

Contents

01	THABET Mohammed, YSSAAD Benyssaad, LITIME EL Mostafa - A comparative study between PID and PD-SMC and PD-ASMC control applied on a delta robot	1
02	Nuruliswa ABDULLAH, Mohamad Z. A. ABD. AZIZ, Abd SHUKUR JAAFAR - Design of a high directive sensor for microwave imaging application	8
03	Nur Syamimi NOORASID, Faiz ARITH, Ahmad Nizamuddin MUSTAFA, Mohd Asyadi AZAM, Syazwan Hanani Meriam SUHAIMY, Oras A AL-ANI - Effect of Low Temperature Annealing on Anatase TiO ₂ Layer as Photoanode for Dye-Sensitized Solar Cell	12
04	Mohammed A. IBRAHIM, Bashar M. SALIH, Mahmoud N. Abd - Protection Transformer and Transmission Line in Power System Based on MATLAB Simulink	17
05	Petro LEZHNIUK, Yulia MALOGULKO, Ihor PROKOPENKO - Mathematical modelling of battery energy storage systems in the additional service market of the United Electric Power System of Ukraine	22
06	Ezzahra KASSID, Essaadia AZELMAD, Lahbib BOUSSHINE, Abdelmajid BERDAI - Magnetic Force computation for a magnetic separator based on permanent magnet	28
07	Rana Muneeb Hassan, Andrzej Bień, Szymon Barczentewicz, Mohammad Abu Sarhan A - Energy Sector of Pakistan – A Review	33
08	Jacek Maciej STANKIEWICZ - Comparison of the efficiency of the WPT system using circular or square planar coils	38
09	Dmytro Borysiuk, Anatoly Spirin, Ihor Kupchuk, Ihor Tverdokhlib, Viacheslav Zelinskyi, Yevhenii Smyrnov, Vitaliy Ognevyy - The methodology of determining the place of installation of accelerometers during vibrodiagnostic of controlled axes of wheeled tractors	44
10	Mohd Hafiz Jali, Hazli Rafis Abdul Rahim, Md. Ashadi Md Johari, Haziezol Helmi Mohd Yusof, Aminah Ahmad, Mohamad Faizal baharom, Siddharth Thokchom, Sulaiman Wadi Harun - Characteristic of non-adiabatic tapered fiber towards humidity	49
11	Noora Rafid Kamil, Aseel Hameed AL-Nakkash, Ahmed Ghanim Wadday, Aymen Dheyaa Khaleel - Fractal Vicsek MIMO Antenna for LTE and 5G Applications	53
12	Heri SURYOATMOJO, A. B. Alvian, S. ANAM, Feby AGUNG PAMUJI, Ronny MARDIYANTO - Design of Wireless Real Time Monitoring Lithium Ion Battery Charger Using Constant Current Constant Voltage Method	58
13	Ayodeji Olalekan SALAU, John N. NWEKE, Uche C. OGBUEFI - Effective Implementation of Mitigation Measures against Voltage Collapse in Distribution Power Systems	65
14	Ayebatonye EPEMU, Pauline OBE, Emeka OBE - Modelling and Analysis of Concentrated and Distributed Winding Synchronous Reluctance Motors in Direct-Phase Variables and Finite Element Analysis	69
15	Muhammad Ruswandi DJALAL, Makmur SAINI, A.M.Shiddiq YUNUS, Ikhlas KITTA - Optimal Power System Stabilizer Design Using Craziness Particle Swarm Optimization In Suiselrabar System	76
16	Imene DEHIBA, Mohamed ABID, Abdelghani AISSAOUI, Boubeker DEHIBA - Robust control of power system stabilizer using sliding mode approach	82
17	Fawaz S. Abdulla, Ali N. Hamoodi, Abdulaziz M. Kheder - Particle Swarm Optimization Algorithm for Solar PV System under Partial Shading	87
18	Rafał PRZESMYCKI, Marek BUGAJ - Different high frequency cable influence on the measurement amplitude value of the generated HPM impulse	91
19	Bernard FRYŚKOWSKI - Analysis of the effect of center electrode temperature on electrical resistivity of spark - plug insulator	96
20	Maciej GURSKI, Robert FRANKOWSKI, Marek ZIELIŃSKI - Algorithms for minimizing bubble terror in precision time-interval metrology	100
21	Krzysztof JAKUBOWSKI, Jacek PAŚ - Determination of the performance parameters of selected electronic safety systems based on the process of their use in critical infrastructure facilities	103
22	Witold KACZMAREK, Marek SUPRONIUK, Karol PIWOWARSKI, Bogdan PERKA, Piotr PAZIEWSKI - Comparison of the effectiveness of nonlinear regression algorithms in the process of identifying defect centers in semi-insulating semiconductor materials	110
23	Krzysztof KARSZANIA, Kazimierz ĆMIELEWSKI, Piotr GOŁUCH, Janusz KUCHARSKI - Testing geometrical conditions of the optical and laser plummets in the metrological aspect	114
24	Sebastian KICIAK, Marek SUPRONIUK, Piotr PAZIEWSKI, Bogdan PERKA, Karol PIWOWARSKI - The stand based on LCN system Sensors used in building management system	118
25	Ewelina MAJDA-ZDANCEWICZ, Emilia GABRIELCZYK - The application of voice signal processing to objective vocal fatigue assessment	121
26	Jan MATUSZEWSKI - Radar signals recognition using neural networks	125
27	Beata PIETRZYK, Jacek WOJTAS - High resolution measurements of characteristic absorption spectra of selected explosives	129
28	Rafał PRZESMYCKI¹, 2. Marek BUGAJ - Measurement of the attenuation of shielding materials using the HPM generator	133
29	Marian WNUK - Broadband electromagnetic field probe	140
30	Jacek WOJTAS, Zbigniew BIELECKI, Dariusz SZABRA, Janusz MIKOŁAJCZYK - Laser absorption spectroscopy with the use of quantum cascade lasers for the detection of ammonia in the long-wave infrared range	144
31	Michał LABOWSKI, Albert WZIĄTEK - Measurement of atmosphere parameters with the use of home meteorological station	148
32	Wojciech LEJKOWSKI, Sławomir DĄBROWSKI, Arkadiusz ŚWITALSKI - The issues of maintaining the traceability of atomic time standards in military metrology	151
33	Oskar SZCZEPANIAK, Dariusz SAWICKI - Nonconventional methods of assessing fatigue – practical aspects	157
34	Grzegorz WĘGRZYŃ, Robert SZCZYGIEL - Voltage Measurements Using Noise Distribution	161
35	Piotr BŁASZCZYK, Sławomir BARAŃSKI - Outline of the TCO methodology for the analysis of the legitimacy of introducing electric means of road transport	164
36	Jerzy HICKIEWICZ, Piotr RATAJ, Przemysław SADŁOWSKI - The activity of the Association of Polish Electrical Engineers from the closing of the 1st Congress of Polish Electrical Engineers to the opening of the 2nd Congress (1919-1921))	168