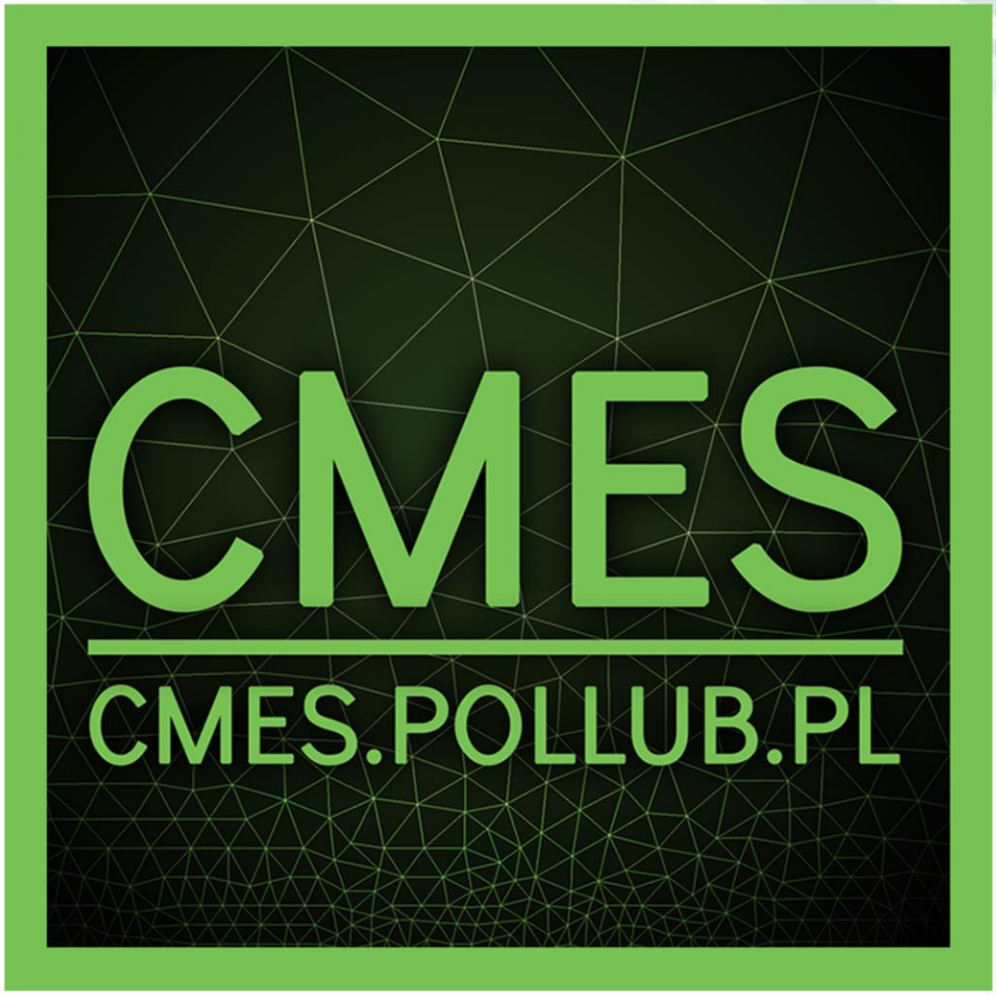
II International Conference of Computational Methods in Engineering Science

Lublin, 23-25 November 2017



Krajowa Reprezentacja Doktorantów KRD

PDUT
Porozumienie Doktorantów Uczelni Technicznych

Politechnika Lubelska

Thursday 23.11.2017 Lublin

17.30 – 19.15	Registration

Friday 24.11.2017 Lublin

8.30 – 9.15	Registration	
9.15 – 9.30	**Opening of Conference and Welcome Speeches**	
9.30 – 10.00	*Special Lecture – dr Tomasz Cieplak*	
10.00 – 11.45	**Session I**	
	Paweł Zdziebko, Adam Martowicz, Tadeusz Uhl	An investigation into multi-domain simulation for a pantograph-catenary system
	Dominik Ożóg	The modelling of two DOF joints controlled by elastic inner ties
	Radosław Jastrzębski, Krzysztof Chwastek	A comparison of macroscopic descriptions of magnetization curves
	Przemysław Nosal, Artur Ganczarski	Modelling of the temperature field that accompanies friction stir welding
	Joanna Wiącek, Wojciech Sobieski, Waldemar Dudda	A Discrete Element Method for engineering application: modelling of granular materials transported on conveyor belt
	Michał Strąkowski, Marcin Kamiński	Stochastic higher order finite element elasto-plastic analysis of the necking phenomenon
	Paweł Pełka, Grzegorz Dudek	Prediction of monthly electric energy consumption using pattern-based fuzzy nearest neighbour regression
11.45 – 12.15	**Coffee break**	
12.15 – 13.15	**Session II**	
	Anna Kaczorowska, Jolanta Słoniec, Sabina Motyka	IT solutions supporting project management processes and the choice of software
	Małgorzata Pudlik, Henryk Skarżyński, Monika Kwacz	Chamber stapes prosthesis with an improved fastening of the membrane
	Adam Deptuła, Wojciech Macek, Marian A. Partyka	Assessing the damage importance rank in acoustic diagnostics of technical conditions of the internal combustion engine with multi-valued logical decision trees
	Agnieszka Tiszbierek	Calculation of the number of branches of multi-valued decision trees in computer aided importance rank of parameters

13.15 – 14.30	Lunch – Restaurant "Koper Włoski" Nadbystrzycka 25	
14.30 – 16.00	Session III	
	Jerzy Lipski, Kazimierz Zaleski	Optimization of milling process based on neural network model
	MikhailTokovarov	Modification of Adaptive Huffman Coding for Use in Encoding Large Alphabets
	Monika Kaczorowska	Identification, characterization, and correction of artifacts in electroencephalographic data in the study of stationary and mobile electroencephalographs.
	Piotr Wiśniewski	Decomposition of Business Process Models into Reusable Sub-Diagrams
	Łukasz Piątek	Reliability and cost optimization of complex electric power networks using ant colony algorithm
	YuriyTryus, AndriiGeiko, GrygoriyZaspa	Web service for solving optimization tasks using swarm intelligence algorithms
16.00 – 17.30	Poster session I	
P -1	Sabina Motyka, Jolanta Słoniec, Anna Kaczorowska, Elżbieta Łaciak	Supporting the climate of innovation in the SME sector - an application for SMEs
P – 2	Grzegorz Gałko, Danuta Król	Equilibrium model of sewage sludge gasification
P – 3	Dariusz Czerwiński, Marek Miłosz	An Inexpensive Environmental Monitoring System with IoT Agents
P – 4	Paweł Powroźnik	Kohonen Network as a Classifier of Polish Emotional Speech
P – 5	Marcin Badurowicz, Jerzy Montusiewicz	Virtual road concept as a tool for road quality research
P – 6	Arkadiusz Kubacki, Arkadiusz Jakubowski	Classifier testing for the brain-machine interface (BCI) based on Steady State Visually Evoked Potential (SSVEP)
P – 7	Arkadiusz Jakubowski, Arkadiusz Kubacki	Modeling and simulation of an hydraulic active heave compensation system
P – 8	Ireneusz Zagórski, Monika Kulisz, Aleksandra Semeniuk	Artificial neural network modelling of cutting force components in milling
P – 9	Ewelina Kozłowska, Jarosław Zubrzycki	Using methods of the reverse engineering to carrying personalized preoperative sizers out on the example of circles of the spine of the man
P – 10	Tomasz Miłek	The analysis of distributions of effective strain and flow stress in longitudinal sections of cold backward extruded copper cans for different punch-face shapes
P – 11	MarcinDaniun, MichałAwtoniuk, Robert Sałat	Implementation of PID autotuning procedure in PLC controller

P – 12	Piotr Borowik, Krzysztof Chwastek	Descriptions of anisotropy of magnetic properties for chosen grades of electrical steels
P – 13	RafałBryk, Holger Schmidt, Thomas Mull, Thomas Wagner, Oliver Herbst, Ingo Ganzmann	The modelling of condensation in horizontal tubes and the comparison with experimental data
P – 14	Karolina Świtnicka, Paweł Suchorab, Beata Kowalska	Optimisation of the water distribution system using Bentley WaterGEMS software
P – 15	Jerzy Józwik, Elżbieta Jacniacka, Dawid Ostrowski	Estimation of uncertainty of laser interferometer measurement in industrial robot accuracy tests
P – 16	Jerzy Józwik, Elżbieta Jacniacka, Dawid Ostrowski	Uncertainty measurement with the kinematic telescopic bar during industrial robot inaccuracy tests
P – 17	Andrzej Wasiak, Olga Orynycz	Computer modelling of the influences of a subsystems' interaction on energetic efficiency of biofuel production systems
P – 18	Małgorzata Iwanek, Paweł Suchorab	The assessment of water losses from a damaged distribution pipe using the FEFLOW software
P – 19	Andrzej Kubit, Magdalena Bucior, Dawid Wydrzyński, Łukasz Bąk	Experimental investigation of the degree of weakening in structural notch area of 7075-T6 aluminum alloy sheet welded with the RFSSW method
P – 20	Dawid Wydrzyński, Magdalena Bucior, Andrzej Kubit	The effects of welding parameters on the tensile shear strength of refill friction stir spot welding of 7075-T6 aluminium alloy joints
P – 21	Robert Karpiński, Łukasz Jaworski, Jarosław Zubrzycki	The design and structural analysis of the endoprosthesis of the shoulder joint
P – 22	Monika Łobaziewicz	Scalability conditions of the measuring points network in a production system using the RFID selective gate technology
P – 23	Joanna Iwaniec, Grzegorz Litak, DavideBernardini, Marcelo A. Savi	Recurrence analysis of regular and chaotic motions of a superelastic shape memory oscillator
P – 24	Grzegorz Litak, Marek Iwaniec, Joanna Iwaniec	Milling gate vibrations anlaysis via Hilbert-Huang transform
P - 25	Radosław Cechowicz	Indoor mobile robot attitude estimation with MEMS gyroscope
P - 26	Wojciech Macek, Tomasz Wołczański	Analysis of the fracture roughness parameters on the steel S355J2 and EN AW-2017A-T4 aluminum alloy specimens
20.00 – ….	Gala dinner - Lunchomania Nadbystrzycka 40A	

Saturday 25.11.2017 Lublin

10.00 – 11.15	Session IV	
	Monika Michalak, Leszek Łatka, Patrycja Szymczyk, Paweł Sokołowski	Computational image analysis of Suspension Plasma Sprayed YSZ coatings
	Mirosław Szala	The application of computer image analysis software for determining incubation period of cavitation erosion – preliminary results
	Agnieszka Paradecka, Krzysztof Łukaszkowicz, Józef Sondor, Mieczysław Pancielejko	Structure and tribological properties of MoS2 low friction thin films
	Jakub Bryła, Adam Martowicz	Experimental and numerical assessment of the characteristics describing superelasticity in shape memory alloys – influence of boundary conditions
	Anna Rzepecka, Monika Ostapiuk	Tensile strength test of thermoplastic materials based on poly(butylene terephthalate)
11.15– 11.30	Coffeebreak	
11.30 – 13.00	Poster session II	
P -1	Zbigniew Czyż, Paweł Karpiński, Tomasz Łusiak, Tomasz Szepanik	Numerical analysis of the influence of particular autogyro parts on the aerodynamic forces
P – 2	Adam Deptuła, Józef Drewniak, Marian A. Partyka	Analysis of a planetary gear modelled with a contour graph considering the decision making complexity of game-tree structures
P – 3	Marcin Buczaj, Andrzej Sumorek	Control and data acquisition system for rotary compressor
P – 4	Sławomir Karaś, Radosław Wróbel	Analysis of the dynamic stiffness of arch bridges by means of the first natural frequency
P – 5	Maciej Kowal, Mateusz Hypki	Numerical analyses of adhesive-bonded joints in steel I-beams reinforced with CFRP strips
P – 6	Janusz Petryna, Jarosław Tulicki, Maciej Sułowicz	Calculating the electromechanical torque of the squirrel cage motor based on the axial flux obtained by the FEM
P – 7	Katarzyna Falkowicz	Stability of rectangular plates with notch using FEM
P – 8	Robert Karpiński, Łukasz Jaworski, Mirosław Szala, Monika Mańko	Influence of patient position and implant material on stress distribution in artificial intervertebral disc protests of lumbar vertebrae
P – 9	Kamil Pasierbiewicz, Anna Rzepecka, Mariusz Walczak	Evaluation of the scratch resistant of nitride coatings on pure titanium grade 2

P – 10	Leszek Szalewski, Elżbieta Czelej-Piszcz, Małgorzata Stodółkiewicz, Radosław Cechowicz, Marcin Bogucki, Janusz Borowicz, Jacek Szkutnik	Experimental study of the exploitation of materials used for prosthetic temporary restorations
P – 11	Krzysztof Przystupa, Stanisław Płaska	An attempt to use FMEA method for approximate reliability assessment of machinery
P – 12	Szemik Kamil, Bogacz Pawel	Measurement system analysis for one-sided tolerance
P – 13	Paweł Stączek	Digital signal processing in ultrasonic based navigation system for mobile robots
P – 14	Justyna Kujawska, Wojciech Cel	Cluster analysis to evaluate chemical compounds in the waters of piezometers from a drilling wastes landfill
P – 15	Krzysztof Szewczyk, Tomasz Walasek	Dynamic diagnostics of moving ferromagnetic material with the linear induction motor
P – 16	Yanfei Lu	Segmentation and reconstruction of the 3D geometry of the middle and inner ear
P – 17	Łukasz Grabowski, Konrad Pietrykowski, Paweł Karpiński	Charging process analysis of an opposed-piston two-stroke aircraft Diesel engine
P – 18	Marzena Kurpińska, Tomasz Ferenc	On the effect of porosity on physical properties of lightweight cement composite with foamed glass aggregate
P – 19	Magdalena Borys, Sara Barakate, KarimHachmoud, Małgorzata Plechawska-Wójcik, Paweł Krukow, Marek Kamiński	Classification of User's Performance in Ruff Figural Fluency Test Based on Eye-Tracking Features
P – 20	Maria Skublewska-Paszkowska Edyta Łukasik, Jakub Smołka, Magdalena Zawadka, Mirosław Jabłoński, Piotr Gawda	Repeatability of the three dimensional kinematics of the pelvis, spine and lower limbs while performing selected exercises
P – 21	Tytus Tulwin	Open end tube dynamic flow model with oscillatory extortion
P – 22	Tytus Tulwin, Rafał Sochaczewski	The dual-fuel CFD combustion model with direct and indirect CNG injection
P – 23	Agnieszka Bojanowska	Application of neural networks in CRM systems
P – 24	Anna Rudawska, Przemysław Wrona, Izabela Miturska, Miroslav Müller	Selected aspects of the technological processes of the aircraft engine washing
P – 25	Aneta Wrzyszcz	Microstructure evaluation of engineering materials by usage of ImagePro Plus software

13.00 – 14.15	Lunch – Restaurant “Koper Włoski” Nadbystrzycka 25	
14.15 – 15.45	Session V	
	Krzysztof Śledziewski	Selection of the appropriate concrete model in numerical calculation
	Agnieszka Łagoda, Adam Niesłony	Dental implant stress analysis with selected prosthetic crown overhangs sizes
	Quirino Estrada, DariuszSzwedowicz, Jesús Silva-Aceves, Alejandro Rodriguez-Mendez, Javier S. Castro, Lara C. Wiebe, Elifalet Gonzalez, Julio Vergara-Vazquez Andrea E. Chavez	Numerical simulations of the crashworthiness performance of multi-cell structures considering damage evolution criteria
	Paweł Magryta, Konrad Pietrykowski, Krzysztof Skiba	FEM simulation research of natural frequency vibration of crankshaft from internal combustion engine
	Robert Jasionowski, Waldemar Kostrzewa	Optimization of liquid flow in cavitational tunnel using CFD method
	Mathias Romańczyk	Influence of gas inlet angle on the mixing process in a Venturi mixer
15.45 -	Tour – Lublin Old Town	