

Technical University of Košice, Faculty of Civil Engineering

Slovak Society for Mechanics, SAS

6th International Scientific Conference

Structural and Physical Aspects of Construction Engineering



15th-17th October 2025

Štrbské Pleso, High Tatras, Slovakia

Program:

Wednesday, October 15, 2025

11.00 – 13.00	Registration
14.25 – 14.30	Opening of the conference
Keynote Speech block	
Chairs:	Congress Hall Michal Šejnoha – Drahomír Novák
14.30 – 15.00	<u>Keynote Speaker:</u> Drahomír Novák Brno University of Technology, Faculty of Civil Engineering, Institute of Structural Mechanics, Brno, Czech Republic, Stochastic Nonlinear Analysis of Concrete Structures
15.00 – 15.30	<u>Keynote Speaker:</u> Michal Šejnoha CTU in Prague, Faculty of Civil Engineering, Department of Mechanic, Prague, Czech Republic, Efficient Numerical Approximation of Fractional Derivative in Viscoelasticity
15.30 – 16.00	<u>Keynote Speaker:</u> Armando La Scala Polytechnic University of Bari, Bari, Italy Bridging Past and Present: Engineering Challenges in Archaeological Heritage Preservation
16.00 – 16.30	Coffee break
Lecture block I.	
Chairs:	Congress Hall Jiří Němeček – Ladislav Sátor
16.30 – 16.45	Jiří Němeček, Jitka Němečková and Jiří Němeček Modeling the contact problem of a visco-elasto-plastic material with an indenter
16.45 – 17.00	Ladislav Sátor, Miroslav Repka Analysis of FGM micro/nano plates under thermal load

17.00 – 17.15	Miroslav Repka, Ladislav Sátor <i>Flexoelectric structures under the thermal load</i>
17.15 – 17.30	Damian Szczech, Renata Kotynia, Drahomír Novák, David Lehký, Jakub Večeře <i>Shear Strength of T-shaped GFRP-Reinforced Concrete Beams without Shear Reinforcement: Part I – Experimental Investigation</i>
17.30 – 17.45	Jakub Večeře, Drahomír Novák, David Lehký, Renata Kotynia, Damian Szczech <i>Shear Strength of T-shaped GFRP-Reinforced Concrete Beams without Shear Reinforcement: Part II – Computational Simulation</i>
19.00 – 23.00	Dinner with Welcome party in the Dining Room

Thursday, October 16, 2025

Lecture block II.	
Chairs:	Congress Hall Dora Foti – Sokol Milan
09.30 – 09.45	Armando La Scala, Maria Francesca Sabbà, Fabio Rizzo, Dora Foti <i>Preserving Pompeii's Past: Infrared Thermography for Conservation Assessment of the Forum Women's Baths</i>
09.45 – 10.00	Soňa Zajícová <i>Tonti decomposition</i>
10.00 – 10.15	Sokol Milan and Oravcová Lucia <i>The Impact of the Diaphragm on Pushover Analysis of Small Masonry Buildings</i>
10.15 – 10.30	Jozef Šimiček, Marián Dubravský <i>Models for Solution Mechanical Properties of Pavement Structures</i>
10.30 – 11.00	Coffee break
Lecture block III.	
Chairs:	Congress Hall Bajzecerová Viktória – Roman Vodička
11.00 – 11.15	Asad Zia and Ivan Holly <i>The impact of end-of-life tire steel fibers on the tensile and shrinkage behavior of natural and recycled aggregate concrete</i>

11.15 – 11.30	Roman Vodička <i>A Multi-Domain Regularised Fracture Dynamic Computational Approach</i>
11.30 – 11.45	Patricia Vanova <i>Impact of Parallelization Settings on Computational Time in Modal Analysis Using Abaqus</i>
11.45 – 12.00	Artem Chystiakov, Anton Bershadskyi, and Michal Slaný <i>Impact Resistance of the Cement Concretes on Recycled Aggregates</i>
12.00 – 12.15	Krempaská Jana, Bajzecerová Viktória, Ján Kanócz <i>Timber-concrete composite bridges for highway applications</i>

16.00 – 17.00	Poster section
Moderators:	Poster Hall Eva Panulinová – Lenka Kabošová
16.00 – 17.00	Coffee break
1.	<i>Statistical Analysis of Shear Performance of Clinch Joints in Steel Plates</i> Petr Lehner, Jakub Flodr, Martin Krejsa
2.	<i>Fatigue Degradation of Thin-walled Cold-formed Steel: Initial Study</i> Martin Krejsa, Petr Lehner, Jakub Flodr, Jan Klusák, Přemysl Pařenica and Kamila Kozáková
3.	<i>Study of the sandblasting waste material as an additive to concrete</i> Mária Mihalíková, Peter Blaško, Jozef Petrík, Alena Pribulová, Patrik Fedorko, Peter Futáš, Pavol Liptai and Elena Čížmarová
4.	<i>Numerical Study of Draining of Fluid Filled Cylindrical Tank with Initial Flat Fluid Surface</i> Kamila Kotrasova, Vladimira Michalcova and Eva Kormanikova
5.	<i>Parametric Analysis of Dynamic Behavior of Voided Reinforced Concrete Slabs</i> Norbert Jendzelovsky and Daniel Beutelhauser
6.	<i>Analysis of Concrete Cone Failure Mode Occurring at a Steel Cast-in Anchor Subjected to Tensile Loading</i> Lucie Malíková, Petr Miarka
7.	<i>Comparative Bending Performance of 3D-Printed Beams with Algorithmically Generated Gradient Infill Structures</i> David Juračka, Pavel Dobeš, Dominik Gřešica, Marek Kawulok, Barbora Kříštková, Kateřina Matýsková, Marie Hornňáková, Martin Krejsa
8.	<i>Revitalization of Slaná River Region after Mining Activities</i> Martina Zelenakova, Tatiana Soláková, Marcela Bindzárová Gergeľová, Slávka Gataš, Rositsa Velichkova
9.	<i>Influence of Joint Design on the Mechanical Response of Frames Made of Cold-Formed Steel Profiles</i> Dominik Gřešica, Petr Lehner, Přemysl Pařenica, Jakub Flodr

10.	Non-linear Approximation of Reinforced Concrete in Mechanical Analysis Katarina Tvrda
11.	Contribution to Analysis of Historical Objects Subjected to Traffic Vibrations Veronika Valašková, Jozef Vlček
12.	Numerical Investigation of Beam-to-Column Connections in Mass Timber Buildings under Combined Gravity and Lateral Loading Michala Weisssova, Dina Ghazi-nader, Vincent Kvocak, Sardar Malek
13.	Testing transverse isotropy on UD carbon epoxy Eva Kormanikova, Hugo Sol, Jun Gu, Lenka Kabosova and Kamila Kotrasova
14.	Identification of geotechnical risk Eva Panulinova
15.	Consolidation and Settlement Slavka Harabinova
16.	Modelling of moisture influence on fracture in timber structures Viktória Bajzecerová, Jana Krempaská, Roman Vodička
17.	Tensegrity Façade Module Made of Transparent Wood: Design and Structural Evaluation Lenka Kabosova and Viktor Karla
18.	Correlation of the Compression Strength and Poisson's Ratio for Rammed Unfired Earth Pavel Padevět, Barbora Mužíková, and Petr Bittnar
19.	Fatigue Performance of S460 High-Strength Steel Welded Joints: Experimental and Numerical Approaches Mohammad S. Al Khazali, Lucie Malíková, Grzegorz Lesiuk, and Stanislav Seitl
20.	Variation of the modulus of elasticity in tests according to the EN standard Štefan Kušnir
21.	Dynamic and aerodynamic analysis of a pedestrian footbridge with experimental verification of pedestrian comfort in situ and in a wind tunnel Jozef Recký, Daniel Papán, Matej Prišč, Martin Ščotka
17.00 – 18.00	Informal discussion

Friday, October 17, 2025

09.30 – 12.00	Technical Excursion to the Reconstruction Project of the Hotel Panorama
12.00	Closing of the conference