17:40 - 18:05	› Discrete models of structural concrete: discretization strategies - <i>John Bolander - University of California, Davis (remotely)</i>
19:00 - 20:30	Cocktail (Restaurant (New Hotel of Marseille))

## mardi 5 juillet 2022

HEURES	ÉVÉNEMENT
09:00 - 09:30	Session plénière (Room "Manon" (New Hotel of Marseille)) - Chairman: A. Sellier
09:00 - 09:30	› Assessing 3D concrete structures at ULS with robust numerical methods - <i>Xavier Cespedes, Strains</i>
09:30 - 10:20	Conférences invitées (Room "Manon" (New Hotel of Marseille)) - Chairman: J.W. Bullard
09:30 - 09:55	› Numerical modeling of new conceptions of 3D printed concrete structures for Pumped Storage Hydropower - <i>Eduardo Fairbairn, COPPE - Instituto Alberto Luiz Coimbra de Pós-Graduação e Pesquisa de Engenharia</i>
09:55 - 10:20	› Deterioration mechanism of dam concrete caused by alkali-aggregate reaction: a numerical investigation based on meso-scale modeling - <i>Jianwen Pan, Tsinghua University (remotely)</i>
10:20 - 10:50	Pause café (Bar (New Hotel of Marseille))
10:50 - 12:30	Conférences invitées (Room "Manon" (New Hotel of Marseille)) - Chairman: B. Massicotte
10:50 - 11:15	› HPC Finite Element Solvers for Structural Scale Simulations Using Phase-Field Models for Fracture in Solids - <i>Giuseppe Rastello, Université Paris-Saclay, CEA, Service d'études mécaniques et thermiques, 91191, Gif-sur-Yvette, France</i>
11:15 - 11:40	› The influence of autogenous shrinkage and creep on the risk of early age cracking - <i>Erik Schlangen, Delft University of Technology</i>
11:40 - 12:05	› Digital twin for modelling of structural durability - <i>Jan Cervenka, Cervenka Consulting s.r.o., Cervenka consulting</i>
12:05 - 12:30	› Toward a Material Agnostic Model of Microstructure Hydration and Deterioration in Concrete - <i>Jeffrey Bullard, Texas A&amp;M University</i>
12:30 - 14:30	Déjeuner (Restaurant (New Hotel of Marseille))
14:30 - 15:20	Conférences invitées (Room "Manon" (New Hotel of Marseille)) - Chairman: J.-L. Tailhan
14:30 - 14:55	› Integrating Hybrid Reinforced Concrete Technology and Advanced FEM-Based Numerical Modelling for Crack Control in Long Concrete Foundations without Joints - <i>Joaquim Barros, University of Minho</i>
14:55 - 15:20	› Virtual design laboratory for sustainable fiber reinforced concrete structures: From discrete fibers to structural optimization under uncertainty - <i>Günther Meschke, Institute for Structural Mechanics, Ruhr-University Bochum</i>
15:20 - 16:05	Session normale (Room "Manon" (New Hotel of Marseille)) - Chairman: E. Fairbairn
15:20 - 15:35	› Predicting early age temperature evolution in massive structures from non-standard characterization test - <i>Arnaud Delaplace, Holcim Innovation Center</i>

15:35 - 15:50	› Bayesian Inverse Modelling of Early-Age Stress Evolution in GGBFS Concrete Due to Autogenous Deformation and Aging Creep - <i>Minfei Liang, Delft University of Technology</i>
15:50 - 16:05	› Modeling of the behavior of concrete specimens under uniaxial tensile stresses through the use of a 3D probabilistic semi-explicit model - <i>Mariane R Rita, Universidade Federal do Rio de Janeiro (remotely)</i>
16:05 - 16:35	Pause café (Bar (New Hotel of Marseille))
16:35 - 17:40	Session normale (Room "Manon" (New Hotel of Marseille)) - Chairman: M. Ben Ftima
16:35 - 16:50	› Numerical simulation of concrete fracture by means of a 3D probabilistic explicit cracking model - <i>Magno Mota, Universidade Federal do Rio de Janeiro (remotely)</i>
16:50 - 17:05	› Numerical modeling of 3D concrete printing wall structure to reliably estimate the failure mechanisms - <i>Meron Wondafrash Mengesha - Bauhaus Universität</i>
17:05 - 17:20	› Biaxial Interaction Diagrams of a RC Section at Elevated Temperature - <i>Sabine Boulevard - Centre Scientifique et Technique du Bâtiment</i>
17:20 - 17:35	› Numerical Analysis of shear wall elements and calibration with testing results - <i>Alan JALIL - CSTB</i>
17:40 - 18:05	Conférences invitées (Room "Manon" (New Hotel of Marseille)) - Chairman: M. Ben Ftima
17:40 - 18:05	› Computational performance assessment and failure analysis of reinforced concrete wall buildings under seismic loads - <i>Ioannis Koutromanos - Virginia Tech, Marios Mavros - University of Cyprus</i>

## mercredi 6 juillet 2022

HEURES	ÉVÉNEMENT
09:00 - 09:30	Session plénière (Room "Manon" (New Hotel of Marseille)) - Chairman: G. Meschke
09:00 - 09:30	› Modeling deterioration of RC structures due to environmental conditions - <i>Josko Ozbolt, University of Stuttgart (remotely)</i>
09:30 - 10:20	Conférences invitées (Room "Manon" (New Hotel of Marseille)) - Chairman: J. Barros
09:30 - 09:55	› Probabilistic modelling of containment building leakage at the structural scale: application to the PACE mock-up - <i>Matthieu Briffaut, Laboratoire de Mécanique, Multiphysique, Multiéchelle</i>
09:55 - 10:20	› Incremental formulation of early age concrete in the finite strain range for the modelling of 3D concrete printing - <i>Boumediene Nedjar, Université Gustave Eiffel</i>
10:20 - 10:50	Pause café (Bar (New Hotel of Marseille))
10:50 - 12:30	Conférences invitées (Room "Manon" (New Hotel of Marseille)) - Chairman: G. Rastiello
10:50 - 11:15	› Life time extension of wind tower foundations via numerical predictions - <i>Marco Di Prisco, Department of Civil and Environmental Engineering, Politecnico di Milano</i>
11:15 - 11:40	› The role of modelling in structures operation or rehabilitation - <i>Etienne Grimal, Electricité de France, Centre d'Ingénierie Hydraulique, EDF-CIH Technolac, 73290 La Motte Servolex, France - Olivier Chulliat, Electricité de France, Hydro Alpes, 38950 Saint-Martin-Le-Vinoux, France</i>
11:40 - 12:05	› Modelling of rock-shotcrete interfaces using a novel bolted cohesive element - <i>Ali KARRECH, School of Civil, Environmental and Mining Engineering, The University of Western Australia</i>
12:05 - 12:30	› Permeability of damaged concrete, evaluation of the flow coefficient on the basis of multiscale computation - <i>Christian La Borderie, Université de Pau et des Pays de l'Adour</i>
12:30 - 14:30	Déjeuner (Restaurant (New Hotel of Marseille))

14:30 - 15:45	Session normale (Room "Manon" (New Hotel of Marseille)) - Chairman: C. La Borderie
14:30 - 14:45	› The multi-scale multi-technique multi-physics framework required to model the thermal properties of cement-based materials - <i>Tulio HONORIO DE FARIA, Ecole Normale Supérieure Paris-Saclay</i>
14:45 - 15:00	› Parameters identification for concrete affected by ASR: combined numerical strategies - <i>Jean-François Seignol, Université Gustave Eiffel</i>
15:00 - 15:15	› Upgrading existing flat slabs and methods of calculation - <i>Alan JALIL, CSTB</i>
15:15 - 15:30	› Numerical Simulations of CNT/CNF Reinforced Concrete Using ANSYS - <i>Sofija Kekez, Silesian University of Technology</i>
15:30 - 15:45	› Development of a thermo-hydro-mechanical model of the containment vessel Vercors to study its aging and leak tightness, based on specimen tests and in situ measurements - <i>Alessandro Perlongo, Engineer - Nicolas Goujard, Engineer</i>
15:45 - 16:30	Pause café (Bar (New Hotel of Marseille))
16:30 - 17:15	Comité scientifique - Comité scientifique et stratégique du congrès
19:30 - 22:00	Dîner de gala (Restaurant (New Hotel of Marseille))

