

PRESENTATION SCHEDULE

12th September 2018 Wednesday

OPENING CEREMONY

10:00 10:20 Welcome to conference, Congress centre Praslička

PLENARY SESSION

nr.	Title of paper	Authors
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|-------------|---|--|
| 10:20 10:40 | 1 | Explanation of New Specifications Used in Geometric Dimensioning Model
<i>Karel Petr</i> |
| 10:40 11:00 | 2 | Effect of Temperature on Bolt Working Load of Pressure Vessels
<i>Jiří Začal and Lukáš Jančar</i> |
| 11:00 11:20 | 3 | Sensor for In-time Identification of Deep Core Drilling Parameters
<i>Martin Dub and Vojtěch Dynybyl</i> |
| 11:20 11:40 | 4 | The Influence Long-term Operating Load to the Riveted Join
<i>Václav Kubec, Josef Hodek, Antonín Prantl and Petr Votápek</i> |

SESSION 1 - ROOM A

Chairman: Doc. Ing. Robert Kohár, Ing.

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| 14:00 14:15 | 5 | Geometric Specification of Complex Spatially - Oriented and Compliant Components II.
<i>Vaclav Vaněk, Martin Gorschenek and Roman Polak</i> |
| 14:15 14:30 | 6 | The Loading of the Crew Protection Structure of the ROPS According to Different World Standards
<i>Ladislav Ševčík and Ha Nguyen Van</i> |
| 14:30 14:45 | 7 | Scuffing Resistance of 16MnCr5 HCR TiAlCN Coated Gears
<i>Miroslav Božanský, František Tóth, Ladislav Gulán, Juraj Rusnák and Adam Furstenzeller</i> |
| 14:45 15:00 | 8 | Design Optimization of Micro Hydro Power Plant
<i>Pavel Srb and Michal Petrů</i> |
| 15:15 15:30 | 9 | FE Analysis of Load Distribution in Clinched Joints Array
<i>Pavel Maly and Frantisek Lopot</i> |
| 15:30 15:45 | 10 | Calculating Strength of Truck Trailer Frames by Using Software MSC Adams and the Finite Element Method
<i>Andrzej Harlecki, Adam Przemysk and Szymon Tengler</i> |
| 15:45 16:00 | 11 | Profile Design of Groove Cam with Roller Follower
<i>Ha Nguyen Van and Ladislav Ševčík</i> |
| 16:00 16:15 | 12 | Mobile Positioning Device Powered by an Electromotor
<i>Filip Dušek</i> |

SESSION 2 - ROOM B Chairman: Prof.Ing. Ladislav Ševčík, CsC.

- 14:00 14:15 13 **Load Analysis of a Ship Generating Sets During the Maneuvers of the Vessel**
Dariusz Tarnapowicz
- 14:15 14:30 14 **Measurement of Torque and Axial Force on Cardan Shaft**
Miroslav Trochta and Jiří Začal
- 14:30 14:45 15 **Dynamic Analysis of Vibrating Sorter and Description of Optical Methods for Experimental Verification**
Jan Hoidekr and Vojtěch Dynybyl
- 14:45 15:00 16 **Screw Connections with Application of Modern Insurance Sealants and Adhesives Analysis**
Jan Kanaval, Eliška Cézová and František Starý
- 15:15 15:30 17 **Safety Models of Systems in the Engine Room With Renewable Elements**
Zbigniew Matuszak
- 15:30 15:45 18 **The Gearing Temperature Shock Oscillation**
Martin Mazač and Miroslav Malý
- 15:45 16:00 19 **AHP - Based Evaluation of Vertical Gardens Design**
Tomáš Vach and Ivan Mašín
- 16:00 16:15 20 **Creation of Computational 2D Model of Harmonic Gearbox**
Maroš Majchrák, Róbert Kohár, Michal Lukáč and Rudolf Skyba

SESSION 3 - ROOM C Chairman: Doc. Ing. František Brumerčík, PhD.

- 14:00 14:15 21 **Comments on ISO 6336 - 2**
Miloš Němček
- 14:15 14:30 22 **Reverse Engineering of the Gearbox Case**
Lukáš Jančar, Jiří Začal and Zdeněk Folta
- 14:30 14:45 23 **Design Optimalization of the Octavia SK37x Driver's Seat - DFMA Principles Application**
Pavel Bartoníček and Ivan Mašín
- 14:45 15:00 24 **Contact Patterns During a Mesh of a Helical Gear Pair**
Jan Pavlík and Václav Mosler
- 15:15 15:30 25 **The Device for Measuring the Stiffness of the Bearings**
Václav Mosler, Jan Pavlík, Jiří Havlík and Ivo Křístek
- 15:30 15:45 26 **Bearing Test Rig: Setting Up and Lesson Learnt**
Jakub Chmelař, Pavel Mossoczy and Vojtěch Dynybyl
- 15:45 16:00 27 **Description Of The Methodology Of The Automated Optimization Process**
Michal Belorit, Slavomir Hrček and Marek Bistak
- 16:00 16:15 28 **The Procedure for Reduction of the Acoustic Performance Level of the Spinning Cycle in the Washing Machine**
Ján Šteiningger, Ján Ďungel, Slavomír Hrček and Igor Gajdáč

SESSION 4 - ROOM A Chairman: Doc. Ing. Jozef Bronček, PhD.

- 9:00 9:15 29 **Low Speed Bearings Diagnostic Equipment**
Michael Oeljeklaus and Lubomír Pešík
- 9:15 9:30 30 **Optimization of Driving Comfort of Golf Cart**
Radka Jírová, Lubomír Pešík and Roman Svoboda
- 9:30 9:45 31 **Innovation of Device for Nanofibers Production using TRIZ**
Petr Lepšík
- 9:45 10:00 32 **Unconventional Carbon Springs**
Milan Benko, Ľuboš Kučera, Tomáš Gajdošík and Michal Herda
- 10:15 10:30 33 **Evaluation of the Energy Balance on Test Bench With Open Power Flow and Closed Power Flow For Testing of Transmission**
Michal Herda, Ľuboš Kučera, Tomáš Gajdošík and Milan Benko
- 10:30 10:45 34 **Development of a New Measuring System for Verifying the Float Level Gauge**
Tomáš Gajdošík, Igor Gajdáč, Ľuboš Kučera, Jaromír Markovič
- 10:45 11:00 35 **The Digital Twin of a Measuring Process Within the Industry 4.0 Concept**
Ľuboš Kučera, Jan Vachálek, Markus Melicher, Pavol Vašek and Juraj Slovák
- 11:00 11:15 36 **Design and Manufacturing of Multipurpose Steering Wheel**
Dana Šišmišová, Erik Mikuláš, Stanislav Zeman and Ľuboš Kučera

SESSION 5 - ROOM B Chairman: Doc. Ing. Michal Petrů, PhD.

- 9:00 9:15 37 **Determination of Mechanical Properties of FRP by Bending Test**
Martina Ryvolová and Josef Vosáhlo
- 9:15 9:30 38 **Boiling Heat Flux of Multilayer Mesh Microstructures**
Norbert Radek, Łukasz J. Orman and Jozef Bronček
- 9:30 9:45 39 **Properties of Steel Welded with CO2 Laser**
Norbert Radek, Jacek Pietraszek, Jozef Bronček and Peter Fabian
- 9:45 10:00 40 **Development of Process Parameters for SLM Processing of AlSi7Mg Aluminum Alloy**
Josef Zvoníček, Daniel Koutný, Libor Pantělejev and David Paloušek
- 10:15 10:30 41 **Transmission Mechanical Vibrations in the Car Seat in the Laboratory Conditions**
Rudolf Martonka and Vítězslav Fliegel
- 10:30 10:45 42 **Design of Belt Wheels Using the 3D Printing Method**
Patrik Sniehota
- 10:45 11:00 43 **The Energy Assist for the Electric Car Edison**
Igor Gajdáč, Tomáš Gajdošík and Ján Šteininger
- 11:00 11:15 44 **Investigation of the Tribological Properties of the Nitride Layer on Heat Treated Steel 100Cr6**
Jozef Bronček, Martin Vicen, Peter Fabian, Norbert Radek

SESSION 6 - ROOM C Chairman. Prof. Dr .Ing. Miloš Němček

- 9:00 9:15 45 **Performance of a Manually Fed Pelleting Machine with a Horizontal Rotating Matrix**
Gurkan Alp Kagan Gurdil, Bahadir Demirel, David Herak, Yunus Ozcan Baz
- 9:15 9:30 46 **Study of EDMS for Additive Technology in a Smart City**
Radek Teplý
- 9:30 9:45 47 **Control System for the Testing Device of Flood Barriers**
Aleš Lufinka
- 9:45 10:00 48 **Numerical Simulation of Flow Through Porous Media**
Ondřej Novák and Michal Petrů
- 10:15 10:30 49 **Sealing Technology for Vacuum Applications Working by Increased Temperatures**
Michal Tropp, Michal Lukáč, Milan Benko, František Brumerčík, Zbigniew Krzysiak and Aleksander Nieoczym
- 10:30 10:45 50 **Examining the Modal Characteristics of the Pre-stressed Gearbox**
Peter Weis, Milan Sapieta and Peter Bezák
- 10:45 11:00 51 **Principles of Increasing the Winding Effectivity of Composite Prepregs to Construction Application**
Michal Petrů and Josef Vosáhlo
- 11:00 11:15 52 **Experimental Verification of Tribological Properties of Thin Coatings for Artificial Human Joints**
Marian Dzimko, Matúš Kovaliček, Eva Gajdošová and Yoshinori Takeichi

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SESSION 7 - ROOM A Chairman: Prof. Ing. Ľuboš Kučera, PhD.

- 9:00 9:15 53 **Contactless Measuring Device for Flexible Shaft Coupling Twist Angle**
Matej Urbanský and Robert Grega
- 9:15 9:30 54 **The Experimental Methods and Devices for the Identification of the Properties of Pneumatic Dual Mass Flywheel**
Robert Grega and Peter Kaššay
- 9:30 9:45 55 **Measuring Mass Moment of Inertia of a Rotor**
Peter Kaššay and Robert Grega
- 9:45 10:00 56 **Optimizing Setting of Open Source Fused Deposition Modeling 3D Printer**
Silvester Poljak, Ronald Bašťovanský and Pavol Podhora
- 10:15 10:30 57 **Modelling of Cornea Applanation when Measuring Eye Pressure**
Branislav Hučko, Ľuboš Kučera, Stanislav Ďuriš, Peter Pavlásek and Jan Rybář

- 10:30 10:30 58 **Innovation of device for production of core yarn with nanofibers**
Martin Chára
- 10:30 10:45 59 **Innovation of the Cutting Tools of the Modular Production Line for the Production of Sophisticated Adhesive Wound Covers**
Martin Dolanský
- 10:45 11:00 60 **The Comparison of Selected Strength Indicators of Manufactured Prototypes Produced by Metal Additive Manufacturing (3D printing) System**
Róbert Sásik, Ronald Bašťovanský, Michal Hoč, Rudolf Madaj and Peter Spišák
- 11:00 11:15 61 **Creation of 3D Calculation Model of Slewing Bearing**
Rudolf Skyba, Slavomír Hrček, Lukáš Smetanka and Maroš Majchrák

SESSION 8 - ROOM B Chairman: Ing. Viera Konstantová, PhD.

- 9:00 9:15 62 **Solving a Boundary-Value Problem of Axisymmetric Vibrations of a Rotor Disc Model With Nonlinear Variable Thickness**
Łukasz Dragun, Jerzy Jaroszewicz, Leszek Radziszewski, Vladimir Antoniuk, Jozef Bronček and Norbert Radek
- 9:15 9:30 63 **Monitoring of the Measurement Process Capability by Using Capability Indices**
Ľuboš Kučera, Jakub Palenčár, Rudolf Palenčár, Stanislav Ďuriš, Ján Vachálek and Jan Rybář
- 9:30 9:45 64 **Impact of the Spin Cycle on the Acoustic Power Level of a Washing Machine**
Marek Bisták, Štefan Medvecký, Michal Belorit and Ján Ďungel
- 9:45 10:00 65 **Contact Analysis of Selected the Toothed Contact of the Two-stage Front Gearbox**
Stanislav Gramblička, Róbert Kohár and Maroš Majchrák
- 10:15 10:30 66 **Principles of Winding Elbows from Pre-impregnated Carbon Fibres**
Petr Kulhavy, Petr Lepšík and Vitezslav Fliegel
- 10:30 10:45 67 **Modular 3D Printer Concept**
Marián Stopka, Róbert Kohár, Peter Weis, Ján Šteininger and Peter Spišák
- 10:45 11:00 68 **Trend of Increasing Dynamicity in the Design of Flood Protection Systems**
Ivan Mašín
- 11:00 11:15 69 **Karakuri Cart Movement Modelling with Maple**
Tomáš Riegr and Ivan Mašín
- 11:15 11:30 70 **Analysis of Tribological Properties of Composite Materials for the Production of Bearing Cage**
Jozef Bronček, Viera Konstantová, Ronald Bašťovanský and Michal Stupavsky

