17th WCSI

Torino - Italy

17° World Conference on Seismic Isolation, Energy Dissipation and Active Vibration Control of Structures

PROGRAM

11-16 September 2022

Politecnico di Torino, Turin, Italy

www.assisisociety.com

Politecnico di Torino

CITTA' DI TORINO

turismo Torino eprovincia

Program Schedule

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It is a great honor and pleasure to wish you All a warm welcome to the 17th World Conference on Seismic Isolation, Energy Dissipation and Active Vibration Control of Structures on behalf of the Anti-Seismic Systems International Society (ASSISi).

The World Conference on Base Isolation (WCSI) is an international event that started right after the Anti-Seismic Systems International Society (ASSISi) was founded on October 5th, 2001 in Assisi (Italy). The WCSI Conference represents the major event of the ASSISI's activity and is focused on fostering development and acceptance of seismic protection solutions and techniques. After 21 years this year the conference has been organized in Italy by the Politecnico di Torino and he is hosted in the Department of Structural, Geotechnical & Building Engineering (DISEG). The event is joined with the XIX Italian National Conference on Earthquake Engineering.

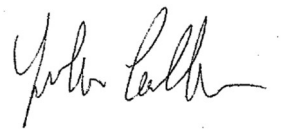
The 17th edition (WCSI2022) aims to bring in Turin prestigious speakers from all over the World for days of exciting lectures on various aspect of the current seismic protection technologies, addressing the most important advances of our discipline in major countries around the World. The conference will allow a constructive sharing of ideas, opportunities, and knowledge to contribute to build disaster resilient societies and to create new directions of research and technology implementation.

The Conference's goal is to disseminate the results of research programs, application examples and basic training material to foster further development and acceptance of seismic protection solutions and techniques.

With this message, we want to take the opportunity to thank all the participants, the organizers of the technical and special sessions, and to acknowledge the support of the many exhibitors and sponsors that will showcase their latest developments in many areas pertinent to seismic protection.

We hope the participants will enjoy the rich program of events by choosing among the several technical presentations and invited lectures, by networking, and by attending the Welcome Reception on September 11th, the Night concert at the jazz club on September 12th, and the Gala dinner at the Risorgimento's Museum on September 13th.

Sincerely



Dr. Gian Paolo Cimellaro
WCSI 2022 Chair

Professor, Department of Structural,

Geotechnical & Building Engineering (DISEG),

Politecnico di Torino, Italy

Conference Chair

Gian Paolo Cimellaro

Department of Structural, Geotechnical & Building Engineering (DISEG)

Politecnico di Torino, Italy

gianpaolo.cimellaro@polito.it

Gian Paolo Cimellaro is currently Professor of Structural Engineering at the Politecnico di Torino. He has been recently Visiting Professor at the University of California, Berkeley (2014-2016). He obtained his M.S. (2005) and Ph.D. (2008) from the University at Buffalo (SUNY) in USA. Graduated cum laude in Civil Engineering, University of Rome La Sapienza, 2001.

He is the Chair of the SHMII Committee on *Resilient Structures and Infrastructure (CORSI)* of the International Society for structural Health Monitoring of Intelligent Infrastructures. He is also SHMII Council member of the Governing body of the International Society for structural Health Monitoring of Intelligent Infrastructures and General Secretary of ASSISI, Anti-Seismic Systems International Society.

He has been invited to 10 Keynote lectures and 30+ invited seminars worldwide. He has authored 105 journal refereed papers, 205 international conference proceedings, 17 book chapters and 5 books and three patents. Dr. Cimellaro current research interests address community disaster resilience and sustainability to natural disasters, seismic risk mitigation of civil infrastructures and strategic buildings such as hospitals. He has been awarded a grant of 1.3 M € by the European Research Council for the research project "IDEAL RESCUE: Integrated Design and control of sustainable communities During emergencies" ERC-2014-StG (2015-2019). This is the most prestigious prize assigned in Europe to researchers, performing high-risk and high-gain ground-breaking research. He has been awarded a grant of 150000 € by the European Research Council for the project IDEAL SENSOR - ERC-2016-PoC (2017-2018) and recently the 2nd project IDEAL DRONE - ERC-2019-PoC (2019-2021).

In 2015, he has received the *Seed Grant Award from the Siebel Energy Institute* of UC Berkeley. *Best Presentation Award* (2017) at the Structural Health monitoring of Intelligent Infrastructure Conference 2017 (SHMII-8), Brisbane, Australia.

Further details can be found in www.cimellaro.org.

Aiken Ian- SIE Inc., Berkeley, California, USA

Benzoni Gianmario – Università di Salerno, Treasurer ASSISI, Italy

Boroschek Rubén, University of Chile, Santiago, Chile

Bubis Alexander – EERC, TsNIISK, 16WCSI organizer, Moscow, Russia

Buffarini Giacomo, ENEA, Italy

Cameron Black, University of California, Berkeley, USA

Castellano Maria Gabriella – R&D FIP MEC srl, Italy

Castino Chiara, Somma Int., Italy

Cimellaro Gian Paolo – Politecnico di Torino, Italy

Constantinou Micheal – University at Buffalo SUNY, USA

Clemente Paolo – ENEA (Presidente ASSISi)

Dall'Asta Andrea – Università degli Studi di Camerino, Italy

de la Llera Martin Juan Carlos, Pontifica Universitad Catolica de Chile, Chile

Dal Pedri Roberto, Hirun, Taiwan

Doglioni Carlo – Universita` di Roma Sapienza, Italy

Domaneschi Marco – Politecnico di Torino, Italy

Douglas John – University of Strathclyde, UK

Du Yongfeng, Lanzhou University of Technology, China

Dutu Andreea, University of Bucharest, Romania

Erdik Mustafa, Bogazici University, Turkey

Filiatrault André – University of New York at Buffalo (SUNY), USA

Fossetti Marinella – Università degli Studi di Enna "Kore", Italy

Fragiacomo Massimo – Università degli Studi dell'Aquila, Italy

Fragiadakis Michalis, National Technical University of Athens (NTUA), Greece

Giovinazzi Sonia, Enea, Italy

Kelly James, University of California, Berkeley, USA

Leoni Graziano – Università degli Studi di Camerino, Italy

Lomiento Giuseppe, California State Polytechnic University, Pomona, USA

Lopez-Garcia Diego, Pontifica Universitad Catolica de Chile, Chile

Martelli Alessandro, First President of ASSISI, Italy

Medeot Renzo, Seismic Engineering Consultant, Italy

Mele Elena - Università degli Studi di Napoli Federico II, Italy

Modena Claudio – Università degli Studi di Padova, Italy

Monti Giorgio – Sapienza Università di Roma, Italy

Nakashima Masayoshi, Kyoto University, Japan

Nuti Camillo – Università degli Studi Roma III, Italy

Occhiuzzi Antonio – Direttore ITC, CNR, Italy

Ponzo Felice Carlo – University of Basilicata, Italy

Pampanin Stefano – Sapienza University of Rome, Italy

Pavese Alberto – University of Pavia, Italy

Prota Andrea – Università degli Studi di Napoli Federico II, Italy

Ricciardi Giuseppe, Univ Messina, Italy

Ryan L. Kery, University of Nevada, Reno, USA

Saito Taiki–Toyohashi Università of Technology, Japan

Sadan Bahadir -MEF University, Istanbul, Turkey

Sextos Anastasios – University of Bristol, UK

Sorrentino Luigi – Sapienza University of Rome, Italy

Spacone Enrico – Università degli Studi G. D'Annunzio Chieti -Pescara, Italy

Takayama Mineo – Fukuoka Università, Japan

Tan Ping, Guangzhou University, China

Wada Akira, Tokyo Institute of Technology, President of JSSI, Japan

Warn Gordon Patrick, Penn State University, USA

Whittaker David – Beca Ltd, Christchurch, New Zealand

Zhou Ying – Tongji University. Shanghai, China

Zhou Fu Lin – University of Guangzhou, China

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Marco Domaneschi, Ph.D., Politecnico di Torino, DISEG, Italy

Melissa De Iuliis, Ph.D., University of Rome Sapienza, DISG, Italy

Raffaele Tarantini, Ph.D., Politecnico di Torino, DISEG, Italy

Alessio Vallero, Ph.D., Politecnico di Torino, DISEG, Italy

Luciana Restuccia, Ph.D., Politecnico di Torino, DISEG, Italy

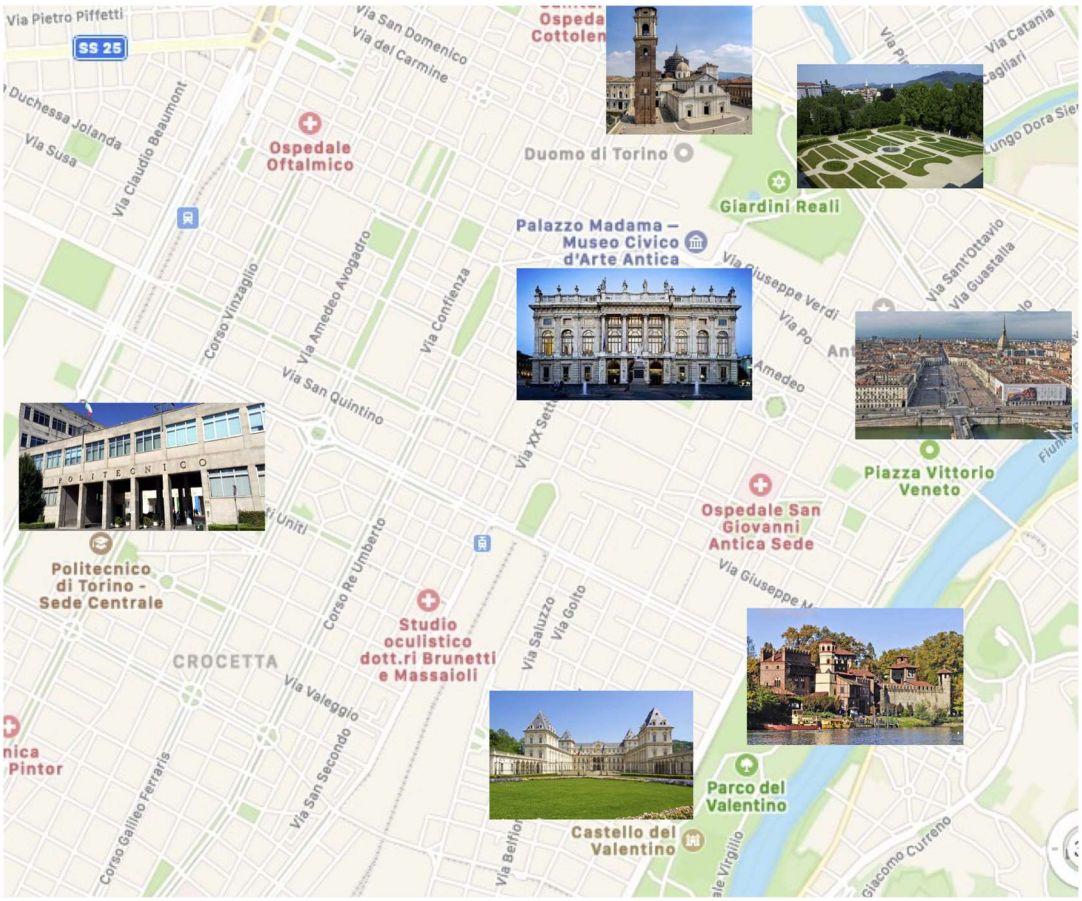
Erica Lenticchia, Ph.D., Politecnico di Torino, DISEG, Italy

Sebastiano Marasco, Ph.D., Politecnico di Torino, DISEG, Italy

Savoy capital from the mid-sixteenth century, **Torino** was for a short time the seat of the National Parliament after the Unity and was the birthplace of Italian industry. In 1620 Charles Emmanuel I began the first major expansion of the city of Torino. This was precisely the richest period in the history of Torino both from the point of view of city construction and from the artistic and cultural point of view. Great architects like Amedeo di Castellamonte, Guarino Guarini and Filippo Juvarra were called to the Savoy court. It was in this period that the great aligned courses typical of the Piedmontese city were built that give the sense of order and that distinguish Torino from the rest of the great Italian cities.

Torino is set in the **Piedmont** region of northwestern Italy, an hour's drive from the French border and slightly more than that from the Mediterranean Sea. Torino, with its fine, aristocratic atmosphere, old world sophisticated shops, grand boulevards and places, leafy parks, and several art galleries, is an increasingly popular tourist resort. The 2006 Winter Olympics, and its status the same year as World Book Capital, have prompted tourists to visit this beautiful and underestimated Italian city, which has a longstanding cultural and artistic history.

Torino is an important city of technology and industry, and the FIAT automobile company is based here (the T in the name stands for Torino). Many people consider Torino to be the European capital of Baroque: many palaces and churches were built in this style during the time of the kingdom of Savoy. Around the city, a crown of churches and castles, some up on a hilltop, some lost in a park, provide plenty of interesting views. Torino also has an aristocratic atmosphere - the centre is filled with posh 19th century cafes, regal arcaded mansions, debonair glittering restaurants, and grand churches.



Politecnico di Torino hosts the 17th World Conference on Seismic Isolation, Energy Dissipation and Active Vibration Control of Structures (WCSI). The Open ceremony is held in the courtyard of Castello del Valentino. The keynote lectures are held in the Aula Magna “Giovanni Agnelli”, located in the Main Campus of Engineering at the second floor– Corso Duca degli Abruzzi. The invited lectures and the sessions are held in the Sala Emma Strada, located in the Main Campus of Engineering at the ground floor. Coffee breaks are held in the lobby of Sala Emma Strada while lunches are held in the MIXTO bar.

Main Campus of Engineering Politecnico di Torino

Corso Duca degli Abruzzi, 24

10129 Torino (Italy)

If you are paying by cash or check as part of your onsite registration, wish to add a social event, or reserve one of the guided tours, visit the 17WCSI 2022 Registration desk.

LOCATIONS:

- Keynotes are held in the Aula Magna.
- Technical sessions are held in the Sala Emma Strada.
- Exhibitors are located in the main courtyard of the Politecnico di Torino.

FULL REGISTRATION INCLUDES:

1 paper, welcome cocktail, access to the conference sessions, lunches and coffee-breaks, gala dinner, special event on Monday, conference proceedings and conference attendees' documentation, subscription to ASSISi.

REDUCED REGISTRATION INCLUDES:

1 paper, welcome cocktail, access to the conference sessions, lunches and coffee-breaks, special event on Monday, conference proceedings and conference attendees' documentation

ON-LINE REGISTRATION INCLUDES:

Remote participation and presentation of 1 paper to the ASSISi conference.

CONFERENCE PROCEEDINGS:

The conference Proceedings will be published by Springer and indexed in Scopus and WoS.

RECEIPT AND CERTIFICATE OF ATTENDANCE

Preregistered attendees who did not receive a receipt or attendees who need a Certificate of Attendance may obtain those at the 17WCSI 2022 Registration desk.

DISABLED ACCESS

The entire venue is accessible to people with disabilities. If you need assistance or have questions, please visit the Registration desk or send an email to 17wcsi2022@polito.it

FOOD ALLERGIES

If you have any questions about the food served at the conference, please contact the staff at the Registration desk.

SMOKING POLICIES

The Venue is a non-smoking area, including e-cigarettes. Smoking is only possible outside.

PERSONAL PROPERTY

Personal belongings should not be left unattended in meeting rooms or public areas. Unattended items are subject to removal by security. 17WCSI 2022 Organization is not responsible for items left unattended.

LUNCHES AND COFFEE BREAKS

Lunches are served in the MIXTO restaurant at the times indicated in the technical program. Refreshments during coffee-breaks are served in the lobby of the Sala Emma Strada at the times indicated in the technical program.

Access to the lunch and refreshments is granted only to those wearing their own badge.

WI-FI ACCESS

The Eduroam international Wi-Fi network is accessible from the workshop Venue. For the members of its partner institutions, Eduroam grants access to the network through the same credentials used by the participants at their home institutions.

It is recommended that the participants check on the website of their home Institution the possibility of accessing Eduroam and the details of the accessing procedure.

Further details about the Eduroam network may be found here:

https://eduroam.org/what-is-eduroam/

The list of the partner Institutions is available here:

https://monitor.eduroam.org/map_service_loc.php

ORAL PRESENTATION POLICY

The time allocated for each technical presentation is 10 minutes, including Q&A. Per Venue's policy and to keep the session on time, the authors are not able to present using their own devices. All Workshop rooms have a laptop, projector, screen, and a microphone. The laptops provide PowerPoint, Acrobat Reader and VLC. The system in all rooms runs on Windows. As such, MAC users are encouraged to make sure their presentation is compatible with a Windows PC or convert their presentation in PDF

Presenters are also encouraged to stop-by the session chair before the start of the session to confirm presence and to upload their file(s). University personnel are present onsite to provide technical assistance.

SESSION CHAIRPERSON POLICY

Before any given session starts, the corresponding chair(s) has(ve) the responsibility to check attendance and verify that the authors have uploaded their presentation on the room that the presentation is laptop and properly working.

The session chairperson introduces the session, and then each author/paper-title, take questions from the audience, and conclude the session.

It is very important that the chairperson makes make sure the time schedule is respected.

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HEALTH AND SAFETY EU COVID CERTIFICATE & SAFETY MEASURES

Travelers arriving in Italy, regardless of their country of origin, are no longer required to present the EU COVID Certificate (certificate of vaccination or recovery, or evidence of a negative test result from SARS-CoV-2 infection).

For more info, please check the following link:

https://www.salute.gov.it/portale/nuovocoronavirus/homeNuovoCoronavirus.jsp?lingua=english

To attend our congress, participants are no longer required to present EU COVID Certificate when entering the venue. However, there will still be some safety measures in place. We recommend to:

– wear a mask (FFP2 or surgical mask) in all Common areas and Lecture Rooms

– wash your hands often and use the hand sanitizers located in the congress venue

Monday, September 12

Prof. Mustafa Erdik

Professor Emeritus

Bogazici University, Istanbul

SEISMIC ISOLATION OF STRUCTURES IN NEAR FAULT CONDITIONS

Dr. Mustafa Erdik is a Professor Emeritus of Earthquake Engineering at Bogazici University, Istanbul and an adjunct faculty member at Rose School, IUSS, Pavia. He currently serves as the member of the executive board of Türk-Reasürans Inc. and the Turkish Earthquake Foundation.

He has received his BSc degree from Middle East Technical University, MSc and PhD degrees from Rice University, USA. He has worked with UN organizations and several international foundations around the world on earthquake engineering problems and has authored about 320 scientific publications.

He is the recipient of United Nation's Sasakawa Disaster Prevention Award, NATO's Science for Peace – Summit Prize, Bruce Bolt Medal given by Earthquake Engineering Research Institute, USA: Prof. Nicholas Ambraseys Distinguished Lecture Award given by the European Association for Earthquake Engineering and; Science Award by Scientific and Technological Research Council of Turkey.

His professional expertise encompasses: earthquake hazard and risk assessment and passive structural control.

Tuesday, September 13

Prof. Carlo Doglioni

Professor at Sapienza University, Rome

President at Istituto Nazionale di Geofisica e Vulcanologia (INGV)

ORIGIN OF SEISMICITY IN ITALY AS A CLUE FOR SEISMIC HAZARD

Carlo Doglioni is professor of geodynamics at the Sapienza University of Rome since 1997, after having worked in the universities of Ferrara, Bari and Potenza. Since 2016 he is president of the National Institute of Geophysics and Volcanology (INGV). His research is mainly on the mechanisms of plate tectonics and the origin of seismicity, studies for which he has received numerous awards. He is member of the National Academy of the Lincei, of the National Academy of Sciences called the XL, and of the Academy of Europe.

Prof. Michael C. Constantinou

S. P. Caper Professor, SUNY Distinguished Professor

University at Buffalo, State University of New York

TESTING OF SEISMIC ISOLATION HARDWARE: SIGNIFICANCE, SCALING, SIMILARITY AND PERFORMANCE-BASED SPECIFICATIONS

Michael C. Constantinou is Samuel P. Capen Professor and SUNY Distinguished Professor in the Department of Civil, Structural and Environmental Engineering at the University at Buffalo, State University of New York. He previously served as the Chair of the department over a period of six years and as the Director or the Deputy Director of the Structural Engineering and Earthquake Simulation Laboratory at the University at Buffalo over a period of nine years. He serves as editor of the Journal of Earthquake Engineering and Structural Dynamics.

His research interests concentrate on seismic protective systems on which he authored or co-authored over 300 papers, books and book chapters and reports. He is best known for contributions in the development, understanding of behavior and modeling of sliding seismic isolation systems; on contributions in the understanding of the lifetime behavior of elastomeric and sliding isolators; on the development of the concept of property modification factors for performing bounding analysis of structures with seismic protective systems; on the development and verification of theories for the hysteretic heating of lead-rubber and sliding isolators; on the development of principles of scaling and similarity for the testing of seismic isolators; on the analysis and design of structures with seismic isolation and damping systems; on the development of semi-active damping systems; on the development of practical large scale negative stiffness systems; on the development of computer software for the analysis of structures with seismic protective systems, and for his continuous participation in the development of codes and specifications, including the ASCE 7, AASHTO and NEHRP-all related to seismic protective systems.

He has four US patents issued. He received a 1988 Presidential Investigator Award and a 1991 Best Paper Award from the American Concrete Institute, was co-recipient of the 2005 American Society of Civil Engineers (ASCE) Civil Engineering Research Foundation Pankow Award for Innovation in the application of “coupled truss walls with damped linked elements in the Torre Mayor building” in Mexico City, was co-recipient of three professional practice awards: the 1994 United States General Services Administration Design Award for the structural strengthening of the US Court of Appeals Building in San Francisco, the 2002 Diamond Award and the 2002 Grand Award of the American Council of Engineering Companies, both for the retrofit design of the Ataturk International Airport in Istanbul, Turkey, was co-recipient of the 2015 ASCE Moisseiff Award and was the 2015 ASCE Nathan M. Newmark Medal recipient. In 2019 he received an honorary doctorate degree from the University of Patras, Greece.

He has lectured and consulted extensively on the analysis and design of structures with seismic protective systems for engineers and owners in Azerbaijan, Canada, Chile, China, Cyprus, Ecuador, Germany, Greece, Italy, Korea, Mexico, Panama, Russia, Saudi Arabia, Switzerland, Taiwan, Turkey, UK and US. He has been involved as consultant, inspector, or peer reviewer in over 100 structures with seismic protective systems worldwide.

Wednesday, September 14

Prof. Anastasios Sextos

Professor

University of Bristol, UK

HYBRID, LOW-COST, SEISMIC ISOLATION SOLUTIONS FOR LOW-RISE BUILDINGS IN DEVELOPING COUNTRIES: EXPERIMENTAL RESULTS AND CHALLENGES FACED

Anastasios Sextos (www.asextos.net) is a Professor of Earthquake Engineering at the University of Bristol, UK. He is the Head of the Earthquake and Geotechnical Engineering Research Group and the Director of the new £12million Soil-Foundation-Structure Interaction (SoFSI) Facility. He acts as the corresponding member of the Management Board of the UK Collaboratorium for Research on Infrastructure and Cities (UKCRIC) in the framework of which SoFSI facility is built, while he is also the founding Director of the MSc Programme in Earthquake Engineering and Infrastructure Resilience.

He is the PI of several large EU- and UK-funded research projects (indicatively, SAFER and Exchange-Risk), a member of the European Project Team for the Evolution of Structural Eurocodes, a member of the BSi 525/8 - Panel 7 for seismic design in the UK, the co-Chair of the European Association for Earthquake Engineering Work Group 11 for bridges and the President of the Hellenic Society of Earthquake Engineering (2017-2022). He is an Associate Editor for the ASCE Journal of Structural Engineering, Earthquake Spectra, the Journal of Earthquake Engineering and the ASCE Journal of Pipeline Engineering. His research contributions are in the areas of experimental and computational earthquake engineering, dynamic soil-structure interaction and seismic resilience of critical infrastructure.

PRE-EVENT Activity – Sunday, September 11, 2022		
Time	**Program**	**Location**
6:00 – 7:30 pm	Welcome Party	Castello del Valentino
Day 1: Monday, September 12, 2022		
Time	**Program**	**Location**
8:00 – 9:00 am	Registration	Lobby Sala Emma Strada
9:00 – 9:30 am	Opening ceremony	Aula Magna
9:30 – 10:15 am	Keynote Lecture (plenary session)	Aula Magna
10:15 – 11:00 am	Keynote Lecture (plenary session)	Aula Magna
11:00 – 11:30 am	Coffee-break	Lobby Sala Emma Strada
11:30 – 1:00 pm	Technical Session	Sala Emma Strada
1:00 – 2:00 pm	Lunch	MIXTO
2:00 – 2:45 pm	Keynote Lecture (plenary session)	Aula Magna
2:45 – 3:10 pm	Invited Lecture	Sala Emma Strada
3:10 – 4:30 pm	Technical Session	Sala Emma Strada
4:30 – 5:00 pm	Coffee-break	Lobby Sala Emma Strada
5:00 – 5:30 pm	Invited Lecture	Sala Emma Strada
5:30 – 7:00 pm	Technical Session	Sala Emma Strada
7:30 – 12:00 am	Concert	Jazz Club
Day 2: Tuesday, September 13, 2022		
Time	**Program**	**Location**
8:00 – 9:00 am	Registration	Lobby Sala Emma Strada
9:00 – 9:45 am	Keynote Lecture (plenary session)	Aula Magna
9:45 – 10:30 am	Keynote Lecture (plenary session)	Aula Magna
10:30 – 11:00 am	Invited Lecture	Sala Emma Strada
11:00 – 11:30 am	Coffee-break	Lobby Sala Emma Strada
11:30 – 1:00 pm	Technical Session	Sala Emma Strada
1:00 – 2:00 pm	Lunch	MIXTO
2:00 – 2:45 pm	Keynote Lecture (plenary session)	Aula Magna
2:45 – 3:00 pm	Invited Lecture	Sala Emma Strada
3:00 – 4:30 pm	Technical Session	Sala Emma Strada
4:30 – 5:00 pm	Coffee-break	Lobby Sala Emma Strada
5:00 – 5:30 pm	Invited Lecture	Sala Emma Strada
5:30 – 6:30 pm	Special Session	Sala Emma Strada
7:30 – 12:00 am	Gala Dinner	Renaissance Museum

Day 3: Wednesday, September 14, 2022		
Time	**Program**	**Location**
8:00 – 9:00 am	Registration	Lobby Sala Emma Strada
9:00 – 9:45 am	Keynote Lecture (plenary session)	Aula Magna
9:45 – 10:30 am	Keynote Lecture (plenary session)	Aula Magna
10:30 – 11:00 am	Invited Lecture	Sala Emma Strada
11:00 – 11:30 am	Coffee-break	Lobby Sala Emma Strada
11:30 – 1:00 pm	Technical Session	Sala Emma Strada
1:00 – 2:00 pm	Lunch	MIXTO
2:00 – 2:45 pm	Keynote Lecture (plenary session)	Aula Magna
2:45 – 3:00 pm	Invited Lecture	Sala Emma Strada
3:00 – 4:30 pm	Technical Session	Sala Emma Strada
4:30 – 5:00 pm	Coffee-break	Lobby Sala Emma Strada
5:00 – 5:30 pm	Invited Lecture	Sala Emma Strada
5:30 – 7:00 pm	Technical Session	Sala Emma Strada
Day 4: Thursday, September 15, 2022		
Time	**Program**	**Location**
8:00 – 9:00 am	Registration	Lobby Sala Emma Strada
9:00 – 9:45 am	Keynote Lecture (plenary session)	Aula Magna
9:45 – 10:15 am	Invited Lecture	Sala Emma Strada
10:15 – 11:15 am	Technical Session	Sala Emma Strada
11:15 – 11:30 am	Coffee-break	Lobby Sala Emma Strada
11:30 – 1:00 pm	Technical Session	Sala Emma Strada
1:00 – 2:00 pm	Lunch	MIXTO
2:00 – 3:30 pm	Technical Session	Sala Emma Strada
3:30 – 4:00 pm	Invited Lecture	Sala Emma Strada
4:00 – 5:00 pm	ASSISi members meeting and closing ceremony	Sala Emma Strada
Day 5: Friday, September 16, 2022		
Technical Tours		

Day 1: Monday, September 12, 2022		
Aula Magna		
9:00 – 9:30 am	Opening Ceremony Greetings from **M. Sessa**	
9:30 – 10:15 am	Keynote 1: **Prof. M. Sarkisian (ANIDIS)** Eliminating Seismic Risk to Structures through Invention	
10:15 – 11:00 am	Keynote 2: **Prof. M. Erdik (Bogazici University, Istanbul)** Seismic Isolation of Structures in Near Fault Conditions	
11:00 – 11:30 am	Coffee-break	Lobby of Sala Emma Strada
Sala Emma Strada		
SESSION	GS01_New isolation and energy dissipation devices	
SESSION CHAIRS	Dr. A. Cardoni Prof. I. Aiken	
11:30 – 11:40 am	Mechanical properties of thick rubber bearings used in over-track buildings	Ying Zhou, Zengde Zhang, Michalis F. Vassiliou
11:40 – 11:50 am	Phenomenological Bi-directional Model for Shear Behavior of High Damping Rubber Bearings with Anisotropic Degradation	Jose Gallardo, Juan De la Llera, Jose Restrepo, Michelle Chen
11:50 – 12:00 pm	The Development Of New Construction Methods About Shake Prevention Duct Structures	Daichi Kato, Kazuto Sakatsume, Osamu Takahashi
12:00 – 12:10 pm	Crescent Shaped Brace devices to strengthen pinned beam-column connections via semi-rigid CSB joints	Michele Palermo, Vittoria Laghi, Stefano Silvestri, Giada Gasparini, Tomaso Trombetti
12:10 – 12:20pm	Experimental and analytical investigation of variable curvature and friction-friction pendulum isolator	Ping Tan, Jiying Shang, Jianping Han, Kui Yang, Yafei Zhang
12:20 – 12:30 pm	A novel active mass damper for seismic protection of structures: full-scale shake table test and experimental results.	Alberto Bussini, Giovanni Rebecchi, Paolo Martino Calvi, Fabio Menardo, Matteo Rosti, Stefano Cii, Filippo Dacarro
12:30 – 12:40 pm	Seismic Isolation Design for Achieving Resilient Structures	Anoop S. Mokha, Victor Zayas, Stanley Low
12:40 – 12:50 pm	Experimental Investigation on Hysteretic Behavior of a Double Friction Pendulum and Frictional Heating	Esengül Çavdar, Gokhan Ozdemir, Ugurcan Ozcamur
1:00 – 2:00 pm	Lunch	MIXTO
Aula Magna		
2:00 – 2:45 pm	Keynote: **Prof. F. Ballio (ANIDIS)** Forzanti Naturali sui Ponti: Fiumi e Sismi a Confronto	
Sala Emma Strada		
2:45 – 3:10 pm	Invited Lecture: **Prof. T. Saito (Toyohashi University of Technology, Japan)** Efforts toward International Harmonization of Seismic Isolation Design Code and Current Status in Japan	
SESSION	GS03_International Standards on Seismically Isolated Structure	
SESSION CHAIRS	Prof. T. Saito Prof. G.P. Cimellaro	
3:10 – 3:20 pm	Seismic isolation design comparison of Japan, China, USA and Eurocode	Demin Feng, Taiki Saito, Honglei Wu, Wenguang Liu
3:20 – 3:30 pm	Hidden pitfalls in Double Curved Surface Sliders (DCSS)	Renzo Medeot

3:30 – 3:40 pm	Code Provisions About Λ-Factors Of Hdrbs For The Upper And Lower Bound Analyses: Hystorical Review	Laura Ragni, M. Gabriella Castellano, Andrea Dall'Asta, Laura Gioiella, Samuele Infanti, Fabio Micozzi
3:40 – 3:50 pm	Design of Base-Isolated Building as per Indian Code Provisions and Practices	Vasant Matsagar, Ratish Jain
3:50 – 4:00 pm	Statistical Analysis Of Rubber Compounds Material Tests For Seismic Isolation Bearings And Code Provisions Comparison	Fabio Micozzi, Andrea Dall'Asta, Laura Gioiella, Laura Ragni, Virginio Quaglini
4:00 – 4:10 pm	Complex Modal Shapes Superposition Response Spectrum Method and Response History Analysis method of Seismically Isolated Structures in China	Ping Tan, Kui Yang, Jiajun Tan, Wenzhi Zheng
4:10 – 4:20 pm	Full scale dynamic tests on concave curved surface sliders: comparison of time history tests and cyclic sinusoidal tests	Aikaterini Evina Pigouni, Maria Gabriella Castellano, Nikolin Hima, Samuele Infanti
4:30 – 5:00 pm	Coffee-break	Lobby of Sala Emma Strada
Sala Emma Strada		
5:00 – 5:30 pm	Invited Lecture: **Prof. B. Sadan (MEF University, Turkey)** State of the Art in Application of Seismic Isolation and Energy Dissipation in Turkey	
SESSION	SPS3_Seismic vulnerability assessment and mitigation of existing buildings	
SESSION CHAIRS	Dr. M. Domaneschi Dr. S. Marasco	
5:30 – 5:40 pm	Horizontal and vertical BIM interoperability aimed at seismic vulnerability assessment	Francesca Maria Ugliotti, Marco Domaneschi, Anna Osello, Salvatore Monforte, Salvatore Tuccitto
5:40 – 5:50 pm	Seismic retrofit of r.c. buildings with base isolation	Giacomo Buffarini, Paolo Clemente, Andrea De Flaviis, Chiara Ormando, Antonello Salvatori
5:50 – 6:00 pm	Seismic response spectra of the 24th August 2016 Amatrice earthquake	Melissa De Iuliis, Francesco Potenza, Vincenzo Gattulli
6:00 – 6:10 pm	Advanced constitutive laws for nonlinear static analyses of masonry structures	Ada Zirpoli, Stefano Farina
6:10 – 6:20 pm	Assessment of the acceleration floor spectra through dynamic identification: the Museum of Bargello in Florence	Riccardo Mario Azzara, Vieri Cardinali, Daniele Pellegrini, Marco Tanganelli, Stefania Viti
6:20 – 6:30 pm	Experimental Evaluation Of The Cyclic Behaviour Of Different Smooth Rebar Anchoring Layout	Simone Pelucco, Anthony Paderno, Marco Preti
6:30 – 6:40 pm	Development of new optimal passive non-detuning Mass Dampers	Luca Martinelli
6:40 – 6:50 pm	Dynamic characterization and seismic vulnerability assessment of existing masonry port structures	Raffaele Tarantini, Alessandro Cardoni, Sebastiano Marasco, Jacopo Merlin, Enrico Pribaz, Gianluca Rupolo, Marco Domaneschi, Gian Paolo Cimellaro
6:50 – 7:00 pm	Automating the Frequency Domain Decomposition Technique Using Modal Assurance Criterion	Amir Reza Elahi, Alessandro Cardoni, Marco Domaneschi, Gian Paolo Cimellaro
7:30 – 12:00 am	Concert at the Jazz Club	

Day 2: Tuesday, September 13, 2022		
Aula Magna		
9:00 – 9:45 am	Keynote 1: **Prof. F. Braga (ANIDIS)** La Evoluzione Delle Norme Tecniche Per Le Costruzioni	
9:45 – 10:30 am	Keynote 2: **Prof. C. Doglioni (Sapienza University of Rome, INGV)** Origin of seismicity in Italy as a clue for seismic hazard	
Sala Emma Strada		
10:30 – 11:00 am	Invited lecture: **Prof. F. Zhou (University of Guangzhou, China)** Recent development and application on seismic isolation, energy dissipation and vibration control in China	
11:00 – 11:30 am	Coffee-break	Lobby of Sala Emma Strada
Sala Emma Strada		
SESSION	GS01_New isolation and energy dissipation devices	
SESSION CHAIRS	Dr. A. Cardoni Prof. I. Aiken	
11:30 – 11:40 am	A novel axial eddy current damper by using rack and gear mechanism: design, testing and evaluation	Shouying Li, Yafeng Li, Zhengqing Chen
11:40 – 11:50 am	Development of seismic isolation and energy dissipation in Taiwan – Application, research, and design	Shiang-Jung Wang, Wang-Chuen Lin, Chung-Han Yu, Cho-Yen Yang, Jenn-Shin Hwang, Kuo-Chun Chang
11:50 – 12:00 pm	Effect of over-stroke capacity of curved surface sliders on the collapse safety of seismically isolated buildings	Antonio Di Cesare, Felice Carlo Ponzo
12.00 – 12:10 pm	Research on the development of three-dimension seismic isolation system for lightweight buildings	Yinglu Wang, Osamu Takahashi
12:10 – 12:20 pm	Application of isolation in large scale infrastructure in cold region in China	Yongfeng Du, Chao Zhang, Guanghuan Wang
12:10 – 12:20 pm	An Experimental Study on the Effects of Different Pendulum Damper Designs on Structural Behavior	Baki Ozturk, Ersin Aydin, Yunus Emre Kebeli, Görkem GÜLTEPE
12:20 – 12:30 pm	Numerical Assessment of Ultra-Low Cycle Fatigue Performance of Buckling-restrained Aluminum Shear Yielding Dampers	Deepak Yadav, Dipti Ranjan Sahoo
12:30 – 12:40 pm	Development of an Improved Deformation History Integral Type Hysteresis Model for High-Damping Rubber Bearings	Takahiro Mori, Sadamitsu Takeuchi, Nobuo Murota
12:40 – 12:50 pm	Design, modeling and testing of innovative seismic metaisolators with a biomimetic character	Fernando Fraternali, Ada Amendola, Narinder Singh, Gianmario Benzoni, Graeme Milton
1:00 – 2:00 pm	Lunch	MIXTO
Aula Magna		
2:00 – 2:45 pm	Keynote: **Prof. M. Costantinou (SUNY, USA) – online** Testing of seismic isolation hardware: significance, scaling, similarity, and performance-based specifications	
Sala Emma Strada		
2:45 – 3:00 pm	Invited lecture: **Dr. I. Aiken (SIE Inc., USA)** Recent Developments and Applications of Seismic Isolation in North America	
SESSION	GS05_Energy Dissipation in tall buildings and seismic isolation for high-risk plants	

SESSION CHAIRS	Dr. M. De Iuliis Prof. Terenzi	
3:00 – 3:10 pm	Application of the gradient based optimization to the structural systems with the supplemental damping devices	Suat Gündemir
3:10 – 3:20 pm	3-D Seismic Isolation for Operational Level Protection of Critical Electrical and Electronic Control Equipment for the Site C Clean Energy Project	Ian Aiken, Cameron Black, Blair Lawrence, Apollo Zhang, Nicole Cheang, Mohammed Mohammed and Patrice Mclean
SESSION	GS06_Seismic Isolation and Energy Dissipation in existing and cultural heritage structures	
SESSION CHAIRS	Dr. M. De Iuliis Prof. Terenzi	
3:20 – 3:30 pm	Seismic base isolation of a historical strategic masonry building	Tobia Zordan , Alessandra Romano, Fulvio Parisi
3:30 – 3:40 pm	A comparative study on isolator modeling approaches	Eser Cabuk, Ugurhan Akyuz, Fatih Sutcu, Nobuo Murota
3:40 – 3:50 pm	Multi-storey building retrofit by ADAS-equipped braces	Gloria Terenzi, Stefano Sorace, Damiano Melani, Elena Fuso
3:50 – 4:00 pm	The effect of non-linear response of the primary system in non-conventional TMDs	Francesco Esposito, Diana Faiella, Mario Argenziano, Giuseppe Brandonisio, Elena Mele
4:00 – 4:10 pm	Isolated artificial ground for the seismic safety in the urban reconstruction of Castelluccio di Norcia	Marco Mezzi, Alessandro Fulco
4:10 – 4:20 pm	Numerical application of viscoelastic devices for improving the out-of-plane behaviour of a historic masonry building	Nuno Mendes, Elesban Nochebuena-Mora, Paulo B. Lourenço
4:30 – 5:00 pm	Coffee-break	Lobby of Sala Emma Strada
Sala Emma Strada		
5:00 – 5:30 pm	Invited lecture: **Prof. A. Wada (Tokyo Institute of Technology, Japan)** Seismic resilience of cities	
5:30 – 6:30 pm	Special Session Prof. De Stefano	
7:30 – 12:00 am	Gala dinner at Museo del Risorgimento	

Day 3: Wednesday, September 14, 2022		
Aula Magna		
9:00 – 9:45 am	Keynote 1: **Prof. W. Salvatore (ANIDIS)** Progetto e controllo della conoscenza per la classificazione e valutazione dei ponti esistenti	
9:45 – 10:30 am	Keynote 2: **Prof. A. Sextos (University of Bristol)** Hybrid, Low-Cost, Seismic Isolation Solutions For Low-Rise Buildings In Developing Countries: Experimental Results And Challenges Faced	
Sala Emma Strada		
10:30 – 11:00 am	Invited Lecture: **Prof. Ying Zhou (Tongji University, China)** A three-dimensional isolation system with vertical quasi-zero stiffness property	
11:00 – 11:30 am	Coffee-break	Lobby of Sala Emma Strada
Sala Emma Strada		
SESSION	SPS2_Supplemental Energy Dissipation Devices for Passive Structural Control	
SESSION CHAIRS	Dr. B. Sadan Prof. F. Ponzo	
11:30 – 11:40 am	Multi-EDP performance assessment of a steel BRBF under ground motion sequences	Fernando Gutiérrez-Urzúa, Fabio Freddi, Enrico Tubaldi
11:40 – 11:50 am	Modern systems for wind & seismic induced vibrations	Peter Nawrotzki, Daniel Siepe, Fulvio Bottoni
11:50 – 12:00 pm	Enhancing stiffness and/or damping in structural systems with cellular shear walls	Panagiota Syrimi, Spyridoula-Maria Papathanasiou, Panos Tsopelas
12:00 – 12:10 pm	Challenges and Detailing Considerations for the Incorporation of Passive Energy Dissipation Systems in Life Science Occupancies	Sam Richardson, Kurt Lindorfer, Bryan Lee
12:10 – 12:20 pm	The brittle failure of fluid viscous dampers and the related consequences on the reliability of a medium-rise steel building	Laura Gioiella, Fabrizio Scozzese, Enrico Tubaldi, Laura Ragni, Andrea Dall'Asta
12:20 – 12:30 pm	Preliminary numerical analysis of the response of base-isolated SDOF systems constrained by two deformable devices under seismic excitations	Giuseppe Perna, Maurizio De Angelis, Ugo Andreaus
12:30 – 12:40 pm	Prediction Of Beyond Design And Residual Performances Of Viscoelastic Dampers By Simplified Fractional Derivative Models	Wang-Chuen Lin, Shiang-Jung Wang, Chung-Han Yu, Yu-Wen Chang, Tung-Yu Wu
12:40 – 12:50 pm	Seismic Isolation in the US Mission Critical Sector	Sam Richardson, Kurt Lindorfer
12:50 – 1:00 pm	Experimental tests of aluminum-steel asymmetric friction connections to improve the seismic response of RC structures	Angelo Aloisio, Francesco Boggian, Roberto Tomasi
1:00 – 2:00 pm	Lunch	MIXTO
Aula Magna		
2:00 – 2:45 pm	Keynote 1: **Dr. Chatzi (ANIDIS)** The importance of engineering models for informed monitoring of structures	
Sala Emma Strada		
2:45 – 3:00 pm	Invited Lecture: **Prof. A. Dutu (University of Bucharest, Romania)** Seismic isolation applications in Romania	
SESSION	GS04_Seismic Isolation and Energy Dissipation in bridges and viaducts	

SESSION CHAIRS	Prof. Gokhan Ozdemir Dr. A. Cardoni	
3:00-3:10pm	Shake table and release tests on a seismically isolated bridge span scaled model	Chiara Ormando, Paolo Clemente, Ivan Roselli, Fernando Saitta, Giacomo Buffarini, Alessandro Colucci, Massimiliano Baldini, Alessandro Picca, Chiara Castino, Anna Maria Cicalese, Patrizia Bellucci, Francesca Ciarallo
3:10-3:20pm	Seismic Isolation of Bridges: practice oriented considerations	Marco Molinari, Daniele Pastorelli, Marcello Cademartori, Simone Dellacasagrande
3:20-3:30pm	Effects of Ice and Water Contamination on Friction Pendulum Bearings	Rolando Grijalva Alvarado, Keri Ryan
3:30-3:40pm	Seismic Design and Performance Assessment of the Post-tensioned Bridge Piers	Yu Shen, Fabio Freddi, Jianzhon Li, Yongxing Li
3:40-3:50pm	Performance Assessment of a Bridge Seismically Isolated with Lead Rubber Bearings at Low Temperature	Volkan Karuk, Cansu Yasar, Esengul Cavdar, Gokhan Ozdemir
3:50-4:00pm	Seismic Performance of Isolated Bridges under Extreme Shaking	Claudio Sepulveda, Ricardo Bustamante, Gilberto Mosqueda
4:00-4:10pm	The Bridges on Çanakkale Highway: a huge application of the seismic protection technology in Europe	S. Barone,M. Sartori,C. Galbiati,M. Ambor,G. Bresaola, I. Zivanovic
4:10-4:20pm	The Role Of An Advanced Quality System For The Control Of Performance Of Lead Rubber Bearings: The Case Of Puente Industrial De Biobio	M. Sartori, C. Galbiati, G. Bresaola, S. Barone, I. Zivanovic, I. Alende
4:20-4:30pm	Fluid viscous dampers for the 1915 Çanakkale Bridge in Turkey	Aikaterini Evina Pigouni, Rudy Borella, Samuele Infanti, Maria Gabriella Castellano
4:30 – 5:00 pm	Coffee-break	Lobby of Sala Emma Strada
5:00 – 5:30 pm	Invited Lecture: **Dr. P. Clemente (ENEA, Italy)** Applications and recent studies on seismic isolation in Italy	
SESSION	GS09_Seismic protection of non-structural elements and equipment, statues and art objects	
SESSION CHAIRS	Prof. G. Benzoni Dr. B. Sadan	
5:30 – 5:40 pm	Improved structural serviceability and seismic protection by adaptive base isolators and dampers	Peter Huber, Felix Weber
5:40 – 5:50 pm	Preliminary results in the design and testing of earthquake-proof glass-aluminium partition walls	Rocco Ditommaso, Fabrizio Scozzese, Antonello Mossucca, Gianluca Auletta, Antonio Di Cesare, Domenico Nigro, Alessandro Zona, Felice Carlo Ponzo, Andrea Dall'Asta
5:50 – 6:00 pm	Preliminary results in the design and testing of earthquake-resistant school furniture	Laura Gioiella, Fabio Micozzi, Alessandro Zona, Andrea Dall'Asta, Martina Sciomenta, Gabriele Tamagnone, Massimo Fragiacomo

6:00 – 6:10 pm	Experimental seismic response characterisation of brackets for use in ventilated façade systems	Simone Peloso, Emanuele Brunesi, Elisa Rizzo Parisi
6:10 – 6:20 pm	Stepwise Performance Enhancement of Sloped Rolling-type Isolators	Chung-Han Yu, Shiang-Jung Wang, Yi-Lin Sung, Wang-Chuen Lin, Tzu-Kang Lin
6:20 – 6:30 pm	Seismic protection of the Goddes of Morgantina statue through an innovative base-isolation device: validation by shake-table tests	Mariagrazia Elena Alberti, Giovanni Ausenda, Maria Chiara Castino, Francesco Lo Iacono, Giacomo Navarra
6:30 – 6:40 pm	Shake table tests on a new passively controlled system with pulley amplification mechanisms for suspended ceilings	Ryo Majima, Tomonari Haruyama, Shigeki Sakai, Yasuo Yamasaki, Taiki Saito
6:40 – 6:50 pm	Base isolation of a rocking object on a rocking pedestal: response to pulse-type ground motion	Giacomo Destro Bisol, Matthew DeJong, Domenico Liberatore, Luigi Sorrentino
6:50 – 7:00 pm	Advanced Digital Video Analyses to Estimate the Dynamic Behavior for Proper Design of a Base-Isolation System of the Sarcophagus of the Spouses at the National Etruscan Museum in Rome: Preliminary Results	Vincenzo Fioriti, Antonino Cataldo, Ivan Roselli, Alessandro Colucci, Paolo Clemente, Miriam Lamonaca, and Luigi Sorrentino

Day 4: Thursday, September 15, 2022		
Aula Magna		
9:00 – 9:45 am	Keynote 1: **B. Hoffmeister (ANIDIS)** Rapid damage detection and dissipative joints for moderate seismicity	
Sala Emma Strada		
9:45 – 10:15 am	Invited Lecture: **Prof. R. Boroscheck (University of Chile)** Seismic Isolation in Chile: An opportunity for Model Codes Calibration	
SESSION	GS07_Resilience and sustainability: new challenges for the protection of structures and infrastructures GS08_The protection systems in the future: which technologies we'll use in 2050?	
SESSION CHAIRS	G.P. Cimellaro A. Sextos	
10:15 – 10:25 am	Versatile aseismic isolation based on practical applications of advanced materials for sustainable resilience against earthquakes	Mohammad Noori, Jian Zhang, Eltahry Elghandour, Donatello Cardone, Peyman Narjabadifam
10:25 – 10:35 am	Observed seismic behaviour of isolation systems in Italy	Giacomo Buffarini, Paolo Clemente, Ugo Ianniruberto, Chiara Ormando, Federico Scafati
10:35 – 10:45 am	Seismic Isolation of the Terminal Core Roof at the Portland International Airport	Reid Zimmerman, Christopher Pitt
10:45 – 10:55 am	Coupling Of Structural Additions For Seismic Response Mitigation Of Existing Buildings	Diana Faiella, Mario Argenziano, Francesco Esposito, Elena Mele
10:55 – 11:05 am	Verification on Actual-Displacement Scale of Displacement-Control System with High-Static–Low-Dynamic Stiffness and Rotational Inertia for Seismic Isolation	Jun Iba, Koichi Watanabe, Kou Miyamoto, Ken Ishii, Masaru Kikuchi
11:05 – 11:15 am	State of the art of resilience using bybliometric analysis	Melissa De Iuliis, Alessandro Cardoni, Gian Paolo Cimellaro
11:15 – 11:30 am	Coffee-break	Lobby of Sala Emma Strada
Sala Emma Strada		
SESSION	SPS1_Seismic risk mitigation for non-structural components: from experimentation to home automation	
SESSION CHAIRS	Prof. R. Nascimbene Dr. M. Rota	
11:30 – 11:40 am	A Shake Table Testing Campaign of Electrical Cabinets	Roberto J. Merino, Filippo Dacarro, Paolo Dubini, Francesco Graziotti, Luca Grottoli, Igor Lanese, Daniele Perrone, Maria Rota, Roberto Nascimbene, Andre Filiatrault
11:40 – 11:50 am	Effects of the vertical and horizontal acceleration on the seismic response of piping networks	Gianni Blasi, Daniele Perrone, Maria Antonietta Aiello
11:50 – 12:00 pm	Seismic vulnerability of pallet storage systems	Giacomo Piredda, Alberto Zonta, Enrico Bernardi, Marco Donà, Francesca da Porto
12.00 – 12:10 pm	Dynamic Characterization of glazed partition walls by Operational Modal Analysis technique	Alessandra De Angelis, Giuseppe Maddaloni, Maria Rosaria Pecce

12:10 – 12:20 pm	Dynamic characterization and damage detection of a fire-protection piping system	Alessandra De Angelis, Giuseppe Maddaloni, Maria Rosaria Pecce
12:10 – 12:20 pm	Comparison of seismic losses associated with traditional/innovative hollow brick and plasterboard internal partitions	Gennaro Magliulo, Danilo D'Angela, Pauline Lopez, Gaetano Manfredi
12:20 – 12:30 pm	Vibration-based test results for the investigation of the infill masonry wall damage	Vanni Nicoletti, Davide Arezzo, Sandro Carbonari, Fabrizio Gara
1:00 – 2:00 pm	Lunch	MIXTO
Sala Emma Strada		
SESSION	SPS1_Seismic risk mitigation for non-structural components: from experimentation to home automation	
SESSION CHAIRS	Prof. R. Nascimbene Dr. M. Rota	
2:00 – 2:10 pm	Dynamic properties and seismic response of a museum display case with an art object	Andrea Prota, Martino Zito, Danilo D'Angela, Giuseppe Toscano, Carla Ceraldi, Antimo Fiorillo, Gennaro Magliulo
2:10 – 2:20 pm	Experimental study on ceiling fall prevention using new materials	Takumi Misaki, Osamu Takahashi
2:20 – 2:30 pm	Shake-table tests on an industrial steel rack isolated with innovative modular devices	Gabriele Guerrini, Francesco Graziotti, Andrea Penna
2:30 – 2:40 pm	A Rapid Visual Screening Procedure To Evaluate Seismic Risk Of Non-Structural Elements In Critical Facilities	Alessandra De Angelis, Daniele Perrone, Giuseppe Maddaloni, Maria Rosaria Pecce, Maria Antonietta Aiello
2:40 – 2:50 pm	A simplified framework to generate fragility functions for in-plane behavior of gypsum partition walls	Fabio Longo, Daniele Perrone, Emanuele Brunesi, Simone Peloso, Maria Antonietta Aiello
2:50 – 3:00 pm	On the use of CLT infills to improve the lateral performance of RC frames	Denise Li Cavoli, Giuseppe D'Arenzo, Elisabetta Maria Ruggeri, Marinella Fossetti
3:00 – 3:10 pm	Required response spectra and acceleration loading histories for seismic assessment of acceleration-sensitive nonstructural elements according to the Italian building code	Martino Zito, Danilo D'Angela, Giuseppe Maddaloni, Gennaro Magliulo
3:30 – 4:00 pm	Invited Lecture: **Prof. G. Marano (Politecnico di Torino, Italy)** Optimization as a tool for seismic protection of structures	
4:00 – 5:00 pm	ASSISi members meeting and closing ceremony	

SOCIAL EVENTS

Social events are held on the evening of Sunday, Monday, and Tuesday. They are open to those with a FULL-REGISTRATION. Others who wish to attend one or more events can purchase individual tickets onsite (based on space availability).

SUNDAY 11 SEPTEMBER 2022

Welcome Cocktail at the Castello del Valentino

MONDAY 12 SEPTEMBER 2022

Concert at Jazz Club

TUESDAY 13 SEPTEMBER 2022

Gala dinner at the Museo del Risorgimento

Sunday 11 September 2022

Welcome cocktail at the Castle of Valentino

In the green heart of the 19th century park of Torino, the **Castle of Valentino** had different uses over the centuries before being taken over by the Faculty of Architecture of Politecnico di Torino. In the 1500s it was a riverside residence located out of town, and its period of maximum splendor was under Christine of France, the first regent in the Savoy State, who chose it to be the palace of entertainment, extending it according to French tastes and promoting the rich decoration of the rooms on the piano nobile.

After her death, the parties that the Madame Royale enjoyed organizing were no more, and just a few decades later one of the side gardens was turned into the Botanical Gardens for the University, which can still be visited. During the 19th century, the castle was radically altered due to the Exposition of 1858 initiated by Cavour. It was inscribed in the **UNESCO World Heritage List** in 1997.

This Welcome Cocktail event will include a selected choice of wines, prosecco, and light spirits (aperitive) and selected Italian food.

Address: Viale Mattioli, 39, 10125 Torino

Monday 12 September 2022

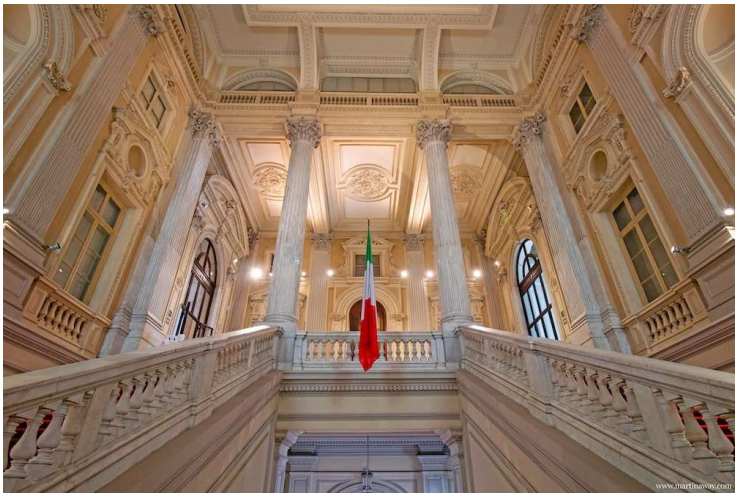
Concert at Jazz Club

Located a few steps from Piazza San Carlo, in the heart of Turin, the **Jazz Club** has been one of the main national stages of jazz music. A meeting point for all lovers of the genre offers a calendar of varied concerts attentive to recent musical trends, ideal for the new generation of musicians.

Address: Via S. Francesco da Paola (Piazzale Valdo Fusi), 10123 Torino

Tuesday 13 September 2022

Gala dinner at the National Museum of the Italian Risorgimento



At the WCSI 2022 Gala Dinner you will have the opportunity to enjoy culinary specialties from Italy. The closing event will take place in a unique atmosphere in the **National Museum of the Italian Risorgimento**. The National Museum of the Italian Risorgimento has been profoundly renewed, and today offers visitors outstanding displays and services in Palazzo Carignano where the collections are housed. Lighting and room colors, the choice of which is always based on the themes in question, and the use of multimedia aids guarantee visitors a unique experience. The period of the Risorgimento is now recounted from a European viewpoint as well as through the eyes of Turin, Piedmont, and Italy. The rooms have been enriched with films created with images from the most important European collections and can be viewed on large screens, while extensive interactive displays help visitors to examine the themes presented in the films in greater depth.

The conference dinner is included in the FULL conference registration fee.

Address: Piazza Carlo Alberto , 8, Via Accademia delle Scienze, 5, 10123 Torino

Bridges, buildings, Ferris wheels: **MAURER AG** in Munich, Germany is known worldwide for its spectacular constructions. Each of us has probably seen one of the components built and installed by MAURER – but often without knowing it. The support of the 34,000 m2 large movable roof construction of the Allianz Arena in Munich comes from MAURER as does the entire bridge equipment for the Russki Bridge in Vladivostok. In steel construction, the BMW Welt and the Airport Terminal II in Munich are among the showpieces.

The most relevant MAURER products are components that transfer loads or convert energy. These include expansion joints as well as structural bearings, seismic control devices and vibration absorbers. Professional roller coasters and Ferris wheels are planned, designed and built for amusement parks. Among the most impressive rides of MAURER AG is the Rip Ride Rockit roller coaster at Universal Studios in Orlando and the Fiorano GT Challenge in Abu Dhabi.

MAURER'S resourceful engineers developed a roadway expansion joint made of steel and rubber to bridge the expansion gap using the accordion principle. Expansion joints may change depending on the temperature and absorb up to five meters of movement. Especially waterproof expansion joints filled a market gap in bridge construction. The over 1,000 km of expansion joints laid in roads and bridges make the Munich family enterprise a world market leader in this field and also marked the beginning of international activities. After plants had been established in Turkey and China in 1999, additional branches followed in Russia, France and India until 2004. Furthermore, the company now maintains a global network of subsidiaries and agencies in over 60 countries. A vast experience in handling sophisticated projects as well as first-class service have been the cornerstones of MAURER AG for almost 140 years.

79 years of innovation. Founded by Eugène Freyssinet, the inventor of post-tensioning, **Freyssinet** brings together an unrivalled range of civil engineering skills. We contribute, as a general contractor or as a subcontractor, to the construction and repair of structures on five continents through a network of 60 subsidiaries located close to its customers. From engineering to the implementation of technical solutions on site and the manufacture of products, we support each project with the same principles of excellence, innovation, performance and sustainability. Freyssinet is a worldwide leading company in the design, technical assistance and supply of anti-seismic and energy dissipation devices. Thanks to the deep experience gained through years of construction activities, it is very active also in the market structural repairs and retrofitting in both infrastructures, civil constructions and buildings. Freyssinet is able to cooperate with construction companies and designers, in order to provide technical assistance and to ensure a high level of technologically advanced solutions. The Freyssinet technical department in collaboration with the testing laboratory is constantly committed in Research and Development of new products and innovative solutions. The active participation of the company in associations and committees has given a strong contribution to the development of European regulations governing the design, manufacture and supply of bearings, post-tensioning systems and anti-seismic devices.

ISOLAB®, the Freyssinet Group's testing laboratory, is one of the largest and most important in the world. The ISOLAB® Test Laboratory has been developed with over 20 years of experience in earthquake engineering through testing and inspection of seismic and structural devices in general. ISOLAB® is accredited with UNI EN ISO 9001:2015 Certification and the main equipment are calibrated according to the International Standard ISO 7500 (Class 1 or Class 0.5) and the American Standard STM E4-16. ISOLAB® is able to perform static and dynamic tests according to all international standards, including the tests required by the Italian Technical Regulations for Construction, thanks to agreements with the Polytechnic of Milan.

HIRUN INTERNATIONAL, is a specialized company for the application, the design, the production, the installation and the testing of Structural bearings, Anti-seismic devices, Expansion joints, Post-tensioning systems, Anti vibration devices.

The core of the company is composed by pioneers that in the last 50 years had a leading position in developing worldwide very important technologies such as: structural bearings, expansion joints, post-tensioning system, anti-vibration and anti-seismic systems and were involved in the definition of international standards or key specifications such as: EN1337 (European standard for structural bearings), EN15129 (European standard for antiseismic devices), special bearings for High Speed Railway lines (as examples in Italy, Taiwan and China) and Metro lines (as example the Bangkok metro system).

HIRUN INTERNATIONAL combines the experience coming from more than 50 years in the field with the most qualified, efficient and modern technologies in addition to an extremely dynamic and smart approach granting the successful presence worldwide.
We aim to become the leading specialized company for the most peculiar and important civil engineer projects in the world: THE ENGINEERING SOLUTION.

TİS Teknolojik İzolatör Sistemleri A.Ş., founded in 2014 in Ankara, Turkey, is the first and only Turkish company that makes design, product ion and domestic and overseas sale of Friction Pendulum type devices and structural bearings, complying with proper certificates. In addition to CE Certificate, TİS has the Integrated Management System (IMS), which is formed by combination of ISO 9001, ISO 14001 and OHSAS 18001 procedures. Using this know-how and background, TİS provides reliable and high quality service. Operating in a production facility with 40.000 m² closed and 200.000 m² open space and having a strong manufacturing background, TİS provides high capacity, fast and solution-oriented production services.

By being capable of not only producing creative and reliable solutions to diverse structural and earthquake engineering problems, but also conducting R&D projects that are supported by various institutions, TİS aims to be one of the leading companies in the base isolation field, by expanding its export network to the whole world. TIS, between November 2016 and today, has manufactured and delivered (or manufacturing) total of 14782 devices for 68 different projects overall. 14526 of those are seismic isolation devices, whereas 256 are structural bearings.

FIP MEC S.r.l. is an Italian company founded in 1945. It is currently a leading company in the design and production of structural devices, such as structural bearings, expansion joints, anti-seismic devices, fittings for tunnels, etc. Its long and wide experience in earthquake engineering started in the 1970s with the first European seismically isolated bridge, the Somplago Bridge. Since then, a complete range of anti-seismic devices has been developed, for any kind of structure: highway or railway bridges, buildings, industrial plants, etc. Now hundreds of structures throughout the world are protected from earthquake and other dynamic actions with FIP MEC's isolators, energy dissipation devices, and other kind of anti-seismic devices. Amongst these, world's record structures such as the Taipei 101 skyscraper in Taiwan, the 1915 Çanakkale Bridge and the Izmit Bay Bridge in Turkey, the Rion-Antirion Bridge in Greece, the Storebælt Bridge in Denmark, the Stonecutters Bridge in Hong Kong. The functionality of many hospitals even after a strong earthquake is guaranteed by FIP MEC's isolators in high seismicity areas all over the world: from Turkey to Chile, from Italy to Ecuador and Dutch Caribbean. FIP MEC's antiseismic devices are used for the seismic retrofit of existing structures as well, since the 1980s.

The continued research and development carried out by FIP MEC on all its products is supported by one of the biggest testing laboratories in Europe of its type, that occupies 1400 square meters inside FIP's workshop facilities. The expertise gained in more than 40 years of testing activities as well as the available facility equipment lead the company to extend testing services to external clients as well. FIP MEC Laboratory is checked and approved by third parties (e.g. Polytechnic University of Milan-Italy and University of Padua-Italy) as a test laboratory capable to perform tests on structural bearings and anti-seismic devices according to different recognized international and national standards.

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