

CONTENTS

Electronics, Telecommunication and Optoelectronics

- 1245 Intravenous glucose tolerance test hardware implementation**
Dariusz Kulakovskis, Tomyslav Sledevič, Aurimas Gedminas, Dalius Navakauskas
- 1257 Gorky's Gyrotron Heroes**
Edward Franciszek Pliński
- 1263 PLC implementation in the form of a System-on-a-Chip**
Przemysław Mazur, Robert Czerwiński, Mirosław Chmiel
- 1275 Limited selectivity of amperometric gas sensors operating in multicomponent gas mixtures and methods of selectivity improvement**
Marta Dmitrzak, Piotr Jasinski, Grzegorz Jasinski
- 1283 Analog circuits specification driven testing by the means of digital stream and non-linear estimation model optimized evolutionarily**
Tomasz Golonek, Łukasz Chruszczyk
- 1301 Hardness identification of rock based on multi-sensor information fusion during the process of roadway tunnelling**
Haijian Wang, Shilin Lu, Mengdie Huang, Xuemei Zhao
- 1311 An eddy current model of pot-cored coil for testing multilayer conductors with a hole**
Grzegorz Tytko

Mechanical and Aeronautical Engineering, Thermodynamics

- 1319 Structural analysis of a scissor structure**
Ichiro Ario, Tatsuya Yamashita, Yuki Chikahiro, Masatoshi Nakazawa, Krzysztof Fedor, Cezary Graczykowski, Piotr Pawlowski
- 1333 Evaluation of the heat release rate during the combustion process in the diesel engine chamber powered with fuel from renewable energy sources**
Mateusz Bednarski, Piotr Orliński, Marcin Wojs, Maciej Gis
- 1341 Strength analysis of critical components of high-pressure fuel pump with hypocycloid drive**
Maciej Bajerlein, Mateusz Bor, Wojciech Karpiuk, Rafał Smolec, Mikołaj Spadło
- 1351 Aircraft system identification using simultaneous quantized harmonic input signals**
Piotr Lichota
- 1363 The problems of mathematical modelling of rolling bearing vibrations**
Mateusz Wrzochal, Stanisław Adamczak
- 1373 Design of nonlinear electromagnetic energy harvester equipped with mechanical amplifier and spring bumpers**
Mariusz Ostrowski, Bartłomiej Błachowski, Marcin Bocheński, Dariusz Piernikarski, Piotr Filipek, Wojciech Janicki

Material Science and Nanotechnology

- 1385 Mechanical and morphological characterization of discarded fishnet/glass fiber reinforced polyester composite**
P. Monivarman, V.A. Nagarajan, F. Michael Raj
- 1393 Optimization on friction and wear behaviour of Al-Si alloy reinforced with B4C particles by Powder Metallurgy using Taguchi design**
Jeya Raj R, Christopher Ezhil Singh Sreedharan, John T D, Rajeev D, Glandeva Dhas G, Jayachristyan K.G, Malkiya Russel, Jeen Robert R.B
- 1403 Optimization of wire EDM process parameters on Al6061/Al2O3 composite and its surface integrity studies**
Mythili T, Thanigaivelan Rajasekaran
- 1413 Hot isostatic pressing influence on the mechanical properties of selectively laser-melted 316L steel**
Janusz Kluczyński, Lucjan Śniezek, Krzysztof Grzelak, Artur Oziębło, Krzysztof Perkowski, Janusz Torzewski, Ireneusz Szachogluchowicz, Krzysztof Gocman, Marcin Wachowski, Bogusz Kania
- 1425 Laser surface remelting of powder metallurgy high-speed steel**
Józef Iwaszko

Civil Engineering

- 1433 Piles system securing road against landslide. 2D/3D method of numerical modeling and design problems**
Aleksander Urbański, Michał Grodecki
- 1443 Numerical study for evaluation of a vibration based damage index for effective damage detection**
Saqib Mehboob, Qaiser uz Zaman Khan, Sohaib Ahmad
- 1457 Seismic strengthening of nonductile bridge piers using low-cost glass fiber polymers**
Kittipoom Rodsin, Qudeer Hussain, Panuwat Joyklad, Adnan Nawaz, Hassan Fazliani
- 1471 The assessment of the influence of styrene-butadiene-styrene copolymer on the selected rheological properties characterising durability of modified bitumens used in road pavements**
Marta Mielezarek, Sylwia Dziadosz, Mieczysław Słowik, Marcin Bilski

Artificial and Computational Intelligence

- 1481 Learning OWL 2 Property Characteristics as an Explanation for an RNN**
Jedrzej Potoniec
- 1491 Adaptation of models from determined chaos theory to short-term power forecasts for wind farms**
Tomasz Popławski, Piotr Szela, Ryszard Bartnik
- 1503 Texture recognition system based on the Deep Neural Network**
Rafał Kapela

Control and Informatics

- 1513 The pointwise completeness and the pointwise degeneracy of linear discrete-time different fractional order systems**
Tadeusz Kaczorek, Łukasz Sajewski
- 1517 The generalized S - and σ -inverse – a comparative case study for right- and left-invertible plants**
Paweł Majewski, Wojciech Przemysław Hunek
- 1525 Robot sensor failure detection system based on convolutional neural networks for calculation of Euler angles**
Aleksandra Świetlicka, Krzysztof Kolanowski

Power Systems and Power Electronics

- 1535 Finite-Difference Operators for 2D problems**
Tadeusz Jan Sobczyk
- 1543 A practical approach to optimal strategies of electricity contracting from Hybrid Power Sources**
Piotr Marchel, Jozef Paska, Karol Pawlak, Krzysztof Zagrajek