



International Conference of Steel and Composite for Engineering Structures

Wednesday 09.07.2025

17:00-19:00	Guidotti Pavillion 4thICSCES Opening
	Vegezzi Pavillion Registration (*) Welcome drink

(*) Registration always at Guidotti Pavillion

Wednesday 09.07.2025	17:00-19:00			
Thursday 10.07.2025	08:30-09:00	10:30-11:00	13:30-14:00	15:30-16:00
Friday 11.07.2025	08:30-09:00	10:30-11:00	13:30-14:00	15:30-16:00
Saturday 12.07.2025	08:30-09:00			

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Thursday 10.07.2025

9:30-10:30	Guidotti Pavillion KEYNOTE SESSION 1 Chair: Erica Magagnini	
	Portraying the strains: a new Machine Learning approach for painting nonlinear strain fields on brittle composite structures Prof. Bahman GHIASSI, University of Birmingham, UK	
10:30-11:00	Coffee Break (Vegezzi Pavillion)	
	Guidotti Pavillion	Negrotti Pavillion
11:00-12:40	PARALLEL SESSION 1 Chair: Danila Aita (°) room technician Yiwei Hua	PARALLEL SESSION 2 Chair: Gabriele Milani (°) room technician Li Zhang
11:00-11:20	Paper ID: 019 Full Modeling of Backfill in 3D Limit Analysis of Masonry Arch Bridges Authors: Yiwei Hua , Gabriele Milani	Paper ID: 028 Resilient offshore wind turbine tower segment with enhanced ductility: Hybrid modelling and seismic performance Wuhua Xie , Ke Ke, Xuhong Zhou, Michael Yam, Yuhang Wang, Xiuzhang He
11:20-11:40	Paper ID: 070 On the safety of damaged masonry structures: a first probabilistic approach Authors: Elsa Garavaglia, Giuliana Cardani, Danila Aita	Paper ID: 089 Numerical Modeling of masonry structures strengthened with composite materials under Low and high-velocity impacts: State of the art Authors: Li Zhang , Ernesto Grande, Gabriele Milani

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11:40-12:00	PAPER ID: 006 Simple truss model to predict the failure of masonry pillars reinforced with FRP subjected to direct shear tests Author: Natalia Pingaro	PAPER ID: 011 Nonlinear FE analysis of S-shaped steel dampers under in-plane and out-of-plane cyclic loading Authors: Kai Guo, Gabriele Milani
12:00-12:20	Paper ID: 021 Fast physical scaled modelling of a cloister vault in the former monastery of Santa Maria della Pace in Piacenza, Italy Authors: Alessandro Gandolfi, Gabriele Milani	PAPER ID: 012 Seismic retrofitting of RC beam-column joints with Basalt-FRP: experimental experiences Authors: Erica Magagnini, Elisa Bettucci
12:20-12:40	Paper ID: 002 Advanced prediction of cracked total hip prosthesis lifespan using ANN-based optimization algorithms Authors: Khalil Chenaifi, Samir Khatir	PAPER ID: 013 Hybrid damper with multi-stage energy dissipation mechanisms: An experimental study Authors: Huanyang Zhang, Ke Ke, Xuhong Zhou, Ye Lin, Yuhang Wang
12:40-14:00	Lunch (Vegezzi Pavillion)	
14:00-15:40	PARALLEL SESSION 3 Chair: Georgios Stavroulakis (°) room technician Alessandro Gandolfi	PARALLEL SESSION 4 Chair: Carmelo Gentile (°) room technician Yiwei Hua
14:00-14:20	Paper ID: 030 Role of fibre coating in bond tests of FRCM systems. Experimental and numerical investigations Chiara Casini, Rebecca Grazzini, Giulia Misseri, Luisa Rovero	Paper ID: 026 An augmented Lagrangian approach to plane truss layout optimization under multiple loading conditions Authors: Valentina Bernardinello, Andrea Chiozzi
14:20-14:40	PAPER ID: 007 Automatic 3D CAD-based Kinematic Limit Analysis for the rapid seismic assessment of masonry towers validated through tilting table tests on toy-models Authors: Natalia Pingaro, Martina Buzzetti	Paper ID: 027 Enhancing seismic resilience of steel frames through GA-optimized knee element sizing Riccardo Piazzon, Jordan Stevy Defo Wabo, Paolo Zampieri, Carlo Pellegrino
14:40-15:00	Paper ID: 004 A 2D nonlinear finite element model for curved masonry pillars reinforced	Paper ID: 037 Dynamic characteristics of two similar steel-concrete composite bridges

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	with FRCM and tested under direct shear conditions Authors: Natalia Pingaro, Gabriele Milani	Authors: Paolo Borlenghi , Ana Avramova, Carmelo Gentile
15:00-15:20	Paper ID: 039 Image supported numerical homogenization for structural analysis of heterogeneous walls Authors: Nikolaos Schetakis, Georgios Drosopoulos, Anastasis Litsas, Georgios Stavroulakis	Paper ID: 014 Partial self-centering onshore wind turbine structure: A proof-of-concept study Authors: Junren Wang , Ke Ke, Huanyang Zhang, Xuhong Zhou, Yuhang Wang
15:20-15:40	Paper ID: 022 3D Heterogeneous Finite Element Analysis of a masonry cloister vault in the former monastery of Santa Maria della Pace in Piacenza (Italy) Authors: Alessandro Gandolfi , Martina Buzzetti, Cecilia Colombo, Gabriele Milani	Paper ID: 029 Impact on fly ash based geopolymer composite long-term properties in compression and three-point bending by increased amount of PVA and steel fiber reinforcement Authors: Rihards Gailitis , Liga Radina, Leonids Pakrastins, Wei-Ting Lin, Andina Sprince
15:40-16:00	Coffee Break (Vegezzi Pavillion)	
16:00-17:40	PARALLEL SESSION 5 Chair: Nicola Cefis (°) room technician Martina Buzzetti	PARALLEL SESSION 6 Chair: Erica Magagnini (°) room technician Yuewen Gao
16:00-16:20	Paper ID: 067 Advanced numerical model for historical masonry structures subjected to seismic sequences Authors: Martina Buzzetti , Maurizio Acito, Gabriele Milani	Paper ID: 036 Conceptual design and dynamic evaluation of car bumper beams utilizing negative stiffness metamaterial Authors: Ali Cherif Messellek , Mohammed Amine Serir, Mohand Ould Ouali, Abdelghani May
16:20-16:40	Paper ID: 093 Seismic vulnerability assessment of masonry minarets: Turkey, Egypt and Iran Authors: Sare Nur Avci , Gabriele Milani, Marco Vincenzo Valente	Paper ID: 033 Experimental and numerical impact behavior of composite materials Authors: Oulad Brahim Abdelmoumin, Capozucca Roberto, Erica Magagnini , Khatir Samir, Debaets Bernard, Bouzid Yassine

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16:40-17:00	Paper ID: 020 2D and 3D modelling and analysis of masonry double curvature structures Authors: Alessandro Gandolfi, Natalia Pingaro, Gabriele Milani	Paper ID: 040 Topology optimization in view of additive manufacturing Authors: Ioannis Ntintakis, Georgios Stavroulakis
17:00-17:20	Paper ID: 081 Structural analysis of stainless steel tubes for the transport of water in supercritical state Authors: Nicola Cefis, Federico Piccagli, Rani Al Sayegh, Roberto Fedele	Paper ID: 034 Detecting structural changes on a long-span steel bridge Authors: Marco Pirrò, Carmelo Gentile
17:20-17:40	PAPER ID: 008 On the bond behavior of anchored FRCM-reinforced masonry pillars subjected to direct shear tests Authors: Natalia Pingaro, Mario Fagone, Tommaso Rotunno, Gabriele Milani	Paper ID: 038 Performance assessment of a novel brace-type damper for seismic energy dissipation Authors: Xiuzhang He, Xuhong Zhou, Yongchao Tan, Ke Ke
17:40-18:00	Paper ID: 003 First experimental results of broom fiber-reinforced mor-tar mechanical performances Authors: Antonio Sandoli, Carla Ceraldi, Giovanni Fabbrocino	Paper ID: 035 Vibration-based Structural Health Monitoring of a long-span steel-concrete composite bridge Authors: Carmelo Gentile, Roberto Gentile, Valeria Pepe

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Friday 11.07.2025

9:30-10:30	Guidotti Pavillon KEYNOTE SESSION 2 Chair: Gabriele Milani	
	High order multifold formulations for shell structures made of advanced anisotropic materials Prof. Francesco TORNABENE, University of Salento, ITA	
10:30-11:00	Coffee Break (Vegezzi Pavillion)	
	Guidotti Pavillion	Negrotti Pavillion
11:00-12:40	PARALLEL SESSION 7 Chair: Ernesto Grande (°) room technician Mohammad Pourfouladi	PARALLEL SESSION 8 Chair: Marco Simoncelli (°) room technician Li Zhang
11:00-11:20	Paper ID: 044 A pushover-based preventive procedure for assessing the seismic performance of masonry structures under earthquake sequences Authors: Martina Buzzetti , Maurizio Acito, Gabriele Milani	Paper ID: 052 Analysis of structural vulnerability through the scanning of road pavements: overview and perspectives Authors: Mihammad Ziad Bacha, Mario Lucio Puppio, Marco Zucca, Alfredo Staglianò, Mauro Sassu
11.20-11:40	Paper ID: 045 Effect of moisture and temperature on FRP-strengthened masonry units Authors: Levingshan Augusthus Nelson , Laurence Weekes, Gabriele Milani	Paper ID: 085 Experimental investigation of bond-slip response of GFRP bars in concrete exposed to high temperature in alkaline solution Authors: Francesca Nerilli, Hadi Monsef Ahmadi , Stefania Imperatore, Giuseppe Vairo

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11:40-12:00	Paper ID: 047 A simplified approach for calibrating material partial safety factors for URM structures under in-plane loads Authors: Federica Vadalà, Luis Carlos Martins da Silva, Ivo Calì, Paulo B. Lourenco	Paper ID: 054 Influence of localized corrosion on the structural behavior of an ancient iron bridge Author: Marco Simoncelli
12:00-12:20	Paper ID: 048 Particle-based modeling in simulation of failure in masonry core testing Authors: Kanaeshvarr Devanand, Bahman Ghiassi, Asaad Faramarzi, Moura Mehravar	Paper ID: 075 Topology optimization for additive manufacturing in astronomical optomechanics Authors: Edoardo Maria Alberto Redaelli, Nicola Cefis, Roberto Fedele, Giuseppe De Luca
12:20-12:40	Paper ID: 060 Modeling of the cyclic bond behavior of FRP strengthening applied to Concrete Elements Authors: Ernesto Grande, Maura Imbimbo, Gabriele Milani, Valentina Tomei	Paper ID: 073 Multi-scale modelling of soft stone masonry via the Applied Element Method Authors: Ciro Candonì, Fulvio Parisi
12:40-14:00	Lunch (Vegezzi Pavillion)	
14:00-15:40	PARALLEL SESSION 9 Chair: Gabriele Milani (°) room technician Xing Wu	PARALLEL SESSION 10 Chair: Mauro Sassu (°) room technician Natalia Pingaro
14:00-14:20	Paper ID: 061 Analytical solutions incorporating interfacial Mode II fracture energy for predicting the shear response of FRP-strengthened concrete samples Authors: Gabriele Milani, Levingshan Augusthus Nelson	Paper ID: 053 Anchoring GFRP rebars: analysis, experimental investigation and assessment for design Authors: Mario Lucio Puppio, Giorgio Serra, Fausto Mistretta, Mauro Sassu
14:20-14:40	Paper ID: 065 Optimal design of tie-rod strengthening for historical masonry structures through a Genetic Algorithm combined with limit analysis Authors: Martina Buzzetti, Gabriele Milani	Paper ID: 098 Full-scale tests on infilled RC frames with and without a lightweight steel exoskeleton system Authors: Antonio Formisano, Emilia Meglio, Ciro del Vecchio, Antimo

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		Fiorillo, Carmine Moliterno, Emanuele Scaiella, Simone Galano, Andrea Rossi, Andrea Dallari, Andrea Prota
14:40-15:00	Paper ID: 066 An interface constitutive model for mortar joints with embedded rubber layers Authors: Yuewen Gao, Gabriele Milani, Nebojša Mojsilović	Paper ID: 072 Structural response analysis of URM buildings subjected to soil settlements via Discontinuum Modelling Techniques Authors: Ciro Candoni, Fulvio Parisi
15:00-15:20	Paper ID: 078 Scaled meso-structure finite element simulation and homogenized parameters deduction of fiber-modified asphalt Authors: Xing Wu, Gabriele Milani	Paper ID: 031 Steel exoskeleton for seismic and energy upgrading of aging RC structures in a former Neapolitan steel mill Authors: Emilia Meglio, Antonio Formisano
15:20-15:40	Paper ID: 086 Meshless fracture mechanics approach to mixed-mode crack growth in adhesively bonded lap joints Authors: Diogo Gonçalves, Luis Ramalho, Raul Campilho, Jorge Belinha	PAPER ID: 009 Seismic and energy retrofitting of unreinforced masonry building aggregates: A case study in Visso affected by 2016 earthquake Authors: Giovanna Longobardi, Antonio Formisano
15:40-16:00	Coffee Break (Vegezzi Pavillion)	
16:00-17:40	PARALLEL SESSION 11 Chair: Emanuele Reccia (°) room technician Mohammad Pourfouladi	PARALLEL SESSION 12 Chair: Roberto Fedele (°) room technician Xing Wu
16:00-16:20	Paper ID: 094 Effective numerical time integration of structural dynamic responses under moving load Authors: Michele Guerini, Rosalba Ferrari, Giuseppe Cocchetti, Egidio Rizzi	Paper ID: 051 Reinforcement of existing RC bridges through composite intrados steel elements to prevent brittle failure Authors: Mauro Sassu, Fabio Doveri, Martina Ferrini, Fausto Mistretta
16:20-16:40	Paper ID: 032 Free vibration of functionally graded porous micro-beams with fuzzy uncertainty using advanced numerical methods	Paper ID: 074 Response to impact of Fiber Metal Laminates for aeronautical applications Authors: Paolo Astori, Alessandro Airolidi, Nicola Cefis, Roberto Fedele

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	Authors: Subrat Kumar Jena, Victor A. Eremeev, Emanuele Reccia	
16:40-17:00	Paper ID: 082 Higher-order theories for the vibration analysis of anisotropic doubly curved irregular shells with holes and discontinuities Authors: Francesco Tornabene, Matteo Viscoti , Rossana Dimitri	PAPER ID: 010 Seismic response of churches in Sorrento (Naples): A kinematic approach for facades overturning assessment Authors: Giovanna Longobardi, Luigi Amitrano, Antonio Formisano
17:00-17:20	Paper ID: 083 Numerical study of joints between cold-formed beams and square hollow columns using long bolts Authors: Manuel López , Alfonso Loureiro, Ruth M Gutierrez, Jose M Reinoso	Paper ID: 091 Automating Engineering Simulation Setup with AI-Driven Generative Models Authors: Ossama Shafiq, Bahman Ghiassi , Alessio Alexiadis
17:20-17:40	Paper ID: 084 Higher-order multifield formulations for shell structures made of advanced anisotropic materials Authors: Francesco Tornabene, Matteo Viscoti , Rossana Dimitri	Paper ID: 092 Seismic Vulnerability of masonry arch bridges: Case studies from Avellino province Authors: Gessica Volpe, Emilia Meglio, Antonio Formisano
19:30-24:00	Social dinner (Campus Arata, Vegezzi Pavilion)	

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Saturday 12.07.2025

9:30-10:30	Guidotti Pavillion (Room 9) KEYNOTE SESSION 3 Chair: Gabriele Milani	
	Breaking the wall: Integrating FEM, DEM, and videogame physics for advanced masonry failure analysis Prof. Francesco CLEMENTI, Università Politecnica delle Marche, ITA	
10:30-11:00	Coffee Break (Vegezzi Pavillion)	
	Guidotti Pavillion	Negrotti Pavillion
11:00-12:40	PARALLEL SESSION 13 Chair: Francesco Clementi (°) room technician Mohammad Pourfouladi	PARALLEL SESSION 14 Chair: Antonio Formisano (°) room technician Yuewen Gao
11:00-11:20	Paper ID: 095 Trepponti bridge: from 3D model to preliminary nonlinear FE analysis Authors: Giovanni Meloni , Mohammad Pourfouladi, Natalia Pingaro, Gabriele Milani	Paper ID: 103 Multidimensional analysis of seismic response of Zhenguo Temple Pagoda Authors: Peixuan Wang , Guoming Liu, Shengcai Li
11:20-11:40	Paper ID: 101 A Simplified Analytical Interface Model for FRCM-Strengthened Masonry Authors: Hamza Tahat , Natalia Pingaro, Mario Fagone, Gabriele Milani	Paper ID: 097 Experimental investigation on the mechanical properties of flax fibres for sustainable FRCM systems: preliminary results Authors: Roberta Di Chicco, Domenico Brigante, Antonio Formisano
11:40-12:00	Paper ID: 069 Decoding the Dynamic Behavior of Twin Church Bell Towers Through Ambient Vibration Analysis	Paper ID: 102 The ERIES_RESUME project: results of experimental activities Authors: Antonio Formisano , Aleksandra Bogdanovic, Antonio

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	Authors: Gianluca Standoli, Francesca Bianconi, Mattia Schiavoni, Martina Di Giosaffatte, Francesca Roscini, Francesco Clementi	Shoklarovski, Marco Domaneschi, Emilia Meglio, Julijana Bojadjieva, Zoran Rakicevic, Vlatko Sesov, Filip Manojlovski, Angela Poposka, Toni Kitanovski, Dejan Ivanovski, Raffaele Cucuzza, Valentina Villa, Giuseppe Carlo Marano
12:00-12:20	Paper ID: 059 Collapse risk assessment of long-span masonry cloister vaults under paradigmatic crown loading: A heterogeneous Limit Analysis approach with stereotomy Authors: Mohammad Pourfouladi, Natalia Pingaro, Gabriele Milani	Paper ID: 104 The use of steel as flexible technique for structural rehabilitation of existing RC industrial buildings Authors: Erica Magagnini, Giuseppe Pace, Roberto Capozucca
12:20-12:40	Paper ID: 068 Cost-Effective Vibration Monitoring for Anomaly Detection and Localization in Existing Structures Authors: Martina Di Giosaffatte, Mattia Schiavoni, Francesca Bianconi, Gianluca Standoli, Francesca Roscini, Francesco Clementi	Paper ID: 096 Eco-sustainable plasters with recycled tyre aggregates: Experimental characterization and numerical application to a school building Authors: Emilia Meglio, Antonio Formisano
12:40-14:00	Guidotti Pavillion 4thICSCES Closure Awards & Special Issues	
	Vegezzi Pavillion Farewell drink	