Lithuanian Academy of Science

Vilnius Gediminas Technical University

Kaunas University of Technology

Opole University of Technology

Bialystok Technical University

IFToMM National Committee of Lithuania

The 9th International Conference

Mechatronic Systems and Materials

MSM-2013

Programme

1–3 July, 2013
Vilnius, Lithuania

Vilnius „Technika“ 2013

The 9th International Conference "Mechatronic Systems and Materials" (MSM-2013), held on 1–3 July, 2013, Vilnius, Lithuania.

Conference Mechatronic Systems and Materials (MSM-2013) is being organized by:

Vilnius Gediminas Technical University, Faculty of Mechanics
Kaunas University of Technology
Lithuanian Academy of Sciences
Opole University of Technology
Bialystok Technical University
IFToMM National Committee of Lithuania

Aim of the Conference

The aim of the conference is to provide an opportunity to share information and facilitate co-operation in mechatronics and new materials and dissemination of current research results in this multidisciplinary field.

Conference Venue

MSM-2013 will be held in Vilnius, the capital of the Republic of Lithuania. Situated at 25 km from the Geographical Center of Europe Vilnius is one of the oldest cities of Eastern Baltic region and the largest city of the Country. According to the data of 2011 the population of Vilnius is more than 539 000. The Old Town, historical centre of Vilnius, is one of the largest in Eastern Europe (about 400 square kilometers). The most valuable historic and cultural heritage is concentrated here, including the mixture of all European architectural styles. Because of its uniqueness the old town of Vilnius has been in the UNESCO World Heritage List since 1994. From 01 May 2004 Lithuania is the member of European Union. From 01 July 2013 Lithuania is the Presidency of the Council of the European Union.

For more information please visit http://www.vilnius-tourism.lt/en/

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Important Addresses

→Registration of participants – Faculty of Mechanics, Vilnius Gediminas Technical University, J. Basanavičiaus str. 28.
→The Conference Opening Ceremony – Faculty of Mechanics, Vilnius Gediminas Technical University, J. Basanavičiaus str. 28.
→Presentations of papers – Faculty of Mechanics, Rooms 1, 2, 3, J. Basanavičiaus str. 28.
→Presentations of posters – Faculty of Mechanics, Rooms 4, J. Basanavičiaus str. 28.
→Conference Gala Dinner – the restaurant "Tvirtovė", 20 km far from Vilnius.

Outline Conference Program

	2013.07.01 (Monday)	2013.07.02 (Tuesday)			2013.07.03 (Wednesday)	
9:00	Registration of Conference Participants Vilnius Gediminas Technical University, Faculty of Mechanics, J. Basanavičiaus str. 28 (10:00–16:00)	Section 1 Room 120 Paper presentations Session 1	Section 2 Room 110 Paper presentations Session 1	Section 3 Room 106 Paper presentations Session 1	Section 1 Room 110 Paper presentations Session 1	Section 2 Room 106 Paper presentations Session 1
		Poster presentations Session 1 (10:00–11:30) Room 105			Poster presentations Session 3 (10:00–11:30) Room 105	
11:00		Coffee break / Room 125			Coffee break / Room 125	
11:30		Section 1 Room 120 Paper presentations Session 2	Section 2 Room 110 Paper presentations Session 2	Section 3 Room 106 Paper presentations Session 2	Section 1 Room 110 Paper presentations Session 2	Section 2 Room 106 Paper presentations Session 2
13:45					Closing Ceremony / Room 133	
14:00	Conference Opening Ceremony Room 133	Lunch / restaurant "Boršč"			Lunch / restaurant "Boršč"	
15:00		Section 4 Room 120 Paper presentations Session 3	Section 2 Room 110 Paper presentations Session 3	Section 3 Room 106 Paper presentations Session 3	Field Excursion	
16:00	Cocktail Party Room 125	Poster presentations Session 2 (15:00–16:30) Room 105				
18:00	Walking Excursion					
19:00		Gala Banquet / restaurant "Tvirtovė"				

Conference MSM 2013 Daily Programme

2013.07.01 (Monday)

10:00–16:00	**Registration of Conference Participants** (Vilnius Gediminas Technical University, Faculty of Mechanics, J. Basanavičiaus str. 28)
14:00–16:00	**Conference Opening Ceremony** (Vilnius Gediminas Technical University, Faculty of Mechanics, J. Basanavičiaus str. 28) **Introductory Address** **Scientific Committee Chairman** **Prof. Dr. Habil. Algirdas Vaclovas Valiulis**, Dean of Faculty of Mechanics of VGTU **Official Welcome** **Prof. Dr. Alfonsas Daniūnas,** Rector of Vilnius Gediminas Technical University **Opening Welcome** **Prof. Dr. Habil. Valdemaras Razumas**, President of the Lithuanian Academy of Sciences **Keynote presentations:** **1 st** keynote presentation Active kinematic pairs: structure, charakteristics, applications **Prof. Dr. Habil. Ramutis Petras Bansevičius** **2 nd** keynote presentation Open materials research and innovation in Europe **Prof. Dr. Habil. Krzysztof. J. Kurzydłowski** **3 rd** keynote presentation Chaotic vibrations in science and engineering **Prof. Dr. Habil. Minvydas Ragulskis**
16:00–18:00	Cocktail Party
18:00	Walking Excursion

2013.07.02 (Tuesday)

Section I: Mechatronic Systems I

Room 120

Session 1

Chairman *Assoc. prof. Dr. Bučinskas V., Vilnius Gediminas Technical University*

Co-Chairman *Assoc. prof. Dr. Murawski L., Gdynia Maritime University*

9:00–9:15	*Dragan K., Dziendzikowski M., Klysz S., Kurnyta A.* Health monitoring of the aircraft structure during a full scale fatigue test with use of an active piezoelectric sensor network
9:15–9:30	*Hein R., Orlikowski C.* Hybrid reduced model of impacting beams
9:30–9:45	*Hein R., Orlikowski C.* Reduced order model of a beam rotating in horizontal plane
9:45–10:00	*Kaldonski T. J., Cudzilo S.* Study on the Thermal Stability of Selected Ionic Liquids
10:00–10:15	*Kurnyta A., Leski A., Dragan K., Dziendzikowski M.* Health monitoring of an aircraft structure during a full scale fatigue test with use of resistive ladder sensors
10:15–10:30	*Lisauskas S., Poška A.J., Uznys D.* Electric multi-module catapult dynamics
10:30–10:45	*Murawski L., Charchalis A.* Estimation method of torsional vibration of marine propulsion system
10:45–11:00	Discussion
11:00–11:30	Coffee break / Room 125

Room 120

Session 2

Chairman *Prof. Dr. Drewniak J., University of Bielsko-Biala*
Co-Chairman *Assoc. prof. Dr. Bučinskas V., Vilnius Gediminas Technical University*

11:30–11:45	*Sokas A., Čiupaila L.* Geometry and programming in the drawing for the artificial intelligence experience
11:45–12:00	*Springis G., Rudzitis J., Avisane A., Kumermanis M., Semjonovs J., Leitans A.* Wear problems of slide-friction pair
12:00–12:15	*Bučinskas V., Šutinys E., Augustaitis V. K., Urbanavičius R.* Experimental research of steel rope vibrations
12:15–12:30	*Zbrowski A., Jóźwik W.* Determination of the speed of an unmanned rescue vehicle
12:30–12:45	*Gužas D.* Stability of acoustic barriers, depending on materials and barrier acting forces
12:45–13:00	*Gužas D., Anaško S.* Investigation of the properties of new materials that may change the sound insulation and sound absorption evaluation parameters
13:00–13:15	*Drewniak J., Zawiślak S.* Multiway planetary gears modelling by means of contour graphs
13:15–13:30	*Zbrowski A., Samborski T., Matras E.* System for graphic personalisation of cards and paper sheets
13:30–13:45	Discussion
14:00–15:00	Lunch

Section IV: Education

Room 120

Session 1

Chairman *Prof. Dr. Habil. Valiulis A.V., Vilnius Gediminas Technical University*
Co-Chairman *Assoc. prof. Dr. Maceika A., Vilnius Gediminas Technical University*

15:00–15:15	*Maceika A., Jančiauskas B.* Engineering education based on engineering change
15:15–15:30	*Smater M., Zieliński J.* Automatization and Robotization as a Lever for Process and Product Quality in SME
15:30–15:45	*Smater M., Zieliński J.* Virtual laboratory for automation and robotics study
15:45–16:00	*Valiulis A.V, Bučinskas V., Toločka E.* Strengthening mobility for better learning
16:00–16:30	Discussion
19:00	Conference Gala Banquet

Section II: Mechatronic Systems II

Room 110

Session 1

Chairman *Prof. Dr. Gürbüz R., Cankiri Karatekin University*
Co-Chairman *Assoc. prof. Dr.Urbonavičius R., Vilnius Gediminas Technical University*

9:00–9:15	*Augustinavičius G, Čereška A.* Modeling of a compliant based precise positioning stage
9:15–9:30	*Väljaots E., Sell R., Kaeeli M.* Motion and Energy Efficiency Parameters of Unmanned Ground Vehicle
9:30–9:45	*Buchacz A.* Classic and unclassic methods in synthesis of the transverse vibrating mechatronic systems
9:45–10:00	*Kabaciński M., Pawliczek R.* Mechatronic concept for airflow tests laboratory equipment
10:00–10:15	*Mystkowski A.* SISO Model identification of a Micro Air Vehicle for Robust Control Design
10:15–10:30	*Gürbüz R.* Experimental measurement of maximum bending stress on rectangular aluminum beam
10:30–10:45	*Karaliūnas B., Lukošienė D.* Study on sensors used in security and alarm systems for buildings
10:45–11:00	Discussion
11:00–11:30	Coffee break / Room 125

Room 110

Session 2

Chairman *Prof. Dr. Milecki A., Poznan University of Technology*
Co-Chairman *Assoc. prof. Dr. Mažeika D., Vilnius Gediminas Technical University*

11:30–11:45	*Laurinavičius L.* Energy efficient circulators with variable-speed electrical motors for hydronic application in buildings
11:45–12:00	*Mažeika D., Lučinskis R., Kulvietis G., Bansevičius R.* Investigation of traveling wave oscillations of piezoelectric cylinder
12:00–12:15	*Milecki A., Rybarczyk D.* Modeling and control of proportional valve with synchronous motor
12:15–12:30	*Milecki A., Pittner G.* Design of 32-bit washing machine controller
12:30–12:45	*Pajor M., Stateczny K.* Intelligent machine tool: new manual programming techniques
12:45–13:00	*Pajor M., Zapłata J.* Intelligent machine tool – Thermal diagnostic system of cnc pretentioned ball screw
13:00–13:15	*Pajor M., Grudziński M.* Intelligent machine tool – Vision 3d scanning system for positioning of the workpiece
13:15–13:30	*Tiimus K., Tamre M.* Modular multi-rotor helicopter platforms
13:30–13:45	Discussion
14:00–15:00	Lunch

Room 110

Session 3

Chairman *Prof. Dr. Habil. Rinkevičienė R., Vilnius Gediminas Technical University*

Co-Chairman *Assoc. prof. Dr. Kilikevičius A., Vilnius Gediminas Technical University*

15:00–15:15	*Rinkevičienė R., Kundrotas B., Tolvaišienė S.* Model of six-phase induction motor
15:15–15:30	*Sędziak D., Regulski R.* Design and investigations of piezobender controlled servovalve
15:30–15:45	*Zhigailov S., Kuznetcov A., Musalimov V., Aryassov G.* Measurement and analysis of human lower limbs movement parameters during walking
15:45–16:00	*Bučinskas V., Klevinskis A., Mitrouchev P., Urbanavičius R.* Implementation of controllable damper for suppress vibration in technological process
16:00–16:30	Discussion
19:00	Conference Gala Banquet

Section III: Materials and Engineering Technologies

Room 106

Session 1

Chairman *Prof. Dr. Turmanidze R., Georgian Technical University*
Co-Chairman *Assoc. prof. Dr. Güllü A., Gazi University*

9:00–9:15	*Minorowicz B.* Design of test stand for magnetic shape memory alloys samples and representation of obtained results
9:15–9:30	*Dzionk S., Ścibiorski B.* Hardened steel surface waviness created by rolling burnishing process
9:30–9:45	*Wiewiórowska S., Muskalski Z., Siemiński M.* The influence the temperature of drawing process on the transformation retained austenite into martensite for TRIP steel wires
9:45–10:00	*Szczygłowski J.* Loss prediction for a high silicon steel
10:00–10:15	*Turmanidze R., Beridze M.* Selection of materials for implants of the human hip – joint and technology of their machining with achievement of high precision and quality of spherical surfaces
10:15–10:30	*Gocman K., Kałdoński T., Mróz W., Budner B.* The effect of deposition parameters on the structural and mechanical properties of BN coatings deposited onto high-speed steel by pld method
10:30–10:45	*Sarıkaya M., Güllü A.* Analysis of process parameters in turning of cobalt-based super alloy Haynes 25 / L 605 using design of experiment
10:45–11:00	Discussion
11:00–11:30	Coffee break / Room 125

Room 106

Session 2

Chairman *Prof. Dr. Habil. Marcinkevičius A., Vilnius Gediminas Technical University*

Co-Chairman *Assoc. prof. Dr. Boiko I., Riga Technical University*

11:30–11:45	*Brensons I., Polukoshko S., Siliņš A., Mozga N.* Fdm prototype experimental research of processing parameter optimization to achieve higher transversal tensile stress
11:45–12:00	*Ślusarek B., Chwastek K., Szczygłowski J., Jankowski B.* Modelling hysteresis loops of smc cores
12:00–12:15	*Marcinkevičius A. H.* Analysis of optimization of selection the tools for turning
12:15–12:30	*Ścibiorski B., Dzionk S.* Hardened steel surface roughness created by rolling burnishing process
12:30–12:45	*Klimasara W., Pilat Z., Słowikowski M.* Safety problems in robotized welding of big elements
12:45–13:00	*Karabulut Şener, Güllü Abdulkadir* Influence of Lead Angle Variation On The Coated Carbide Inserts Wear When Milling CGI and Modeling by Artificial Neural Networks and Regression Analysis Method
13:00–13:15	*Mironovs V., Boiko I., Kolbe M.* Application of pulse electromagnetic field for joining of powder details
13:15–13:30	Discussion
14:00–15:00	Lunch

Room 106

Session 3

Chairman *Prof. Dr. Habil. Marcinkevičius A., Vilnius Gediminas Technical University*

Co-Chairman *Assist. prof. Dr. Mańka M., AGH University of Science and Technology*

15:00–15:15	*Gornostajev D., Aryassov G.* Development of the calculation method of plates for optimization of barge hull thickness
15:15–15:30	*Gintalas M., Kalninš K., Pakalnis A., Šadreika, Žiliukas A.* Evaluation of static and dynamic stress intensity P. factors under pure mode I and mixed mode I/II fracture
15:30–15:45	*Mańka M., Martowicz A., Rosiek M., Ambroziński Ł., Uhl T.* Numerical modelling and experimental verification of the interdigital transducers for lamb wave generation
15:45–16:00	*Banas M.* Low-speed hydraulic pump as a tool for setting and measuring torque
16:00–16:30	Discussion
19:00	Conference Gala Banquet

Room 105

Poster

10:00–11:30	Poster presentations Session 1
15:00–16:30	Poster presentations Session 2

2013.07.03 (Wednesday)

Section I: Mechatronic Systems I

Room 110

Session 1

Chairman *Prof. Dr. Habil. Sidaravičius J., Vilnius Gediminas Technical University*

Co-Chairman *Prof. Dr. Meneses J, University Carlos III de Madrid*

9:00–9:15	*Banaś W., Gwiazda A., Kost G., Reclik D.* Analysis of the dynamic properties of the mechatronic integrator of control procedures of the vehicle driven by disabled persons
9:15–9:30	*Bialas K., Buchacz A., Galeziowski D.* Designing of active mechanical system with electrical elements
9:30–9:45	*Bialas K., Buchacz A., Galeziowski D.* Passive and active vibration isolation methods in discrete mechatronic systems
9:45–10:00	*Corral E., Aryassov G., Meneses J.* A quasi-static approach to optimize the motion of an ugv depending on the track profile
10:00–10:15	*Augustaitis V. K., Gičan V., Jakštas A., Spruogis B., Turla V.* The dynamic errors of machatronically controlled lifting equipment
10:15–10:30	*Ragauskas P., Grigaliūnienė S., Sidaravičius J., Turla V.* Identification of the prints elastic parameters using vibrational methods
10:30–10:45	*Tiimus K., Murumäe M., Väljaots E., Tamre M.* High-efficiency internal combustion engine for unmanned aircraft use
11:00–11:30	Coffee break / Room 125

Room 110

Session 2

Chairman *Prof. Dr. Čereška A., Vilnius Gediminas Technical University*
Co-Chairman *Dr. Gücüyener I., Uludag University*

11:30–11:45	*Hendzel Z., Szuster M.* Approximate dynamic programming in sensor–based navigation of wheeled mobile robot
11:45–12:00	*Gücüyener I.* Fuzzy neural network–based controller
12:00–12:15	*Marcinkevičius A. H.* Analysis of influence of different kinds of drills on production results
12:15–12:30	*Gwiazda A., Herbuś K., Kost G., Ociepka P.* Designing mechatronics equipment basing on the example of stewart platform
12:30–12:45	*Dobrzańska–Danikiewicz A., Sękala A.* Possibilities of Application of Agent–Based Systems to Support Functioning of E–manufacturing Environment
12:45–13:00	*Ociepka P., Herbuś K., Gwiazda A., Kost G.* Motion analysis of mechatronic equipment on the example of the stewart platform
13:00–13:15	Discussion
14:00–15:00	Lunch

Section II: Mechatronic Systems II

Room 106

Session 1

Chairman *Assoc. prof. Dr.Mokšin V., Vilnius Gediminas Technical University*
Co-Chairman *Dr. Iluk A., Wroclaw University of Technology*

9:00–9:15	*Ralys A., Striška V., Mokšin V.* Selection of the nozzle for metal surface cleaning using cavitating pulsing fluid flow
9:15–9:30	*Buchacz A., Płaczek M., Wróbel A.* Mathematical algorithm for analysis of piezoelectric stacks with structural damping
9:30–9:45	*Iluk A.* Modeling and evaluation of loads in vehicles subjected to mine blast
9:45–10:00	*Hetmańczyk M. P.* The prediction oriented analysis of mechatronic machine structures in terms of the signal streams flow
10:00–10:15	*Hetmańczyk M. P.* The prediction oriented analysis of mechatronic machine structures recorded by directed graphs
10:15–10:30	*Nowicki M., Szewczyk R.* Application of magnetovision scanning system for detection of dangerous objects
10:30–10:45	*Przybylski J., Majcher A., Neska M.* Reconfigurable control system for a pa-pvd technology test stand
10:45–11:00	*Salach J., Szewczyk R., Bieńkowski A., Jackiewicz D.* Tensile stress sensor with amorphous ring shape core
11:00–11:30	Coffee break / Room 125

Room 106

Session 2

Chairman *Assoc. prof. Dr.Kilikevičius A., Vilnius Gediminas Technical University*

Co-Chairman *Assoc. prof. Dr.Mokšin V., Vilnius Gediminas Technical University*

11:30–11:45	*Škamat J., Valiulis A.V., Černašėjus O.,* NiCrBSi coatings under vibratory treatment
11:45–12:00	*Bačinskas D., Kilikevičius A.* Dynamic monitoring of railway bridges
12:00–12:15	*Gargasas J., Valiulis A.V., Gedzevičius I., Pokhmurska H.* The research of thermal arc sprayed coatings tribological properties by using rubber wheel test
12:15–12:30	*Kasparaitis A, Kilikevičius A, Vežys J.* Dynamic research of angle measurement comparator
12:30–12:45	*Jurevičius M., Kilikevičius M.* Research of the dynamic properties of vibration isolation System
12:45–13:00	*Kilikevičius A., Vekteris V.* Research of dynamics of the precision mechatronical line scale gage calibration system
13:00–13:15	*Markovič V., Černašejus O.* Laser beam operating modes on the surface are modified by qualitative analysis of the performance
13:15–13:30	*Lukauskaitė R., Valiulis A.V., Černašėjus O., Asadauskas S., Ručinskienė A.* Investigation of friction resistance coatings sprayed on aluminium alloys
13:30–13:45	Discussion
13:45–14:00	Closing Ceremony / Room 133
14:00–15:00	Lunch

Room 105

Poster

10:00–11:30	Poster presentations Session 3

Room 105

Poster presentations Session 1

10:00–11:30

1	*Adamski M., Grzesik N.*	Tactical reconnaissance unmanned aerial vehicle
2	*Avišāne A.*	The elastic deformation of machine elements in mechatronics systems
3	*Bakanauskas V., Bručas D., Bansevičius R., Domeika A.*	Developmnent of novel equipment for attitude control of small satellites
4	*Barylski A., Maszybrocka J., Cybo J.*	The influence of plastic deformation performed before and after electron beam irradiation on mechanical properties and wear of UHMWPE
5	*Bocian M., Jamroziak K., Kosobudzki M.*	Analysis of the material punching including a rotational speed of the projectile
6	*Bubulis A., Dragasius E., Minchenya V. T., Chigareva J. A., Chigarev A. V.*	Thermovibrational action on the deformable media with random microstructure
7	*Burghardt A.*	Task realization of reaching a goal by robots' formation
8	*Bručas D., Šiaudinytė L., Dmitrijev G., Sabaitis D.*	Developmnent of calibration equipment for geodetic angle measurement instruments
9	*Chausov N. G., Maruschak P. O., Prentkovskis O., Pylypenko A. P., Berezin V. B., Volyanska E. M.*	Self-organisation of structure of heat resistant steels at dynamic non-equilibrium processes
10	*Chuchnowska I., Sękala A.*	Supporting rehabilitation pocess in children by means of mechatronic system for kinesitherapy using EEG sensor
11	*Czaban A.*	Cfd analysis of hydrodynamic pressure distribution in non-newtonian oil in journal bearing lubrication gap
12	*Diehl W., Quantmeyer F., Liu-Henke X.*	Model-based development of the algorithms for a battery management system
13	*Dyja H. S., Laber K. B.*	Determination of susceptibility to cracking of S355J2G3 steel during continuous casting process

14	*Dymarek A., Dzitkowski T.*	Passive reduction of vibration to desired vibration amplitude by using case of mass model of damping
15	*Dobrzańska-Danikiewicz A. D., Trzaska J., Jagiełło A.*	Artificial neural networks used for development prediction of state-of-the-art surface engineering areas
16	*Tański T., Labisz K., Dobrzańska-Danikiewicz A.D., Sękala A.*	Strategic position of casting aluminium alloys and leading technologies of their manufacturing
17	*Drewniak J., Rysiński J.*	Kinetics of fatigue crack propagation at tooth root of cylindrical gear wheel
18	*Duda S, Gembalczyk G, Kawlewski K.*	Concept of a system controlling crane keep-up movement
19	*Dudzik K., Czechowski M.*	Influence of joining method for mechanical properties of 5083, 5059 and 7020 aluminium alloys joints
20	*Dudzik K.*	Influence of joining method on electrochemical corrosion properties of 7020 aluminium alloy joints
21	*Dusek D., Hadas Z., Pekarek J., Svatos V., Zak J., Prasek J., Hubalek J.*	Design of artificial micro electro mechanical cochlea
22	*Dzitkowski T., Dymarek A.*	Passive reduction of identified machine drive system vibrations in the form of multistage gear units
23	*Falkowski K.*	Fem analysis of active magnetic bearing for turboengine
24	*Gębura A., Tokarski T.*	Types og the tribologic wear of bearings according to fam-c and fdm-a
25	*Gębura A., Augustyn S.*	The essential problems of mi-24 helicopter's power transmission system
26	*Gębura A., Markiewicz W.*	Fam-c diagnostic method and detection systems in the radio
27	*Gierlak P.*	The application of neural position/force control in a robotised machining process
28	*Giesko T.*	Multi-criteria decision-making method for designing optomechatronic systems

29	*Gosiewski Z., Słowik M., Smolak M.*	Simulation of planning trajectory of flight based on gps positioning system
30	*Grinevich I., Mozga N., Strautmanis G.*	The detection of battery screwdriver's optimal working regimes when assembling fixed threaded joint considering allowable tightening torque in case of equal screw length
31	*Grzesik N.*	F-16 virtual cockpit – project of computer-aided learning and integrated diagnostics application. Part I
32	*Grzesik N.*	F-16 virtual cockpit – project of computer-aided learning and integrated diagnostics application. Part II
33	*Henzel M.*	Simulation analysis of additional aircraft power unit
34	*Hrbacek J., Singule V.*	Generating navigational audio instructions using fuzzy logic
35	*Šiaudinytė L., Bručas D., Rybokas M., Sabaitis D.*	Assumptions of centering – levelling device application in mechatronic angle measuring system
36	*Vogt R., Adamski M, Głębocki R.*	Integrated flight–navigation system of inteligent missiles and bombs

Room 105

Poster presentations Session 2

15:00–16:30

1	*Jamroziak K.*	Parametric identification of the degenerate model with dissipation-elastic element in dissipating impact energy
2	*Janik M., Garstka T., Krzyżańska A., Knapiński M., Kawałek A.*	The study of heat transfer coefficient during cooling plates of high strength
3	*Kost G., Banaś W., Hryniewicz P., Nierychlok A.*	Designing mechatronics equipment basing on the example of stewart platform
4	*Kawałek Anna, Gałkin Aleksandr, Dyja Henryk, Ozhmegov Kiryll, Knapiński Marcin Jarosław, Koczurkiewicz Bartosz*	Plastometric modelling of the e635m zirconium alloy multistage forging process

5	*Kawałek Anna, Magiera Monika, Dyja Henryk, Knapiński Marcin, Koczurkiewicz Bartosz, Kwapisz Marcin*	Numerical modelling of pipelines sheet rolling process
6	*Kelemen Michal, Colville Daniel John, Kelemenova Tatiana, Virgala Ivan, Mikova Lubica*	Educational model of line follower robot Lina 2010
7	*Klosinski Jacek, Rysinski Jacek, Sidzina Marcin*	Synthesis of fuzzy logic controller (flc) using fast ethernet interface
8	*Knapiński M., Dyja H., Garstka T., Janik M., Krzyżańska A.*	The study of heat transfer coefficient during cooling plates of high strength
9	*Knapiński M., Dyja H., Kawałek A., Koczurkiewicz B., Sawicki S.*	Physical simulations of the controlled rolling process of experimental steels with modified chemical composition allocated to pipelines
10	*Koczurkiewicz B., Knapiński M., Dyja H., Kawałek A.*	The physical and numeric modeling of heat treatment the experimental pipelines steel
11	*Kosobudzki M., Jamroziak K.*	Chosen problems of selection The basic chassis to the special purpose body
12	*Kosobudzki M., Smolnicki T., Stańco M.*	The model of estimating the loss of maintenance potential the high mobility wheeled vehicle
13	*Kotnarowska D.*	Destruction of epoxy coatings under the influence of sodium chloride water solutions
14	*Kunicina N., Zabasta A., Soboleva J.*	Control system development for emergency situations in automated manufacturing line of wooden briquettes
15	*Kwapisz M.*	Analysis of the shape of stamp on the distribution of deformation in the process of alternate pressing and multiaxial compression
16	*Laber S., Laber A.*	Modifying operating conditions of the friction pair with an additive added to the lubricant while operating
17	*Laber A., Adamczuk K.*	Distribution of hydrodynamic pressure in slide bearings lubricated with lubricant of different viscosity

18	*Labuda W., Charchalis A.*	The analysis of finish tooling influence on friction factor researched by t-05 tester
19	*Labuda W., Charchalis A.*	The analysis of finish tooling influence on corrosion properties of stainless steel
20	*Majzner M., Baier A.*	Computer modelling and research of FML composites using the method of features
21	*Maszybrocka J., Barylski A., Cybo J.*	The influence of plastic deformation performed before and after electron beam irradiation on the morphology and structural properties of UHMWPE
22	*Miková L., Virgala I., Kelemen M.*	Speed control of dc motor using pid and pwm controller
23	*Mystkowska J.*	Physicochemical and rheological properties of potential additives for synthetic saliva preparation
24	*Molenda J.*	The influence of lapping machine executory system elements temperature on lapping process results
25	*Molenda J.*	Dependence between workpiece material hardness and face lapping results of steel c45
26	*Mróz S., Szota P., Wąsek S., Stefanik A.*	Rolling of Al-Cu Bimetallic Bars in Modified Elongating Grooves
27	*Najgebauer M.*	The concept of scaling analysis in description of soft magnets' properties
28	*Niedworok A., Baier A.*	Numerical modelling of the phenomena of frictional coupling between wheel and rail to describe and verify the operation of surface condition detector
29	*Okipny I. B., Maruschak P. O., Prentkovskis O.*	Structural – hierarchical mechanism of cracking of reactor steel after preliminary thermomechanical loading
30	*Rucevskis S., Akishin P., Chate A.*	Numerical and experimental study on application of mode shape curvature for damage detection in plate-like structures
31	*Sikora G., Miszczak A.*	Viscosity in exploitation time analysis of the lubricating oil used in the combustion engine of the personal car

32	*Sygut P.*	Influence of temperature change on the energy parameters during round bars rolling process
33	*Szewczyk R., Jackiewicz D.*	Application of extended jiles-atherton model for modelling the magnetic characteristics of x30cr13 steel
34	*Petroškevičius P., Popovas D., Birvydienė R.*	The effect of the disturbing potential on the gravity field

Room 105

Poster presentations Session 3

10:00–11:30

1	*Skalik A., Skrobek D., Warys P., Cekus D.*	Kinematic analysis of four degrees of freedom manipulator
2	*Spychała J., Majewski P., Żokowski M.*	The use of vibroacoustic method for monitoring the technical condition of aeroengines with extended time between overhaul
3	*Stadnicki J., Wróbel I.*	Stamping die modelling with consideration to drawpiece springback phenomenon
4	*Stefanik A., Szota P., Mroz S., Dyja H.*	Analysis of the aluminum bars in three-high skew rolling mill rolling process
5	*Strautmanis G., Jurjev V., Grinevich I.*	The influence of torus shaped autoequalizer on the vibrations of rotary systems
6	*Wróbel I.*	Reverse engineering of stamping die punch – a case study
7	*Zbrowski A., Samborski T., Zacharski S.*	Mechatronic applicator for dispersion adhesives
8	*Zbrowski A., Samborski T., Przybylski J.*	Control system for a technological line for the production of electronically secured cards with RFID labels
9	*Zbrowski A., Majcher A.*	System for mechanical durability tests for documents secured with RFID labels
10	*Zbrowski A., Matecki K.*	The influence of the angular position of the laser triangular head on the readings of the measurement system
11	*Zbrowski A.*	Miniature tripod with parallel kinematics for clean room laboratory applications

12	*Zbrowski A., Majcher A., Neska M.*	Structure of a control system in a set of devices for document durability tests
13	*Żokowski M., Witoś M.*	Magneto-mechanical effects in nde & shm applications
14	*Charlamov J., Navickas R.*	Ic design of differential transimpedance amplifier
15	*Charlamov J., Navickas R.*	Enhancing dynamic range of repetitive backscatter measurements using signal coding
16	*Frycz M., Horak W.*	Effect of the concentration of the magnetic particles in the ferrooil on its dynamic's viscosity changes in an external magnetic field
17	*Garbacz P., Mężyk J.*	The system for wireless communication in the group of cooperating mobile robots
18	*Mężyk J., Kowieski S.*	Monitoring the fsw processes with use of thermal imaging
19	*Olimpiu Tătar Mihai, Florin Haiduc, Dan Mândru*	Design of the synchro-drive omnidirectional minirobot
20	*Napadłek W.*	Analysis possibility of using ablation laser texturing 100CrMn6 bearing steel in tribological aspect
21	*Napadłek W.*	Analysis of tribological processes in components of large-scale roller bearings
22	*Napadłek W., Laber A.,, Woźniak A.*	The use of laser texturing the surface layer to modify of friction pair pin-bushing
23	*Jasėnas A., Toločka E.*	Non-formal and formal education systems' combination for students', who study mechatronics engineering, practical skills and abilities synergic improvement
24	*Strautmanis G., Jurjev V., Grinevich I.*	The influence of torus shaped autoequalizer on the vibrations of rotary systems
25	*Kachel S., Kozakiewicz A.*	Modeling of an unmanned aerial vehicle (UAV) body for the needs of numerical aerodynamic investigations, strength analysis and examinations of free vibrations
26	*Kampars V., Legzdina M.*	Thermal deoxygenation of graphite oxide at low temperature

27	*Kasprzyczak L., Macha E.*	Energy parameter control system of strength machine for material tests under poliharmonic bending and torsion
28	*Polukoshko S., Gonca Rosita Rosit V., Shvab J.*	Vibration damping using laminated elastomeric structures
29	*Szota P., Mróz S., Stefanik A., Dyja H.*	Influence of band interstand tension on a rolls wear during continuous groove-rolling process
30	*Wierzcholski K., Miszczak A.*	Slide bearing wear as solutions of recurrences with variable coefficients
31	*Wierzcholski K., Miszczak A.*	Convergences control of cumulative wear values after considered time of bearing operation
32	*Wilk P., Zajac T., Pasnikowska A., Cekus D.*	Simulation of a ride of the real mobile robot according to the defined path
33	*V. Rudzinskas, O. Černašėjus*	Fuel oil deep processing complex compressor fracture analysis
34	*Antoniak P.*	The concept of a mechatronic test stand for the recording of the flow phenomena inside fluid power machines