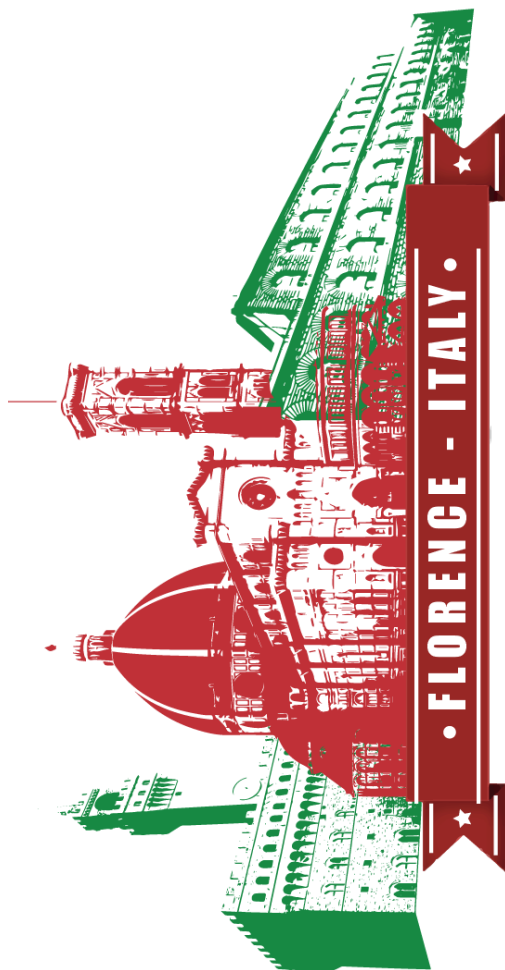




Cinpaer
2018

XIV INTERNATIONAL CONFERENCE ON
BUILDING PATHOLOGY AND CONSTRUCTIONS REPAIR
JUNE 20-22, 2018

PROGRAMME



UNIVERSITÀ
DEGLI STUDI
FIRENZE

DICEA
DIPARTIMENTO
DI INGEGNERIA CIVILE
E AMBIENTALE

Institutional Support

 NUTE Núcleo de Tecnologia e Inovação Universidade Federal do Rio de Janeiro	 FACULDADE ARI DE SÁ	 UNIVERSIDADE ESTADUAL VALE DO ACARAÚ	 SECRETARIA DA CIÊNCIA, TECNOLOGIA E EDUCAÇÃO SUPERIOR Estado do Ceará	 ESCOLA DE CONSTRUÇÃO CIVIL FACULDADE DE ENGENHARIA	 UNIVERSIDADE FEDERAL DO CEARÁ	 INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA Ceará	 INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA Piauí
 iTEC Instituto Tecnológico do Cariri	 URCA Universidade Regional do Cariri	 UNIVERSIDAD TECNOLÓGICA NACIONAL FACULTAD REGIONAL CORDOBA ARGENTINA	 CInTeMaC Centro de Investigación en Tecnología y Medio Ambiente	 GIICMA Grupo de Investigación de Ingeniería Civil y Medio Ambiente	 LEMIT	 UNIVERSIDAD CAMILO JOSÉ CELA	 INSTITUTO de Investigación y Desarrollo
 iTP PERFORMANCE UNIVERSIDADE	 BRND BRAND UNIVERSITY OF TECHNOLOGY	 ALCONPAT BRASIL	 FEUP FACULDADE DE ENGENHARIA UNIVERSIDADE DO PORTO				

INTRODUCTION AND WELCOME

Conference Scope

Structural engineering experts in strengthening and repair of structures need to have a comprehensive knowledge over a set of issues: the materials used (masonry, adobe, timber, steel, concrete and others); the geometric properties of the structures; the available surveying techniques for determining the physical and mechanical properties of the materials; the behaviour of the structural elements and the types of validated strengthening and repair techniques available for the different types of constructions. The advances in structural expertise, over the last years, have revealed a substantial appeal from the intervenient and their roles in the construction industry and the appearance of new materials and construction techniques. Recent construction market forecasts show a considerable growth in the investment on the strengthening and repair activity (EuroConstruct Statistics). CINPAR 2018 international conference is an opportunity for the participants to acquire knowledge on new materials, techniques and construction technologies, and to exchange personal experiences on strengthening and repair of structures .

Principal Aims

- Present and discuss the surveying and diagnosis techniques for material characterization;
- Present and discuss frequent construction defects;
- Identify and analyse the main causes of defects, which knowledge is crucial for a successful repair action;
- Present materials used to repair and strengthen existing structures;
- Present and discuss techniques to repair and strengthen existing structures;
- Promote the communication and sharing of knowledge among different professionals working in this field;
- Identify, discuss and encourage future research directions for the strengthening and repair of structures.

For the Organizing Committee, it is a pleasure to welcome invited-speakers, authors and other participants to the XIV INTERNATIONAL CONFERENCE ON BUILDING PATHOLOGY AND CONSTRUCTIONS REPAIR and to the city of Florence. We hope that you will profit from the scientific program, from the interaction with colleagues and that you will enjoy the charming city of Florence.

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 VARUM, Humberto (FEUP, PORTUGAL)
 VIGNOLI, Andrea (UNIFI, ITALY)

OPENING AND KEYNOTE LECTURES



Opening Lecture

Wednesday, June 20, 10:00-11:00

Prof. Francesco Paolo Di Teodoro

La cupola di Santa Maria del Fiore: la costruzione, le fratture e l'inattuato progetto di cerchiatura di fine Seicento (In Italian with English translation)
[The Dome of Santa Maria del Fiore: construction, crack pattern and the unrealized late-seventeenth-century project for its hooping]



Keynote lecture 1

Wednesday, June 20, 11:30-12:15

Prof. Pablo Eugenio Maturana Barahona

Estructuras Dañadas por Sismo: Experiencia en Chile, Catastro de Daños y Reparación (In Spanish with English translation)
[Structures damaged by earthquake: experience in Chile, damage cadastre and repair]



Keynote lecture 2

Wednesday, June 20, 12:15-13:00

Prof. Grazia Tucci

Geomatics for structural assessment and surface diagnostic of cultural heritage

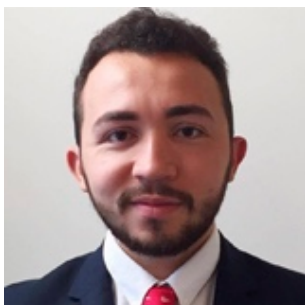


Keynote lecture 3

Wednesday, June 20, 14:30-15:15

Prof. Petr Štěpánek

Long term strength of GFRP reinforcement by temperature, alkaline and cyclic loading



Keynote lecture 4

Thursday, June 21, 08:45-09:30

Prof. Esequiel Mesquita

Learnings from portuguese-brazilian heritage constructions

OPENING AND KEYNOTE LECTURES



Keynote lecture 5
Thursday, June 21, 11:40-12:25

Prof. Siro Casolo

A specific out-of plane model for the nonlinear dynamical analysis of masonry façades and estimation of cumulated seismic damage



Keynote lecture 6
Thursday, June 21, 14:30-15:15

Prof. Enio Pazini

Paradigm changes in diagnosis and rehabilitation of concrete structures



Keynote lecture 7
Friday, June 22, 08:45-09:30

Prof. Humberto Varum

Structural behaviour and seismic retrofitting of existing adobe constructions



Keynote lecture 8
Friday, June 22, 11:40-12:25

Prof. Alessandra Marini

Life cycle perspective in the renovation of existing RC buildings

CONFERENCE LOCATION

Centro Didattico Morgagni

Viale Giovanni Battista Morgagni, 40
Firenze (Italy)

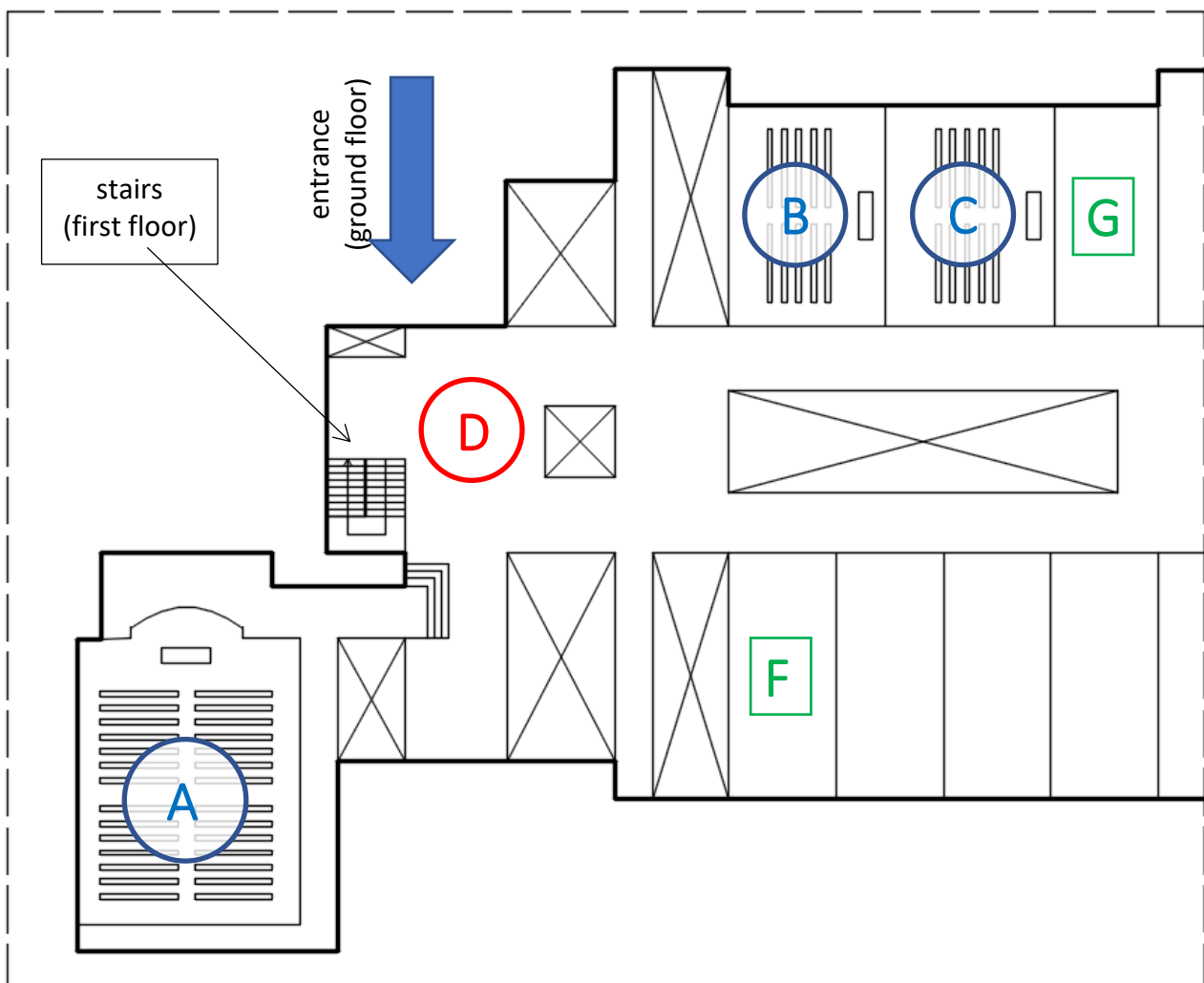


CONFERENCE ROOMS

Centro Didattico Morgagni

Viale Giovanni Battista Morgagni, 40
Firenze (Italy)

- **FIRST FLOOR** -



- A Room 1, Plenary lectures (*room Auditorium*)
- B Room 2, (*room 103*)
- C Room 3, (*room 102*)
- D Conference Desk, Lunch, Coffee-break
- F Cloakroom (*room 106*)
- G Slide preview room (*room 101*)

GENERAL PROGRAMME

Wednesday - June 20, 2018			
09:00-09:30	Registration		
09:30-10:00	Opening Session - Room 1		
10:00-11:00	Opening Lecture - Room 1 Prof. Francesco Paolo Di Teodoro		
11:00-11:30	coffee break		
11:30-12:15	Keynote Lecture 1 - Room 1 Prof. Pablo Eugenio Maturana Barahona		
12:15-13:00	Keynote Lecture 2 - Room 1 Prof. Grazia Tucci		
13:00-14:30	lunch		
14:30-15:15	Keynote Lecture 3 - Room 1 - [Chair: Jose M. Adam] Prof. Petr Štěpánek		
15:15-16:15	Parallel Session - Room 1 T1 - Defects [ENG]	Parallel Session - Room 2 T4.5 Restoration [ENG]	Parallel Session - Room 3 T4.2 Seismic analysis [POR]
16:15-16:45	coffee break		
16:45-18:25	Parallel Session - Room 1 T3.2 Masonry panels [ENG]	Parallel Session - Room 2 T4.2 Seismic analysis / Strengthening [ENG]	Parallel Session - Room 3 T4.5 Restoration [POR]

GENERAL PROGRAMME

Thursday - June 21, 2018			
08:45-09:30	Keynote Lecture 4 - Room 1 - [Chair: Maria Girardi] Prof. Esequiel Mesquita		
09:30-11:10	Parallel Session - Room 1 T2.2 Strengthening [ENG]	Parallel Session - Room 2 T4.3 Sensitivity / Identification [ENG]	Parallel Session - Room 3 T4.5 Restoration [POR]
11:10-11:40	coffee break		
11:40-12:25	Keynote Lecture 5 - Room 1 - [Chair: Claudio Borri] Prof. Siro Casolo		
12:25-13:25	Parallel Session - Room 1 T4.2 Seismic analysis / Strengthening [ENG]	Parallel Session - Room 2 T2 Materials [POR]	Parallel Session - Room 3 T1 Defects [POR]
13:25-14:30	lunch		
14:30-15:15	Keynote Lecture 6 - Room 1 - [Chair: Paolo Spinelli] Prof. Enio Pazini		
15:15-16:15	Parallel Session - Room 1 T4.2 Seismic analysis / Strengthening [ENG]	Parallel Session - Room 2 T1 Defects [POR]	Parallel Session - Room 3 T4.5 Restoration [POR]
16:15-16:45	coffee break		
16:45-18:25	Parallel Session - Room 1 T3.1 Masonry arches / Vaults [ENG]	Parallel Session - Room 2 T4.2 Seismic analysis / Strengthening [ENG]	Parallel Session - Room 3 T2.1 Mechanical characterization [POR]
Social Dinner (20:00)			

GENERAL PROGRAMME

Friday - June 22, 2018			
08:45-09:30	Keynote Lecture 7 - Room 1 - [Chair: Siro Casolo] Prof. Humberto Varum		
09:30-11:10	Parallel Session - Room 1	Parallel Session - Room 2	Parallel Session - Room 3
	T2.1 Mechanical characterization [ENG]	T4.2 Seismic analysis / Strengthening [ENG]	T1 Defects [POR]
11:10-11:40	coffee break		
11:40-12:25	Keynote Lecture 8 - Room 1 - [Chair: Esequiel Mesquita] Prof. Alessandra Marini		
12:25-13:25	Parallel Session - Room 1	Parallel Session - Room 2	Parallel Session - Room 3
	T4.5 Restoration [POR]	T4.5 Restoration [ENG]	T4.2 Seismic analysis / Strengthening [POR]
Closing Session - Room 1			

DETAILED PROGRAMME - Parallel sessions June 20

Wednesday, June 20, from 15:15 to 16:15

Room 1 - [ENG] - T1 Defects Chair: Jose M. Adam		
15:15	Employment of optical fibers for RC bond-slip characterization	Esequiel Mesquita, Paulo Antunes, Nélia Alberto, Carlos Marques, José Melo, Paulo S. André, António Arêde and Humberto Varum
15:35	Carbonated structures in Paraguay: Durability strategies for maintenance planning	Pablo Benitez, Fernanda Rodrigues, Sergio Gavilán, Humberto Varum and Anibal Costa
15:55	Monotonic and low-cycle fatigue properties of earthquake-damaged New Zealand steel reinforcing bars. The experience of the Christchurch 2010/2011 earthquakes	Giuseppe Loporcaro, Alberto Cuevas, Stefano Pampanin and Milo Kral

Room 2 - [ENG] - T4.5 Restoration Chair: Pietro Croce		
15:15	Energy retrofit solutions for heritage buildings located in hot-humid climates	Fabiana Silvero, Sergio Montelpare, Fernanda Rodrigues, Enrico Spacone and Humberto Varum
15:35	Detection of precipitation infiltration in buildings by infrared thermography: a case study	Joaquin Humberto Aquino Rocha, Cynthia Firmino Dos Santos and Yêda Vieira Póvoas
15:55	Evaluation of the infrared thermography technique for capillarity moisture detection in buildings	Joaquin Humberto Aquino Rocha, Cynthia Firmino Dos Santos and Yêda Vieira Póvoas

Room 3 - W.P.3p [POR] - T4.2 Seismic analysis Chair: Francisco Carvalho		
15:15	Sismicidade Brasileira: registros sísmicos indicam a configuração de um novo mapa	Paulo Miranda, Humberto Varum and Nelson Vila Pouca
15:35	Análise de Segurança, Desempenho e Reabilitação da Estrutura do Edifício Residencial QRSW, 08 Bloco B, Setor Sudoeste, Brasília-DF	Márcio Buzar, José De Paula, Marcos Ritter, Stefano Galimi, Francisco Castro Jr. and Leonardo Inojosa
15:55	Análise de Incidências Patológicas, Desempenho e Reabilitação da Estrutura do edifício administrativo do Superior Tribunal de Justiça - STJ, Brasília-DF	Leonardo Inojosa, Márcio Buzar, Marcos de Gregorio, Stefano Galimi and José Humberto De Paula

DETAILED PROGRAMME - Parallel sessions June 20

Wednesday, June 20, from 16:45 to 18:25

Room 1 - [ENG] - T3.2 Masonry panels Chair: Giuseppe Loporcaro		
16:45	In-situ experimental tests on masonry panels strengthened with Textile Reinforced Mortar composites	Francesca Giulia Carozzi, Tommaso D'Antino and Carlo Poggi
17:05	Shear modulus of masonry walls: a critical review	Pietro Croce, Maria Luisa Beconcini, Paolo Formichi, Paolo Cioni, Filippo Landi, Caterina Mochi, Francesco De Lellis, Elisabetta Mariotti and Isabelle Serra
17:25	Masonry micromodels using high order 3D elements	J. Ignacio Gisbert, David Bru, Antonio Gonzalez and Salvador Ivorra
17:45	Nonlinear modelling of the in-plane-out-of-plane interaction in the seismic analysis of masonry infills in r.c. framed buildings	Fabio Mazza and Angelo Donnici
18:05	Behaviour of in-plane loaded masonry panels	Michela Monaco, Bruno Calderoni, Antonino Iannuzzo and Antono Gesualdo

Room 2 - [ENG] - T4.2 Seismic analysis / Strengthening Chair: Francesco Clementi		
16:45	Effects of nonlinear modelling of the base-isolation system on the seismic analysis of r.c. buildings	Fabio Mazza and Rodolfo Labernarda
17:05	Verification of an Energy-Based Design Procedure for Seismic Retrofit of a School Building	Gloria Terenzi, Iacopo Costoli, Stefano Sorace and Paolo Spinelli
17:25	Seismic structural upgrade of historical buildings through wooden deckings strengthening: the case of study of Palazzo Ducale in Parete, Italy	Giorgio Frunzio and Luciana Di Gennaro
17:45	An overview of assessment and retrofit of corroded RC structures	Antonio Bossio, Gian Piero Lignola and Andrea Prota

Room 3 - [POR] – T4.5 Restoration Chair: Esequiel Mesquita		
16:45	Recuperação de um sistema de revestimento de fachada em um edifício residencial na cidade do Recife	Marilia Gabriella Matos de Oliveira, Luiz Antonio Araujo Coelho De Alencar, Amanda Gabriela Dias Maranhão, Fuad Carlos Zarzar Júnior and Angelo Just da Costa E Silva
17:05	Manifestações patológicas em fachadas com calcário laminado: estudo de caso em edificações da cidade de Juazeiro do Norte – CE	Maria Silva Freitas and Jefferson Luiz Alves Marinho
17:25	Projeto de intervenção em patrimônio histórico: antiga fábrica têxtil do município de Caxias, Maranhão, Brasil	Mikhael Ferreira Da Silva Santos, Cláudio V. Ferreira, Wdyelle Elcine de Carvalho Matos, Luís Gustavo Bonora V. Ferreira, Fernanda Duarte de Sousa and Amanda A. Silva Rodrigues de Sousa
17:45	Levantamento e análise das manifestações patológicas no prédio da Igreja Nossa Senhora das Mercês, localizado em Belém-PA	Catarina de Nazaré Pereira Pinheiro, Adriene Rodrigues Barbosa and Victória Dias Reis
18:05	Manifestaciones patológicas en viviendas de interés social en Fortaleza, Brasil	Fernando Sánchez Rodriguez, Alexandre Bertini, Francisco Carvalho, Levi Teixeira, Felipe Amon Silva Gomes and Fernando Sánchez García

DETAILED PROGRAMME - Parallel sessions June 21

Thursday, June 21, from 09:30 to 11:10

Room 1 - [ENG] - T2.2 Strengthening		
Chair: Maria Girardi		
09:30	New Italian Guidelines for Design of Externally Bonded Fabric-reinforced Cementitious Matrix (FRCM) Systems for Repair and Strengthening of Masonry and Concrete Structures	Luigi Ascione, Francesca Giulia Carozzi, Tommaso D'Antino and Carlo Poggi
09:50	On the effectiveness of CFRP reinforcement of masonry panels loaded by out-of-plane actions	Mario Fagone and Giovanna Ranocchiali
10:10	The influence of the joint thickness on the adhesion between CFRP reinforcements and masonry arches	Mario Fagone, Tommaso Rotunno, Ernesto Grande, Elisa Bertolesi and Gabriele Milani
10:30	Fatigue behaviour of composite timber-concrete beams	Pietro Croce, Maria Luisa Beconcini, Paolo Formichi, Filippo Landi and Daniele Cardella
10:50	Damaged RC beams strengthened with GFRP	Roberto Capozucca, Erica Magagnini and Maria Vittoria Vecchietti

Room 2 - [ENG] - T4.3 Sensitivity / Identification		
Chair: Giovanna Ranocchiali		
09:30	Influence of mechanical parameters on non-linear static analysis of masonry buildings: a relevant case-study	Pietro Croce, Maria Luisa Beconcini, Paolo Formichi, Paolo Cioni, Filippo Landi, Caterina Mochi and Riccardo Giuri
09:50	Modal parameters identification with environmental tests and advanced numerical analyses for masonry bell towers: a meaningful case study	Valentina Gazzani, Marina Poiani, Francesco Clementi, Gabriele Milani and Stefano Lenci
10:10	Model parameter estimation using Bayesian and deterministic approaches: the case study of the Maddalena Bridge	Anna De Falco, Maria Girardi, Daniele Pellegrini, Giacomo Sevieri and Leonardo Robol
10:30	Frequency vs time domain identification of heritage structures	Giacomo Zini, Michele Betti, Gianni Bartoli, Sandro Chiostrini

Room 3 - [POR] – T4.5 Restoration		
Chair: Thiago Silva		
09:30	Manifestações patológicas em Ponte Metálica de Caxias, no estado do Maranhão, Brasil	Amanda Aryda Silva Rodrigues de Sousa, Patricia da Silva Lima, Cláudio Vidrih Ferreira, Valney Moura Silva, Luiz Fernando Costa and Mikhael Ferreira da Silva Santos
09:50	Manifestações Patológicas Presentes na Estrutura, Alvenaria e Fachada do Edifício João Marques de Almeida	João Victor Da Cunha Oliveira, Leila Soares Viegas Barreto Chagas, Eduardo Da Cruz Teixeira and Frankslale Fabian Diniz De Andrade Meira
10:10	Mapeamento Patológico das Fachadas dos Prédios Corporativos de Uso Misto da UFCG Campus Campina Grande	João Victor Da Cunha Oliveira, Leila Soares Viegas Barreto Chagas and Frankslale Fabian Diniz De Andrade Meira
10:30	Estudo de caso das patologias de hospital em Belém-Pa	Victória Reis, Felipe Oliveira, Catarina Pinheiro, Adriene Barbosa and Wilton Macieira
10:50	Análise Estrutural e de incidências patológicas no Autódromo Internacional da Capital Federal do Brasil, Brasília-DF	Marco Bessa, Leonardo Inojosa, Lenildo Silva and Márcio Buzar

DETAILED PROGRAMME - Parallel sessions June 21

Thursday, June 21, from 12:25 to 13:25

Room 1 - [ENG] - T4.2 Seismic analysis / Strengthening Chair: Carlo Poggi		
12:25	Iconic crumbling of the clock tower in Amatrice after 2016 center Italy seismic sequence: advanced numerical insight	Marina Poiani, Valentina Gazzani, Francesco Clementi, Gabriele Milani, Marco Valente and Stefano Lenci
12:45	The Bartolomeo Ammannati's Fountain: an artifact in progress	Giada Cerri, Giacomo Pirazzoli, Giorgio Verdiani, Marco Tanganelli, Vieri Cardinali and Stefania Viti
13:05	Public Housing in Florence: Seismic Assessment of Masonry buildings	Marco Tanganelli, Tommaso Rotunno, Vieri Cardinali and Stefania Viti

Room 2 - [POR] - T2 Materials Chair: Francisco Carvalho		
12:25	Evaluation of steel slag of Companhia Siderúrgica do Pecém replacing fine aggregate on mortars	Stefanie A. Campos, Maria Fabiola Rafael and Antônio Eduardo Cabral
12:45	Behavior of concrete reinforced with polypropylene fiber exposed to high temperatures	Felipe A. Amancio, Maria Fabíola C. Rafael, Alisson R. O. Dias and Antonio Eduardo Bezerra Cabral
13:05	Study of propagation of ultrasonic pulses in concrete exposed at high temperatures	Alisson R. O. Dias, Felipe A. Amancio, Maria Fabíola C. Rafael and Antônio E. B. Cabral

Room 3 - [POR] - T1 Defects Chair: Fabiana Oliveira		
12:25	Soluções de Reparo de Manifestações Patológicas Decorrentes de Condensação de Vapor D'água	Marcus Vinícius Fernandes Grossi
12:45	Análise das manifestações patológicas em edificações com até cinco anos de idade, executada na região metropolitana do Recife	Jose Lois Carballal Junior , Thais Simoni Batista, Luiz Bernhoeft and Arnaldo Carneiro
13:05	Mapa de danos de edifícios modernos: proposta para representação gráfica do estado de conservação de fachadas em concreto aparente	Geovanna Brasil Carvalho and Vanda Zanoni

DETAILED PROGRAMME - Parallel sessions June 21

Thursday, June 21, from 15:15 to 16:15

Room 1 - [ENG] - T4.2 Seismic analysis / Strengthening Chair: Alessandra Marini		
15:15	Numerical model and consolidation interventions of Palazzo della Ragione in Milan	Lorenzo Jurina
15:35	Numerical study on the reduction of the seismic vulnerability of historical industrial buildings with wide timber roofs	Ingrid Boem and Natalino Gattesco
15:55	Seismic vulnerability of historic masonry buildings: a case study in the center of Lucca	Andrea Borghini, Sonia Boschi, Barbara Pintucchi and Nicola Zani

Room 2 - [POR] - T1 Defects Chair: Maria Positiere		
15:15	Damages in weld joint of water elevated reservoir steel structures	Hizadora Constanza Medina D'Ambros, Thiago Dias De Araújo Silva, Esequiel Fernandes Teixeira Mesquita and Renato Ferreira Barros
15:35	Recovery of Cracks in Concrete Railroad Sleepers: Procedure and Case Study	Iara Melo Da Silva, Luciano De Oliveira, Conceição De Maria Pinheiro Correia and Kelvyane Meneses Sousa Rafful
15:55	Behavior of galvanized reinforcements in carbonated and non- carbonated media	Gibson R. Meira, Taíssa G. Cândido, Mariane R. Carvalho, Pablo R. R Ferreira and Carla C. Araújo

Room 3 - [POR] - T4.5 Restoration Chair: Gibson Meira		
15:15	Inspección y diagnóstico de la Catedral de Potosí, Bolivia	Jahdiel Villafuerte, Michele D'Amato, Michelangelo Laterza, Gunnady Caro, Julio Ruiz and Gonzalo Salazar
15:35	Análise dos traços de argamassas de duas construções antigas localizadas em Santa Catarina - Brasil	Abrahão Bernardo Rohden and Priscila Kollross
15:55	Manifestações Patológicas na Madeira: Estudo de caso da Fortaleza dos Reis Magos em Natal/RN	Isabela Cavalcanti de Souza and Edna Moura Pinto
16:15	Intervenções Ocorridas no Teatro São João no Contexto do Sítio Histórico de Sobral	Eder Paulus Moraes Eder Guerra and José Leonézio Lopes de Vasconcelos Filho

DETAILED PROGRAMME - Parallel sessions June 21

Thursday, June 21, from 16:45 to 18:25

Room 1 - [ENG] - T3.2 Masonry arches / Vaults Chair: Maurizio Orlando		
16:45	Experimental and numerical study on a real-scale masonry cross-vault subjected to settlement in one of its support	Pedro A. Calderón, Benjamín Torres, Juan J. Moragues and Jose M. Adam
17:05	Effect of geometry parameters on the seismic capacity of masonry arches	Cyrille Denis Tetougueni, Alex Zilio, Paolo Zampieri and Carlo Pellegrino
17:25	Failure analysis of masonry arch with no-horizontal support settlement	Paolo Zampieri, Nicolò Simoncello, Cyrille Denise Tetougueni and Carlo Pellegrino

Room 2 - [ENG] - T4.2 Seismic analysis / Strengthening Chair: Andrea Vignoli		
16:45	Identification of fault-inducing phenomena in an old masonry building	Paola Condoleo and Alberto Taliercio
17:05	Understanding crack patterns in masonry chimneys	Patrick Bamonte and Alberto Taliercio
17:25	Analysis of the restoration and consolidation of the late Baroque church of the Holy Spirit in Aversa	Luigi Guerriero, Margherita Cicala, Nicola Chiacchio and Mariella Tomeo
17:45	The Corpus Domini Bell Tower: Conservation and Safety	Mariateresa Guadagnuolo, Mariano Nuzzo and Giuseppe Faella

Room 3 - [POR] – T4.5 Mechanical characterization Chair: Maria Soledad Gomez		
16:45	Análise da estanqueidade de painéis de Cross Laminated Timber (CLT) para uso externo em fachadas de edificações	Gabriela Lotufo Oliveira, Fabiana Lopes De Oliveira and Sergio Brazolin
17:05	Agregados alternativos para composição do concreto: um estudo da viabilidade	Maria Silva Freitas and Jefferson Luiz Alves Marinho
17:25	Explorando morteros sustentables	Nicolás Isamitt Letelier, Sebastián Fierro Sepúlveda, Pablo Maturana Barahona and Maria Soledad Gomez Lorenzini
17:45	Características Mecânicas de Concreto Autoadensável Produzido com Pó de Pedra Cariri	Paulo S.T. Miranda, Leonardo T. Souza, Jailson S. Gonçalves and Iaritissa S. Carneiro
18:05	Influência da cura à 50°C nas propriedades mecânicas do concreto autoadensável contendo adições de metacaulim e filer calcário	Wesley Fêu dos Santos, Marcos Alyssandro Soares dos Anjos and Maria das Vitórias Vieira Almeida de Sá

DETAILED PROGRAMME - Parallel sessions June 22

Friday, June 22, from 09:30 to 11:10

Room 1 - [ENG] - T2.1 Mechanical characterization		
Chair: Siro Casolo		
09:30	Calibration of a Visual Method for the Analysis of the Mechanical Properties of Historic Masonry	Antonio Borri, Marco Corradi, Alessandro De Maria and Romina Sisti
09:50	Mechanical characterization of concrete: the case of a school building located in Tuscany	Maria Teresa Cristofaro, Angelo D'Ambrisi, Mario De Stefano, Raffaele Nudo and Marco Tanganelli
10:10	On the anchoring of timber shear walls to foundations: available strategies to prevent wood deterioration and on-site installation problems	Roberto Scotta, Davide Trutalli, Luca Marchi and Luca Pozza
10:30	Wood preservation for preventing biodeterioration of Cross Laminated Timber (CLT) panels assembled in tropical locations	Gabriela Lotufo Oliveira, Fabiana Lopes De Oliveira and Sérgio Brazolin
10:50	Use of silica fume and nano-silica in mortars attacked by acids present in pig manure	Jefferson Jacob, Amadeu Mascelani, Ricardo Steinmetz, Filipe Antônio Dalla Costa and Osmar Antonio Dalla Costa

Room 2 - [ENG] - T4.2 Seismic analysis / Strengthening		
Chair: Massimiliano Lucchesi		
09:30	Application of low-invasive techniques and incremental seismic rehabilitation to increase the feasibility and cost-effectiveness of seismic interventions	Elena Casprini, Chiara Passoni, Jacopo Zanni, Andrea Belleri, Alessandra Marini, Paolo Riva and Simone Labò
09:50	Development and characterization of a system for the seismic and energy retrofit of existing buildings	Valentina Pertile, Lorenzo De Stefani and Roberto Scotta
10:10	Rehabilitation and seismic upgrading of the masonry arch bridge over the Magra river in Villafranca	Nicola Croce, Pietro Croce, Raffaele Taccola and Marino Pelusi
10:30	The masonry vaults of the cellars in the system of ditches in Livorno	Massimiliano Lucchesi, Barbara Pintucchi and Nicola Zani
10:50	Mechanical behavior of TRM plates	David Bru, Valentina Serrecchia, F. Javier Baeza, Salvatore Quaranta, Stefano Silvestri and Salvador Ivorra

Room 3 - [POR] – T1 Defects		
Chair: Maria Positiere		
09:30	Manifestações patológicas por corrosão de armaduras em edificações de Nova Venécia-ES	Maria De Lourdes De Oliveira and Marcus Antonius da Costa Nunes
09:50	Manifestações patológicas encontradas nos abrigos de paradas de ônibus em concreto armado na cidade do Recife	Caio Vieira Bandeira de Mello, Amâncio Da Cruz Filgueira Filho, Rafael Filgueira Amaral, Artur Silva and Eliana Cristina Barreto Monteiro
10:10	Estudo do ataque químico por sulfatos em estruturas cimentícias	Amanda Gabriela Dias Maranhão, Luiz Antônio Araújo Coelho De Alencar, Fuad Carlos Zarzar Júnior and Angelo Just Da Costa E Silva
10:30	Desempenho de Concretos Autoadensáveis com Resíduo da Extração de Scheelita Submetidos a Altas Temperaturas	Larissa C. A. Mello, Jônatas M. Souza, Manoel L. Queiroz Neto, Isabela C. De Souza, Marcos A. S. Anjos and Maria Das Vitórias V. A. Sá
10:50	Efeito dos Íons Cloreto na Resistividade Elétrica Superficial do Concreto – Monitoramento até a idade de 63 dias	Gustavo José Lauer Coppio, Julia Wippich Lencioni, Luciana De Simone Cividanes, Paulo Paiva Oliveira Leite Dyer and Maryangela de Lima

DETAILED PROGRAMME - Parallel sessions June 22

Friday, June 22, from 12:25 to 13:25

Room 1 - [POR] - T4.5 Restoration Chair: Francisco Carvalho		
12:25	Natural zeolite, a pozzolan for structural concrete	Barbara Belen Raggiotti, Maria Josefina Positieri and Angel Oshiro
12:45	Estudo da utilização de resíduos de rochas ornamentais em pastas autoadensáveis	Felipe Cavalcante, Matheus de Sousa, Kaique Amaral, Davi Gomes, Francisco de Carvalho and Esequiel Mesquita
13:05	Evaluación de la influencia de la incorporación de residuos de neumáticos inservibles como agregado en hormigones.	Ana Giselle Cressa, Alejandro Nicolas Losa, Carlos Baronetto and María Josefina Positieri

Room 2 - [ENG] - T4.5 Restoration Chair: Esequiel Mesquita		
12:25	Time marks: an assessment of the conservation status of Tafona Farm main house from damage maps	Luiza Segabinazzi Pacheco, Mateus Rosada, Luciani Neves Lens, Bruna Fuzzer de Andrade, Cristina Storck, Leonardo Da Silva Peres, Luiza Wollmann, Nadiane Dias Joris, Quetilan Rodrigues Domingues and Rhaíssa Mix Porto
12:45	Inventory process of Tafona's Farm in Cachoeira do Sul, RS, Brazil	Bruna F. de Andrade, Luiza Segabinazzi Pacheco, Mateus Rosada, Luciani N. Lens, Ana Rita P. Wollman, Marcelle Marin, Luiza Wollman, Ramão Machado and Carlos Gonçalves
13:05	Pathological Manifestation and Restoration Procedures Analysis of the Historic Building "Biblioteca Arquivo Público do Pará", located in Belém-PA	Catarina De Nazaré Pereira Pinheiro, Adriene Rodrigues Barbosa and Victoria Dias Reis

Room 3 - [POR] - T4.2 Seismic analysis / Strengthening Chair: Jeferson Marinho		
12:25	Spray dryer ash da usina termelétrica do Pecém como substituição à cal em argamassas para revestimentos externos	Raphael Arlego and Antonio Eduardo Bezerra Cabral
12:45	Efeitos na estrutura interna devidos ao confinamento em peças constituídas de materiais cimentícios	Artur Silva, Amâncio Filgueira Filho, Fuad Zarzar Júnior and Romilde Oliveira
13:05	Análise estrutural e de Patologias da Biblioteca da Faculdade de Medicina do Distrito Federal	Marco Bessa, Leonardo Inojosa, José De Paula, Carlos Feijão, Ronaldo de Almeida and Márcio Buzar

CONFERENCE DINNER

Alla Torre De' Rossi

Borgo S. Jacopo, 3/R, 50125 - Firenze (Italy)

Thursday, June, 21, h. 20.00

