



Transilvania
University
of Braşov

FACULTY OF CIVIL ENGINEERING



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

CONFERENCE PROGRAM



Transilvania
University
of Braşov

FACULTY OF CIVIL ENGINEERING



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

Organized by:

Faculty of Civil Engineering, Transilvania University of Braşov

Shenyang Jianzhu University, China

Faculty of Constructions, Geodesy and Cadastre,
Technical University of Moldova

HONORARY COMMITTEE

Ioan Vasile ABRUDAN,

Rector of Transilvania University of Braşov

Wenfu YAN,

President of Shenyang Jianzhu University

Baishu XIA,

Vice president of Shenyang Jianzhu University

Viorel BOSTAN

Rector of Technical University of Moldova

Valeriu V. JINESCU,

President of Technical Sciences Academy of Romania

Victor POPA,

President of Civil Engineering and Urbanism section
of the Romanian Academy of Technical Sciences



INTERNATIONAL ACADEMIC SCIENTIFIC COMMITTEE

Radu BĂNCILĂ, Member of Academy of Technical Sciences of Romania, Politehnica University Timișoara, Romania

Alina BĂRBULESCU, Transilvania University of Braşov, Romania

Lino BIANCO, University of Malta and University of Architecture, Civil Engineering and Geodesy, Bulgaria

Natalia BREDIKHINA, Southwest State University, Kursk Russia

Andrei BURLACU, Technical University „Gh. Asachi” Iași, Romania

Alin Andrei CÂRSTEANU, Instituto Politécnico Nacional, Mexico City, Mexico

Nicoleta COBÂRZAN, Technical University Cluj-Napoca, Romania

Vasilică CIOCAN, Technical University „Gh. Asachi” Iași, Romania

Ivana ĆIPRANIĆ - University of Montenegro, Montenegro

Ion CREȚU, Technical University of Moldova

Mircea Radu DAMIAN, Technical University C.E. București, Romania

Sorin DAN, Politehnica University of Timișoara, Romania

Ruxandra ENACHE, Technical University of Civil Engineering of Bucharest, Romania

Wolfgang FRANCKE, University of Applied Sciences Konstanz, Germania

Radomir FOLIĆ, University of Novi Sad, Serbia

Antonio FORMISANO, Università di Napoli Federico II, Italy

Marijana HADZIMA-NYARKO, Josip Juraj Strossmayer University of Osijek, Croatia

Dorina ISOPESCU, Technical University „Gh. Asachi” Iași, Romania

Marija JEVRIĆ - University of Montenegro, Montenegro

Valeriu V. JINESCU – President of Academy of Technical Sciences of Romania

Yoshikazu KOBAYASHI, College of Science and Technology, Nihon University, Japan

Danijel KUKARAS, University of Novi Sad, Serbia

Guochang LI, Shenyang Jianzhu University, China

Yupeng LI, Shenyang Jianzhu University, China

Cătălin LUNGU, Technical University C.E. București, Romania

Madelyn MARRERO-MELÉNDEZ - University of Seville, Spain

Carmen MAFTEI, Transilvania University of Braşov, Romania

Daniela Lucia MANEA, Technical University Cluj-Napoca, Romania

Pilar MERCADER-MOYANO - University of Seville, Spain

Marius MOȘOARĂ, University of Life Sciences "King Mihai I" Timisoara, Romania

Gabriele MILANI, Politecnico di Milano, Italy

Ilinca NĂSTASE, Technical University C.E. București, Romania

Livia NISTOR-LOPATENCO, Technical University of Moldova

Daniel LEPĂDATU, Technical University „Gh. Asachi” Iași, Romania

Andreas LANGOUSIS, University of Patras, Greece

Ichinur OMER, University Ovidius Constanța, Romania

Ekaterina Gennadievna PAKHOMOVA, Southwest State University, Kursk Russia

Konstantinos PAPTAEODOROU, International Hellenic University, Greece

Mihai PETRU, Technical University „Gh. Asachi” Iași, Romania

Victor POPA, Member of Academy of Technical Sciences of Romania

Marcela PRADA, University of Oradea, Romania

Aurelian Gimi RIMBU, National Institute for R&D in Electrical Engineering ICPE-CA, Romania

Ioan SZAVA, Transilvania University of Braşov, Romania

Aleksandar SEDMAK, University Belgrade, Serbia

Elena SIDORENCO, Technical University of Moldova

Adrian-Alexandru ȘERBĂNOIU, Technical University „Gh. Asachi” Iași, Romania

Ashok VASEASHTA, State University of New Jersey, USA

Anatolie TARANENCO, Technical University of Moldova

Zhijian YANG, Shenyang Jianzhu University, China

Raul ZAHARIA, Politehnica University Timișoara, Romania



Transilvania
University
of Braşov

FACULTY OF CIVIL ENGINEERING



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

ORGANIZING COMMITTEE

Chairman:

Ioan TUNS,

Faculty of Civil Engineering Braşov

Members:

Christiana CAZACU, Transilvania University of Braşov, Romania

Mircea CONȚIU, Transilvania University of Braşov, Romania

Evgheni CUTIA, Technical University of Moldova

George DRAGOMIR, Transilvania University of Braşov, Romania

Liting FAN, Shenyang Jianzhu University, China

Teofil-Florin GĂLĂȚANU, Transilvania University of Braşov, Romania

Jun LI, Shenyang Jianzhu University, China

Guochang LI, Shenyang Jianzhu University, China

Radu MUNTEAN, Transilvania University of Braşov, Romania

Vitali MUSTAF, Technical University of Moldova

Dorin RADU, Transilvania University of Braşov, Romania

Vadim ȚURCAN, Technical University of Moldova

Fengchi WANG, Shenyang Jianzhu University, China



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

CONFERENCE PROGRAM – CONCISE

Thursday, 6th of November

08:00	Registration of the participants	JAT
09:00	Opening ceremony	JAT1
09:40	Plenary session 1	JAT1
10:40	Coffee break	
10:50	Plenary session 2	JAT1
11:50	Coffee break	
12:00	Parallel session 1	JAT1
	Analysis and Design of Structures. Numerical Approaches - part 1	
12:00	Parallel session 2	JAT2
	Building Materials and Renewable Energy	
14:20	Lunch (Bellman's Quotidian Restaurant)	
15.30	Parallel session 3	JAT1
	Vulnerability Assessments and Risk Analysis	
15.30	Parallel session 4	JAT2
	Analysis and Design of Structures. Numerical Approaches - part 2	
15.30	Parallel session 5	JIV3
	Technologies and Design in Roads, Railways and Brigdes	
15.30	Parallel session 6	JIII8
	Processes and Optimization Methods Used in Civil Engineering	

Friday, 7th of November

08:00	Registration of the participants	JAT
09.00	Plenary session 3	JAT1
10:20	Coffee break	
10.30	Plenary session 4	JAT1
11:50	Coffee break	
12:00	Parallel session 7	JAT1
	Restoration and Conservation of the Built Heritage	
12:00	Parallel session 8	JAT2
	Analysis and Design of Structures. Numerical Approaches - part 3	
12:00	Parallel session 9	JIV3
	Design for Energy Efficient Buildings, Circular Economy and Urban Planning	
14:30	Lunch (Quotidian Restaurant)	
20:00	Gala Dinner (Belvedere Restaurant - str. Stejerişului 11B)	



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

CONFERENCE PROGRAM – DETAILED

Thursday, 6th of November

08:00	Registration of the participants	JAT
09:00	Opening ceremony	JAT1
	Plenary session 1	JAT1
	09:40 – 10:40, Chairman Prof. Ercan Işık	
09:40	Prof. Zhijian Yang, School of Civil Engineering, Shenyang Jianzhu University, Liaoning, China <i>Behavior of high strength square steel tube and high strength spiral stirrup multiple confined high strength concrete</i>	
10:00	Prof. Ashok Vaseashta, International Institute for Clear Water, Manassas, USA <i>Integrating Artificial Intelligence (AI) and Smart Materials into critical infrastructures</i>	
10:20	Prof. Konstantinos Papatheodorou, International Hellenic University, Greece <i>Engineering a Safer Tomorrow: Rapid Damage Assessment, Public Engagement and Resilient Infrastructure</i>	
10:40	Coffee break	
	Plenary session 2	JAT1
	10:50 – 11:50, Chairman Prof. Lino Bianco	
10:50	Assoc. Prof. Emmanuel Karlo Nyarko, Josip Juraj Strossmayer University of Osijek, Croatia <i>Concrete Data, Intelligent Predictions: ML for Smarter Structures</i>	
11:10	Prof. Ercan Işık, Civil Engineering Department in Bitlis Eren University, Türkiye <i>A Study on Comparative Analysis of RC Structures Before and After 2023 Kahramanmaraş Earthquakes</i>	
11:30	Prof. Baoxin Qi, School of Civil Engineering, Shenyang Jianzhu University, Liaoning, China <i>Monitoring and assessment of flexural damage in PVA-ECC beams under thermal effects</i>	
11:50	Coffee break	
	Book launch - <i>Calculation methods for fatigue and weld calculations in welded metal structures in accordance with European standards</i>	JAT1
12:00	Parallel session 1	JAT1
	Analysis and Design of Structures. Numerical Approaches - part 1	
12:00	Parallel session 2	JAT2
	Building Materials and Renewable Energy	
14:30	Lunch (Quotidian Restaurant)	
15:30	Parallel session 3	JAT1
	Vulnerability Assessments and Risk Analysis	
15:30	Parallel session 4	JAT2
	Analysis and Design of Structures. Numerical Approaches - part 2	
15:30	Parallel session 5	JIV3
	Technologies and Design in Roads, Railways and Brigdes	
15:30	Parallel session 6	JIII8
	Processes and Optimization Methods Used in Civil Engineering	



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

Friday, 7th of November

08:00	Registration of the participants	JAT
	Plenary session 3	JAT1
	09:00 – 10:20, Chairman Prof. Marijana Hadzima-Nyarko	
09:00	Prof. Gabriele Milani, Politecnico di Milano, Italy <i>Computerized Upper Bound Limit Analysis approach for the safety assessment of complex historical masonry structures</i>	
09:20	Prof. Antonio Formisano, University of Naples Federico II, Italy <i>Scientific research on the use of natural fibres in structural and seismic fields: The use of hemp as a sustainable resource and comparative analysis among alternative solutions</i>	
09:40	Assoc. Prof. Yohei Endo, Faculty of Engineering, Shinshu University, Japan <i>Proposal of energy harvesting from metro-induced vibrations in historic cities</i>	
10:00	Adrian Ghencea, Allbim Net <i>Optimized use of space and massive concrete foundations for collecting and directing rainwater</i>	
10:20	Coffee break	
	Plenary session 4	JAT1
	10:30 – 11:50, Chairman Prof. Alina Bărbulescu	
10:30	Prof. Haixia Zhang, School of Civil Engineering, Shenyang Jianzhu University, Liaoning Shenyang, China <i>Bonding performance of NSM FRP bars-concrete interface under freeze-thaw cycles</i>	
10:50	Prof. Alin Cârsteanu, Instituto Politécnico Nacional, Mexico City, Mexico <i>Cascade models and properties of their breakdown coefficients</i>	
11:10	Dr. Gimi Aurelian Rimbu, National Institute for Research and Development for Electrical Engineering ICPE-CA Bucharest, Romania <i>Perspectives for future integration of the Microbial Fuel Cell Technology (MFC) in the building industry</i>	
11:30	Uğur Çelik, Makyol România <i>Digitalization and Integrated Project Management on Motorway Projects: A Case Study of the Design and Build Project of Sibiu-Făgăraş Motorway, Section 3</i>	
11:50	Coffee break	
12:00	Parallel session 7	JAT1
	Restoration and Conservation of the Built Heritage	
12:00	Parallel session 8	JAT2
	Analysis and Design of Structures. Numerical Approaches - part 3	
12:00	Parallel session 9	JIV3
	Design for Energy Efficient Buildings, Circular Economy and Urban Planning	
14:30	Lunch (Quotidian Restaurant)	
16:00	Guided tour - Braşov Old City (meeting in front of ARO Palace Hotel)	
20:00	Gala Dinner (Belvedere Restaurant - str. Stejerişului 11B)	

Considering that possible changes in the program may occur, please consult the latest conference program version, scanning the following QR code:





PARALLEL SESSIONS

Thursday - 6th of November

12:00 - 14:30, JAT1

Parallel session 1

Analysis and Design of Structures. Numerical Approaches - part 1

Chairman: Cutia Evgheni, Teofil Gălăţanu

*Each presentation will last a maximum of **8 minutes**, followed by 2-3 minutes for questions and answers.

1	Parametric study of the damping ratio estimation using ambiental vibration recordings	Enache Ruxandra-Gabriela, Nica George-Bogdan, Ionică Georgiana, Vînătoru Ioana Alexandra
2	Comparison of unsupervised learning methods for classifying elastic waves used in non-destructive inspections	Katsuya Nakamura, Mikika Furukawa, Kenichi Oda, Satoshi Shigemura, Yoshikazu Kobayashi
3	Residual Drift Reduction and Seismic Performance in RC Frames with SMA Jacketing: A Numerical Study under Near-Fault Ground Motions	Nizar El Ouahabi, Loubna Bounab, Sabri Attajkani
4	Machine Learning Approaches for Predicting Drift Capacity of RC Shear Walls	Andrei-Odey Kadhim, Iolanda-Gabriela Craifaleanu, Eugen Lozincă
5	Prediction of compressive strength in concrete with marble aggregate using response surface methodology and fuzzy modeling	A. Rusu, M. Tawfiq, M. Bărbuţă
6	Theoretical and Experimental Approaches to the Structural Design of Multistory Buildings with Reinforced Concrete and Hybrid Shear Walls	Paul-Eftimiu Tudor, Viorel Todea, Daniel Dan, Sorin-Codruţ Floruţ, Vlad-Şerban Popescu
7	Analysis of reinforced concrete support constructions for the stabilization of unstable slopes	Alexandru Cernica, Elena Sidorencu
8	Influence of steel fiber reinforcement on hybrid shear walls with staggered openings under lateral loading	Vlad-Şerban Popescu, Daniel Dan, Viorel Todea, Sorin-Codruţ Floruţ, Paul Tudor
9	Robustness and Resilience of Steel Moment-Resisting Frames: A State-of-the-Art Review	Charef Eddine Mebarki, Dan Dubina
10	Determination of fundamental natural vibration periods for existing structures using numerical and direct methods	Constantin Budan, Hiroyuki Nakahara, Daniel-Ioan Dima, Georgia Alexandra Covaleov
11	Theoretical and Experimental Study of Cold Formed Steel Thin Gauge Members in Construction	Denisa Popica, Teofil Gălăţanu, Ioan Száva, Renáta-Ildikó Száva
12	Performance assessment of steel moment-resisting frames using equivalent single-degree of freedom models	Aurel Stratan, Adriana Chesogan, Toma-Florin Voica
13	On the Calibration of Combined Hardening Model for Structural Steels	Ciprian Ionut Zub, Dara-Dragana Iosim, Aurel Stratan
14	Predictive Modeling of Thermal Performance within Laminated Composite Plate Structures	Eliza Chircan, Liviu Costiuc, Iuliana Costiuc, Vasile Gheorghe



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

Thursday – 6th of November

12:00 – 14:30, JAT2

Parallel session 2

Building Materials and Renewable Energy

Chairman: Cazacu Christiana, Mihail Ştaşcov

*Each presentation will last a maximum of **8 minutes**, followed by 2-3 minutes for questions and answers.

1	Study of thermophysical properties of compressed earth bricks (CEB) stabilized with rice husk ash-cement by full factorial design (FFD)	Garba Labo Mahaman Nazirou, Moga Ligia, Konan Affoué Tindo Sylvie, Amadou Kiari Mahaman Nassirou, Yao Kouassi Benjamin
2	Polyurethane wastes for thermal insulation	Liana Iures, Sorin Dan, Lucian Stan, Catalin Badea, Teodora Mihaela Toadere
3	Study on Dynamic Mechanical Properties of Graphene Oxide-Modified Recycled Aggregate Concrete	Kai Guo, Fubin Zhao
4	Experimental investigation on the compression behavior of the stone masonry walls strengthened with overlays of ecological concrete	Tawfik M., Bogdan Roşca, Barbuta M.
5	Evaluation of the degree of coverage to the active hydraulic addition constituting the smart additions for self-repairing concrete	Alboiu, E.F., Panait, F.V., Voinitchi, C.D., Cimpoca, I.D.
6	Evolution of colorimetry in 3D printed samples exposed to external weather conditions, used in smart facades	Dan-Radu Baraboi, Gabriel Năstase
7	Dynamic behavior of Nano-SiO ₂ -PVA cement composites at extreme temperatures	Changxing Guo, Baoxin Qi, Shuo Liang
8	Hygrothermal performance and sustainability of wool or/and expanded polystyrene (EPS) insulation	Adriana-Mariana Asoltanei, Sebastian George Maxineasa, Constantin Eugen Ailenei, Marius Sebastian Secula, Ioan Mamaligă, Dorina-Nicolina Isopescu
9	3D printing for buildings - a cutting edge technology and a new benchmark in construction industry	Isopescu Dorina Nicolina, Ungureanu Dragoş, Munteanu Vlad, Petrescu Tudor Cristian, Vataman Dumitriţa, Ghileschi Bogdan-Alexandru, Panduru Mihai-Rad
10	Mechanical Performance of Carbon–Aramid Hybrid Sandwich Composites with Foam Core under Tensile, Flexural and Impact Loading	Ştefania Ursache, Cerbu Camelia
11	Study on Acid Corrosion Resistance of Planting Concrete	Fengchi Wang, Jinfeng Tian, Chu Zhang
12	The Sustainability of Building Materials with Clay Bound and Sawdust	Catalin Badea, Sorin Dan, Liana Iures, Mihaela Toadere
13	Challenges on multi-layered timber elements while subjected to the influence of moisture distribution	Teodorescu Ioana, Tapusi Daniela, Erbasu Ruxandra
14	Study on the effects of moisture on the adhesive in glued laminated timber elements	Teodorescu Ioana, Tapusi Daniela, Erbasu Ruxandra
15	Study on the Combined Correction of Concrete Strength Using Rebound Hammer and Core Drilling Methods	Xu Chunyi, Hui Yubo



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

Thursday – 6th of November

15:30 – 17:40, JAT1

Parallel session 3

Vulnerability Assessments and Risk Analysis

Chairman: Carmen Maftai, Radu Muntean

*Each presentation will last a maximum of **8 minutes**, followed by 2-3 minutes for questions and answers.

1	Drought Forecasting in Dobrogea, Romania Using SPEI-Based Machine Learning Models	Cristina Serban, Anata Flavia Ionescu, Carmen Elena Maftai
2	Rehabilitation of the Historic Batal Pond – a 30-Hectare Polluted Site in Târgu Mureş	Horea Cristian Cosman
3	Study on Fire Smoke Detection and Flashover Prediction in Timber Structure Buildings Based on Machine Learning	Haoran Wang, Yansheng Song, Guang Xiao, Junwei Wang
4	Hydraulic Methods for Monitoring and Controlling Soluble Microparticle Pollution in Water Supply Networks: A Literature Review	Mihaela Violeta Pisleaga
5	Capacity Spectrum Approach for Assessing Seismic Vulnerability of Buildings in an Urban Area	Josip Radić, Silva Lozančić, Ercan Işık, Marijana Hadzima-Nyarko
6	A Node Importance Algorithm for Timber Building Village Fire Spread Based on Weighted Network Theory	Fan Gu, Li Jie, Sitong Wu, Wenchao Du, Ruijie Hou
7	Innovative Tools for Rapid Earthquake Damage Assessment: Development and Field Applications	Konstantinos Papatheodorou, Yasin Fahjan, Emmanouil Kirtas, Nikolaos Theodoulidis, Nikolaos Klimis, Can Zulfikar, Dragos Toma-Danila, Georgios Panagopoulos, Vassilis Papanikolaou, Basil Margaritis, Christos Karakostas
8	Mechanics of Shrub Collapse and Its Implications for Snow Avalanche Occurrence	Kenichi Oda, Risako Tsuruoka, Takafumi Katsushima, Takane Matsumoto, Katsuya Nakamura, Mikika Furukawa, Yoshikazu Kobayashi
9	The Influence of Wind Speed on the Outdoor Fire Spread Distance of Timber Building Village	Fan Gu, Sitong Wu, Jie Li, Qiang Wang, Ruijie Hou
10	Improving Flood Hazard Mapping in Nistoreşti: A LiDAR-Based Comparison with FRMP	Constantin Cerneagă, Carmen Maftai
11	A copula approach for analyzing the hydro-meteorological shocks	Youssef Saliba, Alina Bărbulescu
12	A Mesoscale Modelling Methodology for ECC and Its Tensile Behavior Simulation	Fan Gu, Xiaohan Xu, Bing Wang, Qiang Wang, Tianshang Han
13	Research on the main anthropogenic factors influencing the quality of water resources in the Bahlul River basin, Iaşi County	Lăcramioara Hranici, Gabriela Biali, Alina Barbulescu, Carmen Elena Maftai



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

Thursday – 6th of November

15:30 – 18:00, JAT2

Parallel session 4

Analysis and Design of Structures. Numerical Approaches – part 2

Chairman: Baoxin Qi, Ion Creţu

*Each presentation will last a maximum of **8 minutes**, followed by 2-3 minutes for questions and answers.

1	The first Romanian building consolidated with Japanese CFT system (concrete-filled tubular members)	Constantin Budan, Hiroyuki Nakahara, Alexandru Aldea, Daniel-Ioan Dima, Iulian Spătărelu
2	Nonlinear Dynamics of Bearing-Rotor Systems Considering CageStructural Defects	Haitao Xian, Zinan Wang, Xuhui Liang, Ran Guo, Jian Ma
3	Numerical Evaluation of Steel Beam to Steel Column Connections with Extended End Plate	Abigail-Bethsabé Sütő, Barnabás-Attila Lőrincz, Marius Ştefan Buru, Nóra Urszuly, Zsolt Nagy
4	Study On Joint Stiffness Degradation Of I-steel Connecting Coupling Beam And Shear Wall	Zheng Debin, Li Ming, Chen Gaomin, He Yikai
5	Modeling the work with the structure of composite floors	Tepes-Onea Florin, Constantinescu Andreea, Panchici Andrei
6	Seismic Response Analysis of Reinforced Concrete Frame Structures Using the Time-History Method with Simulated and Recorded Earthquake Motions	Staşcov Mihail, Creţu Ion
7	FEM-Based Design of a Hybrid Steel-Timber Buckling Restrained Brace	Dara-Dragana Iosim, Aurel Stratan, Ciprian Ionut Zub
8	Research on Deep Learning-Driven Safe Trajectory Planning for Human-Machine Collaborative Construction Machinery	Fenglian Q, Gang Fan, Jing Li
9	Research on Axial Compression Mechanical Properties of Composite Concrete-filled Steel Tubular Short Columns with Built-in UHPC	Wei Xu, Feiyu Shi
10	Mechanical Properties of Sleeve Reinforced Castellated Beam under Bending Shear	Ran Bi ,TianAo Liu, Lian Guang Jia, HongZe Liu
11	Experimental Study on the Influence of Sleeve Grouting Compactness Defects on Bearing Capacity	Wei Sun, Wenjun Zhu, Jingyi Zhou
12	Numerical Simulation of the Energy Absorption Features of Origami Honeycomb Structures under Quasi-Static Compression	Yunwen Chen, Baoxin Qi
13	Analysis of horizontal bearing characteristics of four-pile foundation based on inverted truncated cone scour pit model	Zihao Zhao, Pengfei Xue, Xinjie Zhou
14	Numerical Investigation of the Lateral Response of Horizontally Loaded Monopile under Asymmetric Local Scour Conditions	Zihao Zhao, Han Zhou, Yanqiu Yin
15	Monitoring of the technical condition of reinforced concrete building structures under operation using non-destructive testing methods	Vladimir Bredikhin, Kirill Los, Natalia Bredikhina, Aleksandr Bredikhin



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

Thursday - 6th of November

15:30- 17:40, JIV3

Parallel session 5

Technologies and Design in Roads, Railways and Bridges

Chairman: Conţiu Mircea, Ciprian Bratu

*Each presentation will last a maximum of **8 minutes**, followed by 2-3 minutes for questions and answers.

1	Galvanized hot-dip steel bridges a sustainable solution for corrosion protection applicated in Romania	Edward Petzek, Radu Băncilă, George Ispăşoiu, Alexandru Turcan, Andreia Juravle
2	Study on the Effectiveness of Air Curtains in Controlling Smoke in Subway Station Fires	Yansheng Song, Jieqing Liu, Junwei Wang, Yu Wang
3	Comparative Analysis of Construction and Repair Alternatives for Concrete Bridge Decks through Life Cycle Cost Modelling	Almeida Jose
4	Bridge Deck Waterproofing Solutions, Technologies for Fast return to Service and reduction of Life Cicle Cost	Zeno Dan
5	Research on Seismic Performance of Offshore Bridges under Combined Effects of Chloride Ion Erosion and Mainshock-Aftershock Sequences	Jin Qiao, Liu Hongye
6	Reinventing Road Concrete: Circular Economy in Civil Engineering with Industrial Waste Addition	Bogdan-Ionel Luca, Marinela Bărbuţă, Gheorghită Ciprian Grigoriu
7	Monitoring and Analysis of Railway Track Geometry Deterioration	Madalina Ciotlaus, Marcian Domuta, Crina I. Fenesan, Alexandra D. Danciu, Vladimir Marusceac, Mihai L. Dragomir
8	An Attention-Gated U-Net Approach with Hybrid Loss for Pavement Crack Segmentation in Complex Visual Conditions	Shuo Huang, Weiqi Cui
9	CFRP Strengthening of Steel Structures: An overview of interface failure modes, bond-slip models, and key influencing parameters	Ciprian Bratu, Radu Băncilă, Dorin Radu, Dan Zeno Günther
10	Automation of Geotechnical Data Processing and Stratification Profiles	Crina Fenesan, Madalina Ciotlaus, Diana Mureşan, Mihai Dragomir, Alexandra Danciu, Vladimir Marusceac
11	A new P&R in the parking system. A case study in a small urban area	Rozalia Melania Boitor, Mihai Liviu Dragomir, Rodica Dorina Cadar
12	Advantages of a Multidisciplinary Approach to Slope Instability Phenomena - Case Study	Marius Măntulescu, Radu Muntean
13	Research on Damage Identification of Cable-Stayed Bridges Based on CNN-BiLSTM-SelfAttention	Shilong Jia, Lin Jiang
14	Reinventing Road Concrete: Circular Economy in Civil Engineering with Industrial Waste Addition	Bogdan-Ionel Luca, Gheorghită Ciprian Grigoriu, Bogdan Roşca, Marinela Bărbuţă



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

Thursday – 6th of November

15:30- 17:40, IIII8

Parallel session 6

Processes and Optimization Methods Used in Civil Engineering

Chairman: Cutia Evgheni, Alexandru Bratu

*Each presentation will last a maximum of **8 minutes**, followed by 2-3 minutes for questions and answers.

1	Engineering the Future: How Artificial Intelligence is Redefining Civil Engineering Practice Main	Vladimir Marusceac, Alexandra D. Danciu, Mădălina Ciotlaus, Mihai Liviu Dragomir, Crina Feneşan
2	VB 6.5 Macro Modules for Autodesk AutoCAD: Applications in Hydrotechnical Design	Dan Pavel, Alina Bărbulescu, Gabriela Biali
3	Management of Tourism Building Investment Projects Regarding Fire Safety	Marian-Valentin Popescu, Mirela Mădălina Stoian, Andreea Grecu
4	Evaluation of Seismic Force for Concerte Structures According the Seismic Regulation in Romania From 1942 to Present	Cristian-Dan Palade, Marius Moşoarcă
5	Applications of Underactuated Mechanical Systems in Civil Engineering	Yanze Long, Yanze Qi, Huaitao Shi, Peng Zhou, Yijun Wu, Zhengquan Liang, Longtao Li
6	Streamlining processes in civil engineering using BIM: from 3D design to selective deconstruction	Ioniță Alexandru-Ionel, Stoian Mirela Mădălina, Popescu Marian-Valentin, Grecu Andreea, Silvestru Ramona Camelia, Stan Oana Mihaela
7	Study on Thermal Characteristics of All-Ceramic Angular Contact Ball Bearings Based on Oil-Air Two-Phase Flow	Jianjiang Zhou, Siqi Niu, Zhenpeng Liu, Xirui Guo, Lukai Wang
8	Research of AI impact in Civil Engineering	Vârlan Simona-Elena, Buzatu Dumitru-Adrian , Isopescu Dorina Nicolina
9	Use of Dry Tailings Storage Technology to Reduce the Environmental Impact of Mining Operations	Ludmila Semenova, Andrey Sabelnikov, Denis Semenov
10	Use of Concrete Sheet Piles in Constrained Urban Environments	Natalia Bredikhina, Darya Sherkunova, Aleksandr Bredikhin
11	Monitors Thermal Phase Transformation of Intumescent Paint with a Custom Experimental Stand	Ildikó Renata Száva, Ioan Száva, Denisa Elena Popica, Teofil Florin Gălăţanu
12	Modernizing the Construction Sector Through Eurocodes: Technical, Economic, and Institutional Perspectives	Vadim Ţurcan, Evgheni Cutia
13	DiT-BIM: A Diffusion Transformer Framework for Generative Building Design	Moutaman M. Abbas, Alina Barbulescu, Radu Muntean



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

Friday – 7th of November

12:00 – 14:10, JAT1

Parallel session 7

Restoration and Conservation of the Built Heritage

Chairman: Baoxin Qi, Teofil Gălăţanu

*Each presentation will last a maximum of **8 minutes**, followed by 2–3 minutes for questions and answers.

1	A non-destructive method to secure cables to masonry surfaces	Lino Bianco, Alessandra Bianco
2	The Kizhi Museum-Reserve as a monument of wooden architecture. Construction history and architectural features	Juliya Davidenko, Viktoriya Klus
3	Load-bearing Party Walls: Structural and Legal Implications of Additional Floors to Existing Dwellings	Lino Bianco
4	Seismic Vulnerability of Historic Masonry Complexes: A Case Study from Southern Italy	Elide Nastri, Paolo Todisco, Vincenzo Ricciardi
5	Diagnosis of cave churches in Romania: The Şinca Veche Monastery complex	Diana-Elisa Dumescu, Antonella Ranaldo, Anna Lo Monaco, Michele D'Amato, Marius Moşoarcă
6	Freeze–Thaw Damage in Historic Masonry: A Review	Barnaure, M., Voinitchi, C.D., Panait, F.V., Zaulet I.O.
7	Strengthening Masonry Structures by Shotcreting Method	Kirill Los, Juliya Davidenko, Viktoriya Lobova, Aleksandr Bredikhin
8	Seismic Performance of Representative Historical Masonry Buildings in Romania	Barnaure, M., Teodorescu, A.C.
9	Influence of Moisture on the Mechanical Performance of Historic Masonry Structures: A Review	Barnaure, M., Panait, F.V., Voinitchi, C.D.
10	Surveying Techniques for Built Heritage Conservation: A Comparative Perspective of Workflows for Monument Restoration	George Cristian, Sorin Herban, Clara-Beatrice Vîlceanu, Andreea Diana Clepe, Carmen Grecea
11	Cultural Heritage Sites Management Systems	Tatiana Novikova, Natalia Bredikhina, Anastasia Tyutyunnikova
12	Comparative Investigation of the chemical and mineralogical composition of Roman Mortars from the Quadriburgium of Ovidiu and present-day lime-based mortars	Nicolae Costin Mociu, Carmen Elena Maftei, Ionela Carazeanu Popovici, Constantin Buta, Madalina Stanescu
13	Integrated approaches to valorization of archaeological heritage in urban space	AM Daniela Barbu, Ana Maria Grămescu, Cătălin Maftei, Alexandru Gabriel Bîrcă, Ancuta Gemănanu, Dorina Nicolina Isopescu



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

Friday – 7th of November

12:00 – 14:30, JAT2

Parallel session 8

Analysis and Design of Structures. Numerical Approaches – part 3

Chairman: Liting Fan, Ion Creţu

*Each presentation will last a maximum of **8 minutes**, followed by 2-3 minutes for questions and answers.

1	Critical Assessment of Micro-cracks in S235JR Welded Joints	Branislav Đorđević, Stefan Dikić, Mihajlo Arandelović, Aleksandar Sedmak, Simon Sedmak, Radomir Jovičić, Dorin Radu
2	Research on Bearing Fault Diagnosis Methods Based on Multi-domain Fusion SDP	Detong Ling, Jiacan Xu, Haohua He, Nanxiu Shen, Binbin HU
3	Study on Vibration Characteristics of High-Speed Bearing Raceway Defects in TBM Main Drive Systems Under Transient Impacts	Jingde Lai, Peng Zhou, Shucheng Liu, Qian Wang, Mingdi Yi
4	Study on Axial Compression Behavior of Partially Encased Steel–Ultra-High Performance Concrete Short Columns	Puhan Yin, Zhuangnan Zhang, Daye Cheng, Chungang Wang
5	Study on shear behavior of light-gauge steel stud composite external wall panels	Yu Guan, Zhuangnan Zhang, Chungang Wang, Guyue Han, Liwu Nie
6	Study on flexural behavior of prefabricated ultra-low energy consumption enclosure wall panels	Hao Guo, Chungang Wang, Zhuangnan Zhang, Guyue Han, Liwu Nie
7	Research on the flexural performance of T-section partially encased composite beam with corrugated web	Ce Wang, Chungang Wang, Zhuangnan Zhang
8	The Influence of Lubricant Viscosity on the Dynamic Characteristics of All-Ceramic Angular Contact Ball Bearings	Bing Liu, Zhan Wang, Liuwang Gao, Rui Zhao
9	Research on Autonomous Vibratory System of Vibratory Robot for Wind Turbine Foundation Construction	Liting Fan, Xiyang Jiang, Sizheng Wang
10	Seismic Performance of Replaceable Castellated Beam-Reinforced Concrete Column End-Plate Connections	Ran Bi, Honggang Guo, Yansheng Song, Kai Geng
11	Research on the Explosion Resistance Performance of a New Prefabricated Concrete Frame Structure	Yu Wang, Xingyu Yu, Ming Ye, Junwei Wang
12	Nonlinear vibration analysis of bearing-rotor systems with ball defects considering time-varying impact force	Rui Zhao, Zhan Wang, Liuwang Gao, Yangbiao Wu, Bing Liu
13	Numerical Simulation Study on Vertical Fire Spread along External Walls of High-Rise Buildings with Overhead Floors	Yu Wang, Xu Zheng, Zhiqiang Zhao, and Qiang Wang
14	Research on a Characterization Method for Rough Surfaces with Micro-texture Morphology	Zhu Chunxia, Zhao Yuan, Ren Nvying, Yan Zhibiao
15	Numerical analysis of mechanical behavior of square arched corrugated steel pipe gallery underneath steel section reinforcement	Guoqing Zhao, Zhenqi Zhang, Zhiyang Zhao
16	Seismic performance of GO-RC frame columns under low-cycle reversed loading	Kai Guo, Mengyu Han, Chen Wang, Yifan Si



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

Friday – 7th of November

12:00 – 14:20, JIV3

Parallel session 9

Design for Energy Efficient Buildings, Circular Economy and Urban Planning

Chairman: Mihail Ştaşcov, Alin Brezeanu

*Each presentation will last a maximum of **8 minutes**, followed by 2-3 minutes for questions and answers.

1	Solutions for improving the sustainability of reinforced concrete elements	Dan Georgescu, Andrei Zybaczynski, Andrei Gîrboveanu, Muheeb Altaieb
2	Simulation-Based Analysis of the Impact of Fire Smoke and Mechanical Ventilation on Evacuation Safety	Shilong Jia, Haoran Shang
3	From NZEB to ZEB. A Paradigm Shift in Building Standards	Ioan Boian, Ioan Tuns
4	Green Roofs as Multi-Functional Climate Adaptation Tools: From Rainwater Retention to Carbon Mitigation	Didem Gunes Yilmaz
5	Evaluation of the CO2e footprint of energy renovation and seismic strengthening of the residential building stock	Viorel Popa, Ionuţ Bogdan Gheorghe
6	Assessing the Costs of Integrated Interventions for Seismic and Energy Retrofit for Educational Buildings	Viorel Popa, Cătălina Bazavan
7	Contributions to mitigating overheating and improving comfort in typical Romanian buildings from 1960s	Sânziana Suba, Ligia Moga, Moldovan Ioana Mădălina, Daniel Aelenei
8	Influence of the Window to Wall Ratio on Heating Energy Demand: Case Study of an Office Building in Alba Iulia	Ioana Maria Codarcea, Ligia Moga
9	Innovations and Optimizations in Micro- and Pico-Hydropower Plants and Complementary Renewable Sources: A Literature Review and Hydraulic Analysis for Isolated Communities	Mihaela Violeta Pisleaga
10	Sustainable Water Management in Green Cities: Technical-Cultural and Educational Approaches for Awareness and Critical Thinking	Mihaela Violeta Pisleaga
11	Parametric design's impact on energy performance in educational buildings	Andra Raluca Boroş, Ligia Moga
12	Construction Risk Identification in Building Engineering Based on the LDA Model	Shilong-Jia, Jiaxin Xiao
13	A Numerical Framework for Ground-Coupled Heat Transfer Assessment Using Multi-Polynomial Influence Functions	Ligia Moga, Ioan Moga
14	Implications of Pollutant Factors on Human Health	Ionut Poinareanu, Horatiu Rus, Mihaela Ciurea



Transilvania
University
of Braşov

FACULTY OF CIVIL ENGINEERING



CIBv2025 International Scientific Conference

Civil Engineering and Building Services, Braşov, 6th – 7th November 2025

SPONSORS:



CANAM
Better Building Solutions



SUNTEM
CE CONSTRUIM

