7 | 11
SETTEMBRE
2025
ASSISI

XX *CONVEGNO* ANIDIS

L'Ingegneria Sismica in Italia

Conference Programme

ASSOCIAZIONE NAZIONALE ITALIANA DI
INGEGNERIA SISMICA
ANIDIS
Italian National Association of Earthquarke Engineering

STUDIUM GENERALE CIVITATIS PERUSII
A.D. MCCCVIII

A.D. 1308
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UNIVERSITÀ DEGLI STUDI
DI PERUGIA

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Zona Alessandro - Università degli Studi di Camerino
Zonta Daniele - Università di Trento

THEMES

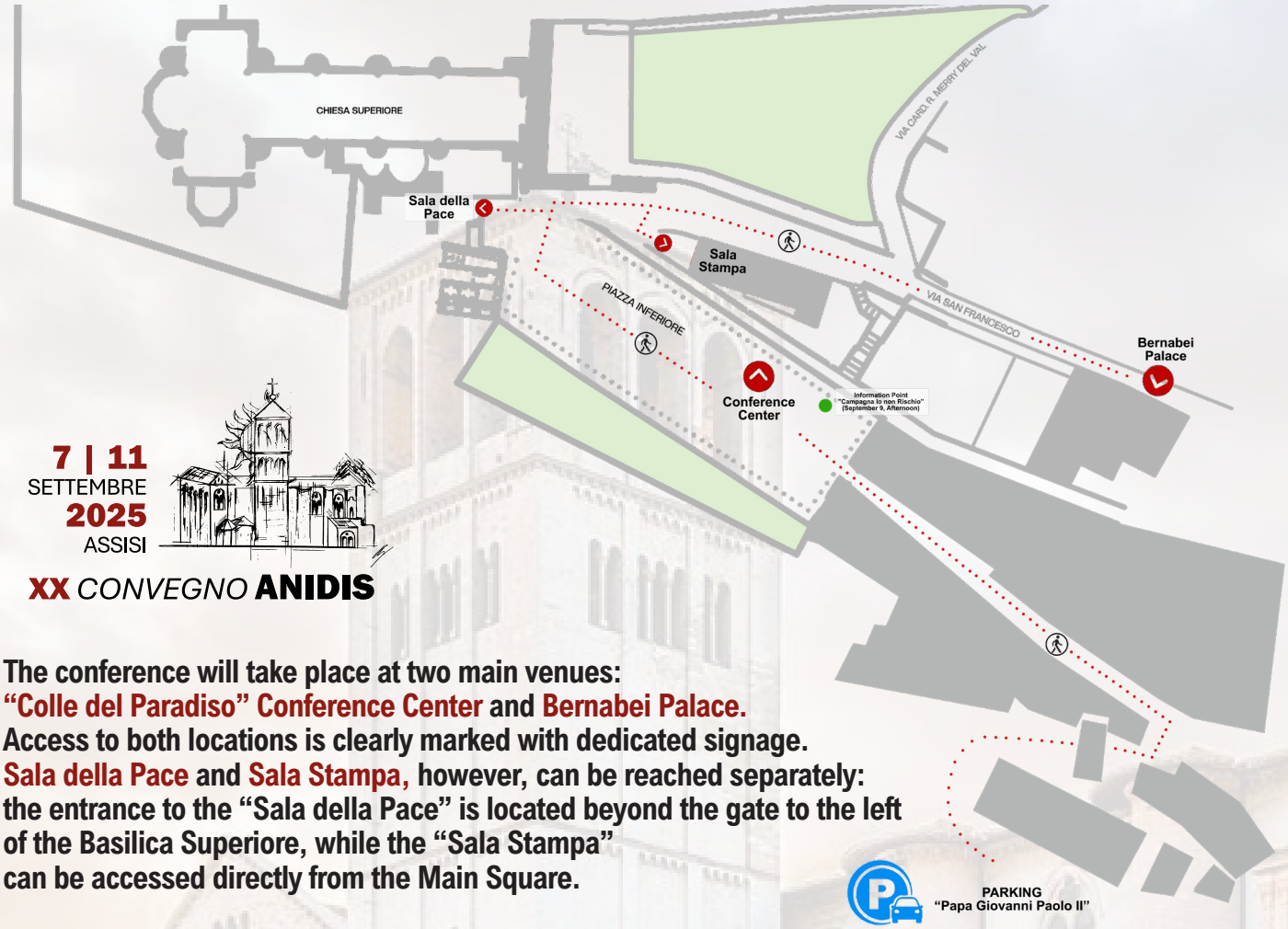
SG - GENERAL SESSIONS

SG02 - Soil dynamics, earthquake geotechnics and Soil-structure dynamic interaction
SG04 - Vulnerability and seismic risk
SG06 - Technical standards and design/verification methods
SG07 - Analysis methods, modeling and capacity models
SG09 - Bridges, tunnels, and strategic and special structures
SG11 - Experimentation, diagnostics and monitoring of structures and infrastructure
SG12 - Seismic risk analysis and reduction: strategies, methods, and intervention techniques
SG13 - Assessment and improvement of structural behavior of Heritage-Protected Cultural Assets
SG15 - Passive, semi-active and active protection systems for structures and installations

SS - SPECIAL SESSIONS

SS01 - Behavior of beam - column joints in reinforced concrete structures under seismic actions
SS02 - Frontiers in seismic isolation and energy dissipation technologies
SS03 - Recent advancements on the use of timber-based systems for resilient cities
SS04 - Loss - assessment: post - earthquake data, predictions and mitigation strategies
SS05 - Structural knowledge and reliability assessment of existing bridges
SS06 - Developments and Challenges in Seismic Testing: Methodologies and Recent Applications
SS07 - Advancements in machine learning for risk assessment, mitigation, and management of structures and infrastructure
SS08 - Advancements in OpenSees applications for Earthquake Engineering
SS09 - Advanced materials for earthquake engineering
SS10 - Retrofit strategies for existing structures: recent advances
SS11 - Bio-based Materials for Resilient Structures in Seismic Areas
SS14 - Near-Source Earthquakes: Recent Seismological Progress and Structural Impact
SS15 - Seismic risk assessment, management and mitigation
SS16 - Earthquake-resistant structural systems conceived adopting a life cycle thinking approach
SS17 - Advances in Structural Health Monitoring for Masonry Structures
SS18 - Analysis, testing, monitoring and retrofitting of historical masonry bell towers
SS19 - Multi-hazard assessment of buildings and bridges through data-driven and physics-based methods considering pre-existing damage and material degradation
SS20 - Loss-Based Design frameworks in earthquake-and multi-hazard settings
SS21 - Seismic Structural Health Monitoring for Buildings and Civil Infrastructure
SS22 - Risk analysis and mitigation strategies for constructions under seismic-triggered events
SS23 - Nonstructural Elements in Civil Engineering: Seismic Vulnerability, Risk, and Mitigation Strategies
SS24 - Genesis: Seismic risk management for tourist valorization of the historical centers of southern Italy
SS25 - Vulnerability and seismic resilience of building aggregates in Italian historic centres: analysis methodologies and sustainable retrofit strategies
SS26 - Seismic design and assessment of masonry infills: numerical modelling, experimental tests and pre normative research

LOGISTICS



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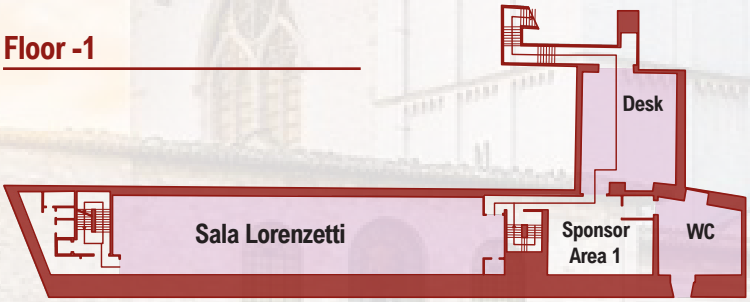
The conference will take place at two main venues:
"Colle del Paradiso" Conference Center and Bernabei Palace.
Access to both locations is clearly marked with dedicated signage.
Sala della Pace and Sala Stampa, however, can be reached separately:
the entrance to the "Sala della Pace" is located beyond the gate to the left of the Basilica Superiore, while the "Sala Stampa" can be accessed directly from the Main Square.

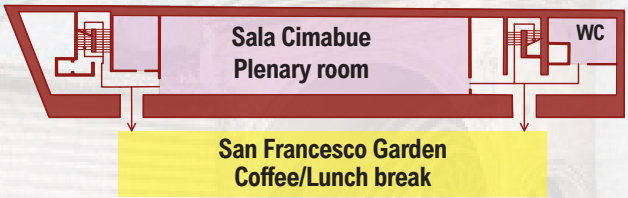
Conference Center "Colle del Paradiso"

Sala Cimabue - Sala Lorenzetti - Technical exhibition - Coffee break - Lunch break

Floor -1



Floor -2

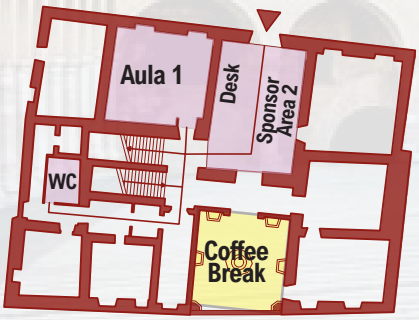


San Francesco Garden
Coffee/Lunch break

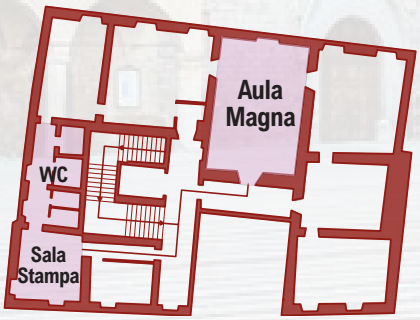
Bernabei Palace

Aula Magna - Aula 1 - Aula 2 - Technical Exhibition - Coffee break

Floor 0



Floor 1



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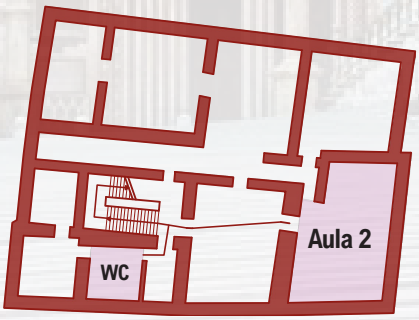


GENERAL INFORMATION

Oral presentation

The time allocated for each presentation is 15 minutes, including questions and discussion. In order to keep the conference on schedule and to accommodate participants who want to move between sessions, session chairs are urged to strictly follow the time schedule. Please be considerate of your fellow speakers and stay within your allocated time. All lecture rooms are equipped with a computer. All presenting authors are requested to be present in the lecture room 15 minutes prior to the start of the session in order to copy their presentation file to the computer in the lecture room. Please bring your presentations on a portable data device. Presentation files may be in .pdf or .pptx format. Please note that personal laptops cannot be used for presentations to keep the time between presentations minimal. Authors whose presentation contains animations, videos, or special effects are strongly encouraged to test it before their session in the respective room. It is the authors' responsibility to check in advance that their presentation works fine with the installed version of the available software. All contributions from the individual sessions can be accessed at the following link:
https://convegno.anidis.it/index.php/anidis/2025/schedConf/presentations

Coffee breaks - Lunch breaks

Coffee breaks and lunch breaks take place at the times indicated in the conference program. At the Colle del Paradiso Conference Center, they will be served at "Giardino del Maestro di San Francesco", accessible from floor -2. At Palazzo Bernabei, an additional area will be available, which will host the afternoon coffee break.

Welcome reception

A conference reception will be offered to conference participants at Borgo Antichi Orti restaurant, Via Pallareto 1, Assisi, on Sunday September 7 from 18:30 to 20:30. During this informal gathering, participants will be able to register for the conference while enjoying local food and wine in a charming setting overlooking the valley below Assisi.

Conference concert

On Monday September 8, a concert by the Choir of the University of Perugia will take place from 19:30 to 20:30 in the Upper Basilica of Saint Francis of Assisi, one of the most iconic and spiritually significant sites in Italy. The Basilica, a UNESCO World Heritage Site, is renowned for its breathtaking frescoes by Giotto and Cimabue, and for being the resting place of Saint Francis. This unique musical event offers participants an opportunity to experience a moment of artistic and spiritual reflection in an extraordinary setting.

Conference Gala Dinner

On Tuesday September 9 2025 at 20:00, the Conference Gala Dinner will take place at Cantine Tabarrini, in Montefalco. A bus service will depart from the "Papa Giovanni Paolo II" parking area at 19:30 to take participants to Cantine Tabarrini. At the end of the Conference Dinner, a return bus service will depart from Cantine Tabarrini at 23:30 to return participants to Assisi.

ANIDIS Awards

As part of the conference program, three prestigious awards have been established to honor outstanding contributions in the field. Winners will be announced during the Gala Dinner.
- ANIDIS Best Paper Award for Young Researcher, dedicated to promoting the work of emerging scholars;
- ANIDIS Best Paper Award, recognizing the most impactful contribution among all submitted papers;
- ANIDIS Career Award, honoring a distinguished career and long-standing commitment to the field of structural engineering.

Technical Visit

As a part of the ANIDIS 2025 Conference program, a technical visit to Norcia will take place on Thursday, September 11 departing from the "Papa Giovanni Paolo II" parking area at 8:00. The visit will focus on two symbolic sites of reconstruction following the 2016 earthquake: the Basilica of Saint Benedict, and the Town Hall. Participation, reserved for conference members, is free upon specific registration to the event.

Wireless Network

At the Colle del Paradiso Conference Center, wireless network credentials will be provided at the registration desk and will also be available on site. At Palazzo Bernabei, the eduroam network is active and accessible for all participants with institutional credentials.

KEYNOTE LECTURES

During the ANIDIS Conference, 9 Keynote Lectures will be delivered by distinguished international speakers, providing an updated overview of the most relevant topics in earthquake engineering and risk reduction. The program will also include two Round Tables, designed as opportunities for open discussion and debate among academia, professionals, and institutions.
All Keynote Lectures will take place in the "Sala Cimabue" at the Colle del Paradiso Conference Center.

Monday 8 September, 9:30 - 10:15
Atilla Ansal - Ozyegin University, Cekmekoy, Istanbul, Turkey

"Recent developments in site response analysis and microzonation"

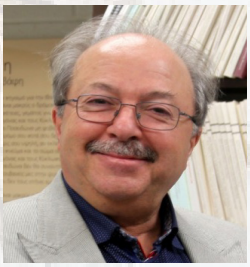
The basic purpose of site response analysis is to evaluate possible local site effects and the earthquake characteristics on the ground surface to estimate probable earthquake damage for the existing building stock and for the design of new structures. The basic issues in the site response analysis are the inherent uncertainties in source characteristics, soil profile, soil properties, and site response analysis procedure. In addition, characteristics of the building inventories would introduce critical uncertainties associated with these analyses. Recent advances, with growing computational capacity, emphasize probabilistic frameworks to capture these uncertainties. The probability distribution of the related earthquake parameters on the ground surface may be determined considering all possible input acceleration time histories, site profiles, and dynamic soil properties. One option to account for the variability in earthquake source and path effects may be to consider using large number of acceleration records compatible with the site-dependent earthquake hazard partially based on hazard deaggregation at the investigated site. Likewise, stochastic soil profiles generated via Monte Carlo simulations can be used to account for the site condition variability. A comprehensive seismic microzonation methodology is proposed based on the probabilistic assessment of these factors involved in site response analyses. The second important issue is the selection of microzonation parameters. The selection of microzonation parameters—such as Cumulative Absolute Velocity (CAV) and Housner Intensity (HI)—is emphasized for their stronger empirical correlation with structural damage. The main approach is to develop a microzonation procedure for ground shaking intensity accounting for variability in ground motion and soil response. The third issue is the reliability and correctness of the site response analysis procedure. The adopted methodology advances traditional site response analysis by integrating frequency- and stress-dependent soil behavior models to achieve a more accurate numerical model and proposing the use of 3D site response analysis to reflect the multi-directional nature of seismic loading. It also highlights the need for representative time histories with known exceedance probabilities. Even though the selected representative acceleration time histories may be scaled with respect to probabilistic acceleration spectrum or peak round acceleration obtained based on probabilistic site response analysis; the probability of the selected acceleration time histories are not known. The only possible option is to estimate probabilistic acceleration time histories with predetermined exceedance probabilities to enhance fully probabilistic site response analysis. The proposed methodology is demonstrated through case studies based on data from the Istanbul Rapid Response Network, to underline the importance of fully probabilistic site response analysis in seismic microzonation, aiming to improve the reliability.

Monday 8 September, 10:15 - 11:00
Giovanni Macedonio - Research Director INGV, Italy

"Bradiseism and volcanic hazard at Campi Flegrei, Italy"

The Phlegraean Fields (Campi Flegrei) are a volcanic caldera formed by the eruptions of the Campanian Ignimbrite (39,000 years ago) and the Yellow Tuff (15,000 years ago). Subsequently, three periods of activity can be distinguished, during which about 70 eruptions occurred, separated by long periods of quiescence. The most recent eruption took place in 1538, and it is well documented through images and historical documents. The typical hazardous eruptive phenomena include the generation of pyroclastic flows, the dispersal and fallout of volcanic ash, and lava flows. More recently, the "bradyseism risk" has been officially recognized, referring to ongoing ground deformation and associated earthquakes in the area. An additional hazard that is now being discussed is the potential occurrence of phreatic explosions, which may be triggered by the rapid depressurization of shallow portions of the hydrothermal system. The presentation will illustrate the various hazards related to the possible opening of new eruptive vents and volcanic eruptions, as well as the damage associated with seismic activity, ground deformation, and gas emissions that occur during bradyseismic crises, such as the one that has been ongoing since 2005.

Monday 8 September, 14:00 - 14:45
Michael Constantinou - University of Buffalo, State University of NY, USA



"Performance of seismically isolated structures in earthquakes"

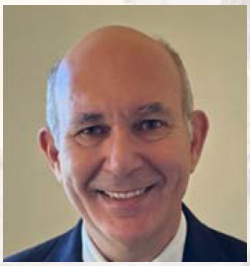
Many seismically isolated structures have been constructed, ranging from houses, apartment buildings, hospitals, emergency facilities, architecturally and historically significant structures and tall buildings to large bridges and offshore platforms. The observation of performance of such structures in earthquakes provides valuable information on the validity of design procedures and on the lifetime behavior of isolators and delivers lessons on actions that are needed to avoid problems and enhance reliability. The presentation will start with a discussion of design procedures for seismically isolated structures, uncertainty and reliability in design. This guides the audience to a better understanding of the observed performance of several seismically isolated structures that are presented next. It is concluded that, in general, the performance of seismically isolated structures is very good but dependent on proper analysis and design, provisions for increased capacities of isolators and superstructures to meet reliability objectives, effective peer review, testing (prototype and production) of isolators, proper construction and inspection.

Tuesday 9 September, 9:30 - 10:15
Tiziana Rossetto - University College of London, Great Britain

"Earth, Fire, Wind and Water: Research needs to understand vulnerability to the 4 elements"

In the field of vulnerability and risk to natural hazards, earthquake engineering has led the way. This includes providing exposure taxonomies, post-earthquake damage data, and the definition of empirical, numerical and judgement-based approaches for the development of fragility functions. This dominance of earthquake engineering in risk modelling is underpinned by a history of high earthquake losses, and by close collaboration between researchers working on hazard with those working on the hazard performance of engineered infrastructure. This has not necessarily been the case for other hazards, where silos still exist between hazard scientists and engineers. However, with climate and sea level rise projections predicting the higher frequency and intensity of meteorological and hydraulic hazards, it is becoming of growing importance to better understand risk from these. In this talk the four classical Greek elements of Earth, Fire, Wind and Water will be used to frame discussions around the state of art of fragility functions to different hazards. Drawing on past experience and current research, examples will be provided of the strong challenges that exist in deriving fragility models for tsunami, landslides, man-made fires and extreme winds. It will be shown that although advances made in earthquake risk assessment have had significant positive influence, they have at times negatively biased the development of fragility models for other (non-earthquake) hazards. In particular, multi-hazard fragility of buildings to earthquake ground shaking combined with fire and tsunami will be presented to highlight the importance of hazard-specific considerations for structural loading and damage representation in infrastructure. Throughout, the talk will highlight significant data and research gaps that need to be filled to better understand community and infrastructure risk to the four elements to an equal degree.

Tuesday 9 September, 10:15 - 10:45
Joel P. Conte - University of California, USA



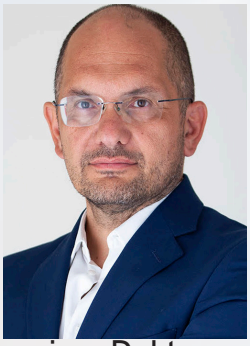
"Digital Twin of the NHERI-UC San Diego 6-DOF Large High-Performance Outdoor Shake Table (LHPOST6)"

The UC San Diego Large High-Performance Outdoor Shake Table (LHPOST) was commissioned on October 1, 2004, as a shared-use experimental facility under the U.S. National Science Foundation (NSF) Network for Earthquake Engineering Simulation (NEES) program. While originally conceived as a sixdegree-of-freedom (6-DOF) system, budget constraints led to its initial construction as a single-degree-of-freedom (1-DOF) shake table. After serving the earthquake engineering community for 15 years, the LHPOST underwent a major upgrade to its originally intended 6-DOF configuration between October 2019 and April 2022, at which point it was renamed the LHPOST6. A mechanics-based numerical model (i.e., digital twin) of the LHPOST6 was developed. Under bare-table conditions, this model comprises three subsystems: (1) the hydraulic dynamics, (2) the hold-down struts, and (3) the three-dimensional kinematics and dynamics of the mechanical components of the LHPOST6, including the platen and the attached vertical and horizontal actuators. A systematic, step-by-step methodology was established to both calibrate the model parameters and validate the model itself, using an extensive set of experimental data from acceptance and characterization tests.

Tuesday 9 September, 14:00 - 15:00 - Round Table
"I rischi naturali nei grandi progetti del PNRR: quali scenari per il futuro?" - Angelo Masi, Andrea Prota, Tommaso Moramarco, Paola Inverardi, Giulio Selvaggi, Graziano Leoni

Wednesday 10 September, 9:00 - 9:45

Sen. Guido Castelli - Commissario Straordinario del Governo per la riparazione e la ricostruzione sisma 2016



"Ricostruire l'Appennino centrale tra innovazione e sicurezza"

Il territorio italiano ha un primato assoluto in Europa: quello della maggiore sismicità continentale. Su 1.300 terremoti distruttivi di cui si ha memoria e documentazione nel secondo Millennio, nell'area del Mediterraneo, almeno 500 hanno interessato il nostro Paese. Insomma, l'Italia è un Paese quasi totalmente esposto al rischio sismico, cambia solo la frequenza attesa e la potenza liberata. La ricostruzione da un terremoto costa in genere circa 10-100 volte di più che realizzare un adeguamento o un miglioramento antisismico. Dal terremoto del Belice in poi si stima che le ricostruzioni post sisma siano costate fino a 200 miliardi, senza contare i danni economici indiretti. È la prima volta che, nell'ambito di una ricostruzione post sisma di vasta portata come quella dell'Italia Centrale (la sequenza sismica 2016-2017 ha interessato un'area di 8000 kmq, distruggendo edifici per un valore di circa 28 miliardi di euro), viene pianificato un lavoro di analisi sistematica, con controlli sul campo e l'uso di tecnologie avanzate sulle aree di dissesto individuate. Ricostruire in sicurezza vuol dire aver sciolto definitivamente quella visione datata e irrealistica della ricostruzione "dov'era, com'era". Dopo le indicazioni univoche offerte dalla conferenza di Sendai oggi l'attenzione si è spostata, opportunamente, sulla necessità di migliorare la comprensione del rischio di disastri in tutte le sue dimensioni di esposizione, vulnerabilità e caratteristiche di pericolosità; la responsabilità per la gestione del rischio di disastri deve avere l'obiettivo di "ricostruire meglio", laddove sia possibile e sicuro farlo. Nella ricostruzione in atto nel più grande cantiere edile d'Europa abbiamo due "case histories" all'avanguardia: Arquata del Tronto e Castelluccio di Norcia. Due esempi di questo innovativo percorso di messa in sicurezza prima di ricostruire. Due progettazioni ormai diventati oggetto di studio in Italia e all'estero.

Wednesday 10 September, 9:45 - 11:00 - Round Table

"Ricerca ed innovazione per la Sicurezza in Europa tra minacce tradizionali e minacce emergenti " - Angelo Masi, David Fabi, Arturo Varriale, Daniele Tonti, Angelo D. Perrini, Vincenzo Pullez, Gianluigi Consoli

Wednesday 10 September, 14:00 - 14:45

Anil Agrawal - The City College of New York, USA

"Large ship impacts on bridge piers"

The Key Bridge in Baltimore stood for more than half a century until it collapsed when a massive ship it was never designed to withstand collided with it. Ship collision design provisions established in 1991, well after the bridge was built, suggest that the chance of collision was extremely low, estimated to be around 1/100,000. This risk assessment, which ultimately proved to be overly optimistic, likely contributed to a false sense of security about the bridge's vulnerability and may have impeded proactive measures to reinforce the structure. Collapse of this bridge also highlighted the need for critical investigation through complex simulations using impact of large ships into bridge piers to determine the sufficiently of current AASHTO guidelines and development of simulation tools to investigate safety of bridge piers from large ship impacts. This presentation will highlight various critical aspects of the impact of large ships on bridge piers.

Wednesday 10 September, 14:45 - 15:30
Gian Michele Calvi - IUSS PAvia, Eucentre Foundation Director, Italy

"Isolamento e controllo attivo nella progettazione fondata sulla minimizzazione delle perdite"

Performance-based design was first envisaged in the early 1990s and has become a mantra in conceptual seismic design. However, practical approaches to be possibly introduced in codes of practice are not readily available, to say the least, though some can be found in the literature. What is essentially missing is some correlation between structural response parameters and expected monetary losses, at a level of simplicity comparable with the force- or displacement-based approaches applied to designing in everyday practice. The basics of a formulation that may evolve into such a practical loss–based approach will be discussed, with a focus on some essential practical questions: is it possible to design for very low expected loss and what will be the associated parametric investment cost? In this context, seismic isolation plays a peculiar role, being one of the most accredited candidates to allow a credible design approach for strategic constructions, in which case extremely contained losses could be aimed at, even for low probability ground motions. Some examples derived from the recent 2023 Turkey earthquake will be introduced and discussed as case studies. The potential application of active control for the same purpose will be briefly touched. This technology is still in its infancy but seems to be promising in specific areas of application.

Thursday 11 September, 9:00 - 9:45
Andrea Dall'Asta - University of Camerino, Italy

"Il ruolo della sperimentazione sismica nella ricostruzione"

Gli eventi sismici evidenziano spesso le carenze dei nostri modelli predittivi e delle nostre capacità di limitare in maniera efficace le conseguenze dei terremoti. Allo stesso tempo, durante e immediatamente dopo la sequenza sismica si attiva un complesso processo di ricostruzione che comprende il rilievo dei danni, l'adozione di interventi temporanei di messa in sicurezza, la progettazione e realizzazione di interventi di riduzione del rischio sismico a diversa scala. All'interno di questo processo si creano spesso condizioni uniche per confrontare i modelli teorici con il dato sperimentale, non solo attraverso l'osservazione delle conseguenze, ma anche attraverso l'attivazione di attività sperimentali orientate all'ottimizzazione delle risorse destinate alla ricostruzione e all'approfondimento di tecniche e metodi innovativi o non ancora completamenti maturi. La relazione fornisce un primo quadro delle opportunità che sono scaturite nell'ambito della ricostruzione che ha seguito l'ultimo evento sismico di rilievo nazionale (Centro Italia 2016), esperienza che si è intersecata con il Piano di Ricostruzione e Resilienza e che ha contribuito a realizzare sperimentazioni di sicuro interesse per la definizione di soluzioni costruttive più efficaci, auspicando che l'avvenimento di eventi non completamente prevedibili e potenzialmente disastrosi possa almeno essere utilizzato in maniera efficace per limitare danni nel futuro.

Day 1 - Monday 8 September

Conference Center "Colle del Paradiso"

Monday 8 September	Sala Cimabue	Sala Lorenzetti	Sala della Pace	Sala Stampa	
8:00-8:45	*Registration*				8:00-8:45
8:45-9:30	*Opening Ceremony - Sala Cimabue*				8:45-9:30
9:30-10:15	*Plenary Lecture* - Atilla Ansal - Recent Developments in Site Response Analysis and Microzonation *Sala Cimabue - Chair: Filippo Ubertini*				9:30-10:15
10:15-11:00	*Plenary Lecture* - Giovanni Macedonio - Bradiseism and volcanic hazard at Campi Flegrei, Italy *Sala Cimabue - Chair: Franco Braga*				10:15-11:00
11:00-11:30	*Coffee break*				11:00-11:30
11:30	**Session SG09-1** **Chairs: Bernardino Chiaia, Laura Ierimonti** **4985 Modal identification of prestressed concrete beams with artificial damage on prestressing strands** *Dario De Domenico, Amir Shamsaddinlou, Natale Maugeri, Paolo Longo, Davide Messina, Dario La Mazza, Monica Longo, Paola Darò, Antonino Recupero, Giuseppe Mancini* **5023 Fragility-Based Assessment of Seismic Isolation Strategies for the Retrofit of simply supported existing Bridges.** *Carmine Lupo, Luigi Petti*	**Session SS07-1** **Chairs: Ilaria Venanzi, Giuseppina Uva** **5220 Machine learning based framework for the seismic fragility assessment of reinforced concrete bridges** *Mirko Calò, Andrea Nettis, Sergio Ruggieri, Giuseppina Uva, Andrea Dall'Asta* **5250 Sensitivity analysis of different machine learning models in the seismic response assessment of bridges** *Gianluca Quinci, Ignazio Casiraro, Marinella Fossetti, Hoang Nam Phan, Fabrizio Paolacci*	**Session SG04-1** **Chairs: Atilla Ansal, Ingrid Boem** **4956 Predicting Regional Post-Seismic Building Usability with Machine Learning: The 2016–2017 Central Italy Earthquake Case** *Angelo Aloisio, Marco Martino Rosso, Giuseppe Quaranta, Massimo Fragiacomo* **4957 Vulnerability of precast concrete decks to vertical earthquakes** *Riccardo Maurizio Ambrogio Baltrocchi, Bruno Dal Lago, Francesco Foti*	**Session SS05-1** **Chairs: Michele D'Amato, Valentina Giglioni** **4996 Assessment of the Flat-Jack Test for evaluating in-situ stress in Post-Tensioned Concrete** *Dalila Rossi, Carlo Pettorruso, Sara Cattaneo, Virginio Quaglini* **5066 The Strambino Bridge, 20 Years Later: Preliminary Assessment of Scour Effects on a Retrofitted Bridge** *Andrea Pozè Falet, Marco Civera, Mauro Aimar, Antonino Quattrone, Donato Sabia, Bernardino Chiaia, Sebastiano*	11:30
12:00	**5064 Dynamic identification of prestressed reinforced concrete railway bridges through Automated Operational Modal Analysis: an example on two case studies** *Eleonora Massarelli, Marco Civera, Giulio Ventura, Bernardino Chiaia* **5095 Seismic risk mitigation strategies of the Italian railway infrastructure** *Efisio Murgia, Adriana Galli, Andrea Vecchi, Francesco Iodice, Ilaria Fabrizi, Riccardo Orlandi*	**5256 Bayesian neural networks for seismic damage detection in bridges using monitoring data** *Francesco Mariani, Laura Ierimonti, Filippo Ubertini, Ilaria Venanzi* **5260 Robust Anomaly Detection in Masonry Structures Using Temperature-Driven CAESVD Framework: Application to the Consoli Palace** *Akshay Rai, Laura Ierimonti Valentina Giglioni, Elisa Tomassini, Filippo Ubertini, Ilaria Venanzi*	**4992 Application of a novel geological-geotechnical index for assessing multi-hazard risk in linear infrastructure** *Nadia Salvatore, Alessandro Pagliaroli, Kyle M. Rollins, Giuseppe Brando* **5060 L'ipotesi di impalcati infinitamente rigido per le costruzioni in calcestruzzo armato** *Franco Braga, Carmenzo Miozzi, Giuseppe Rossi, Massimo Sessa*	**5092 A new reliability-based procedure for the life-cycle management of constructions: application to RC bridge half-joint** *Matteo Tatangelo, Lorenzo Audisio, Michele D'Amato, Rosario Gigliotti, Franco Braga* **5135 Data-Driven Probabilistic Braking Force Model for Existing Bridges Using WIM Traffic Records** *Amirmahmoud Behzadi, Simone Celati, Michele D'Amato, Agnese Natali, Walter Salvatore*	12:00
12:30	**5221 Enhancing the seismic resilience of a historic R.C. arch bridge by means of low-mass TMDs** *Samuele Faini, Emanuele Gandelli, Enrico Faccin, Luca Facconi, Fausto Minelli*	**5361 Integrating robotics and immersive technologies for automated structural monitoring** *Simone Felicioni, Matteo Castellani, Gabriele Costante, Fabrizio Montecchiani, Nicola Cavalagli, Ilaria Venanzi* **5444 Novelty detection and localization using vibration monitoring and sparse Autoencoders** *Marco Pirrò, Carmelo Gentile*	**5123 Simulation of Synthetic Ground Motions for Specified Earthquake Scenarios in Italy** *Maijia Su, Mayssa Dabaghi, Marco Broccardo* **5125 Seismic fragility curves of existing masonry school buildings: preliminary estimate of the large-scale effect of Composite Reinforced Mortar application** *Ingrid Boem*	**5155 Degradation phenomena in post-tensioned prestressed concrete beams: defect analysis of a set of existing bridges** *Giuseppe Santarsiero, Valentina Picciano, Angelo Masi, Tatiana Troiano* **5471 Exploring the Potential of Load Cells in Comprehensive Static and Dynamic Monitoring of Cable-Stayed Bridges** *Simone Quarchioni, Vanni Nicoletti, Sandro Carbonari, Fabrizio Gara*	12:30
13:00-14:00	*Lunch break*				13:00-14:00
14:00-14:45	*Plenary Lecture* - Michael Constantinou - Performance of Seismically Isolated Structures in Earthquakes *Sala Cimabue - Chair: Francesca Mattei*				14:00-14:45
14:45	**Session SG09-2** **Chairs: Carmelo Gentile, Marco Gaetani d'Aragona** **5274 Impact of Corrosion on the Lateral Load Response of RC Multi-Column Bents with flexure-shear critical members** *Marco Gaetani d'Aragona, Antonino Recupero, Andrea Prota* **5299 Extension of segment-based risk classification methodology from road tunnels to bridges: a proposal for enhanced infrastructure assessment** *Galileo Tamasi, Manuel Capogna, Emanuele Renzi, Maurizio De Angelis*	**Session SS07-2** **Chairs: Giuseppina Uva, Mirko Calò** **5370 Machine Learning–Aided Structural Health Monitoring of the San Pietro Bell Tower in Perugia** *Valentina Giglioni, Lorenzo Morini, Filippo Ubertini, Ilaria Venanzi* **5379 Machine-Learning-assisted predictors for post-earthquake reconstruction cost and masonry building usability class** *Marco Martino Rosso, Angelo Aloisio, Luca Di Battista, Massimo Fragiacomo, Giuseppe Quaranta, Cristoforo Demartino, Giuseppe Carlo Marano*	**Session SG04-2** **Chairs: Chiara Nardin, Giovanni Macedonio** **5158 UQ based state-dependent framework for recovery and seismic risk assessment** *Chiara Nardin, Stefano Marelli, Marco Broccardo, Bruno Sudret, Oreste S. Bursi* **5218 Performance of URM buildings accounting for cumulated seismic damage** *Stefano Bracchi, Maria Rota, Andrea Penna, Guido Magenes*	**Session SS05-2** **Chairs: Michele D'Amato, Fabio Micozzi** **5192 Finite element model updating based on ambient vibration test for a Gerber half-joints bridge** *Andrea Gennaro, Filippo Lorenzoni, Nicola Molon, Antonino Recupero, Francesca da Porto* **5228 Seismic assessment of masonry arch bridges using discontinuum substructural models** *Alessia Furiosi, Nicolò Damiani, Maria Rota, Andrea Penna*	14:45
15:15	**5301 An innovative governance model for road infrastructure in the prevention and mitigation phase of seismic risk** *Galileo Tamasi, Guerino Liberatore, Emanuele Renzi, Luigi D'Angelo* **5342 Mid-span hinge effects in the seismic performance assessment of an in-service curved prestressed concrete box girder bridge – preliminary analyses** *Stefano Bozza, Alessandro Mazelli, Marco Fasan, Eric Puntel, Natalino Gattesco, Chiara Bedon*	**5384 AI-assisted seismic fragility assessment of corroded RC bridge piers** *Andrea Nettis, Vincenzo Mario Di Mucci, Angelo Cardellicchio, Sergio Ruggieri, Vito Renò, Giuseppina Uva* **5453 A Data-Driven Framework for Rapid Seismic Risk Assessment of Existing Bridges: Application to Marche Highway Network in Italy** *Lorenzo Principi, Michele Morici, Valeria Leggieri, Alessandro Zona, Andrea Dall'Asta*	**5235 Derivation of State-Dependent Fragility curves for Reinforced Concrete Frame Buildings Using Cloud Analysis** *Joud Habib, Nicola Buratti* **5246 Physics-based ground-motion simulations for the seismic vulnerability and risk mitigation of the Religions Complex in Old Cairo** *Marco Fasan, Chiara Bedon, Hesham Abdel Hafiez, Hany Hassan, Fabio Romanelli, Marco Francesco Funari, Michele Dilena*	**5252 Code-compliant assessment of a masonry arch bridge by using different models** *Matteo Allegretti, Mirko Moretti, Daniele Corritore, Fabrizio Paolacci, Gianluca Quinci* **5257 Simulated design: seismic analysis of 1970s bridges using RPN programmable calculators HP67/97** *Galileo Tamasi*	15:15
15:45	**5355 Problems and solutions for the seismic protection of a very large prefabricated industrial building** *Leonardo Casali, Graziano Baldograni, Donato Rotondi, Agnese Giovagnoli, Marco Bifulco, Alessandro Fulco, Jurgen Tabaku, Marco Mezzi* **5445 Effect of the environmental changes on the dynamic characteristics of a large cathedral** *Carmelo Gentile, Ana Avramova*	**5457 Probabilistic physics-driven assessment of shear-critical steel-reinforced-concrete columns and joints under seismic loading** *Hanlin Wei, Cristoforo Demartino, Hanlin Wei* **5511 A new transfer-learning methodology for seismic capacity among similar structures in a network after an earthquake** *Pooria Mesbahi, Enrique García Macías, Laura Ierimonti, Marco Breccolotti, Filippo Ubertini*	**5626 NTC18 Time-adaptive PSHA Reliability for Poisson Multirisk Predictions of the Camastra Dam Scenarios** *Marco Faggella, Andre Barbosa*	**5334 Non-Destructive Testing Strategies for Post-Tensioned Bridges: A Framework for Selecting Investigation Methods** *Carlo Pettorruso, Dalila Rossi, Fabio Giulio Stefano Viganò, Virginio Quaglini*	15:45
16:15-16:45	*Coffee break*				16:15-16:45
16:45	**Session SG09-3** **Chairs: Marco Breccolotti, Andrea Meoni** **5374 Bridge health index: towards an integrated indicator for seismic risk management of road infrastructures** *Galileo Tamasi, Domenico Cefali, Antonio Cefali, Maurizio De Angelis, Emanuele Renzi* **5389 Impact of Degradation on the Seismic Vulnerability of an Existing Reinforced Concrete Bridge** *Lorenzo Ciccarelli, Alberto Barontini, Maria Giovanna Masciotta, Giuseppe Brando*	**Session SS07-3** **Chairs: Ilaria Venanzi, Mirko Calò** **5532 Satellite measurements for monitoring bridge networks** *Andrea Miano, Pietro Carpanese, Francesca da Porto, Teresa Fazio, Pier Francesco Giordano, Raffaele Landolfo, Maria Giuseppina Limongelli, Riccardo Liuzzo, Vincenzo Massimi, Aldo Milone, Davide Oscar Nitti, Raffaele Nutricato, Alessandro Parisi, Andrea Prota, Anna Saetta, Elisa Saler, Marco Savoia, Diego Talledo, Marina Zingaro* **5544 Enhancing Multi-Objective Seismic Retrofitting Design through Optimisation** *Besim Yukselen, Gianrocco Mucedero, Ricardo Monteiro*	**Session SG04-3** **Chairs: Marco Fasan, Caterina Carbone** **5279 Toward the definition of 20th-century reinforced concrete school buildings archetypes for large-scale seismic vulnerability assessment** *Marco Postiglione, Tommaso Petrella, Giuseppe Brandonisio, Antonio Sandoli, Giovanni Fabbrocino* **5287 Seismic Vulnerability of Masonry Walls Damaged by Foundation Settlements: Development of Analytical Fragility Curves** Marina Serpe, Alberto Barontini, Valentina Tomei, Ernesto Grande, Paulo B. Lourenço, Maura Imbimbo	**Session SS01** **Chairs: Giada Frappa, Manuela Scamardo** **4995 Relevant findings on experimental behavior of exterior beam-column joints reinforced with plain bars under cyclic actions** *Giada Frappa, Caterina Di Marco, Samantha Lisetto, Margherita Pauletta* **5012 Experimental Assessment of Post-Installed Bars in Full-Scale Beam-Column Joints Using Different Adhesives** *Manuela Scamardo, Sara Cattaneo, Pietro Crespi, Giovacchino Genesio*	16:45
17:15	**5472 A study on the vibration serviceability performance of a new steel arch footbridge** *Anna Brunetti, Simone Quarchioni, Vanni Nicoletti, Sandro Carbonari, Fabrizio Gara, Luigino Dezi* **5557 A Defect-Based Framework for Predictive Life-Cycle Assessment of Corroded RC Bridges** *Federica Di Criscio, Livio Pedone, Stefano Pampanin*		**5332 Comparison of seismic vulnerability for different classes of Italian reinforced concrete buildings** *Caterina Carbone, Maria Rota, Flavio Mosele, Paolo Morandi, Andrea Penna, Guido Magenes* **5365 Analysis of open data resources for multi-scale probabilistic risk assessment of built environment** *Antonio Sandoli, Tony Fierro, Filippo Santucci de Magistris, Francesca Di Virgilio, Fabbrocino Giovanni*	**5483 Seismic strengthening of exterior RC beam-column joint: basalt vs. carbon FRCM systems** *Teklewoin Haile Fitwi, Klajdi Toska, Flora Faleschini, Lorenzo Hofer, Dario De Domenico, Giuseppe Ricciardi, Carlo Pellegrino*	17:15

Day 1 - Monday 8 September

Bernabei Palace

Monday 8 September	Aula Magna	Aula 1	Aula 2	
8:00-8:45	*Registration*			8:00-8:45
8:45-9:30	*Opening Ceremony - Sala Cimabue*			8:45-9:30
9:30-10:15	*Plenary Lecture* - Atilla Ansal - Recent Developments in Site Response Analysis and Microzonation *Sala Cimabue - Chair: Filippo Ubertini*			9:30-10:15
10:15-11:00	*Plenary Lecture* - Giovanni Macedonio - Bradiseism and volcanic hazard at Campi Flegrei, Italy *Sala Cimabue - Chair: Franco Braga*			10:15-11:00
11:00-11:30	*Coffee break*			11:00-11:30
11:30	**Session SS18** **Chairs: Corrado Chisari, Eric Puntel** **5038 Dynamic testing and seismic retrofitting of a masonry bell tower near Gorizia (Friuli Venezia Giulia)** *Michele Dilena, Francesco Polentarutti, Eric Puntel, Natalino Gattesco, Antonino Morassi* **5397 Seismic risk of bell towers in Naples based on remote surveying and simplified vulnerability assessment** *Maddalena Della Pietra, Corrado Chisari, Mattia Zizi, Gianfranco De Matteis*	**Session SS10-1** **Chairs: Manuela Scamardo, Pietro Crespi** **5641 Combined seismic and energy solution retrofit for masonry structures** *Francesca Mattei, Federica Del Carlo, Silvia Caprili, Walter Salvatore* **4964 External steel bracing frames with energy dissipation devices for the seismic retrofit of a precast R.C. school building** *Giada Frappa, Alessia Bernardotto, Samantha Lisetto, Margherita Pauletta*	**Session SS26-1** **Chairs: Paolo Morandi, Paolo Ricci** **5165 Seismic performance and modelling of rc frames infilled with sliding joint infills** *Simone Pelucco, Sang Van Doan, Simone Vincenzi, Marco Preti* **5272 A Coupled IP/OOP Macro-Model for Seismic Analysis of Thin Clay Masonry-Infilled RC Frames** *Ahmed Hisham Ahmed Sabry Hassanein Mabrouk, Marco Donà, Luca Tosolini, Marco Gaspari, Francesca da Porto*	11:30
12:00	**5046 A comprehensive long term monitoring system of an iconic heritage complex: the Assisi Basilica case study.** *Daniele Storni, Harpal Singh, Gianni Alessandroni, Nicola Di Donato, Marco Giuseppe Moroni, Sergio Fusetti, Davide Ciarlariello, William Yang, Claudio Martino, Herbert Gross, Domenico Patanè, Giuseppe Occhipinti* **5262 Seismic damage to masonry towers during the Central Italy earthquake sequence** *Francesco Testa, Alberto Barontini, Giorgia Cianchino, Maria Giovanna Masciotta, Giuseppe Brando, Paulo Lourenço*	**5015 Influence of the Axial Behaviour of Braces in the Scissor-Toggle Configuration** *Maria Maglio, Martina Della Corte, Alessandro Pisapia, Elide Nastri, Rosario Montuori, Vincenzo Piluso* **4977 Smart Seismic Bracing Beams: Adaptive Control Systems for Enhanced Structural ResilienceReza** *Mokarram Aydenlou*	**5300 Simplified Assessment of the Out-of-Plane Capacity of URM Infill Walls through a Parametric Approach** *Marco Gaspari, Marco Donà, Andrea Gennaro, Francesca da Porto* ***5351 Analytical evaluation of debris due to the collapse of infill walls in reinforced concrete structures*** *Mariano Di Domenico, Paolo Ricci, Gerardo Mario Verderame*	12:00
12:30			**5364 Guidelines for Seismic Design and Verification of Masonry Infills in RC Buildings** *Paolo Morandi*	12:30
13:00-14:00	*Lunch break*			13:00-14:00
14:00-14:45	*Plenary Lecture* - Michael Constantinou - Performance of Seismically Isolated Structures in Earthquakes *Sala Cimabue - Chair: Francesca Mattei*			14:00-14:45
14:45	**Session SS11-1** **Chairs: Angelo Aloisio, Cristoforo Demartino** **4969 A Visual-Based Classification Approach for Assessing the Residual Strength of Recycled Timber for Seismic-Resilient Structures** *Angelo Aloisio, Dag Pasquale, Pasca, Massimo Fragiacomo, Audun Øvrum* **5014 Structural assessment of centuries-old timber bridge foundations in Amsterdam's historic centre** *Giorgio Pagella, Michele Mirra, Geert Ravenshorst, Wolfgang Gard, Jan Willem Van de Kuilen*	**Session SS10-2** **Chairs: Manuela Scamardo, Pietro Crespi** **5126 Experimental and analytical study for retrofitting with thin concrete overlay** *Manuela Scamardo, Sara Cattaneo, Pietro Crespi, Giovacchino Genesio, Nicola Viale* **5213 Experimental and numerical study on masonry barrel vault strengthened through CRM system: preliminary results** *Marielisa Di Leto, Filippo Campisi, Giuseppe Rusticano, Calogero Cucchiara, Lidia La Mendola, Diego Antonio Trapani*	**Session SS26-2** **Chairs: Fabio Di Trapani, Marco Donà** **5378 Experimental Campaign on the Seismic Response of Weak Clay Masonry Infills: In-Plane and Out-of-Plane Interaction via Shake Table Testing** *Riccardo Milanesi, Maithree Kurukulasuriya, Guido Magenes, Paolo Morandi* **5458 INODIS – A Novel Decoupling System to Improve the Earthquake Resistance of Masonry Infills** *Christoph Butenweg*	14:45
15:15	**5036 A novel slip-friction connector for seismic applications in timber structures: Analytical and experimental investigation** *Matteo Pelliciari, Angelo Aloisio, Francesco Boggian, Lars Vidar Jakobsen Næsse, Roberto Tomasi* **5085 Natural Fiber TRM Systems for Sustainable Seismic Retrofitting of Masonry Walls: An Experimental Study Using Jute Fibers** *Flavio Stochino, Arnas Majumder, Monica Valdes, Enzo Martinelli*	**5214 Diagonal compression testing of FRCM-strengthened Calcarenite masonry panels: DIC analysis and simplified numerical modeling** *Marielisa Di Leto, Giuseppe La Sala, Lorenzo Pace, Carmelo Caggegi, Mohammadali Rezazadeh, Piero Colajanni, Lidia La Mendola* **5303 Existing masonry buildings retrofitted by Steel Fiber Reinforced Mortar coatings: comparison of different analysis approaches** *Sara Lucchini, Luca Facconi, Fausto Minelli, Giovanni Plizzari*	**5494 Nonlinear Dynamic Response of Infilled RC Frames: Investigating Local Shear Demand through a Full-Scale Test** *Marilisa Di Benedetto, Raffaele De Risi, Fabio Di Trapani, Guido Camata* **Session SS06-1** **Chairs: Roberto Nascimbene, Laura Gioella** **5011 Shaking table testing of a reinforced concrete frame prototype: damage assessment by Artificial Intelligence analysis of vibration data** *Ivan Roselli, Domenico Palumbo*	15:15
15:45	**5086 Strengthening of Masonry Walls Using Jute Fiber: Merging Structural and Thermal Upgrading/Retrofitting** *Arnas Majumder, Flavio Stochino, Andrea Frattolillo, Monica Valdes, Enzo Martinelli*	**5329 Assessment and Strengthening of Gerber Saddles in RC Bridges** *Valentina Picciano, Giuseppe Santarsiero, Angelo Masi*	**5017 Experimental testing campaign on wall-slab-wall structures** *Emanuele Brunesi, Rui Pinho, Roberto Nascimbene* **5024 Innovative Beam-Column Joint Solutions for Precast Frames Under Seismic Loading** *Roberto Nascimbene, Davide Bellotti*	15:45
16:15-16:45	*Coffee break*			16:15-16:45
16:45	**Session SS11-2** **Chairs: Antonio Sandoli, Vittoria Borghese** **5344 Improving CT Imaging Accuracy of Historic Timber Structures Using LTI-SIRT with Chord-Angle Velocity Compensation** *Ling Xuewei, Cristoforo Demartino, Vittoria Borghese, Chen Dongdong* **5350 Non-destructive assessment of hybrid CLT** *Vittoria Borghese, Niels Vonk, Jan Niederwestberg*	**Session SS10-3** **Chairs: Manuela Scamardo, Pietro Crespi** **5354 Shear Retrofitting of Reinforced Concrete Beams: A Critical Review** *Giovanni Muciaccia, Rawand Alnsour* **5464 Computational study of CLT Infill Panels in Reinforced Concrete Frames** *Adriano Del Fiol, Vito Tateo, Sergio Ruggieri, Denise Li Cavoli, Giuseppe D'Arenzo, Marinella Fossetti, Giuseppina Uva*	**Session SS06-2** **Chairs: Laura Gioella, Joel Conte** **5390 Some observations from the first application of a computer vision monitoring of displacements in multi-story buildings during shake-table tests** *Laura Gioiella, Fabio Micozzi, Morgan McBain, Michele Morici, Alessandro Zona, Andrea Dall'Asta, Barbara G. Simpson, Andre R. Barbosa* **5391 The STRIC project: the new International Center for Research on Sciences and Techniques of Physical, Economic and Social Reconstruction** *Graziano Leoni, Alessandro Zona, Michele Morici, Laura Gioiella, Fabio Micozzi, Andrea Dall'Asta*	16:45
17:15	**5372 An overview on the performances of natural fiber-reinforced mortars in seismic applications** *Antonio Sandoli, Giuseppe Di Iorio, Giuseppina De Luca, Antonio Bonati, Giovanni Fabbrocino* **5419 Comparative Environmental and Cost Analysis of Multi-Storey Steel Buildings with CLT and Steel Deck Floors** *Laura Corti, Vittoria Borghese, Cristoforo Demartino, Giovanni Muciaccia*	**5536 Architectural Non-Structural Elements (NSEs) and Heritage Safety: Restoration Interventions for the Seismic Vulnerability Reduction** *Riccardo Liberotti, Mattia Schiantella, Federico Cluni, Vittorio Gusella*	**5392 Preliminary results from concentrated impact tests on a school desk with life-saving function in case of earthquakes** *Fabio Micozzi, Laura Gioiella, Michele Morici, Francesco Allegrezza, Alessandro Zona, Andrea Dall'Asta* **5474 Seismic Performance of 3D Printed Buildings: An Overview of the World-First Full-Scale Shaking Table Test** *Valentino Sangiorgio, Enrico Spacone, Guido Camata, Raffaele De Risi, Tansu Gokce, Flavia De Luca, Matt Dietz, Adam Crewe, Dimitris Karamitros, George Mylonakis, Anastasios Sextos, André Furtado, José Melo, Humberto Varum*	17:15

Day 2 - Tuesday 9 September

Conference Center "Colle del Paradiso"

Tuesday 9 September	Sala Cimabue	Sala Lorenzetti	Sala della Pace	Sala Stampa	
8:00-9:00	*Registration*				8:00-9:00
9:00-9:45	*Plenary Lecture* - Tiziana Rossetto - Earth, Fire, Wind and Water: Research needs to understand vulnerability to the 4 elements *Sala Cimabue - Chair: Ilaria Venanzi*				9:00-9:45
9:45-10:30	*Plenary Lecture* - Joel Conte - Digital Twin of the NHERI-UC San Diego 6-DOF Large High-Performance Outdoor Shake Table (LHPOST6) *Sala Cimabue - Chair: Francesca Mattei*				9:45-10:30
10:30-11:00	*Coffee break*				10:30-11:00
11:00	**Session SS19-1** **Chairs: Fulvio Parisi, Filippo Ubertini** **5018 A taxonomy of masonry structures in Italy for seismic risk assessment** *Valentina Buonocunto, Fulvio Parisi* **5088 Discontinuous analysis of heritage masonry structures subjected to soil settlements accounting for pre-existing seismic damage** *Ciro Canditone, Fulvio Parisi, Nicola Cavalagli, Filippo Ubertini*	**Session SS05-3** **Chairs: Michele D'Amato, Carlo Pettorruso** **5363 Evaluating structural damage in prestressed bridge decks: preliminary insights from a full-scale bridge demonstrator** *Prajwal Giri, Laura Ierimonti, Enrique García-Macías, Leonardo Casali, Filippo Ubertini, Ilaria Venanzi* **5368 Controlled demolition and experimental reuse of decommissioned bridges: a strategic resource for seismic engineering research and training** *Galileo Tamasi, Fausto Alimenti, Maurizio De Angelis, Emanuele Renzi*	**Session SG04-4** **Chairs: Joel Conte, Tiziana Rossetto** **5428 Issues in near-source probabilistic seismic hazard analysis of the Messina Strait (Italy): preliminary investigation** *Georgios Baltzopoulos, Pasquale Cito, Eugenio Chioccarelli, Iunio Iervolino* **5432 Preliminary seismological validation of a physics-based ground-motion database** *Giovanni Smiroldo, Marco Fasan, Fabio Romanelli, Chiara Bedon*	**Session SG07-1** **Chairs: Virginio Quaglini, Marco Terenzi** **5050 Advanced numerical modelling of mechanical nutted bar anchors for precast concrete connections under tensile loading** *Enes Krasniqi, Mohamad Ahmad, Milot Muhaxheri, Marko Bartolac, Bruno dal Lago* **5111 Influence of damping in nonlinear dynamic analysis of existing reinforced concrete buildings** *Marco Terrenzi, Enrico Spacone*	11:00
11:30	**5127 Effect of rebar corrosion and soil settlements on seismic capacity of RC framed buildings** *Federica Rausea, Fulvio Parisi, Mauro Pappalardo, Elena Michelini, Beatrice Belletti* **5185 Climate change impact on built environment: definition of vulnerability and fragility models for infill panels** *Sara Mozzon*	**5376 Numerical analysis of a multi-span prestressed girder bridge considering the influence of corrosion** *Andrea Dhima, Alberto Barontini, Maria Giovanna Masciotta, Giuseppe Brando* **5398 Comparative analysis of vibration frequencies in reinforced concrete bridges using analytical and experimental approaches** *Noemi Di Rienzo, Angela Diana, Mattia Zizi, Corrado Chisari, Gianfranco De Matteis*	**5435 Reliability of census data for typological identification of existing residential buildings: the case study of Bologna** *Gunseli Yazici, Gianluca Salamida, Francesca Ferretti, Luca Pozza, Marco Savoia* **5459 Integrating Socio-Economic Indicators with Seismic Resilience Metrics: A Compiled Post-Earthquake Dataset for Urban Risk Management in Istanbul** *Fatih Ozkaynak*	**5116 A new closed-form expression for the equivalent viscous damping ratio of RC frames** *Melina Bosco, Andrea Floridia, Pier Paolo Rossi* **5145 Experimental and analytical investigation on the biaxial shear capacity of reinforced concrete columns** *Dario De Domenico, Giuseppe Quaranta, Qingcong Zeng, Giorgio Monti*	11:30
12:00	**5227 Discrete element modeling for the dynamic characterization of a monitored masonry arch bridge** *Alessia Furiosi, Nicolò Damiani, Maria Rota, Andrea Penna* **5243 Post-earthquake traffic load-carrying capacity of a RC deck-stiffened arch bridge** *Abed Soleymani, Daniele Losanno, Fulvio Parisi*	**5411 Some remarks on the knowledge of existing bridges in Bolivia: the case of Fisculco Bridge** *Carla Grandon Soliz, Antonio Sandoli, Giovanni Fabbrocino* **5416 Nonlinear Dynamic Analysis of a RC Bridge with Gerber Saddles: Influence of Material Degradation on Seismic Response** *Gregory Santilli Di Luia, Alberto Barontini, Maria Giovanna Masciotta, Giuseppe Brando*	**5531 Lessons Learnt from two Strong Earthquakes Hitting Turkey on 09 February 2023** *Yavuz Yardim, Giulio Castori, Marco Corradi* **5230 An overview of communication activities for risk mitigation in Italy** *Andrea Digrisolo, Angelo Masi, Giuseppe Ventura*	**5223 Assessment of reinforced concrete dapped-end beams by means of a plastic model** *Pier Paolo Rossi, Nino Spinella*	12:00
12:30	**5349 Cost-benefit analysis of fire-protected steel buildings for vehicles storage** *Antonio Cibelli, Donatella de Silva, Paola De Santis, Andrea Miano, Emidio Nigro*	**5427 Historical development of Italian Codes for the structural capacity assessment of reinforced concrete bridge** *Pasquale Bencivenga, Mattia Zizi, Gianfranco De Matteis*	**4980 Cyclic bond behavior and end of life bio recycling of FRP strengthening systems** *Ernesto Grande*		12:30
13:00-14:00	*Lunch break*				13:00-14:00
14:00-15:00	*Round Table* - "Natural Hazards in Major PNRR Projects: What Future Scenarios?" - *Sala Cimabue* - *Chairs: Angelo Masi, Andrea Dari - Participants: Angelo Masi, Andrea Prota, Tommaso Moramarco, Paola Inverardi, Giulio Selvaggi, Graziano Leoni*				14:00-15:00
15:00	**Session SS19-2** **Chairs: Fulvio Parisi, Beatrice Belletti** **5393 Preliminary investigation on the influence of degradation uncertainties on seismic risk of R.C. bridge pier** *Alberto Poeta, Fabrizio Scozzese, Fabio Micozzi, Alessandro Zona, Andrea Dall'Asta* **5438 Resilience and life-cycle optimal management of bridge networks exposed to multiple hazards in a changing climate** *Leila Jafari, Fabio Biondini*	**Session SS05-4** **Chairs: Fabio Micozzi, Valentina Giglioni** **5443 Structural condition monitoring of a steel-concrete composite bridge based on statistical pattern recognition of dynamic measurements** *Ana Avramova, Carmelo Gentile* **5447 Implications of Different Corrosion Damage Modeling Strategies on Long-Term Seismic Performance Assessment of RC Bridges** *Simone Reale, Marco Furinghetti, Alberto Pavese, Alessandro Palermo*	**Session SS09-1** **Chairs: Antonella D'Alessandro, Flora Faleschini** **5176 Experimental study on the strain sensing behavior of smart cement-based composites under static load** *Paolino Cassese, Luigi Cieri, Carlo Luca Schiavi, Antonio Bonati, Carlo Rainieri* **5371 Effectiveness of FRCM systems based on sustainable mortar for the confinement of masonry columns: a preliminary study** *Francesco Ascione, Francesco Bencardino, Sebastiano Candamano, Maria Milena Della Vecchia, Pietro Mazzuca, Alfredo Micieli, Annalisa Napoli, Luciano Ombres, Roberto Realfonzo*	**Session SG07-2** **Chairs: Andrea Floridia, Loris Vincenzi** **5278 Non-linear Finite Element modelling for the out-of-plane analysis of masonry walls** *Tommaso Petrella, Marco Postiglione, Giuseppe Brandonisio* **5314 Influence of Timber Diaphragms and Wall-to-Diaphragm Connections on the Out-of-Plane Response of URM Façade Walls** *Beatrice Travasoni, Fabio Minghini*	15:00
15:30	**5485 Using After-Event Assessments to Evaluate the Resilience of Road Networks to Earthquake Hazards** *Marco Civera, Fabrizio Aloschi, Andrea Miano, Fulvio Parisi, Valerio De Biagi, Bernardino Chiaia, Andrea Prota* **5505 Enhancing Infrastructure Safety in Italy Through Network-Scale, Real-Time Multi-Risk Bridge Monitoring** *Elisa Tomassini, Giuseppe Chellini, Enrique García-Macías, Gianluca Centofanti, Lorenzo Lepori, Paolo Mannella, Walter Salvatore, Filippo Ubertini*	**5465 A parametric investigation on the fragility of R.C. circular bridge piers** *Sandro Carbonari* **5572 Effects of Temperature on the Static Response of Bridges: A Case Study** *Michele Morici, Laura Gioiella, Laura Ierimonti, Fabio Micozzi, Ilaria Venanzi, Filippo Ubertini, Andrea DAll'Asta*	**5383 Cyclic shear-compression tests on masonry walls strengthened with frcm systems: preliminary results** *Francesco Bencardino, Sebastiano Candamano, Maria Milena Della Vecchia, Pietro Mazzuca, Alfredo Micieli, Annalisa Napoli, Luciano Ombres, Roberto Realfonzo* **5479 3D-Printed Smart Reinforced Beam for Strain Monitoring** *Han Liu, Israel Sousa, Simon Laflamme, Shelby Doyle, Antonella D'Alessandro, Filippo Ubertini*	**5313 Staircase Modeling Effects on the Seismic Assessment of RC Gravity Buildings** *Leandro Pancottini, Marco Terrenzi, Enrico Spacone*	15:30
16:00	**5516 A multi-model strategy for model-based SHM for cultural heritage structures** *Ciro Canditone, Laura Ierimonti, Enrique García-Macías, Filippo Ubertini, Fulvio Parisi*		**5498 Damage-Sensitive Lime Mortars with Carbon Nanotubes and Carbon Microfibers for Earthquake Monitoring of Historic Masonry** *Israel Nilton Lopes Sousa, Antonella D'Alessandro, Daniel Andrés Triana-Camacho, Filippo Ubertini*		16:00
16:30-17:00	*Coffee break*				16:30-17:00
17:00	**Session SG06** **Chairs: Alessandro Pisapia, Rosario Gigliotti** **5157 Stiffness evaluation of floor diaphragms** *Alessandro Pisapia, Francesco Fabbrocino, Vincenzo Piluso* **5352 Experimental assessment of partial factors for externally bonded inorganic matrix composite reinforcement systems** *Annalisa Franco, Francesca Ceroni, Antonio Occhiuzzi, Antonio Bonati*	**PHD CONTEST** **Chair: Ilaria Venanzi**	**Session SS09-2** **Chairs: Antonella D'Alessandro, Luciana Restuccia** **5524 Biochar as a Self-Sensing and Self-Healing Additive in Cementitious Composites** *Flora Faleschini, Amandeep Singh Sidhu* **5530 Effect of Carbon Fillers and Printing Path Strategy on Damage Detection in 3D-Printed Smart Concretes for Structural Health Monitoring** *Antonella D'Alessandro, Israel Nilton Lopes Sousa, Simon Laflamme, Filippo Ubertini*	**Session SG07-3** **Chairs: Simona Coccia, Christian Salvatori** **5367 The effects of the vertical ground motion on the rocking response of masonry walls** *Simona Coccia, Stefania Imperatore* **5417 Evaluation of out-of-plane response of masonry walls: comparison between nonlinear kinematic and dynamic analyses** *Marta Bertassi, Nicolò Damiani, Gabriele Guerrini, Francesco Graziotti, Guido Magenes*	17:00
17:30	**5381 An optimization methodology for modular structural systems** *Alfonso Ferdinando Coniglio, Michele D'Amato, Rosario Gigliotti*		**5552 Structural Application of Micro-Pore Foamed Concrete in RC Frames: A Comparative Study on Dynamic Behavior and Required Reinforcement** *Devid Falliano, Peng Shi, Diogo Dias, Luciana Restuccia, Mauro Corrado, Giuseppe Andrea Ferro* **5583 Interpreting and modelling the high piezoresistive sensing performance of cementitious materials** *Anastasios Drougkas, Virginia Mendizábal, Borja Martínez, Ernest Bernat-Maso, Lluis Gil*	**5420 A 3D Macroelement formulation for modeling unstrengthened and strengthened masonry piers** *Christian Salvatori, Gabriele Guerrini, Alessandro Galasco, Andrea Penna*	17:30
20:00	*Gala Dinner*				20:00

Day 2 - Tuesday 9 September

Bernabei Palace

Tuesday 9 September	Aula Magna	Aula 1	Aula 2	
8:00-9:00	*Registration*			8:00-9:00
9:00-9:45	*Plenary Lecture* - Tiziana Rossetto - Earth, Fire, Wind and Water: Research needs to understand vulnerability to the 4 elements *Sala Cimabue - Chair: Ilaria Venanzi*			9:00-9:45
9:45-10:30	*Plenary Lecture* - Joel Conte - Digital Twin of the NHERI-UC San Diego 6-DOF Large High-Performance Outdoor Shake Table (LHPOST6) *Sala Cimabue - Chair: Francesca Mattei*			9:45-10:30
10:30-11:00	*Coffee break*			10:30-11:00
11:00	**Session SS23-1** **Chairs: Gianluca Quinci, Cristoforo Demartino** **5034 Seismic fragility analysis of solar energy generation systems** *Andrea Santo Scarlino, Daniele Perrone, Ricardo Monteiro, José Miguel Castro, Maria Antonietta Aiello* **5063 Experimental seismic performance evaluation on pipe-to-tank connections** *Chiara Miglietta, Daniele Perrone, Gianni Blasi, Francesco Micelli, Mariano Ciucci*	**Session SS25-1** **Chairs: Antonio Formisano, Sergio Lagomarsino** **5087 Retrofitting of existing historical masonry building complex through base seismic isolation: the project of the Palazzo del Governo in Livorno** *Elisabetta Bersanetti, Livio Gambacorta* **5131 Numerical Modelling-Based Seismic Vulnerability Assessment of Building Aggregates in a Historic Centre of Basilicata** *Roberta Di Chicco, Antonio Formisano*	**Session SS14** **Chairs: Andrea Dall'Asta, Giulia Giuliani** **4973 Impact of the vertical component of near-fault earthquakes on the nonlinear response of RC structures with horizontal and vertical base-isolation** *Fabio Mazza, Andrea Braile, Rodolfo Labernarda* **5254 Recent developments in vertical ground motion models for engineering applications in Italy** *Fadel Ramadan, Giovanni Lanzano, Sara Sgobba*	11:00
11:30	**5134 Seismic vulnerability assessment of storage tanks in terms of loss of containment** *Alessio Bonelli, Mariano Ciucci, Gianluca Quinci, Fabrizio Paolacci* ***5569 A simplified model to simulate the elastic behaviour of cylindrical steel silos filled with granular-like material*** *Francesco Martini, Sergio Ruggieri, Mariano Angelo Zanini, Giuseppina Uva, Carlo Pellegrino*	**5191 Combining Seismic Resilience and Energy Efficiency: A Retrofit Strategy for Some Historic Masonry Aggregates in Molis** *Giovanna Longobardi, Muhammad Tayyab Naqash, Antonio Formisano* **5289 Evaluation of the effect of full and partial retrofit of timber floors in an urban masonry cluster building** *Elisabetta Bonaguro, Luca Sbrogiò, Margherita Fabris, Francesca da Porto*	**5268 Three-Dimensional Seismic Input and Structural Response in Near-Fault Scenarios** *Giulia Giuliani, Sara Sgobba, Fabio Micozzi, Fadel Ramadan, Laura Ragni, Giovanni Lanzano, Lucia Luzi, Andrea Dall'Asta* **5271 Base Isolation in Near-Fault Scenario: A Design-Oriented Investigation** *Giulia Giuliani, Sara Sgobba, Fabio Micozzi, Fadel Ramadan, Laura Ragni, Giovanni Lanzano, Lucia Luzi, Andrea Dall'Asta*	11:30
12:00	**5594 A critical analysis of methods for seismic risk assessment of nonstructural elements in school building** *Cristoforo Demartino, Gianluca Quinci, Fabrizio Paolacci* **5441 Development of statistical capacity surfaces for expeditious assessment of rocking-dominated elements housed in ordinary and critical buildings** *Danilo D'Angela, Carmen Rosaria Addeo, Gennaro Magliulo*	**5491 Influence of inter-unit connectivity on the seismic behavior of unreinforced masonry aggregates** *Sofia Villar, Fabio Di Trapani, Massimo Petracca, Guido Camata* **5535 Modelling strategies for structural units within masonry aggregates** *Maria Eleonora Pipistrelli, Chiara Pepi, Gianluca Fagotti, Massimiliano Gioffrè*	**5275 Modellazione di effetti di campo vicino su una parete di muratura in pietrame** *Omar A lShawa, Domenico Liberatore, Luigi Sorrentino* **5341 Surface Faulting vs Built Environment: Lessons from the 2023 Mw 7.8 and 7.5 Turkey Earthquakes** *Fabio Micozzi, Tiziano Volatili, Stefano Mazzoli, Flavio Stimilli, Giorgio Valentini, Mehmet Tümay, Bilge Aksay, Ahmet Beycioğlu, Emanuele Tondi, Andrea Dall'Asta*	12:00
12:30	**5512 Recent advances in seismic assessment of nonstructural elements: ENRICH project** *Gennaro Magliulo, Danilo D'Angela, Carmen Rosaria Addeo, Margherita Agresti, Maria Antonietta Aiello, Gianni Blasi, Antonio Bonati, Orsola Coppola, Alessandra De Angelis, Anna Giannino, Giuseppe Maddaloni, Gemma Musacchio, Daniele Perrone, Maria Giovanna Sestito, Umberto Signoriello, Roberto Tartaglia, Silvia Zidarich*	**5540 Alternative approaches to computational mechanics: Blender for the analysis of earthquake-damaged historical buildings** *Martina Di Giosaffatte, Mattia Schiavoni, Francesca Roscini, Francesco Clementi*	**5462 Impact of vertical and horizontal near-fault ground motions on base-isolated structures: the Castelluccio di Norcia case study** *Luca Tentella, Giulia Scipione, Sandro Carbonari, Laura Ragni, Fabrizio Gara, Francesca Dezi, Luigino Dezi* **5570 Seismic resilience assessment for steel-concrete composite bridges under near-fault earthquakes** *Yang Liu, Lu Dagang, Fabrizio Paolacci, Gianluca Quinci*	12:30
13:00-14:00	*Lunch break*			13:00-14:00
14:00-15:00	*Round Table* - "Natural Hazards in Major PNRR Projects: What Future Scenarios?" - *Sala Cimabue - Chairs: Angelo Masi, Andrea Dari - Participants: Angelo Masi, Andrea Prota, Tommaso Moramarco, Paola Inverardi, Giulio Selvaggi, Graziano Leoni*			14:00-15:00
15:00	**Session SS23-2** **Chairs: Gennaro Magliulo, Mariano Zanini** **5360 Design of Non-Structural Elements According to NTC 2018: Floor Response Spectrum Approaches for Seismic Safety** *Lorenzo Audisio, Matteo Tatangelo, Michele D'Amato, Rosario Gigliotti* **5555 Seismic assessment of rocking nonstructural elements: advances, challenges, and future directions** *Alessandro Contento, Danilo D'Angela, Carmen Rosaria Addeo, Gennaro Magliulo*	**Session SS20** **Chairs: Gianni Bartoli, Federico Gusella** **5001 Evaluating the Choice Between Dissipative and Low-Dissipative Design Approaches** *Federico Gusella, Gianni Bartoli* **5385 Towards a practical loss-based seismic design approach for continuous-deck multi-span bridges** *Andrea Nettis, Roberto Gentile, Domenico Raffaele, Giuseppina Uva*	**Session SS02-1** **Chairs: Eleonora Bruschi, Stefano Silvestri** **4982 A Preliminary Investigation into the Reliability of RC Structures Retrofitted with Hysteretic Dampers** *Eleonora Bruschi, Virginio Quaglini* **4997 Investigation of the friction coefficient of sliding isolators in iced conditions** *Virginio Quaglini, Eleonora Bruschi, Esengül Çavdar, Gökhan Özdemir, Ügurcan Özçamur*	15:00
15:30	**Session SS03-1** **Chairs: Antonio Sandoli, Ivan Giongo** **5049 Push-Out Testing of Hardwood Timber-to-Timber Connections with Self-Tapping Screws** *Martina Sciomenta, Gloria Rosone* **5084 Conventional and supplementally damped light-frame timber top additions of RC structures** *Stefano Sorace, Naisa Hoxha, Arianna Straulino, Gloria Terenzi*	**5558 A Multi-Scale Framework for Seismic Loss Assessment of Urban Areas** *Livio Pedone, Mattia Francioli, Michele Matteoni, Francesco Petrini, Stefano Pampanin* **5543 The Influence of the seismic hazard and structural fragility related uncertainties on the seismic reliability** *Lorenzo Hofer, Klajdi Toska, Mariano Angelo Zanini, Flora Faleschini, Carlo Pellegrino*	**5057 Isolamento sismico di oggetti rigidi oscillanti: l'effetto del rapporto di massa e dello smorzamento** *Giacomo Destro Bisol, Matthew DeJong, Domenico Liberatore, Luigi Sorrentino, Daniele Malomo* **5081 Evaluation of time effects on the response of pfv spring dampers** *Gloria Terenzi, Stefano Sorace, Carlo Vienni*	15:30
16:00	**5140 Mechanical classification of timber beam-to-column joints** *Giacomo Iovane, Beatrice Faggiano* **5141 Potential of hybrid steel-timber frames as sustainable seismic structures** *Giacomo Iovane, Raffaele Landolfo, Beatrice Faggiano*	**5412 Life-cycle seismic risk and reliability of concrete bridges** *Adriano D'Iorio, Fabio Biondini* **5104 Predicting post-earthquake reconstruction costs of masonry buildings from seismic vulnerability features** *Nicola Di Battista, Angelo Aloisio, Tiziana D'Alfonso*	**5169 A multi-objective design model for inter-story isolation systems in seismic retrofitting of existing buildings** *Enrico Bernardi, Marco Donà, Orsola Coppola*	16:00
16:30-17:00	*Coffee break*			16:30-17:00
17:00	**Sessione SS03-2** **Chairs: Giovanni Fabbrocino, Maurizio Piazza** **5182 Integration of traditional and advanced seismic protection technologies through timber-based retrofits** *Michele Mirra, Enrico Bernardi, Orsola Coppola* **5269 Seismic demand in masonry buildings with cross-laminated timber vertical additions** *Gennaro Vesce, Giovanni Fabbrocino, Antonio Sandoli*		**Session SS02-2** **Chairs: Laura Ragni, Marco Furinghetti** **5288 Ensuring Seismic Resilience: Low Cycle Fatigue Analysis of Maurer SHARK® Damper** *Yangwen Zhang, Frederik Bomholt, Torsten Ebert* **5319 Partial Safety Factors for Seismic Isolation Devices in the Second Generation of Eurocodes** *Marco Furinghetti, Paolo Franchin, Alberto Pavese*	17:00
17:30	**5270 Structural health monitoring of timber structures: methods, sensors and real-world applications** *More D. Florence, Giovanni Fabbrocino, Antonio Sandoli* **5333 Cyclic Behavior of Laminated Veneer Lumber Bracing** *Andrea Fabbri, Fabio Minghini, Nerio Tullini* **5353 TimberGrid: a novel integrated timber-based solution for the seismic and energy retrofitting of masonry existing buildings** *Giada Zammattio, Daniele Riccadonna, Maja Danovska, Alessandro Prada, Maurizio Piazza, Ivan Giongo*		**5571 Novel inerter-based vibrating barrier for non-invasive seismic protection of building structures** *Predaricka Deastra, Marco Domaneschi* **5580 Simulation of push and release tests on HDRBs-based seismic isolation systems accounting for viscous effects** *Laura Ragni, Fabio Micozzi, Andrea Dall'Asta* **5129 Numerical investigations on U-Shaped Dissipative Devices and comparison with experimental results** *Annarita Palmiotta, Alfonso Ferdinando Coniglio, Michele D'Amato, Rosario Gigliotti*	17:30
20:00	*Gala Dinner*			20:00

Day 3 - Wednesday 10 September

Conference Center "Colle del Paradiso"

Wednesday 10 September	Sala Cimabue	Sala Lorenzetti	Sala della Pace	
8:00-9:00	*Registration*			8:00-9:00
9:00-9:45	*Plenary Lecture* - Guido Castelli - Ricostruire l'Appennino Centrale tra Innovazione e Sicurezza *Sala Cimabue - Chair: Andrea Dall'Asta*			9:00-9:45
9:45-11:00	*Round Table* - "Research and innovation for security in Europe: between traditional and emerging threats" - *Sala Cimabue - Chairs: Angelo Masi, Andrea Dari - Participants: Angelo Masi, David Fabi, Arturo Varriale, Daniele Tonti, Angelo D. Perrini, Vincenzo Pullez, Gianluigi Consoli*			9:45-11:00
11:00-11:30	*Coffee break*			11:00-11:30
11:30	**Session SG12-1** **Chairs: Alessandro Zona, Marco Civera** **5006 Experimental study on strengthening CFS dry joints in existing racking systems** *Alessandro Mei, Giovanni Lavacchini, Sandro Chiostrini, Mario Fagone, Giovanna Ranocchiai, Maurizio Orlando* **5090 On the Effectiveness of Local Modification as Dynamic Instability Modifiers** *Filippo Dringoli, Dionisio Bernal, Marco Civera*	**Session SG02** **Chairs: Marco Breccolotti, Piero Colajanni** **5051 Performance of nonlinear 2D numerical models for the seismic response analysis of a natural slope** *Gianluca Cavallo* **5188 Effect of the modelling of the seismic action at the bedrock in seismic microzonation** *Piero Colajanni, Patrizia Capizzi, Raffaele Martorana, Muhammad Ahmed*	**Session SG07-4** **Chairs: Massimiliano Gioffrè, Antonio Pio Sberna** **5423 A mixed experimental/numerical approach for assessing the seismic vulnerability of RC column-slab joints** *Giovanni Menichini, Massimo Lapi, Antonio Ramos, Maurizio Orlando* **5460 Bond behaviour between concrete-filled steel tubes and reinforced concrete plinths** *Sabatino Di Benedetto, Marco Rizzano, Carmine Avagliano, Francesco Arcione, Gianvittorio Rizzano*	11:30
12:00	**5132 Retrofitting of an existing structure with friction pendulum isolators according to Italian code** *Mohammad Mahdi Mohammadi Dehnavi, Giovanni Vito Bello, Maria Rosaria Pecce* **5178 Seismic fragility assessment of a reinforced concrete building retrofitted with a rocking exoskeleton system** *Parvane Rezaei Ranjbar, Osvaldo Pecorari, Massimiliano Ferraioli*	**5225 Seismic response of urm buildings accounting for soil-foundation-structure interaction adopting lumped parameter models** *Stefano Bracchi, Maria Iovino, Rosa Maria Stefania Maiorano, Maria Rota, Raffaele Di Laora, Luca De Sanctis, Andrea Penna* **5373 State of the art of geotechnical monitoring for the mitigation of seismic risk in road infrastructures** *Galileo Tamasi, Domenico Cefali, Antonio Cefali, Maurizio De Angelis, Emanuele Renzi*	**5496 Structural Engineering Solutions for the DarkSide-20k Experiment: Design, Modelling and On-Site Implementation** *Michele Angiolilli* **5529 Analytical Formulation for Biaxial Curvature and Ductility of RC Rectangular Sections** *Antonio Pio Sberna, Giuseppe Quaranta, Fabio Di Trapani*	12:00
12:30	**5179 Seismic retrofit of RC structures using performance-spectra design of dissipative exoskeletons** *Salvatore Mottola, Osvaldo Pecorari, Massimiliano Ferraioli*		**5234 Design and experimental testing of a concrete rocking wall structural system** *Elisa Bassoli, Nicola Buratti, Loris Vincenzi, Claudio Mazzotti, Marco Savoia*	12:30
13:00-14:00	*Lunch break*			13:00-14:00
14:00-14:45	*Plenary Lecture* - Anil Agrawal - Large Ship Impacts on Bridge Piers *Sala Cimabue - Chair: Filippo Ubertini*			14:00-14:45
14:45- 15:30	*Plenary Lecture* - Gian Michele Calvi - Isolamento e controllo attivo nella progettazione fondata sulla minimizzazione delle perdite *Sala Cimabue - Chair: Ilaria Venanzi*			14:45- 15:30
15:30	**Session SG12-2** **Chairs: Walter Salvatore, Alessandro Mei** **5574 Internal and external additional seismic-resistant systems coupled to the original structure for seismic upgrading of existing buildings** *Alessandro Fulco, Fabrizio Comodini, Marco Mezzi* **5180 Performance Assessment of Steel Storage Racks under Progressive Collapse Scenarios** *Tahir Ahmad, Giuseppe Giordano, Massimiliano Ferraioli, Osvaldo Pecorari, Alberto Mandara, Marina Pastore, Elide Nastri, Rosario Montuori*	**Session SG13-1** **Chairs: Giuseppe Andrea Ferro, Emanuele Maiorana** **4984 Seismic Vulnerability Assessment of Heritage-Protected School Buildings: Experimental and Numerical Modeling Approaches** *Emanuele Maiorana, Giorgio Conte, Bruno Briseghella* **5061 Interventi su edifici in muratura di interesse culturale** *Carmenzo Miozzi, Alberto Lemme, Antonio Mignemi*	**Session SS08-1** **Chairs: Gerard O'Reilly, Fabio Di Trapani** **5041 Topological Optimization of Knee-Braced Frames for Enhanced Seismic Performance Using Genetic Algorithms** *Riccardo Piazzon, Jordan Stevy Defo Wabo, Paolo Zampieri, Carlo Pellegrino* **5047 Numerical Modeling of an Existing RC Bridge Including Soil-Structure Interaction: Preliminary Results** *Gabriele Fiorentino, Angelo Forte, Francesco Aucone, Silvia Giallini, Raffaele De Risi*	15:30
16:00	**5286 Machine Learning-Enhanced Risk Assessment and Multi-Hazard Optimization of Aerodynamic Core-Tube Systems** *Estovio Timothy, Cigdem Avci-Karatas* **5318 Effects of non-structural walls and suspended ceilings on vertical floor vibration and acceleration demands: a case study** *Giovanni Muciaccia, Irfan Ali, Assi Rola*	**5255 Pre-damaging test of a full-scale masonry cross vault subjected to in-plane cyclic shear loading: main results and design of the FRCM-based strengthening intervention** *Luca Facconi, Emanuele Gandelli, Alessia Monaco, Giulia Sammartano, Giacomo Patrucco, Fausto Minelli* **5316 Seismic damage analysis for historic buildings: the case of Palazzo Gulinelli in Ferrara** *Matteo Calzolari, Fabio Minghini, Marco Nale, Beatrice Travasoni, Nerio Tullini*	**5053 Advanced Model Calibration of a Historical Masonry Tower in OpenSeesPy via Genetic Algorithm and Particle Swarm Optimization** *Shahin Sayyad, Loredana Contrafatto, Massimo Cuomo, Davide Li Rosi, Simone Scalisi*	16:00
16:30-17:00	*Coffee break*			16:30-17:00
17:00	**Session SG12-3** **Chairs: Serena Cattari, Anil Agrawal** **5293 Non-invasive seismic retrofit of reinforced concrete structures: the spead technique** *Paolo Ielpo, Giuseppe Santarsiero, Valentina Picciano, Angelo Masi, Vincenzo Manfredi* **5305 Enhanced Seismic Performance of Linked Column Frames by means of Three Linked Columns** *Melina Bosco, Marco Caragliano, Elga Mangiameli, Pier Paolo Rossi*	**Session SG13-2** **Chairs: Nicola Cavalagli, Luisa Berto** **5323 Knowledge and Design in archaeological sites. the Insula Meridionalis in Pompeii** *Vincenzo Calvanese, Massimo Mariani, Paolo Mighetto, Alessandra Zambrano, Gabriel Zuchtriegel* **5386 Seismic vulnerability of the nave arcade in three-aisled churches** *Emanuele Rizzi*	**Session SS08-2** **Chairs: Antonio Pio Sberna, Carlotta Pia Contiguglia** **5406 Optimal seismic retrofit procedure for existing RC structures through a Genetic Algorithm implemented in OpenSEESPy** *Francesco Nigro, Enzo Martinelli* **5408 An Integrated Open-Source Workflow for OpenSees** *Stefano Ercolessi, Tony Fierro, Filippo Santucci de Magistris, Giovanni Fabbrocino*	17:00
17:30	**5431 Towards Mitigated Seismic Risk Scenarios for School Buildings:Analysis of a Real-Case Retrofit Database from the MARS Project** *Serena Cattari, Vincenzo Manfredi, Lorenza Petrini, Sara Alfano, Angelo Masi* **5559 Shake Table Testing of a pre and post retrofitted Unre-inforced Masonry Structure: Experimental results and numerical simulations** *Fabio Di Trapani, Sofia Villar, Marilisa Di Benedetto, Alessandra Marini, Chiara Passoni, Andrea Belleri, Giacomo Navarra, Francesco Lo Iacono, Maria Oliva, Marinella Fossetti, Davide Campanini, Guido Camata, Enrico Spacone*	**5442 Enhancing seismic resilience of museum artifacts: experimental response assessment of base isolated freestanding assets** *Luisa Berto, Gabriella Castellano, Luigi Di Sarno, Irene Rocca, Anna Saetta* **5528 Numerical Modeling of the Structural Response of the Basilica of Santa Maria degli Angeli in Assisi After Seismic Strengthening Interventions** *Nicola Cavalagli, Massimiliano Gioffrè, Vittorio Gusella, Waqas Qayyum, Filippo Ubertini, Riccardo Vetturini*	**5440 Developing and Calibrating Equivalent Strut Models for CLT Infills in RC Frames: A Predictive Model Based on Machine Learning** *Carlotta Contiguglia* **5446 Geometric modelling of a lattice structure for large roofs with OpenSees** *Mauro Mazzei*	17:30
18:00	**5424 Seismic upgrading of existing RC frame structures by steel exoskeletons: comparison between bare and masonry-infilled frames** *Francesco Nigro, Gaetano Della Corte, Enzo Martinelli*	**Session SG13-3** **Chairs: Nicola Cavalagli, Luisa Berto** **5576 Strategies and tools in the seismic design for regeneration of a heritage building for public reuse** *Paolo Petrella, Ilenia Rico, Alessandro Fulco, Marco Mezzi* **5584 The seismic restoration operations for the Collegiate Church of San Michele in Brisighella** *Marco Peroni*		18:00

Day 3 - Wednesday 10 September

Bernabei Palace

Wednesday 10 September	Aula Magna	Aula 1	Aula 2	
8:00-9:00	*Registration*			8:00-9:00
9:00-9:45	*Plenary Lecture* - Guido Castelli - Ricostruire l'Appennino Centrale tra Innovazione e Sicurezza *Sala Cimabue - Chair: Andrea Dall'Asta*			9:00-9:45
9:45-11:00	*Round Table* - "Research and innovation for security in Europe: between traditional and emerging threats" - *Sala Cimabue - Chairs: Angelo Masi, Andrea Dari - Participants: Angelo Masi, David Fabi, Arturo Varriale, Daniele Tonti, Angelo D. Perrini, Vincenzo Pullez, Gianluigi Consoli*			9:45-11:00
11:00-11:30	*Coffee break*			11:00-11:30
11:30	**Session SG15** **Chairs: Alberto Pavese, Alessandro Fulco** **5029 Connections Between Steel Exoskeletons And RC Frame Buildings: Stiffened plates** *Gaetano Della Corte* **5518 Hinge-Spring-Friction Device Optimized for the Protection of Wind Turbines from Combined Wind-Earthquake Loads** *Nicola Caterino, Ettore Sorge, Carlos Andres Riascos Gonzalez*	**Session SS15-1** **Chairs: Fabio Minghini, Marco Nale** **4988 Towards a reliability-based approach for the seismic design: an application to the Italian territory** *Matteo Tatangelo, Lorenzo Audisio, Michele D'Amato, Rosario Gigliotti, Franco Braga* **5078 An advanced 72H survival kit to overcome seismic emergencies** *Galileo Tamasi, Silvia Santarelli, Marco Bisti, Roberta Fisicaro, Giovanni Mainini*	**Session SG11-1** **Chairs: Andrea Prota, Carlo Rainieri** **4979 Integrated building monitoring system for multiple hazards: Manini Connect** *Manuel Boccolini, Leonardo Casali, Giuseppe Paci, Arianna Peppoloni, Salvatore Romano, Bruno Dal Lago* **5194 Preliminary dynamic identification of a masonry cross vault** *Luca Rota, Emanuele Gandelli, Andrea Belleri, Luca Facconi, Michelle Gualdi, Giovanni Assini, Michele Bianchessi, Fausto Minelli, Alessia Monaco*	11:30
12:00	**5577 Implementation of the isolated artificial ground project for urban regeneration of Castelluccio di Norcia** *Gianluca Fagotti, Stefano Nodessi Proietti, Alessandro Fulco, Marco Mezzi* **5575 First seismic retrofit by base isolation of a strategic building in use implemented in Umbria** *Alessandro Fulco, Fabrizio Comodini, Marco Mezzi*	**5265 An Automated Machine Learning approach for the rapid estimation of seismic risk in existing bridges** *Franco Ciminelli, Giuseppe Palermo, Egidio Lofrano, Davide Bernardini, Galileo Tamasi, Mario Graniero, Emanuele Renzi*	**5113 The new vibration-based Structural Health Monitoring system of the School of Engineering Main Building in Naples, Italy** *Carlo Rainieri, Matilde Notarangelo, Giovanni Fabbrocino, Andrea Prota* **5231 Modal testing of a reinforced concrete Gerber-type bridge** *Antonio Romanazzi, Daniele Scocciolini, Federico Ponsi, Ghita Eslami Varzaneh, Elisa Bassoli, Loris Vincenzi, Nicola Buratti*	12:00
12:30	**5587 Sequential optimization of liquid-column vibration control devices for multi-story structures** *Salvatore Dario Di Trapani, Silvia Vassallo, Chiara Masnata, Antonina Pirrotta*		**5239 Experimental Evaluation of Long-Duration Ground Motion Effects on RC Shear Wall Performance** *Alvaro Lopez*	12:30
13:00-14:00	*Lunch break*			13:00-14:00
14:00-14:45	*Plenary Lecture* - Anil Agrawal - Large Ship Impacts on Bridge Piers *Sala Cimabue - Chair: Filippo Ubertini*			14:00-14:45
14:45- 15:30	*Plenary Lecture* - Gian Michele Calvi - Isolamento e controllo attivo nella progettazione fondata sulla minimizzazione delle perdite *Sala Cimabue - Chair: Ilaria Venanzi*			14:45- 15:30
15:30	**Session SS15-2** **Chairs: Fabio Minghini, Lorenzo Bacci** **5296 Enhancing linear infrastructure safety through fixed-wing UAVs in the event of earthquakes and other natural hazards** *Galileo Tamasi, Mario Graniero, Emanuele Renzi, Maurizio De Angelis* **5309 Rapid post-earthquake evaluation method for strategic hydraulic infrastructures in the ferrara territory** *Marco Nale, Marco Accolli, Fabio Minghini*	**Session SS24-1** **Chairs: Cristina Cantagallo, Mattia Zizi** **5117 Strategies for seismic risk mitigation through typological fragility curves: The case of Norcia** *Matilde Natalizi, Lorenzo Audisio, Matteo Tatangelo, Michele D'Amato, Rosario Gigliotti* **5151 Multilevel framework for risk assessment of cultural heritage: application to a case study** *Anna Lo Monaco, Antonella Ranaldo, Michele D'Amato, Rosario Gigliotti, Marius Mosoarca*	**Session SG11-2** **Chairs: Gianfranco de Matteis, Irene Matteini** **5281 Practical Applications of Multi-Channel Ground-Penetrating Radar for bridge deck assessment and maintenance** *Irene Matteini, Stefania Coccimiglio, Rosario Ceravolo, Guido Tronca* **5635 Impact of environmental conditions on dynamic properties of existing reinforced concrete bridges** *Mariano Angelo Zanini, Tommaso Pivetta, Carlo Pellegrino*	15:30
16:00	**5366 VISIT-X7: post-earthquake technical triage for strategic transport infrastructures** *Galileo Tamasi, Debora Dei Roncini, Federica De Falco, Vincenzo De Sensi, Mario Graniero, Guerino Liberatore, Marco Liuzzi, Andrea Tortora, Marco Tuffanelli, Francesco Vavallo, Filippo Gentili, Alessandro Giuseppe Battista, Graziano Tabelli, Sergio Schiaro* **5476 Seismic NATECH early warning and monitoring in major hazard industries** *Alessandra Marino, Giorgia Berardo, Mariano Ciucci*	**5152 Seismic vulnerability assessment of existing masonry churches macro-elements by means of FEM modelling** *Antonella Ranaldo, Anna Lo Monaco, Michele D'Amato, Rosario Gigliotti, Marius Mosoarca* **5395 Simplified seismic vulnerability assessment of representative buildings in the historic centre of Casertavecchia, Italy** *Somayeh Gholami, Mattia Zizi, Corrado Chisari, Gianfranco De Matteis*	**5325 Analysis of the shear deformation in simply supported prestressed concrete girder-bridges** *Marco Bonopera, Gianfranco De Matteis* **5482 Scaled-down benchmark railway bridge model for vibration-based damage identification** *Arash Rahimi, Enrique Garcia-Macias, Laura Ierimonti, Filippo Ubertini, Ilaria Venanzi*	16:00
16:30-17:00	*Coffee break*			16:30-17:00
17:00	**Session SS04** **Chairs: Ciro Del Vecchio, Marco Di Ludovico** **5021 Seismic risk assessment of precast industrial buildings in italy by the GEOSAFE platform** *Marius Ëteme Minkada, Andrea Belleri, Marco Bosio, Luca Rota, Paolo Riva, Nicola Pasetti, Marina Ranghetti* **5147 PERIL: a new platform for risk assessment and generation of insurance products** *Pietro Carpanese, Luca Badin, Veronica Follador, Elisa Saler, Marco Donà, Francesca da Porto*	**Session SS24-2** **Chairs: Francesca Mattei, Mattia Zizi** **5402 Tourism Enhancement of Small Historic Centers in Seismic Areas: The Case Study of Popoli Terme (Pescara, Italy)** *Cristina Cantagallo, Giorgia Cianchino, Letizia Mancini, Maria Giovanna Masciotta, Sergio Stumpo, Vincenzo Zappino, Gilberto Zangari, Roberto Gambassi, Giuseppe Brando, Enrico Spacone* **5403 Integrated procedures for the seismic response assessment of existing masonry constructions** *Michele D'Amato, Antonio Di Cesare, Rocco Ditommaso, Nicla Lamarucciola, Anna Lo Monaco, Antonella Ranaldo, Roselena Sulla, Felice Carlo Ponzo*		17:00
17:30	**5159 Adaptive regional seismic risk assessment under uncertainty: a case study in the Alto Garda area** *Chiara Nardin, Federico Ugolini, Marco Broccardo* **5263 Framework semplificato per la stima delle perdite economiche e dell'efficacia degli interventi** *Ciro Del Vecchio, Carmine Molitierno, Marco Di Ludovico*	**5470 Testing and modelling a full-scale historic masonry vault under seismic loads** *Mattia Zizi, Mohammad Javad Azari Nezhadian, Corrado Chisari, Giuseppe D'Arenzo, Maddalena Della Pietra, Costantino Dell'Aversano, Giulio Iovinelli, Denise Li Cavoli, Marinella Fossetti, Gianfranco De Matteis* ***5501 An Interpretative Model For Seismic Risk: The Case Of Fiumefreddo Bruzio In Southern Italy*** Caterina Balletti, Luisa Berto, Enrico Breggion, Paolo Faccio, Francesco Guerra, Giovanna Deltragia Martinelli, Irene Rocca, Anna Saetta, Diego Talledo		17:30
18:00	**5439 Integrating Machine Learning Techniques into Post-Earthquake Seismic Residual Capacity Assessment of Reinforced Concrete Buildings** *Livio Pedone, Michele Matteoni, Simone Saquella, Michele Scarpiniti, Stefano Pampanin* **5525 Advancements in seismic risk assessment of existing structures: insights from analytical models and empirical earthquake data** *Gerard J. O'Reilly, Volkan Ozsarac, Davit Shahnazaryan*	**5563 Expeditious seismic risk assessment method at territorial scale: application on the case study of Cosenza historical center** *Francesca Mattei, Roselena Sulla, Michele D'Amato, Rosario Gigliotti* **5396 Towards the definition of fragility curves for masonry churches via machine learning** *Ebrahim Aminifar, Mattia Zizi, Gianfranco De Matteis*		18:00

Day 4 - Thursday 11 September

Conference Center "Colle del Paradiso"

Thursday 11 September	Sala Cimabue	Sala Lorenzetti	Sala della Pace	
8:00-9:00	*Registration*			8:00-9:00
9:00-9:45	*Plenary Lecture* - Andrea Dall'Asta - Il ruolo della sperimentazione sismica nella ricostruzione *Sala Cimabue - Chair: Walter Salvatore*			9:00-9:45
9:45	**Session SS17-1** **Chairs: Andrea Meoni, Andrea Nettis** **5070 Urban-scale decision support for risk assessment of cultural heritage structures using Bayesian Networks** *Laura Ierimonti, Fernando Ávila, Enrique García-Macías, Ilaria Venanzi, Nicola Cavalagli, Filippo Ubertini* **5071 Advanced Structural Health Monitoring of Masonry Buildings using Self-Sensitive Construction Materials** *Andrea Meoni, Michele Mattiacci, Daniel Andres Triana Camacho, Filippo Ubertini*	**Session SS21-1** **Chairs: Elisa Tomassini, Michele Morici** **5232 ARX models for dynamic identification of non-linear systems from non-stationary signals** *Antonio Romanazzi, Nicola Buratti* **5245 Dynamic identification of seismic isolator properties in base-isolated buildings** *Livia Fabbretti, Eleni Chatzi, Filippo Ubertini, Marco Breccolotti*	**Session SG12-4** **Chairs: Maria Zucconi, Fabio Di Trapani** **5437 Seismic Retrofitting of a RC case-study structure: preliminary evaluation of the behaviour of structural and non-structural elements for seismic loss assessment** *Giuseppe Elettore, Anastasia Allegretti, Annalisa Napoli, Gianvittorio Rizzano, Elena Elettore, Sabatino Di Benedetto, Antonella Bianca Francavilla, Massimo Latour, Arianna Straulino, Samantha Lisetto, Stefano Sorace, Margherita Pauletta, Stefano Grimaz, Giuliana Somma* **5638 Seismic Vulnerability assessment of Complex Masonry Buildings: The Case of the Garibaldi Barracks in Naples** *Giuseppe Brandonisio, Laura Giovanna Guidi , Alfonso Antonio Grimaldi, Antonello De Luca*	9:45
10:15	**5089 Domain adversarial neural network for strain-based seismic damage detection in masonry structures: first proposal and preliminary results** *Alina Elena Eva, Andrea Meoni, Ilaria Venanzi, Filippo Ubertini* **5128 Design of a dynamic monitoring system for the Saint Lawrence Cathedral in Genoa, Italy** *Daniele Sivori, Serena Cattari, Sergio Lagomarsino*	**5317 Parametric identification of nonlinear beams through the Hilbert Huang Transform** *Andrea De Flaviis, Rocco Alaggio, Daniele Zulli* **5400 Structural Health Monitoring and Damage Assessment: what damage thresholds to adopt?** *Rocco Ditommaso, Felice Carlo Ponzo*	**5639 Seismic Assessment of a 1970s Reinforced Concrete School Complex Originally Designed for Gravity Loads** *Laura Giovanna Guidi, Giuseppe Brandonisio, Antonello De Luca* **5640 Nonlinear Modelling for the Seismic Vulnerability of Complex Monumental Masonry Buildings: A Case Study** *Giuseppe Brandonisio, Laura Giovanna Guidi, Antonello De Luca*	10:15
10:45	**5233 Integration of dynamic monitoring data for near-real-time urban seismic damage scenarios** *Margherita Gabriella Bruna Merani, Daniele Sivori, Gabriele Tarchini, Simone Barani, Serena Cattari*		**5567 Seismic behaviour of enhanced composite CHS-to-I beam joints with passing through plates** *Agnese Natali, Francesco Fabbri, Daniele Mattoccia, Francesco Morelli*	10:45
11:00-11:30	*Coffee break*			11:00-11:30
11:30	**Session SS17-2** **Chairs: Laura Ierimonti, Daniele Sivori** **5295 Analysis of multi-source satellite-derived displacement data for structural monitoring of masonry heritage buildings** *Stefania Coccimiglio, Raffaele Tarantini, Gaetano Miraglia, Irene Matteini, Linda Scussolini, Rosario Ceravolo, Giuseppe Andrea Ferro* **5297 Efficient nonlinear seismic modelling of masonry arch bridges using calibrated simplified FE models** *Giuseppina Uva, Luigi Rainone, Luis Martins da Silva, Siro Casolo*	**Session SS21-2** **Chairs: Agnese Natali, Michele Morici** **5404 Temperature-Induced Effects in DInSAR-SBAS Monitoring of Infrastructures** *Felice Carlo Ponzo, Rocco Ditommaso* **5452 Preliminary Structural Health Monitoring Results of a Hybrid Base-Isolated Building in Camerino, Italy** *Michele Morici, Lorenzo Principi, Laura Gioiella, Fabio Micozzi, Alessandro Zona, Andrea Dall'Asta*	**Session SG12-5** **Chairs: Giuseppe Brando, Maria Zucconi** **5475 Steel Plate Solutions for the Seismic Retrofitting of Masonry Buildings: A Buckling-Based Approach** *Hadi Monsef Ahamadi, Maria Zucconi, Antonio Formisano, Barbara Ferracuti* **5548 An integrated regional prioritisation framework for seismic retrofitting of residential buildings** *Rita Monteiro Garcia Couto, Gianrocco Mucedero, Rita Bento, Ricardo Monteiro*	11:30
12:00	**5327 Data-driven and Model-based Strategies for Static Monitoring of Historic Masonry Structures** *Michele Mattiacci, Andrea Meoni, Branko Glisic, Filippo Ubertini* **5429 Enhancing Structural Health Monitoring through BIM-Integrated Finite Element Model Updating** *Pasquale Guarino, Enrique García-Macías, Andrea Meoni, Filippo Ubertini*	**5488 Vibration-based monitoring and damage assessment on a laboratory steel frame using multi-sensor systems** *Antonio S. López-Cuervo, Elisa Tomassini, Filippo Ubertini, Juan Chiachio Ruano, Enrique García-Macías* **5527 Remote Deformation Monitoring of Riveted Steel Railway Bridges During Load Testing using UAVs: field investigation and accuracy assessment** *Matteo Castellani, Andrea Meoni, Enrique García-Macías, Andrea Meoni, Fabio Antonini, Filippo Ubertini.*	**5549 Downtime-based seismic assessment: insights from new and retrofitted RC buildings in Italy** *Gianrocco Mucedero, Besim Yükselen, Rita Couto, Ricardo Monteiro* **5326 Shear strengthening of existing reinforced concrete columns by pre-stressed steel strips: experimental outcomes** *Maria Teresa De Risi, Carlo Del Gaudio, Gerardo Mario Verderame*	12:00
12:30	**5551 From Baseline Monitoring to Seismic Vulnerability Assessment: Integrated Thermal-Mechanical Analysis of Gubbio's Medieval Wall** *Eugenio Moreira, Renan Paulo, Marco Breccolotti, Nicola Cavalagli, Filippo Ubertini*	**5568 From territorial to local seismic monitoring of existing bridges** *Agnese Natali, Gianluca Centofanti, Giuseppe Chellini*	**5340 Seismic Risk Reduction of Masonry Barrel Vaults Using CRM: Experimental results and Fragility Assessment** *Filippo Campisi, Fabio Di Trapani, Marielisa Di Leto, Calogero Cucchiara, Antonio Pio Sberna, Lidia La Mendola*	12:30

Day 4 - Thursday 11 September

Bernabei Palace				
Thursday 11 September	**Aula Magna**	**Aula 1**	**Aula 2**	
8:00-9:00	***Registration***			**8:00-9:00**
9:00-9:45	***Plenary Lecture*** **- Andrea Dall'Asta - Il ruolo della sperimentazione sismica nella ricostruzione** ***Sala Cimabue - Chair: Walter Salvatore***			**9:00-9:45**
9:45	**Session SS16-1** **Chairs: Chiara Passoni, Simone Labò** **4991 Sviluppo di una connessione modulare e standardizzata tra edificio esistente ed esoscheletro** *Michele Bianchessi, Simone Labò, Andrea Belleri, Alessandra Marini* **5033 Preliminary Assessment of Self-Centring Steel Frame Systems with Energy Dissipation Devices** *Michelle Gualdi, Andrea Belleri, Alessandra Marini, Simone Labò*	**Session SS22-1** **Chairs: Marta Del Zoppo, Maria Zucconi** **5062 Dynamic Identification for Retrofitting Assessment of Reinforced Concrete Buildings with Shaking Table: Preliminary Results** *Marco Martino Rosso, Maurizio Bottini, Guido Camata, Giuseppe Carlo Marano, Alessandro Contento, Giuseppe Quaranta* **5114 Multi-Hazard Risk Analysis of Industrial Equipment Exposed to Earthquake-Tsunami Scenarios: A State-of-the-Art Review** *Yazdan Almasi, Fabrizio Paolacci, Daniele Corritore, Stefano Caprinozzi, Gianluca Quinci*		**9:45**
10:15	**5208 Sustainability-driven design method for RC buildings retrofitting through dissipative bracing** *Raffaele Laguardia, Solomon Tesfamariam, Paolo Franchin* **5210 Local dissipative solutions for the seismic retrofitting of RC buildings: experimental results and numerical simulations carried out within the SAFER- REBUILT project** *Angelo Masi, Felice Carlo Ponzo, Caterina Di Maio, Giuseppe Santarsiero, Roberto Vassallo, Giuseppe Ventura, Vincenzo Manfredi, Rocco Ditommaso, Valentina Picciano, Rosalba Gaetano*	**5153 Seismic Risk Mitigation Using a Novel Hysteretic Tuned Mass Damper: Experimental Investigation and Numerical Modeling** *Vinay Yadav Janga, Pranath Kumar Gourishetty, Biagio Carboni, Giuseppe Quaranta, Walter Lacarbonara* **5261 Tsunami impact on coastal regions accounting for mitigation strategies** *Marta Del Zoppo, Maria Zucconi, Liborio Cavaleri, Barbara Ferracuti, Marco Di Ludovico*		**10:15**
10:45	**5217 Evaluation of the carbon footprint of AAC masonry buildings accounting for the effect of seismic action** *Stefano Bracchi, Christian Salvatori, Maria Rota, Francesco Pomponi, Andrea Penna*	**5249 Integrating Seismic and Tsunami Data for Multi-Hazard Consequence Functions: Toward Scalable Loss Scenarios** *Maria Zucconi, Valerii Maksimov, Barbara Ferracuti, Marco Di Ludovico, Marta Del Zoppo*		**10:45**
11:00-11:30	***Coffee break***			**11:00-11:30**
11:30	**Session SS16-2** **Chairs: Chiara Passoni, Giuseppe Santarsiero** **5409 Life Cycle Thinking-based hybrid steel/wood exoskeleton for the integrated renovation of existing buildings** *Chiara Passoni, Jacopo Zanni, Alessandra Marini, Paolo Riva* **5450 Multi-parameter evaluation of sustainable seismic retrofitting strategies for a three-span RC bridge** *Atakilti Gebrehiwet Gebrekidan, Nicola Scattarreggia, Ricardo Monteiro*	**Session SS22-2** **Chairs: Liborio Cavaleri, Claudio Mazzotti** **5184 Dalla vulnerabilità urbana al supporto alle decisioni: simulazioni di impatto economico e strategie di mitigazione nei Campi Flegrei** *Francesca Linda Perelli* **5298 Preliminary analysis of the damage data collected after the 2016 Central Italy seismic sequence through AeDES forms** *Gianluca Salamida, Nicola Buratti, Claudio Mazzotti*		**11:30**
12:00	**5456 Valutazione dell'impatto ambientale e dei costi in relazione alla variabilità progettuale degli edifici in cemento armato in zone sismiche italiane** *Tommaso Albanesi, Matteo Chicca, Vittora Borghese, Cristoforo Demartino*	**5430 Towards a Multi-Risk Framework for Enhancing Emergency Preparedness in Cross-Border Areas: Ongoing Development in the BORIS2 Project** *Matjaz Dolsek, Serena Cattari, Beatrice Di Napoli, Valerio Poggi, Daria Ottonelli, Neja Fazarinc, Maria Polese* **5578 Experimental investigation of tsunami waves-induced loads on a scaled building models** *Maria Concetta Oddo, Anthea Amato, Liborio Cavaleri*		**12:00**
12:30		**5579 Mediterranean coastal bridges' vulnerability to combined earthquake-tsunami actions: fragility assessment** *Anthea Amato, Liborio Cavaleri, Marta Del Zoppo, Barbara Ferracuti, Valerii Maksimov, Maria Concetta Oddo, Maria Zucconi*		**12:30**

Day 4 - Thursday 11 September

	Convegno Ordine degli Ingegneri della Provincia di Perugia - *Sala Cimabue* Murature Storiche e Resilienza Sismica: un binomio possibile? Dalla diagnosi all'intervento: soluzioni tra innovazione e tradizione. Registration link: https://ordineingegneriperugia.it/formazione/offerta/murature-storiche-e-resilienza-sismica-un-binomio-possibile-dalla-diagnosi-all	
14:00	*Registration*	14:00
14:15-14:30	*Opening greetings* Gianluca Fagotti, Giovanni Gigliotti, Guido Castelli	14:15-14:30
14:30-15:20	*Invited Lecture* - Massimo Mariani Interpretazione del sisma in relazione al comportamento delle strutture storiche in muratura vulnerabili	14:30-15:20
15:20-15:40	*Invited Lecture* - Serena Cattari Modellazione non lineare delle costruzioni storiche in muratura: uno strumento di interpretazione, non solo di verifica	15:20-15:40
15:40-16:00	*Invited Lecture* - Riccardo Vetturini Alcune applicazioni della strategia dell'isolamento alla base per la protezione sismica del patrimonio artistico monumentale	15:40-16:00
16:00-16:20	Invited Lecture - Filippo Ubertini, Nicola Cavalagli Monitoraggio Strumentale degli Edifici Storici: Esperienze Applicate per la Diagnosi e la Progettazione degli Interventi	16:00-16:20
16:20-16:40	*Technical Presentation*	16:20-16:40
16:40-17:10	*Coffee Break*	16:40-17:10
17:10-17:30	*Invited Lecture* - Andrea Giannantoni Organismi strutturali complessi in muratura storica e sicurezza sismica: metodi diagnostici e prassi operativa per l'intervento minimo ed efficace	17:10-17:30
17:30-17:50	*Invited Lecture* - Marco Mezzi Protocolli e strumenti nel miglioramento finalizzato al riutilizzo di costruzioni storiche tutelate notevoli: il caso del Palazzo Barbaran Da Porto di Andrea Palladio	17:30-17:50
17:50-18:10	*Invited Lecture* - Alberto Capitanucci Il Baldacchino di San Pietro in Vaticano. Tra arte e ingegneria: il restauro per l'Anno Santo 2025	17:50-18:10
18:10-18:30	*Technical Presentation*	18:10-18:30
18:30-18:50	*Conclusions and Discussion* Gianluca Fagotti	18:30-18:50

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Colle del Paradiso
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MEDIA PARTNER

ingenio