

Build Better Before the Earthquake Comes: Seismic Isolation and Damping Technologies in Romania

ASSISi, the Anti-Seismic Systems International Society, Inc., in collaboration with the Technical University of Civil Engineering Bucharest (UTCB), will introduce the principles and benefits of Seismic Isolation (SI) and Damping Technologies (DT) for improved seismic protection of buildings.

SI and DT applications in Romania will be presented.

International manufacturers will present the latest SI and DT technologies and products and describe project applications worldwide.

OBJECTIVE:

We welcome you to our networking event where international manufacturers, design companies, general contractors, academia, authorities and students (future engineers and architects) can meet each other, set the basis for, and **contribute to building better before the earthquake comes.**

WHEN:

3 October 2024	09:30 - 17:00
4 October 2024	10:00 - 12:00

WHERE:

Technical University of Civil Engineering Bucharest (UTCB), Romania
Lacul Tei 122-124 Campus
I-2 conference room, first floor, main building (Rectorat)

Participation is free and everyone is welcome to join.

Registration is required using the below link or QR code:

<https://forms.office.com/e/SGkSZwfs8u>



ORGANIZERS:

Dr. Andreea CĂSUȚĂ (Duțu), ASSISi Director

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PROGRAM

Day One: 3 October 2024

09:35-10:00 Opening Session and Welcome Messages

1st SESSION: Principles of Seismic Isolation and Damping Technologies

Chair: Dr. Ian Aiken, P.E., Principal, SIE, Inc., Berkeley, California, USA, ASSISi President

10:00-10:20 Seismic Isolation

Dr. Andreea DUTU, UTCB, Romania, Lecturer and ASSISi Director

Dr. Dutu is a lecturer and a researcher. She graduated from UTCB in 2007. She has been enrolled in several doctoral and postdoctoral research stages around the world (Tokyo Institute of Technology, Technical University of Lisbon, University Grenoble-Alpes, Bogazici University – KOERI, Lanzhou University of Technology). In Japan and China she learned about seismic isolation, passive and active controlled structures, seeing many applications and also many experiments related to such technologies for buildings. She is part of the working ISO group “Design Principles of Seismically Isolated Structures”.



10:20-10:40 Response Control of Buildings with Seismic Dampers

Dr. Fatih SUTCU, Istanbul Technical University, Turkey, Assistant Professor and ASSISi Director

Dr. Sutcu is an assistant professor at Istanbul Technical University and an expert in reinforced concrete architecture. He has a diverse academic background at Tohoku University and Tokyo Institute of Technology and specializes in damper design and seismic isolation structures. He is researching innovative seismic retrofitting methods. After the earthquake in Türkiye last year, he is actively working towards recovery.



10:40-11:00 Effect of Seismic Isolation on Architectural and MEP Systems

Dr. Bahadır SADAN, MEF University and OBS Earthquake Engineering Solutions, Turkey, Assistant Professor and Manager, ASSISi Secretary General

Dr. Sadan earned his bachelor's in civil engineering from Yıldız Technical University (2002), a master's in Earthquake Engineering from Boğaziçi University (2005), and a Ph.D. from Politecnico di Milano (2009). He founded OBS Engineering in 2013 and has lectured at MEF University since 2019. His research focuses on seismic design and retrofitting. He leads TASI/DİD (Turkish Association for Seismic Isolation) and holds key roles in ASSISi, the Turkish Earthquake Foundation Earthquake Engineering Committee, and DEGÜDER (Seismic Retrofitting Association of Turkey).



11:00-11:20 The Importance of Testing: Validation of Seismic Isolation and Damping Device Behavior

Dr. Ian AIKEN, P.E., Principal, SIE, Inc., Berkeley, California, USA, ASSISi President

Dr. Aiken has nearly 40 years of experience in earthquake, structural and civil engineering. His particular areas of expertise are seismic isolation and passive energy dissipation for seismic structural control, the seismic protection of high voltage electrical equipment, and the use of nonlinear analysis methods for structural analysis. He has worked on more than 100 seismic isolation and damping projects worldwide, and has published more than 140 technical papers, reports and articles on seismic isolation, energy dissipation and buckling-restrained brace technologies.

He is a member of California, US national and international committees on isolation and energy dissipation, including ASCE, FEMA-BSSC, SEAOC, ASTM, ISO and IEEE committees.



11:20-11:50 COFFEE BREAK

2nd SESSION: SI and DT Applications in Romania
Chairs: Dr. Fatih SUTCU, Dr. Andreea DUTU

11:50-12:10 Particular Aspects in the Case of the Consolidation of Historical Monument Buildings by the Base Isolation Method

**Dr. Adrian IORDACHESCU and dr. Vlad PETRESCU, “Ion Mincu”
University of Architecture and Urban Planning,
Romania, Professors**

Dr. Iordachescu graduated from UTCB, has been a lecturer here until 2002, then moved to UAUIM where he is an Associate Professor. He has a wide experience in the anti-seismic design of buildings, with a specialty in seismic isolation and passive control. He was the first to apply such techniques in Romania, at the ASE building, and since then he had various applications. He is a member in the National Committee of Earthquake Engineering since 2020, and a certified expert since 2009.



12:10-12:30 Design Parameters Variation of Friction Based Seismic Isolators
Mr. Dan IANCU, DI&A, Romania, General Manager

Mr. Dan Iancu has been a structural designer since 1993. He currently leads DI&A Design Consulting SRL, pioneering the introduction of the base isolation system and added damping in Romanian designs. He serves as the Certification Director at AICPS (Romanian Association of Structural Engineers) and is appointed as a verifier and expert by the Romanian Ministry of Public Works. Additionally, he is a member of the C.T.S. A - National Committee for Mechanical Resistance and Stability.



13:00-14:30 LUNCH

3rd SESSION: Worldwide Manufacturing Companies' Latest Technologies for SI and DT

Chairs: Dr. Bahadır SADAN and Mr. Dragos MOCANU

14:30-14:50 Potential and Some Applications of Seismic Control Strategies Dr. Peter NAWROTZKI, GERB Vibration Control Systems, Berlin, Germany, Senior Director & Adviser

After his assignment as Scientific Assistant at the University of Bochum, Germany, Dr. Peter Nawrotzki joined HOCHTIEF for 4 years where he worked in the Technical Office and as Construction Site Manager. In 1999 he became Managing Director of the GERB Engineering Division within the GERB Group. From 2009 until 2021 he served as Managing Director of GERB Vibration Control Systems in Berlin. In this position he was responsible for R&D, applications and sales worldwide. Since 2021 he is Senior Director & Adviser in the GERB headquarters.



14:50-15:10 Performance of Seismically Isolated Hospitals During the 06.02.2023 Earthquakes in Türkiye Mr. Uğurcan ÖZÇAMUR, TIS, Turkey, General Manager

Mr. Uğurcan Özçamur has completed his bachelor's and degree in civil engineering in METU in 2012. In 2014, he has graduated from MEEES, having a structural earthquake engineer Master's degree from METU and IUSS Pavia joint programme. He is still continuing his advance studies as PhD Candidate in seismic base isolation field. Uğurcan has been working in TIS, where he has experienced technology development, design, certification and application aspects of the industry, thoroughly. Uğurcan is the active board member in Turkish Association of Seismic Isolation (TASI), member of ASSISSi and Turkey IMSAD. He is actively participating in the technical boards of standards committees of EN15129, too.



15:10-15:30 Structural Seismic Protection Realized with Isolation and Damping Systems

Mr. Peter HUBER, MAURER, Germany, Head of Technical Consulting and Business Development on the field of earthquake and vibration devices

Mr. Peter Huber worked in Technical Sales for Bearing Systems at MAURER from 1996, made an MBA for Technical Sales at University Landshut in cooperation with UCSD/USA 2002-2004 and has been the head of Sales for Seismic/Vibration Devices at MAURER 2002-2016. From 2016 till today he is the Head of Technical Consulting and Business Development on the field of earthquake and vibration devices at MAURER.



15:30-15:50 Earthquake Protection of Buildings Through Seismic Isolation and/or Energy Dissipation Devices

Dr. Maria Gabriella CASTELLANO, Civil Engineer, FIP MEC ACADEMY, Italy, Manager

Dr. Gabriella Castellano is a Structural Civil Engineer with more than 30 years experience in seismic isolation and supplemental energy dissipation. In 1996 she joined FIP Industriale, that in 2018 became FIP MEC. Since December 2020, she manages FIP MEC Academy, acting as a consultant to structural engineers for the design with seismic isolation and/or energy dissipation devices, and giving regular lectures.



15:50-16:20 COFFEE BREAK

16:20-16:40 Seismic Isolation Design for Achieving Functional and Operational Structures

Dr. Anoop MOKHA, Earthquake Protection Systems, USA, Vice-President

Dr. Anoop Mokha's engineering career has spanned from basic research on Friction Pendulum bearings to its implementation in important and critical industrial, bridge, and building structures worldwide. In 1990, Anoop was awarded a PhD in Structural Engineering from the State University of New York at Buffalo, New York, being supervised by Prof. Michael C. Constantinou on the topic of "Experimental and Analytical Study of Sliding Isolation Systems with emphasis on Friction Pendulum Bearings". In 1999, Anoop was awarded the prestigious "George W. Thorn" Award from the State University of New York at Buffalo in recognition for his contribution and accomplishments on the same topic. As Vice President of EPS, since 1999, Dr. Mokha has worked closely with Clients, Engineers, Architects, and Contractors for successful and cost-effective implementation of "Continued-Functionality" design with Friction Pendulum bearings in over 30 countries.



16:40 – 17:00 Application of Rotational Friction Dampers in New and Existing Buildings, 25 Years of Experience

Dr. Imad MUALLA, DAMPTECH, Denmark, Chief Technical Officer and Founder

Dr. Imad Mualla is the Chief Technical Officer and Founder of Damptech, where he also pioneered the development of Rotational friction dampers (RFD) technology. With a Ph.D. from the Technical University of Denmark, Dr. Mualla has authored many scientific papers and holds several patents related to RFD Technology. He has been a speaker at many international conferences and has successfully expanded Damptech's presence to 16 countries. Dr. Mualla and Damptech are now exploring opportunities to bring their innovative solutions to Romania.



17:00 END DAY ONE

Day Two: 4 October 2024

Chairs: Dr. Ian AIKEN and Dr. Andreea DUTU

10:00-10:20 Seismic Isolation Application to Retrofit Bucharest City Hall

Mr. Dragos MOCANU, European Business Consult, Romania, Manager and ASSISi Regional Coordinator

Mr. Dragos Mocanu graduated from UTCB in 2001. He currently leads EBC company since 2003. He has wide experience in the design of RC structures with modern and special technologies. He is a verifier certified by the Romanian Ministry of Public Works for A1 - concrete structures and a certified site manager, and an execution technical responsible (RTE) for special foundations.



10:20-10:40 Seismic Monitoring of Isolated Structures: Romanian Case-Studies

Mr. Alex TIGANESCU, National Institute for Earth Physics-NIEP, Romania, Researcher

Mr. Alexandru Tiganescu is currently working as a Scientific Researcher at the National Institute for Earth Physics (INCDFP), Magurele, Romania, in the field of engineering seismology, with main focus on strong motion data analysis, seismic monitoring of structures and hazard and risk assessment. Mr. Tiganescu is also a Ph.D. Student at the Technical University of Civil Engineering of Bucharest, with a thesis in the field of vibration-based structural health monitoring. He holds a bachelor's degree in civil engineering and a Master of Science (MSc) degree in Earthquake Engineering and Engineering Seismology.



10:40 – 11:00 Base Isolation Challenges in Long Corner Period Seismic Areas
Dr. Dietlinde KOBER, UTCB, Romania, Associate Professor

Dr. Kober graduated from UTCB and she is teaching several courses related to Reinforced Concrete structures. During her career she approached a wide variety in research topics (nonlinear torsional behaviour of engineering structures, RC structures' behaviour under seismic loading, discontinuity regions, nature-friendly buildings, energetic efficiency of buildings) is completed by outstanding engineering projects (design team member for the National Stadium in Bucharest, the Great Mosque in Algier and the Orthodox Church Assembly in Munich). She was invited lecturer at TU Darmstadt, HTWG Konstanz, OTH Regensburg, Hochschule Karlsruhe für Technik und Wirtschaft. She is also a member of the WG8 and WG12 within EAEE.



11:00-11:20 COFFEE BREAK

11:20 – 11:40 HIRUN INTERNATIONAL - Company Profile, Isolation Examples

Mr. Roberto Luigi DALPEDRI, HIRUN, Taiwan, Director

Mr. Roberto DALPERDI graduated as mechanical engineer in Milan in 1982. He has been working in the field of structural devices since 1983 being Quality Manager of ALGA company, located in Milan, between 1985 and 1999, and later managing different departments and developing new markets in Europe, Middle East and Asia. From 2014 up to 2019, moving to Wuhan in PRC, he was working for WUHAN HIRUN ENGINEERING EQUIPMENT Co., for the development of new dynamic testing laboratory equipment for sliding material tests and test on real scale devices for large capacity and velocity for which he was the designer and project manager. Since January 2020 he is one of the shareholders and Director of HIRUN Group, developing and implementing the network of production processes with outsourcers and help for the necessary certification, including factories in China, India, Türkiye and Italy.



11:40 – 12:00 ISOSISM as New Frontier of Seismic Protection
Mr. Mauro SARTORI, FREYSSINET, Italy, Technical Manager

Mr. Mauro Sartori has more than 20 years of experience in the structural bearings and seismic engineering sector and has been involved in a wide range of projects, from designing of structural bearings and seismically isolated structures, to developing custom devices, to performing product testing. holds 20+ scientific publications including magazines, letters, journals, and conferences. He is also member of few international commissions for standard review (EN 15129, EN 1337 and ISO 22762). He is highly knowledgeable in the areas of design, analysis, and finite element modeling, of structural bearings and seismic devices and has consulted on a variety of projects for both public and private sector clients.



12:00-12:10 CLOSING REMARKS (A. Dutu and I. Aiken)