

Poster Session

1. ASY 076	Marat Dosaev, Liubov Klimina, Boris Lokshin, Vitaly Samsonov, Ekaterina	<i>Two-frequency averaging in the problem of motion of a counter-rotating vertical axis wind turbine</i>
2. ASY 123	J. Awrejcewicz, S.P. Pavlov, M.V. Zhigalov, V.A. Krysko	<i>Nonlinear dynamics of inhomogeneous in two directions nano-beams with topologic optimal microstructure</i>
3. ASY 127	Jan Awrejcewicz, Nikolay P. Erofeev, Vitaliy Dobriyan, Vadim A. Krysko	<i>Dissipative dynamics of a geometrically nonlinear Bernoulli-Euler beam under the action of a transverse load and color noises</i>
4. ASY 184	Fadi Dohnal	<i>Homotopy analysis method applied for coupled time-periodic systems</i>
5. ASY 281	Tomasz Mirosław	<i>Computer model of ground under vehicle's wheels</i>
6. BIF 100	Rafael Avança, Angelo Tusset, Marcelo Suetake, Helio Navarro, José Balthazar, Airtón Nabarrete	<i>The pendulum dynamic analysis with DC motors and generators for sea waves energy harvest</i>
7. BIF 130	Vadim A. Krysko - jr., Jan Awrejcewicz, Irina V. Papkova, Vadim A. Krysko	<i>General theory of geometrically nonlinear size dependent shells taking into account contact interaction. Part 1. Chaotic dynamics of geometrically nonlinear axially symmetric one-layer shells</i>
8. BIF 132	Irina V. Papkova, Olga A. Saltykova, Jan Awrejcewicz, Vadim A. Krysko	<i>Chaotic dynamics of a two-layer beam set, described by mathematical models of the first and second approximation</i>
9. BIF 176	Łukasz Borkowski	<i>Numerical analysis of dynamic stability of an isotropic plate by applying tools used in dynamics</i>
10. BIF 255	Zofia Szmit, Jerzy Warmański, Jarosław Latański	<i>Synchronisation analysis of a de-tuned three-blades rotor</i>
11. BIF 310	Krzysztof Polczyński, Grzegorz Wasilewski, Jan Awrejcewicz, Adam Wijata	<i>Modeling and experimental investigation of dynamics of two pendulums elastically coupled and driven by magnetic field</i>
12. BIF 361	Angelika Kosińska, Dariusz Grzelczyk, Jan Awrejcewicz	<i>Non-linear dynamics of flexibly suspended spring pendulum embedded in gravity and electric fields</i>
13. CON 074	Elżbieta Jarzębowska, Krzysztof Augustynek, Andrzej Urbaś	<i>Development of a computational based reference dynamics model of a flexible link manipulator</i>
14. CON 089	Jose Adenilson Gonçalves Luz Junior, Angelo Marcelo Tusset, Frederic Conrad Janzen, Rodrigo Tumolin Rocha, Jose Manoel Balthazar, Airtón Nabarrete	<i>Optimal control for robot manipulators with three-degrees-of-freedom</i>
15. CON 090	Wagner Barth Lenz, Angelo Marcelo Tusset, Rodrigo Tumolin Rocha, Frederic Conrad Janzen, Adriano Kossowski, Jose Manoel Balthazar, Airtón Nabarrete	<i>The influence of anti-roll bar in the dynamics of a full-car control</i>
16. CON 096	Zbigniew Koruba	<i>The control of the artillery-rocket set in conditions of random interferences</i>
17. CON 110	Izabela Krzysztofik	<i>Sliding control of a gyroscopic scanning and tracking system mounted on a moveable base</i>
18. CON 143	Mirosław Gidlewski, Leszek Jemioł, Dariusz Żardecki	<i>Sensitivity investigations of the lane change maneuver with an automatic control system</i>
19. CON 166	Jonas Kräml, Carsten Behn	<i>Gait transitions in artificial non-standard snake-like locomotion systems using adaptive control</i>

20.	CON 192	Tomasz Pałczyński, Jakub Łagodziński	<i>Model of kinetic energy recuperation system for city buses</i>
21.	CON 229	Łukasz Woliński	<i>Implementation of the adaptive control algorithm for the KUKA LWR 4+ robot</i>
22.	CON 239	Zbigniew Koruba, Daniel Gapiński, Piotr Szmidt	<i>A reverse analysis of the remote controlled artillery-missile set dynamics under the influence of disturbances</i>
23.	CON 270	Yulia Danik, Mikhail Dmitriev, Ekaterina Komarova, Dmitry Makarov	<i>Application of Pade approximations to the solution of nonlinear control problems</i>
24.	CON 300	Mateusz Krain, Bartłomiej Zagrodny, Jan Awrejcewicz	<i>Exoskeleton – control by pressure sensors – practical solution</i>
25.	ENG 025	Liubov Klimina, Boris Lokshin, Vitaly Samsonov, Yury Selyutskiy, Ekaterina Shalimova, Alois Steindl	<i>Modeling of dynamics of a counter-rotating horizontal axis wind turbine</i>
26.	ENG 124	Alena A. Zakharova, Jan Awrejcewicz, Tatyana V. Yakovleva, Vadim S. Kruzhilin, Anton V. Krysko	<i>Contact interaction of a nanoplate, reinforced by a local set of nanobeams located in a stationary temperature field</i>
27.	ENG 125	Jan Awrejcewicz, Tatyana V. Yakovleva, Vadim S. Kruzhilin, Svetlana A. Mitskevich, Vadim A. Krysko	<i>Theory of coupled deformation and temperature fields for three-layer nano-mechanical structures</i>
28.	ENG 161	Robert Mitoraj, Marek Szczotka	<i>Dynamics of a portable module handling system</i>
29.	ENG 241	Ivan Shatskyi, Ihor Popadyuk, Andrii Velychkovych	<i>Hysteretic properties of shell dampers</i>
30.	ENG 289	Kamil Urbanowicz, Mateusz Firkowski	<i>Modelling water hammer with quasi-steady and unsteady friction in viscoelastic conduits</i>
31.	ENG 312	Przemysław Szulim, Stanisław Radkowski	<i>The analytical approach for identification of magnetically induced vibrations of working in faulty state BLDC motor</i>
32.	ENG 366	Adrian Chmielewski, Robert Gumiński, Tomasz Mydlowski, Artur Małecki, Krzysztof Bogdziński	<i>Model based research on ICE engine powered by an alternative fuels</i>
33.	EXP 093	Łukasz Breńkacz, Grzegorz Żywica, Marta Drośnińska-Komor, Natalia Szewczuk-Krypa	<i>The experimental determination of bearings dynamic coefficients in a wide range of rotational speeds, taking into account the resonant speed and speeds at which there was a phenomenon of hydrodynamic instability</i>
34.	EXP 147	Rafał Burdzik, Bogusław Nowak, Jacek Rozmus	<i>Comparative analysis of rail vibration structure in the aspect of identifying the excitation characteristics</i>
35.	EXP 155	Rafał Burdzik, Łukasz Konieczny, Bogusław Nowak, Jakub Młyńczak, Jacek Rozmus	<i>Analysis of the propagation of the vibration of the rail vehicle while driving with and without locomotive wheel slip</i>
36.	EXP 178	Paweł Wątroba, Mariusz Pawlak, Damian Gąsiorek	<i>Validation of the numerical model of Impuls I electric multiple unit driver's</i>
37.	EXP 190	Tomasz Pałczyński	<i>Dynamic properties of pipes in different geometries with pulsating flows in transient states (sweeping up and down) under various temperature conditions</i>
38.	EXP 232	Paweł Komorski, Tomasz Nowakowski, Grzegorz M. Szymanski, Franciszek Tomaszewski	<i>Application of time-frequency analysis of acoustic signal to detecting flat places on the rolling surface of a tram wheel</i>
39.	EXP 260	Jan Warczek, Rafał Burdzik, Łukasz Konieczny	<i>The concept of autonomous damper in vehicle suspension</i>
40.	EXP 290	Mirosław Gidlewski, Leon Prochowski, Leszek Jemioł, Dariusz Żardecki	<i>The process of energy dissipation during a front-to-side collision of passenger cars</i>

41. EXP 293	Tomasz Kik, Jaromir Moravec, Iva Nováková	<i>Application of numerical simulations on 10GN2MFA steel multilayer welding</i>
42. LIF 035	Ambrus Zelei, Csenge A. Molnár, Tamás Insperger	<i>Four-bar mechanism substitution for balance board experiments: a parametric study</i>
43. LIF 053	László Bencsik, Bálint Bodor, Tamás Insperger	<i>Reconstruction of motor force during stick balancing</i>
44. LIF 085	Andjelka N. Hedrih, Katica (Stevanović) Hedrih	<i>Influence of mass chromosome distribution in equatorial plane on oscillatory energy of mitotic spindle trough biomechanical oscillatory model of mitotic spindle</i>
45. LIF 163	Carsten Behn, Konrad Siedler	<i>Tracking control of a muscle-like actuated double pendulum</i>
46. LIF 278	Tomasz Mirosław, Adam Zawadzki	<i>Non-linear modeling of human body dynamic load</i>
47. LIF 306	Wiktoria Wojnicz, Bartłomiej Zagrodny, Michał Ludwicki, Małgorzata Syczewska, Jerzy Mrozowski, Jan Awrejcewicz	<i>Approach for determination of functioning of lower limb muscles</i>
48. LIF 343	Ievgen Levadnyi, Dariusz Grzelczyk, Jan Awrejcewicz, Oleg Loskutov	<i>Influence of the fixation region of a hip stem on the behaviour of the "bone-implant" system</i>
49. LIF 352	Paweł Biesiacki, Dariusz Grzelczyk, Jerzy Mrozowski, Jan Awrejcewicz	<i>A novel human "broomstick" forward fall model and its application in the strength analysis of the human upper extremity</i>
50. MAT 024	Agnieszka Ozga	<i>Analysis of vibrations of an oscillator using statistical series</i>
51. MAT 038	Natalia Dubovikova, Erik Gerlach, Igor Zeidis, Klaus Zimmermann	<i>An approach to the mechanical modeling of contact problems in the application to friction stir welding</i>
52. MAT 047	Irina Demiyanyushko, Ilya Karpov, Beka Tavshavadze	<i>Developments of non-linear dynamics FEM simulation of the impact performance of road safety barriers with use of experimental validation of models</i>
53. MAT 048	Barbara Tomczyk, Paweł Szczerba	<i>Micro-dynamics of thin tolerance-periodic cylindrical shells</i>
54. MAT 065	Barbara Tomczyk, Anna Litawska	<i>A new asymptotic-tolerance model of dynamics of thin uniperiodic cylindrical shells</i>
55. MAT 081	Filip Zakęś, Paweł Śniady	<i>Vibrations of a multi-span beam subjected to a moving stochastic load</i>
56. MAT 088	Adam Przemyk, Szymon Tengler, Andrzej Harlecki	<i>An analysis of dynamics of a truck with a trailer</i>
57. MAT 117	Ryszard Wojnar, Włodzimierz Bielski	<i>Gravity waves in a reservoir with uneven bottom: asymptotic approach</i>
58. MAT 181	Wojciech Danek, Mariusz Pawlak	<i>Charpy Impact Testing Machine in modeling of vehicle frontal crash with street lights</i>
59. MAT 243	Mikhail Nikabadze	<i>On decomposition of the initial boundary value problems in mechanics</i>
60. MAT 258	Przemysław Dąbek, Maciej Trojnacki	<i>Comparative analysis of tire models for simulation of longitudinal motion of lightweight wheeled mobile robots</i>
61. MAT 266	Hovik Matevossian, Mikhail Nikabadze, Armine Ulukhanian	<i>On solutions of biharmonic problems</i>
62. MAT 280	Tomasz Mirosław	<i>Model of 4-wheel electric drive vehicle with ESP and ABS system</i>
63. MAT 367	Adrian Chmielewski, Jakub Możaryn, Robert Gumiński, Przemysław Szulim, Krzysztof Bogdziński	<i>Experimental evaluation of mathematical and artificial neural network modeling of energy storage system</i>
64. MAT 381	Mikhail U. Nikabadze, Tamar Moseshvili, Armine R. Ulukhanian, Ketevan Tskhakaia, Nodar Mardaleishvili	<i>Formulation of the initial boundary value problems in the theory of multilayer thermoelastic thin bodies in moments (part II)</i>

65.	MAT 388	Mikhail U. Nikabadze, Tamar Moseshvili, Armine R. Ulukhanian, Ketevan Tskhakaia, Nodar Mardaleishvili	<i>Formulation of the initial boundary value problems in the theory of multilayer thermoelastic thin bodies in moments (part III)</i>
66.	MTR 193	Andrzej Kosiara, Jakub Chołodowski	<i>Development of a prototype dynamic weighing system for single bucket excavator</i>
67.	MTR 337	Kostiantyn Vonsevych, Mikhail Bezuglyi, Jerzy Mrozowski, Jan Awrejcewicz	<i>Features of low-channel sEMG and FMG control systems for the biomechatronic solution of human fingers replacement</i>
68.	MTR 360	Dariusz Grzelczyk, Bartosz Stańczyk, Olga Szymanowska, Jan Awrejcewicz	<i>Simulation of the octopod robot controlled by different Central Patterns Generators</i>
69.	MTR 369	Bartłomiej Zagrodny, Cezary Miśkiewicz, Krystian Polczyński, Jan Awrejcewicz	<i>Bionic movement algorithms implemented in mechatronic robots</i>
70.	MTR 379	Lech Knap, Jędrzej Mączak, Michał Trojgo	<i>Process-oriented approach to the design of Cyber-Physical Systems</i>
71.	NON 309	Krzysztof Witkowski, Grzegorz Kudra, Grzegorz Wasilewski, Fryderyk Wiądkowicz, Jan Awrejcewicz	<i>Experimental and numerical investigations of one-degree-of-freedom impacting oscillator</i>
72.	NUM 066	Jaroslav Zapoměl, Jan Kozánek, Petr Fernecki	<i>The mathematical modelling of nonlinear vibration of rotors influenced by magnetic and electric effects</i>
73.	NUM 164	Nicola Maria Auciello, Maria Anna De Rosa, Maria Lippiello, Stefania Tomasiello	<i>Review on the Cell Discretization Method</i>
74.	NUM 213	Adam Papierski, Andrzej Błaszczak, Mariusz Susik	<i>CFD predict dynamic properties (stiffness and damping) of long labyrinth seals in axial balance drum for high frequency pump</i>
75.	NUM 221	Mario Wuehrl, Matthias Klaerner, Lothar Kroll	<i>Energy based composite damping modelling</i>
76.	NUM 245	Erwin Ulises Lopez Palechor, Marcela Rodrigues Machado, Marcus Vinicius Girão de Moraes, Luciano Mendes Bezerra	<i>Dynamic analysis of a beam with additional auxiliary mass spatial via spectral element method</i>
77.	NUM 283	Adam Martowicz, Wiesław J. Staszewski, Massimo Ruzzene, Tadeusz Uhl	<i>Nonlocal elasticity theory for solving dynamic problems via peridynamics</i>
78.	OPT 122	Ruzena Kralikova, Miroslav Badida, Lydia Sobotova, Anna Badidova	<i>Design of illumination and lighting visualisation by simulation methods</i>
79.	OPT 187	Paweł Maciąg, Paweł Malczyk, Janusz Frączek	<i>Optimal design of multibody systems using the adjoint method</i>
80.	OPT 316	Robert Jasionowski, Waldemar Kostrzewa	<i>Optimization of geometry of cavitational tunnel by using CFD method</i>
81.	STA 040	Hjörtur Björnsson, Sigurdur Hafstein	<i>Lyapunov functions for almost sure exponential stability</i>
82.	STA 068	Yury D. Selyutskiy, Andrei P. Holub, Marat Z. Dosaev, Rinaldo Garziera	<i>Elastically mounted double pendulum in flow</i>
83.	STA 165	Nicola Maria Auciello, Maria Anna De Rosa, Maria Lippiello, Stefania Tomasiello	<i>Non-conservative instability of cantilevered nanotube via Cell Discretization Method (CDM)</i>

84. STA 199	Tatyana Y. Yaroshenko, Jan Awrejcewicz, Igor I. Shulga, Maxim V. Zhigalov, Vadim A. Krysko	<i>Application of non-linear dynamics to Poland's evolution</i>
85. VIB 043	Susanne Sumi, Philipp Schorr, Valter Böhm, Klaus Zimmermann	<i>Dynamic analysis of a compliant tensegrity structure for the use in a gripper application</i>
86. VIB 059	Olga Szlachetka, Jacek Jaworski, Marek Chalecki	<i>Free vibration of cantilever bars having a shape of solid and hollow curvilinear truncated cone</i>
87. VIB 079	Krzysztof Michalczyk, Wojciech Sikora	<i>Analysis of the influence of parameters of elastic layer in shock-absorbing holder of helical spring on its dynamic and static properties</i>
88. VIB 107	Martin Svoboda, Václav Schmid, Josef Soukup, Milan Sapieta	<i>Influence of the spring system in vehicle vibrafon</i>
89. VIB 185	Matthias Klaerner, Mario Wuehrl, Lothar Kroll, Steffen Marburg	<i>Amplitude dependent damping of hybrid composites - experimental determination and energetic interpretation</i>
90. VIB 202	Milan Nad', Ladislav Rolník, Lenka Kolíková	<i>Influence of pre-stressed zones in beam structures on the modification their modal properties</i>
91. VIB 203	Maciej Dutkiewicz	<i>Interaction of bridge cables and wake behind in the vortex induced vibrations</i>
92. VIB 206	Andrzej Rysak	<i>Dynamics and effectiveness of Villari effect in magnetostrictive composite beam in the presence of magnetic field</i>
93. VIB 251	Paweł Zdziebko, Adam Martowicz, Tadeusz Uhl	<i>Influence of the mechanical properties of pantograph's structural parts on its interaction with a catenary</i>
94. VIB 288	Miroslav Byrtus, Štěpán Dyk	<i>Jeffcott rotor bifurcation behaviour using different models of hydrodynamic bearings</i>
95. VIB 297	Ersin Aydin, Baki Öztürk, Maciej Dutkiewicz	<i>Control of vibrations of multistory buildings with use of passive dampers</i>