



CONSEC
2019

21st INTERNATIONAL CONFERENCE ON CONCRETE UNDER SEVERE CONDITIONS: ENVIRONMENT, LOADING

TECHNICAL SESSIONS

Wednesday, June 5th

Technical Session 1

Coordinator: Ph.D. Giovanni Muciaccia

Time	Type	Presentation
10:20 AM - 10:40 AM	Keynote	Keynote: "Recent developments in assessment and design of pre-cast and post-installed rebar connections under temperature" Keynote Speaker: Ph.D. Giovanni Muciaccia, from Politecnico di Milano, Italy
10:40 AM - 11:00 AM	Keynote	Keynote: "Innovative cement-based materials through incorporation of nano particles" Keynote Speaker: Ph.D. Zongjin Li, from University of Macau, China
11:00 AM - 11:10 AM	Paper	Paper: "Joint evaluation of the mechanical properties of concretes produced with ornamental stone waste thermally treated and glass lapidation residue, in different substitution percentages" Presenter: Nadir Gomes Nascimento
11:10 AM - 11:20 AM	Paper	Paper: "Physico-mechanical aspects of external sulfate attack: impact of the cement mix design and the sample shape on the expansion" Presenter: Mike Jabbour
11:20 AM - 11:30 AM	Paper	Paper: "Developing deterioration models for brazilian bridges" Presenter: Yina Fernanda Muñoz Moscoso
11:30 AM - 11:40 AM	Paper	Paper: "A low-cost approach to monitoring the structural health of pedestrian bridges" Presenter: Michel Murillo Acosta
11:40 AM - 11:50 AM	Paper	Paper: "Durability of geopolymer cements: recent developments and evaluation of corrosion resistance in steel-reinforced concrete" Presenter: Lucas E. P. Sacardo
11:50 AM - 12:10 PM	Keynote	Keynote: "Performance based specification for alkali-activated materials in chloride environments" Keynote Speaker: Ph.D. Arnaud Castel, from School of Civil and Environmental Engineering, Australia

Questions Time

Technical Session 2

Coordinator: Dr. Matteo Colombo

Time	Type	Presentation
3:00 PM - 3:20 PM	Keynote	Keynote: "Collapse of Annone overpass in Italy: the effect of corrosion on the collapse" Keynote Speaker: Dr. Matteo Colombo, from Politecnico de Milano, Italy
3:20 PM - 3:40 PM	Keynote	Keynote: "Sustainable structures exposed to elevated temperature : A focus on lightweight aggregate concrete" Keynote Speaker: Ph.D. Student Georges Roufael, from Université de Cergy-Pontoise, France
3:40 PM - 3:50 PM	Paper	Paper: "Synnergic effects between mineral additions on strength and microstructure of concretes at 28 days" Presenter: Rogério Cattelan Antochaves de Lima

Questions Time

Technical Session 3

Coordinator: Dr. Hiroshi Hayashida

Time	Type	Presentation
4:20 PM - 4:40 PM	Keynote	Keynote: "Experimental examinations on the punching shear strenght of a frost-damaged RC slab" Keynote Speaker: Dr. Hiroshi Hayashida, Civil Engineering Research Institute for Cold Region, Japan
4:40 PM - 4:50 PM	Paper	Paper: "Influence of fire exposure on the flexural behavior of macro-synthetic fiber reinforced concrete" Presenter: Ramoel Serafini
4:50 PM - 5:00 PM	Paper	Paper: "Experimental study of conventional concrete under thermal fatigue" Presenter: Jacinto Almeida
5:00 PM - 5:20 PM	Keynote	Keynote: "Classification of UHPC in the exposure classes of the European standard with focus on chemical attacks" Keynote Speaker: Ph.D. Holger Schmidt, from MC Bauchemie, Brazil

Questions Time



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TECHNICAL SESSIONS

Thursday, June 6th

Technical Session 4

Coordinator: Ph.D. Florent Manzoni

Time	Type	Presentation
3:00 PM - 3:20 PM	Keynote	Keynote: "Modelling of transient thermal deformation in temperature and application to disposal tunnels for medium activity exothermic nuclear wastes" Keynote Speaker: Ph.D. Florent Manzoni, from Laboratoire Matériaux et Durabilité des Constructions, France
3:20 PM - 3:40 PM	Keynote	Keynote: "Site air-permeability test as a measure of concrete durability" Keynote Speaker: Eng. Graciela Alejandra Benítez, from Instituto Nacional de Tecnología Industrial, Argentina
3:40 PM - 3:50 PM	Paper	Paper: "Properties of lightweight concrete with waste scrap tire rubber aggregate at elevated temperature" Presenter: David Citek
3:50 PM - 4:00 PM	Paper	Paper: "The effect of very low bearing pressure on the behavior of cast-in anchors" Presenter: Giuseppe Di Nunzio

Questions Time

Technical Session 5

Coordinator: Ph.D. Kazunori Fujikake

Time	Type	Presentation
4:20 PM - 4:40 PM	Keynote	Keynote: "Study on impact behavior of concrete confined by spiral steel" Keynote Speaker: Ph.D. Kazunori Fujikake, from National Defense Academy of Japan
4:40 PM - 5:00 PM	Keynote	Keynote: "Analysis of apparent chloride diffusivity and aging factor experimentally determined for high performance concrete exposed to seawater" Keynote Speaker: Ph.D. Francisco Presuel-Moreno, from Florida Atlantic University, USA
5:00 PM - 5:10 PM	Paper	Paper: "Inspection parameters calibration by the netherlands standard for numerical modeling of existing reinforced concrete structures" Presenter: Camila Ribellato
5:10 PM - 5:20 PM	Paper	Paper: "Permeability and condition of concrete in the Argentine Antarctic 'Carlini' Base" Presenter: Graciela Alejandra Benítez
5:20 PM - 5:30 PM	Paper	Paper: "Effects of elevated temperatures and of loading procedures on the bond performance of reinforcement in concrete" Presenter: Giovanni Muciaccia
5:30 PM - 5:40 PM	Paper	Paper: "Evaluation of geopolymer coatings to prevent bio-corrosion in wastewater concrete pipes" Presenter: Negar Roghanian

Questions Time



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TECHNICAL SESSIONS

Friday, June 7th

Technical Session 6

Coordinator: Dr. Edna Possan

Time	Type	Presentation
9:10 AM - 9:30 AM	Keynote	Keynote: "Carbonation in concrete structures: durability and sustainability issues" Keynote Speaker: Dr. Edna Possan, from Federal University of Latin American Integration (Unila), Brazil
9:30 AM - 9:40 AM	Paper	Paper: "Study on the current conditions of a bridge exposed to an aggressive environment on highway BR-101 / PE" Presenter: Romilde Almeida de Oliveira
9:40 AM - 9:50 AM	Paper	Paper: "S-N curves for RC beams post-strengthened with prestressed CFRP based on experimental data" Presenter: Mônica Regina Garcez

Questions Time

Technical Session 7

Coordinator: Ph.D. Acir Mércio Loredou-Souza

Time	Type	Presentation
10:40 AM - 11:00 AM	Keynote	Keynote: "Prediction of the aerodynamic performance of concrete cable-stayed bridges through wind tunnel testing" Keynote Speaker: Ph.D. Acir Mércio Loredou-Souza, from Federal University of Rio Grande do Sul, Brazil
11:00 AM - 11:20 AM	Keynote	Keynote: "Service-life prediction of reinforced concrete structures subjected to action of chloride ions: numerical modeling and applications " Keynote Speaker: Ph.D. João Luiz Calmon, from Federal University of Bahia, Brazil
11:20 AM - 11:30 AM	Paper	Paper: "Chloride threshold level for pitting corrosion of low-carbon reinforcement steel in simulated concrete pore solutions" Presenter: Júlio Daudt
11:30 AM - 11:40 AM	Paper	Paper: "Durability of concretes produced with a mix of ornamental stone waste thermally treated and waste originating from glass stoning - A view to the corrosion resistance of the reinforcements" Presenter: Luiz Filipe da Silva Gomes / Geilma Lima Vieira
11:40 AM - 11:50 AM	Paper	Paper: "Evaluation of the performance of special cements under chemical attack" Presenter: Jéssica Fröhlich
11:50 AM - 12:00 PM	Paper	Paper: "Sorptivity and resistivity measured on binary and ternary blended concrete" Presenter: Francisco Presuel-Moreno
12:00 PM - 12:10 PM	Paper	Paper: "Evaluation of the influence of pH and ionic strength of pore solution on the corrosion resistance of concrete with partial substitution of cement by silica fume" Presenter: Vinicius Ortolan
12:10 PM - 12:20 PM	Paper	Paper: "Accelerated test methodology for determination of reactive aggregate in concrete" Presenter: Jéssica Ferreira Marins
12:20 PM - 12:40 PM	Keynote	Keynote: "Durability of cementitious rendering mortars over structural concrete substrate" Keynote Speaker: Dr. Claudio Kazmierczak, from Unisinos University, Brazil

Questions Time

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TECHNICAL SESSIONS

Friday, June 7th

Technical Session 8

Coordinator: Dr. Dóris Zechmeister Bragança Weinmann

Time	Type	Presentation
2:00 PM - 2:20 PM	Keynote	Keynote: "Concrete electrical resistivity and the structure durability" Keynote Speaker: Dr. Enio Pazini, from Federal University of Goiás, Brazil
2:20 PM - 2:40 PM	Keynote	Keynote: "Problems and pathological manifestations in the Brazilian civil construction applied to the ConstruLand Project" Keynote Speaker: Dr. Abdala Carim Nabut Neto, from University of Brasília, Brazil
2:40 PM - 2:50 PM	Paper	Paper: "Microstructural evaluation of GFRP bars subjected to severe environments" Presenter: Ruan Carlos de Araújo Moura
2:50 PM - 3:00 PM	Paper	Paper: "Evaluation of the use of recycled aggregates in mortars: analysis of physical properties" Presenter: Mauro José Mazzochini
3:00 PM - 3:10 PM	Paper	Paper: "Microstructural evaluation of ITZ in concrete with carbonated recycled concrete aggregates" Presenter: Monique Lunardi
3:10 PM - 3:20 PM	Paper	Paper: "Influence of wind on chloride profiles of concrete structures in marine environment: case study of Arvoredos Island" Presenter: Carlos Eduardo Tino Balestra
3:20 PM - 3:30 PM	Paper	Paper: "Structural repair and maintenance in a 35-year-old reinforced concrete building in an aggressive coastal environment in Barra Velha / SC" Presenter: Arthur Medeiros
3:30 PM - 3:40 PM	Paper	Paper: "Analysis of concrete performance with addition of silica fume in simulation of marine aggressiveness" Presenter: André Luiz Louzeiro Carvalho
3:40 PM - 3:50 PM	Paper	Paper: "Diagnosis and prognosis for cantilevered beam in multi-family condominium of 40 years of age in the city of Fortaleza" Presenter: Pedro Welldon Accioly Paiva

Questions Time

Technical Session 9

Coordinator: Ph.D. Thomas Bes

Time	Type	Presentation
4:20 PM - 4:40 PM	Keynote	Keynote: "Behavior of low-pH cement subjected to leaching" Keynote Speaker: Ph.D. Thomas Bes, from Paul Sabatier University, France
4:40 PM - 5:00 PM	Keynote	Keynote: "Novel electrochemical and synchrotron methods for IN-SITU real-time characterization of cement-based systems under severe conditions" Keynote: Ph.D. Mauricio Mancio, from Unisinos University, Brazil
5:00 PM - 5:10 PM	Paper	Paper: "Concrete reinforced with polypropylene and polyester fibers exposed to fire" Presenter: João Luiz Calmon
5:10 PM - 5:20 PM	Paper	Paper: "Evaluation of carbonating interference in concrete resistance through non-destructive tests" Presenter: Myrela Vieira de Araújo
5:20 PM - 5:30 PM	Paper	Paper: "The infrared thermography potential for steel detection detection in reinforced concrete structures" Presenter: Leonardo Covatti de Oliveira
5:30 PM - 5:50 PM	Keynote	Keynote: "An experimental study on evaluating galvanic corrosion of hot-dip galvanized steel rebar which is in contact with ordinary steel rebar under concrete environment" Keynote Speaker: Ph.D. Student Hongbok Choe, from Hanyang University, Republic of Korea

Questions Time