

Table of contents

(alphabetic order according to the name of the first author)

KEYNOTE LECTURES

Krejsa Martin, Janas Petr, Krejsa Vlastimil (#084): Application of the DOPoC Method in Solving Reliability Problems	2
Kruis Jaroslav (#213): Solution of Large Engineering Problems on Parallel Computers	6

PAPERS

Andrs Ondrej, Vetiska Jan, Holub Michal, Kovar Jiri (#090): Model Based Design of Fuel Pump Control	10
Baláž Ivan, Koleková Yvona (#230): Safety Factors γ_{M0} and γ_{M1} in Metal Eurocodes	12
Baláž Ivan, Koleková Yvona (#240): Bending, Torsion and Distortion of Thin-Walled Beams	14
Bártková Denisa, Langer Jiří, Dymáček Petr, Válka Libor (#070): Determination of Mechanical Properties of Magnesium Alloys and Composites by Small Punch Testing	16
Bayer Jan, Pospíšil Stanislav, Urushadze Shota, Kasal Bohumil (#196): Changes of Dynamic Properties of a Timber Frame Due to Simulated Seismic Load: A Case Study	18
Bednarik Martin, Holzer Rudolf, Tornyai Rudolf (#105): Stone in Historical Architecture in Slovakia	20
Beketova Ganna, Shevtsova Marina, Symonov Volodymyr (#139): Comparison of Hybrid Metal-Composite Micropin Joints with Conventional Ones in Terms of Fatigue Life	22
Benčat Jan (#219): Full-Scale Testing of the Highway Arch Viaduct	24
Benko Vladimír, Fillo Ľudovít, Kendický Peter, Dvoranová Veronika (#152): Experimental and Numerical Analysis of Concrete Slender Columns by Stability Failure	26
Beňo Matej, Patzák Bořek (#159): On Choice of Lagrange Multipliers for Fictitious Domain Method for the Numerical Simulation of Incompressible Viscous Flow around Rigid Bodies	28
Brožová T., Luks T., Astrouski I., Raudenský M. (#118): Fatigue Testing of Polymeric Hollow Fibre Heat Transfer Surfaces by Pulsating Pressure Loads	30
Brúha Jan, Rychecký Drahomír (#166): Modelling of Rotating Twisted Blades as 1D Continuum	32
Brych Ivan, Sýkora Miroslav (#072): Assessment of Cast-Iron Structures	34
Buljac Andrija, Pospíšil Stanislav, Kozmar Hrvoje (#044): Comparison of Flutter Derivatives for Kao Pin Hsi Bridge and Flat Plate	36
Buzík Jiří, Létal Tomáš (#087): Influence of Vortex Excitation on the U-Tube Bundle	38
Cech Vladimír, Jevicky Jiri, Jus Milan (#151): Simulation of the Motor Power of Line-of-Sight Stabilized Devices by Passing the Test Bump	40
Čečrdle Jiří, Maleček Jaromír, Hlavatý Václav, Malínek Petr (#042): Simulation of Nonlinear Characteristic of Aileron Attachment on Aeroelastic Demonstrator Using Active Electromagnetic Spring Concept	42
Danek Wojciech, Lawniczek Rafal (#057): Experimental Studies of Heat Flow Through the Radiator of Electric Motor in a Multi-Purpose Hybrid Vehicle (WIPH)	44
Danek Wojciech, Lawniczek Rafal (#058): Experimental Study of Heat Flow through the Cooling System of the Internal Combustion Engine in a Hybrid Vehicle WIPH	46
Dlugoš Jozef, Novotný Pavel, Raffai Peter (#100): Advanced Computational Analysis of Connecting Rod of an Aircraft Engine	48
Doškář Martin, Novák Jan (#142): Wang Tilings in Numerical Homogenization	50
Doupník Petr, Koutník Tomáš (#146): Validation Task for Solution of Optimal Slotted Flap Position Using FLUENT Software	52

Dubina Radek, Eliáš Jan (#063): Dependence of the Discrete Model on the Internal Parameters Considering Grain Crushing	54
Dyk Štěpán, Zeman Vladimír (#049): Bifurcations in Mathematical Model of Nonlinear Vibration of the Nuclear Fuel Rod	56
Eliáš Jan (#061): Adaptive Remeshing Technique in Discrete Models of Random Geometry	58
Feistauer Miloslav, Hadrava Martin, Horáček Jaromír, Kosík Adam (#221): Discontinuous Galerkin Simulation of Dynamic Elasticity and Application to Fluid-Structure Interaction	60
Fiedler Josef, Koudelka Tomáš (#008): Nonlinear Behaviour of Concrete Foundation Slab	62
Fillo Ludovít, Augustín Tomáš, Hanzel Ján, Dvoranová Veronika (#150): Punching Resistance of Flat Slabs	64
Fürst Jiří (#134): Numerical Simulation of Flows through Labyrinth Seals	66
Gajdoš Lubomír, Šperl Martin (#220): Fracture Toughness Testing for Improving the Safety of Gas Pipelines	68
Gembalczyk Grzegorz (#043): Numerical and Experimental Study of Control Algorithm for Unloading System in Mechatronic Device for Gait Reeducation	70
Gramblička Štefan, Frólo Juraj (#121): Resistance of Composite Steel-Concrete Columns with Solid Steel Profile	72
Guran Ardeshir (#207): Response of a Non-Linearly Damped Duffing Oscillator Including Non-Linear Restoring Force by Using a Variational Approach	74
Had Jiří, Růžička Milan (#056): Simulation of Damage in Hybrid Composite Cell Structure	76
Hájek Petr, Švancara Pavel, Horáček Jaromír, Švec Jan G. (#086): Finite Element Modelling of the Effect of Stiffness and Damping of Vocal Folds Layers on their Vibrations and Produced Sound	78
Halama Jan, Vrátný Miroslav (#143): Numerical Solution of Humid Air Flow with Non-Equilibrium Condensation	80
Hanzel Ján, Majtanová Lucia, Halvoník Jaroslav (#025): Statistical Safety Evaluation of EC2 and MC 2010 – Model for Assessment of Punching Resistance of Footings	82
Havelka Jan, Sýkora Jan, Kučerová Anna (#251): Uncertainty Analysis of Earth Dam	84
Havlikova Ivana, et al. (#077): Evaluation of Fracture Tests of Concrete Specimens via Advanced Tool for Experimental Data Processing	86
Heidler Václav, Vimr Jan, Bublík Ondřej (#180): CFD Analysis of the Coolant Flow in Fuel Assembly of the VVER1000 Type Reactor	88
Hlaváček Petr, Šmilauer Vít, Vorel Jan (#227): Engineering Properties of Alkali Activated Fly Ash Foams	90
Holman Jiří (#140): Unsteady Flow Past a Circular Cylinder Using Advanced Turbulence Models	92
Holub Michal, Vetska Jan, Knobloch Josef, Minar Petr (#144): Analysis of Machine Tool Spindles under Load	94
Horáček Jaromír, et al. (#198): Aero-Acoustic and Vibration Characteristics of Self-Oscillating Artificial Vocal Folds	96
Horská Alena, Jiricek Pavel, Foglar Marek (#199): Performance of Fibre Reinforced Concrete Specimens Subjected to Impact Loading	98
Hortel Milan, Škudrová Alena (#032): To the Analytical Analysis of the Internal Dynamics of Nonlinear Time Heteronomous Planetary Differential Systems	100
Hračov Stanislav (#115): Approximate Calculation of Eigen-Values of Linear Viscously Damped System with Passive Damping Element	102
Hric Vladimír, Halama Jan (#012): Numerical Solution of Wet Steam Flow through Blade Stage	104
Hutyrová Zuzana, et al. (#197): Study of Surface Quality and Mechanical Properties of Composite Material Based on Natural Reinforcement	106

Hyhlík Tomáš (#050): Void Fraction Based Two Phase Flow Model of Natural Draft Wet-Cooling Tower.....	108
Janas Petr, Koubová Lenka, Krejsa Martin (#201): Load Carrying Capacity of Steel Arch Reinforcement Taking Into Account the Geometrical and Physical Nonlinearity	110
Jandejsek Ivan, Gajdoš Lubomír, Šperl Martin, Vavřík Daniel (#216): Experimental Measurement of Elastic-Plastic Fracture Parameters Using Digital Image Correlation Method.....	112
Janošťák Jan, Stoniš Jakub, Ramík Zdeněk (#112): Risk-Based Inspection of Some Components of Power Plant Prunéřov-II	114
Janotová Dana, et al. (#254): Properties of Commercially Available, Ready-to-Use Mortars for the Restoration of Historic Renders and Masonry.....	116
Janouchová Eliška, Kučerová Anna, Sýkora Jan (#081): Parameter Identification of Heterogeneous Materials from a Set of Destructive Experiments	118
Jebáček Ivo, Horák Marek (#176): Measuring of a Nose Landing Gear Load During Take-Off and Landing.....	120
Jelínek Tomáš, Straka Petr, Kladrubský Milan (#137): Aerodynamic Characteristics of Steam Turbine Prismatic Blade Section	122
Jiroušek Ondřej, Koudelka Petr, Fíla Tomáš (#231): Mechanical Properties of 3D Auxetic Structures Produced by Additive Manufacturing	124
Joch Lukáš, Krautschneid Roman (#067): VVER-440 Steam Generator's Two-Phase Flow Analysis..	126
Jovanović Miroslav M., et al. (#256): Experimental Modal Analysis of a Rectangular Plate with Embedded Piezoelectric Actuators and Sensors	128
Juraj Stein George, Tobolka Peter, Chmúrny Rudolf (#051): Preliminary Investigations of Machine Frame Vibration Damping Using Eddy Current Principle	130
Kadřová Jana, Eliáš Jan, Vořechovský Miroslav (#170): The Influence of Autocorrelation Length of Random Strength Stochastic Discrete Simulations	132
Kadlíček Tomáš, Janda Tomáš, Šejnoha Michal (#082): Calibration of Hypoplastic Models for Soils	134
Katrňák Tomáš, Juračka Jaroslav (#149): Detail Topometrical FEM Optimization of Wing Structural Panel	136
Knotek Jiří, Novotný Pavel, Maršíálek Ondřej (#127): Multibody Based Tool for Simulation of the Turbocharger Rotor Dynamics	138
Kolařík Filip, Patzák Bořek, Zeman Jan (#108): Fresh Concrete Flow through Reinforcing Bars using Homogenization Approach	140
Kolman Radek, Cho Sang Soon, Park K.C. (#013): Partitioned Equations of Motion for Wave Propagation Problems in Solids	142
Koudelka Petr, Neuhäuserová Michaela, Fíla Tomáš, Kytyř Daniel (#217): Deformation Mechanisms of Auxetic Microstructures for Energy Absorption Applications	144
Koudelka Petr (#053): Experiment E7/0,3 – Time Behaviour of Active Pressure of Non-Cohesive Sand after Wall Translative Motion	146
Koudelka Tomáš, Kruis Jaroslav (#092): Modelling of Moisture Transport Influenced by Damage in Concrete Structures	148
Koutník Tomáš (#155): Wing Geometry Design Using Glauert's Method	150
Kovářová Kateřina (#094): The Influence of Internal Structure Change on Sandstone Strength	152
Kožíšek Martin, Fürst Jiří, Příhoda Jaromír, Doerffer Piotr (#128): Implementation of $k-kL-\omega$ Turbulence Model for Compressible Flow into OPENFOAM	154
Král Radomil, Pospíšil Stanislav (#186): Numerical Investigation of Wind Effects on the Perforated Structures	156
Kralík Juraj, Grmanova Alžbeta, Klabník Maros (#179): Nonlinear Analysis of Fire Resistance of Composite Steel-Concrete Tube Column	158

Králik Juraj, Králik jr. Juraj (#178): Probabilistic Nonlinear Analysis of Bubble Tower Structure due to Extreme Pressure and Temperature	160
Krejsa Jan, Sýkora Miroslav, Drahorád Michal (#059): Probabilistic Assessment of Historic Reinforced Concrete Bridge	162
Kříštek Vladimír, Škaloud Miroslav, Kunrt Jaromír, Urushadze Shota (#190): Problems of Lamella Flanges in Steel Bridge Construction	164
Kruisová Alena, et al. (#114): Acoustic Metamaterial Behaviour of 3D Periodic Structures Assembled by Robocasting	166
Kruml Tomáš, et al. (#189): Effect of Pulsating Water Jet Peening on 316L Stainless Steel	168
Kubík Michal, Mazurek Ivan, Macháček Ondřej (#165): Decreasing of Sliding Friction in Hydraulic Piston Damper	170
Kučera Pavel, Přštěk Václav (#030): Computational Model of ATV Vehicle for Real-Time Simulation	172
Kušnerová Milena, Valíček Jan, Harničárová Marta (#194): Prediction of Optimal Load and Performance of Thermal Batteries	174
Kyncl Martin, Pelant Jaroslav (#045): Analysis of the Boundary Problem with the Preference of Mass Flow	176
Kytýř Daniel, et al. (#225): Deformation Behaviour of Gellan Gum Based Scaffold Subjected to Compression Loading	178
Laco Kamil, Borzovič Viktor (#109): Reliability of Approach Slabs and Modelling of Transition Zones of Bridge	180
Lehký David, Šomodíková Martina (#103): Utilization of Artificial Neural Network Based Response Surface Method for Reliability Analysis of Structures	182
Macounová Dana, Bayer Karol, Navrátilová Michaela, Slížková Zuzana (#234): Consolidation Testing of Porous Limestone Using Lime Nanomaterials: Optimization, Assessment of Stone Mechanical and Structural Characteristics	184
Major Štěpán, Kocour Vladimír, Hubálovský Štěpán (#191): Mechanics of Laser Cut Stent Grafts	186
Major Štěpán, Vavřík Daniel, Kocour Vladimír, Bryscejn Jan (#252): The Influence of Deformation of the Frame of Testing Device on the Accuracy of Brazilian Test and Indirect Assessment of Young Modulus	188
Makovička Daniel, Makovička jr. Daniel (#024): Failure of Window Glass Plate under Blast Load	190
Maršílek Ondřej, Novotný Pavel, Knotek Jiří (#126): Numerical Solution of Micro-Lubrication in Internal Combustion Engine Journal Bearing	192
Michalcová Vladimíra, Lausová Lenka (#218): Numerical Calculation of Coefficient of Force for Cylindrical Shape Smokestack Covered with Corrugated Iron	194
Michálek Petr, Zacho David (#029): Experimental Study of Gas Dispersion over Complex Terrain	196
Miczán Martin, Bednář Lukáš, Hoznedl Michal, Tajč Ladislav (#039): Experimental Verification of the Unloaded Control Valve	198
Mikeš Karel (#041): Quasicontinuum Approach Applied to Inelastic Materials	200
Minster Jiří, Šašek Petr (#195): Microindentation Assessment of Climatic Loading Impacts on Polymer Sealants	202
Milkvík Marek, et al. (#110): Influence of the Primary Breakup Conditions on the Droplet Size of the Spray Generated by Twin Fluid Atomizers	204
Myšáková Eva, Lepš Matěj (#157): Adaptive Updating of Meta-Models in Hyperspherical Domains	206
Náprstek Jiří, Fischer Cyril (#021): Non-Linear Normal Modes in Dynamics – Discrete Systems	208
Navrátilová Michaela, et al. (#250): Modification of Protective Lime Coating Systems for the Porous Limestone Using Lime Nanomaterials: Assessment of Mechanical Properties and Ageing Resistance	210

Němec Ivan, Štek Bauer Hynek (#125): Dynamic Analysis of Cables on Pulleys Using the New Algorithm	212
Novotný Lubomír W., Marek Jiří, Marek Tomáš (#205): Issue of Rigidity of the Ball Screw Nut Exposed to Bending Stress during Bending Stress of the Ball Screw	214
Novotný Lubomír W., Učený Oldřich (#203): Methodology of Geometry Testing and Measuring of Oversized Machine Tool Components and Their Verification Using the FEM Method	216
Panáček Tomáš, Klapka Milan (#060): Reduction of Pneumatic Tyred Roller Fuel Consumption	218
Pařík Petr (#133): Parallel Solver for Large Thermo-Elasto-Plastic Finite Element Problems	220
Pavlenko Michail V. (#007): Development of Technology of Controlled Wave Effects on Low-Carbon Array	222
Pečinka Ladislav, Švrček Miroslav (#006): Acoustic Standing Waves in Primary Circuit of NPPs with WWER 1000 MW	224
Pejchar Jan, Daniel Miloš, Popela Robert (#122): Mars Probe Soft Landing Test in the Earth Conditions	226
Petráňová Veronika, Sajdlová Tereza, Němeček Jiří (#214): Micromechanical Homogenization of Ultra-High Performance Concrete	228
Pichal Radek, Machacek Josef (#048): Stability of Stainless Steel Prestressed Stayed Columns	230
Podolka Luboš (#147): Helical Reinforcements Can Be Replaced with Glass Reinforcements	232
Podstawk Adam, Foglar Marek, Kristek Vladimir (#200): Statistical Evaluation of Three and Four-Point Bending Tests of FRC	234
Polach Pavel, Václavík Jaroslav (#016): Two Approaches to the Simulations of City Bus Driving Tests	236
Pospíšil Stanislav, et al. (#233): Variation of Strouhal Number on Iced Cable in Sub-Transitional Range	238
Pospíšilová Adéla, Lepš Matěj (#078): Reconstruction of Random Media via Multi-Objective Optimization	240
Přinost Michal, Kabele Petr (#096): Mechanical Properties of Fiber Reinforced Lime-Based Mortar Evaluated from Four-Point Bending Tes	242
Procházková Zdenka, Králík Vlastimil, Doubrava Karel, Šejnoha Michal (#113): Definition of Effective Material Properties of Recycled Plastic: Image Analysis and Homogenization	244
Püst Ladislav, Pešek Luděk (#037): Dynamics of Simple Planet Gearing Model	246
Radolf Vojtěch (#064): Mathematical Modelling of the Sensitivity of Acoustic Resonance Properties to a Change in Volume of Lateral Cavities of the Human Vocal Tract	248
Radová Zuzana, Nouzovský Luboš (#202): Measuring of Driving and Impact Dynamics of Cyclists ..	250
Raffai Peter, Novotný Pavel, Dlugoš Jozef (#129): Computer Simulation of the Behavior of the Piston Ring Pack of Internal Combustion Engines	252
Rek Václav, Němec Ivan (#055): Parallel Computing Procedure for Dynamic Relaxation Method on GPU Using NVIDIA's CUDA	254
Řezníček Hynek, Beneš Luděk (#136): Modelling of the Influence of Vegetative Barrier on Concentration of PM10 and PM2,5 from Highway	256
Řídký Radek, Iván László, Popovič Miloslav (#253): Ansys More than FEM	258
Řídký Radek, et al. (#181): The Dynamic Response of Polymeric Composites	260
Řídký Václav (#022): Numerical Simulation of Flow in the Human Vocal Tract	262
Rosenberg Josef, Štengl Milan, Byrtus Miroslav (#020): Simple Model of the Cajal-Like Interstitial Cell and Its Analysis	264
Rózsás Árpád, Sýkora Miroslav, Vigh László Gergely (#083): Long-Term Trends in Annual Ground Snow Maxima for the Carpathian Region	266

Rypl Daniel, Vesecký Jan (#123): Parallel Data Mapping between Simplex Finite Element Meshes using Mesh Topology	268
Šána Vladimír (#085): Dynamic Analysis of the Structure Exposed to the Moving Periodic Force and Viscoelastic Models of the Human Body	270
Šebek František, Kubík Petr, Petruška Jindřich (#017): Verification of Ductile Fracture Criteria Based on Selected Calibration Tests	272
Ševčík Martin, Hutař Pavel, Kotousov Andrej, Náhlík Luboš (#187): Fatigue Crack Front Behavior near the Free Surface	274
Sigalingging Riswanti, Herák David, Kabutey Abraham (#117): Tangent Curve Mathematical Model for Illustration of Deformation Curve of Rapeseeds	276
Šíp Viktor, Beneš Luděk (#177): Road Dust Emission Modelling	278
Škaloud Miroslav, Zörnerová Marie, Urushadze Shota (#184): The "Miracle" of Post-Buckled Behaviour in Thin-Walled Steel Construction and its Breathing-Induced Limitation	280
Slížková Zuzana, Frankeová Dita (#192): Strengthening of Weak Historic Renders with Traditional and Innovated Consolidation Treatment	282
Šmídová Magdalena, Sadílek Václav, Eliáš Jan, Vořechovský Miroslav (#066): Evaluation of Audze-Eglājs Criterion for Orthogonal and Regular Triangular Grids	284
Sobotka Jiří (#018): Forced Vibration Analysis of Timoshenko Beam with Discontinuities by Means of Distributions	286
Stach Eduard, Falta Jiří, Sulitka Matěj (#138): Analytical Solution of Hydrostatic Pocket Tilting	288
Štemberk Petr, Vaitová Michaela, Petřík Martin (#222): Estimation of Pressure Vessel Lower Head Impact Force	290
Stetina Jakub, Brezina Tomáš, Hadas Zdeněk (#145): Dynamic Analysis of Mechatronic System with Ball Screw	292
Straka Petr, Němc Martin (#019): Influence of the Radial Gap Under the Stator Blade on Flow Around the Hub-end of the Rotor Blade	294
Stránský Jan, Doškář Martin (#107): Stochastic Wang Tiles Generation Using the Discrete Element Method	296
Stránský Marek (#102): Determination of the Turning Knife Thermal Stress during Longitudinal Turning	298
Šubrt Kamil, Knoflíček Radek, Houška Pavel (#089): Comparison of Energy Efficiency of the Redundant Actuation of Positioning Axes	300
Šulec Petr, et al. (#106): Frequency Analysis of Torsion Vibration of Hard Rubbers under Finite Deformations	302
Sváček Petr (#101): On the Finite Element Method Application for Approximation of Free-Surface Flows with Surface Tension	304
Švancara Pavel, et al. (#132): Comparing the Use of Compressible and Incompressible Flow in the FE Model of Human Vocal Folds Self-Oscillation	306
Svoboda Bohumil, Svoboda Jan, Kašpar Radim (#031): Impact of Landslide on Blasting in the Quarry Dobkovičky	308
Svoboda David (#223): Kinematic Excitation of the Rotor	310
Svoboda Ondřej, Machacek Josef (#033): Influence of Textile Membrane on Stability of Supporting Steel Arch	312
Svoboda Petr, Kostal David, Křupka Ivan (#005): Study of Scale Effect in a Starved Elastohydrodynamically Lubricated Contact	314
Syrovátková Martina, Petrů Michal, Novotná Martina (#182): Crash Test of Carbon Composite	316
Szkoda Klaudia, Pezowicz Celina (#111): Influence of Vertebral Compression Fractures on the Deformation in Thoracolumbar Spine	318

Szkoda Klaudia, Pezowicz Celina, Žak Małgorzata (#169): The Influence of Facet Joint Load Transmission in the Spine Column on the Mechanical Properties of the Intervertebral Disc in Finite Element Modeling	320
Tesár Alexander (#062): Aeroelastic Response of Slender Full Sky Telescope	322
Tesař Václav (#026): Fluidic Relaxation Oscillators for Microbubble Generation.....	324
Tesař Václav (#206): Fluidic Oscillators with Active Devices Operating in Anti-Parallel	326
Tišlová Renata, Novotná Adéla (#255): Repair Formulations for Fine-Grained Stone Arte-Facts	328
Tsymbalyuk Volodymyr A. (#023): Influence of the Natural Frequency Mistuning and the Damping and Kinematic Properties of Blades on Subsonic Flutter Stability of Blading	330
Urbanová Soňa, Vorel Jan, Šejnoha Michal (#124): Modeling of Nonlinear Behavior of Textile Composites	332
Urushadze Shota, Pirner Miroš, Fischer Ondřej (#188): Wind Tunnel Experimental Study of Coupled Rocking-Swivelling Model of Guyed Mast Shaft	334
Valach Jaroslav, Wolf Benjamin, Paulová Eva, Urushadze Shota (#211): Assessment of Vibrations in Museum's Environment	336
Valášek Jan, Sváček Petr, Horáček Jaromír (#130): Numerical Simulation of Interaction of Fluid Flow and Elastic Structure Modelling Vocal Fold	338
Vampola Tomáš, Horáček Jaromír (#080): Numerical Simulation of the Speaker's Formant for Different Geometric Configuration of the Human Vocal Tract	340
Vančík Vladimír, Jirásek Milan (#040): Computer-Aided Plastic Limit Analysis of Plates	342
Vetiska Jan, Hadas Zdenek, Holub Michal (#116): Multidisciplinary Multi-Body Modeling of Machine Tools	344
Vilémová Monika, et al. (#226): Properties of Ultrafine-Grained Tungsten Prepared by Ball Milling and Spark Plasma Sintering	346
Vimr Jan, Jonášová Alena, Bublík Ondřej (#183): Assessment of Carotid Stenoses by the Principle of Fractional Flow Reserve Derived from CT	348
Vlček Václav, Štěpán M., Zolotarev Igor, Kozánek Jan (#204): Experimental Investigation of the Flutter Incidence Range for Subsonic Flow Mach Numbers	350
Voldřich Josef, Lazar Jan (#079): The Influence of Parameters of Interface Contact Elements of the LSB48 Blade's Computational Model on the Resonant Frequencies of the Bladed Disc	352
Votavová H., Pohanka M. (#135): Study of Water Jets Collision of High Pressure Flat Jet Nozzles for Hydraulic Descaling	354
Weis Martin, Cejpek Jakub, Juračka Jaroslav (#098): Acoustic Emission Localization in the Dynamic Fatigue Testing of a Composite Wing	356
Wieczorek Barbara (#235): Determining the Distribution of Forces in Reinforcing Bars in Slab-Column Connections of Reinforced Concrete Structures	358
Wieczorek Barbara (#236): Numerical Model on the Example of Experimental Investigations of a Punching in the Central Connection of the Slab with the Column Situated Eccentrically	360
Wieczorek Miroslaw (#237): Attempt of Numerical Mapping of a Real Model of Slab-Beam Connection Using the Simplified Shell Model	362
Wieczorek Miroslaw (#238): Proposed Way of Calculating the Value of the Failure Load in the Span Zone of Slab-Column Structures	364
Wątroba Paweł (#068): Numerical Simulation of Aerodynamic Forces Which Have an Impact on the Pantograph	366
Zahálka Jiří, Bradáč František, Tůma Jiří, Synek Miloš (#052): Issues with Determination of Mean Time to Dangerous Failure and Diagnostic Coverage in Safety Functions of Machine Tools	368
Žák Josef (#047): Modelling of Textile Structures	370

Zapoměl Jaroslav, Kozánek Jan, Ferfecki Petr (#154): <i>Investigations of Transient Oscillations of Rotors Supported by Magnetorheological Squeeze Film Dampers Using Bilinear Material to Model the Lubricant</i>	372
Zeman Vladimír, Hlaváč Zdeněk (#038): <i>Prediction of the Nuclear Fuel Rod Abrasion in the Probability Sense</i>	374
Zinkovskii A.P., Kruts V.A., Sinenko E.A., Tokar I.G. (#015): <i>Influence of Elastic Characteristics of Regular System on the Vibrodiagnostic Parameter Due to the Presence of a Breathing Crack</i>	376
Zinkovskii A.P., Savchenko K.V., Kruglii Ya.D. (#009): <i>Influence of the Conditions for Coupling of the Shrouds on the Static Stress State of Blade Rings</i>	378
Zlámal Petr, Fila Tomáš, Králík Vlastimil (#212): <i>Testing of Energy Absorption Capability of Sandwich Structures Based on Metal Foams for Design of Protective Helmets</i>	380
Zrůbek Lukáš, Kučerová Anna, Novák Jan (#160): <i>Artificial Neural Network in Approximation of Solution for Short-Cylinder-Shaped Inclusion Problem</i>	382