
Monday - June 4

17.30 – 20.30 *Registration, accommodation*

19.00 – 20.30 *Dinner* (hotel restaurant)

Tuesday - June 5

7.30 – 09.30 *Registration, accommodation*

09.00 – 09.20 **Conference opening** (Jiří Raška conference hall)

09.20 – 10.40 **Plenary session** (Jiří Raška conference hall)

Chairman: Doc. Ing. Iva Petříková, Ph.D.

09.20 **Magneto-sensitive rubber in a vibration isolation context.**

prof. Nere Gil-Negrete Laborda, Ph.D.(University of Navarra, San Sebastián, Spain)

10.00 **Assessment and increasing of lifetime and time of safe operation of machines and equipment by the experimental methods of mechanics.**

Dr.h.c. mult. prof. Ing. František Trebuňa, CSc.(TU Košice)

10.40 – 11.00 *Coffee break* (hotel foyer)

11.00 – 12.00 **Parallel session A** (Jiří Raška conference hall)

Chairman: Prof. Ing. František Plánička, CSc.

11.00 **Shrinkage of Rammed Earth Based on Illitic Clay.**

Pavel Padevět, Petr Bittnar, Tereza Otcovská

11.20 **Lightweight Mason Block made from Recycled Concrete.**

Jan Trejbal, Zdeněk Prošek, Jakub Ďureje, Radim Hlůžek

11.40 **Effect of Cement/Water Ratio on Mechanical Properties of Cement Pastes Containing Recycled Micronized Concrete Powder and Chemical Additives.**

Pavel Tesárek, Zdeněk Prošek, Pavla Ryparová, Jaromír Hrůza, Václav Nežerka, Josef Fládr

11.00 – 12.00 **Parallel session B - Young** (František Jež conference hall)

Chairman: Prof. Ing. Nikolaj Ganev, CSc.

11.00 **Optimization of the cutting blade stress fields.**

Peter Frankovský, Jozef Bocko, Michal Kicko, Ingrid Delyová, Ján Kostka

11.20 **X-Ray Diffraction Study of Macroscopic Residual Stresses of Al₂O₃ + TiC Oxide Cutting Ceramics after Surface Machining.**

Jakub Němeček, Kamil Kolařík, Jiří Čapek, Nikolaj Ganev, Valery V. Kuzin

11.40 **Application of laser shearography to vibration mode shape analysis of composite panel during acoustic load.**

Pavel Zděnek, Martin Kadlec, Jiří Běhal

12.00 – 13.00 *Lunch* (hotel restaurant)

13.20 – 15.00 Parallel session A (Jiří Raška conference hall)

Chairman: Doc. Ing. Tomáš Návrat, Ph.D.

- 13.20 **Modelling and experimental measurement on heated lamination cylinder for optimization of heat flows.**
Tomáš Martinec, Michal Petrů, Ondřej Novák
- 13.40 **Experimental Verification of Ski Model for Finite Element Analysis.**
Radek Zbončák
- 14.00 **Material Characteristics of the CFRP for Car Seat Frame.**
Rudolf Martonka, Martina Rovolova, Antonín Potěšil
- 14.20 **Experimental Analysis of Jet Engine Air Channel Impact Resistance by means of Strain Gauges and FBG Sensors.**
Karel Doubrava, Milan Dvořák, Radek Doubrava, Jan Václavík, Milan Růžička
- 14.40 **Experimental verification of jet engine composite inlet for bird and hail impact resistance.**
Radek Doubrava, Martin Oberthor, Petr Bělský, Milan Dvořák, Karel Doubrava

13.20 – 15.00 Parallel session B - Young (František Jež conference hall)

Chairman: Ing. Aleš Lufinka, Ph.D.

- 13.20 **Materials Selection for Efficient Cross-section of Components.**
Martin Kratochvíl, Ivana Mazínová, Filip Hrdlička
- 13.40 **Determining the Young's modulus of a specimen using experimental modal analysis.**
Adam Kaňavský, Róbert Huňady, Peter Pavelka
- 14.00 **Monitoring of Delamination Growth on the MMB Specimens Using FBG Sensors and Electrical Resistance Measurement Method.**
Nikola Schmidová, Milan Dvořák, Martin Kadlec, Milan Růžička
- 14.20 **Analysis of Experimental Testing of Clinched Joint.**
Pavel Malý, František Lopot
- 14.40 **Advanced Methods in Crash Safety Testing.**
Jakub Jelínek, Milan Růžička, Michal Kalinský

15.00 – 15.20 Coffee break (hotel foyer)

15.20 – 17.00 Parallel session A (Jiří Raška conference hall)

Chairman: Prof. Ing. Bohdana Marvalová, CSc.

- 15.20 **Experimental Analysis of Modern Screw Fasteners.**
Jan Kanaval, Eliška Cézová, František Starý, Vojtěch Dynybyl, Vít Klíma
- 15.40 **Experimental Verification of FEA model.**
Ondřej Medůna
- 16.00 **Mechanical Behaviour of Foam Used in Joint Protectors.**
Radek Kottner, Sandra Kaňáková, Lukáš Šoltés, Tomasz Bońkowski, Jan Krystek

16.20 **Crash test of carbon composite**

Martina Ryvolová, Josef Vosáhlo

16.40 **Experimental Analyses of Limit States, Stress-Strain Distribution, Defects and Failure Mechanisms of High-Pressure Gas Pipe.**

Ivo Černý, Jan Kec, Miroslav Jersák, Miloslav Poupa, Marie Černá. Romana Pavelková

15.20 – 17.00 Parallel session B - Young (František Jež conference hall)

Chairman: Doc. Ing. Radim Halama, Ph.D.

15.20 **Load capacity of bolted joint of carbon fibre reinforced plastics.**

Jan Krystek, Libor Lobovský

15.40 **Formation of austenite and ferrite preferred orientation during cold-rolling of dual and single-phase steels.**

Jiří Čapek, Karel Trojan, Jakub Němeček, Nikolaj Ganev

16.00 **Experimental Investigation of Clearance Effect on Single-lap Joint Using Blind Rivet.**

Lukáš Bek, Radek Kottner, Vladislav Laš

16.20 **Dynamic analysis of 3D printed and moulded composites with carbon microfibers.**

Petr Kulhavý, Vítězslav Fliegel, Petr Lepšík, Pavel Srb

16.40 **Development of the plastic zone at the crack tip under cyclic loading in the middle-cracked tension specimen.**

Jakub Šedek

17.10 – 18.40 Poster session (Jaroslav Sakala conference hall)

Chairman: Ing. Karel Doubrava, Ph.D.

19.00 – 20.30 Dinner (hotel restaurant)

Wednesday - June 6

08.30 – 09.10 Plenary session (Jiří Raška conference hall)

Chairman: prof. Ing. Milan Růžička, CSc.

08.30 **Experimental Research and Numerical Simulation of the Behavior of Magnetosensitive Elastomers.**

prof. Ing. Bohdana Marvalová, CSc. (TU Liberec)

09.20 – 10.20 Parallel session A - Young (Jiří Raška conference hall)

Chairman: prof. Ing. Milan Růžička, CSc.

09.20 **Experimental Testing of Piston Lock.**

Pavel Malý, Raphaël Vuillermet

09.40 **Numerical and Experimental Prediction of Lamb Wave Scattering from Horizontal Notch.**

Michal Šofer, Petr Ferfecki, Martin Fusek, Pavel Šofer, Dagmar Ličková

10.00 **Axle Gearbox Hinge as a Diagnostic Member for Rail Vehicle Drive.**

Martin Dub, Josef Kolář, František Lopot

09.20 – 10.20 Parallel session B - Young (František Jež conference hall)

Chairman: Ing. Aleš Jíra, Ph.D.

09.20 **Effect of activation recycled concrete using different admixtures on the strength and modulus of elasticity of the resulting cement composite.**

Vladimír Hrbek, Ondřej Zobal, Zdeněk Prošek, Jakub Ďureje, Pavel Tesárek

09.40 **Determining Fracture Energy of unstabilised Rammed Earth by Using Three-Point Bending Test.**

Barbora Mužíková, Tereza Otcovská, Pavel Padevět

10.00 **Plasma modification of microfiber reinforcement to improve adhesion with cement matrix containing recycled concrete.**

Jakub Ďureje, Zdeněk Prošek, Jan Trejbal, Pavel Tesárek

10.20 – 10.40 Coffee break (hotel foyer)

10.40 – 11.40 Parallel session A (Jiří Raška conference hall)

Chairman: Ing. František Fojtík, Ph.D.

10.40 **Use of notches in the shafts loaded by torque for improvement in accuracy of strain gauge measurements.**

František Lopot, Martin Dub, Martin Janda, Ondřej Berka

11.00 **Measurement of vibration responses of a rotating disc using DIC method.**

Róbert Huňady, Peter Pavelka, Adam Kaľavský

11.20 **The Design of Final Drive Pinion Temperature Measurements Realized During the Real Passenger Car Operation.**

Martin Mazač, Pavel Herajn, Miroslav Malý

10.40 – 11.40 Parallel session B - Young (František Jež conference hall)

Chairman: Ing. Pavel Padevět, Ph.D.

11.00 **Micromechanical Characterization of Phases in Recycled Concrete.**

Václav Nežerka, Pavel Tesárek, Zdeněk Prošek, Vladimír Hrbek

11.20 **Comparative Mechanical Analysis of Different Trabecular Structures For Use in Implant Dentistry.**

Luboš Řehounek, Aleš Jíra

11.40 **Investigation of mechanical properties of cement pastes with fine recycled concrete as partial replacement for Portland cement: kind of method high-speed milling.**

Zdeněk prošek, Pavel Tesárek, Jakub Ďureje, Jan Trejbal, Ondřej Zobal

12.00 – 13.00 Lunch (hotel restaurant)

13.20 – 19.00	Trip	
13.20 – 14.00	walking about 1.5 km	
14.00 – 15.00	excursions to the glassworks and to the small brewery	
15.00 – 19.00	small brewery pub museum with glass shop or trip to Mumlavské waterfalls (about 6km)	

19.00 Social evening (hotel restaurant)

Thursday - June 7

8.30 – 10.10 Parallel session A (Jiří Raška conference hall)

Chairman: Prof. Ing. František Plánička, CSc.

- 08.30 **Experimental investigation of friction relations in threaded joints.**
Eliška Cézová
- 08.50 **Computation of Carbon Nanotubes Eigenfrequencies Based on Nonlocal Theory and Using Finite Element Method.**
Pavol Lengvarský, Jozef Bocko
- 09.10 **Comparison of the depth profile of stress when measuring by hole drilling method with measuring by X-Ray diffraction.**
Bohuslav Řeha, Josef Zawada and Milan Kwaczek
- 09.30 **Evaluation of the Stress Intensity Factor for Corrosion Fatigue on Steel Alloy in Steam Turbines.**
Miroslav Černý
- 09.50 **Crack Propagation Prediction in Aluminium Friction Welded Joints.**
Petr Brož, Daniel Dobiáš

8.30 – 10.10 Parallel session B (František Jež conference hall)

Chairman: Ing. Lubomír Houfek, Ph.D.

- 08.30 **Evaluation of Multiaxial Fatigue Criteria on LCF Data of SS316L.**
Martin Fusek, Dagmar Lickova, Radim Halama, Zdeněk Poruba, František Fojtík
- 08.50 **Delamination Growth under Mixed Mode I - Mode II Fatigue Loading in Polymer Composite.**
Martin Kadlec, Jakub Šedek
- 09.10 **Measurement of Mechanical Properties of Lead Free Solder.**
Daniel Antoš, Radim Halama, Matěj Bartecký
- 09.30 **Residual Stress Distribution in Spherical Storage Tank Butt Weld.**
Ľuboš Mráz, Miroslav Vrána, Charles Hervochoes, Peter Baxa, Milan Baláž, Pavol Mikula
- 09.50 **Fatigue Loading of Polymer Composite Lap Joints with Washers Inserted in the Lay-up.**
Robin Hron, Martin Kadlec, Petr Bělský

10.10 – 10.30 *Coffee break* *(hotel foyer)*

10.30 – 11.30 **Parallel session A** **(Jiří Raška conference hall)**

Chairman: Doc. Ing. Róbert Huňady, Ph.D.

10.30 **Experimental Determination of Viscoelastic Behavior of Core for Composite Sandwich Beam.**

Miroslav Černý, Pavel Šlapák

10.50 **Masonry Barrel Vault's Analysis.**

Aneta Maroušková

11.10 **Influence of Non-alcoholic Beverages on Micromechanical Properties of Human Enamel.**

Aleš Jíra, Martin Tomanec, Petra Hájková

10.30 – 11.30 **Parallel session B** **(František Jež conference hall)**

Chairman: Ing. Aleš Lufinka, Ph.D.

10.30 **Measurement of Operational Stresses of ŠKODA Trolleybus 27Tr.**

Jaroslav Václavík, Jiří Némec, Otakar Weinberg

10.50 **System of Axle-Box Force Measurement for Experimental Railway Bogie.**

Petr Bauer, Jan Kalivoda

11.10 **FEM Calculation, Measuring and Testing of Flood Protection Barriers**

Ladislav Ševčík, Aleš Lufinka

11.30 – 12.00 **Conference closing** **(Jiří Raška conference hall)**

12.00 – 13.00 *Lunch* *(hotel restaurant)*