

Contents

01	Leszek S. CZARNECKI, Motab ALMOUSA - Conversion of Fixed-Parameters Compensator in Four-Wire System with Nonsinusoidal Voltage Into Adaptive Compensator	1
02	Sompod WONGKHEAD, Satean TUNYASRIRUT - Implementation of a DSP- TMS320F28335 Based State Feedback with Optimal Design of PI Controller for a Speed of BLDC Motor by Ant Colony Optimization	7
03	Salima ASANOVA, Murodbek SAFARALIEV, Nurlan ASKARBEK, Sergey SEMENENKO, Erkin AKTAEV, Anastasia KOVALEVA, Egor LYUKHANOV, Elena STAYMOVA - Calculation of power losses at given loads and source voltage in radial networks of 35 kV and above by hierarchical-multilevel structured topology representation	13
04	Salah Alkurwy - Design and Implementation of Parallel Multiplier Using Two Split Circuits	19
05	Chuthong SUMMATTA, Weera RATTANANGAM - The Improvement of a Fail-safe Counter for Low-speed Detection	23
06	Dmytro SNIZHKO, Anatoliy BYKH, Baohua LOU, Guobao XU - "Pulsar" Photon Counter in Electrogenerated Chemiluminescent Measurements	29
07	Thanat NONTHAPUTHA, Montree KUMNGERN - CMOS Programmable PID Controller Circuit Based Analogue Switches	39
08	Djamel Eddine CHAOUCH, Hocine Abdelhak AZZEDDINE, Ahmed LARBAOUI, Zoubir AHMED-FOITIH - SRF Control Strategy based on STFIS Controllers For Single-Stage Four-Leg Transformerless Inverter for Grid-Connected PV system	42
09	Andrii Bereziuk, Oleksiy Karlov, Roman Kryshchuk, Ihor Garasymchuk, Pavlo Potapskyi, Mykola Vusatyi - Energy parameters of induction heat generator with branched heat exchanger for production of environmentally friendly coolant	48
10	Khalid Subhi Ahmad, Mohamad Zoinol Abidin Abd. Aziz - Pattern reconfigurable planar antenna array based on two circular defected ground structure	52
11	Mowafak K. Mohsen - Using EBG to Enhance Directivity, Efficiency, and Back Lobe Reduction of a Microstrip Patch Antenna	56
12	Benaissa Tahar, Mahi Djillali, Halbaoui Khaled - Maximum Power Point Tracking under simplified sliding mode control based DC-DC boost converters	60
13	Rahul Kumar Verma, Anubhav Kumar, R.L Yadava - WI-FI Reconfigurable Dual Band Microstrip MIMO Antenna for 5G and WI-FI / WLAN Applications	66
14	Somchai ARUNRUNGRUSMI, Wittawat POONTHONG, Apidat SONGRUK, Narong MUNGKUNG, Nutte THUNGSUK, Kongsak ANUNTAHIRANRATH, and Toshifumi YUJI - Application of Atmospheric-pressure Non-equilibrium Microwave Discharge Plasma for Decomposition of Sodium Dodecyl Sulfate in Aqueous Solution	72
15	Irina Gunko, Valerii Hraniak, Vitalii Yaropud, Ihor Kupchuk, Volodymyr Rutkevych - Optical sensor of harmful air impurity concentration	76
16	Reda KARA, Abdelhalim TLEMCANI, Nawel HASSAOUI - Interval type-2 fuzzy logic controller based DPC-SVM algorithm for PWM rectifier	80
17	Aleksandra SKUZA, Marek SUPRONIUK, Stanisław ZIEMIANEK - Influence of current leakage phenomenon on impedance measurements in high voltage networks).	85
18	Bogdan PERKA - Review of heat flow modeling methods in electric wires	90
19	Andriy CZABAN, Vitaliy LEVONIUK, Radosław FIGURA - The mathematical model of high voltage switch as an element of a power system	94
20	Marek LEŚNIEWICZ - Contemporary methods and systems of clock cycle generation with high accuracy and stability and negligible jitter	98
21	Imen SAIDI, 2. Nahla TOUATI - Sliding mode control to stabilization of nonlinear Underactuated mechanical systems	106
22	Ferdous S. Azad, Golam Sarowar, Istiak Ahmed - Development of single-phase single switch AC-DC Zeta converter for improved power quality	110
23	Dominika KACZOROWSKA, Przemysław JANIK, Łukasz JASIŃSKI, Jacek REZMER, Vishnu SURESH - Power flow control algorithm in a microgrid with energy storage	116
24	Rafał OWCZARCZAK, Paweł ŻYLKA - Harvesting energii jako metoda bezbaterijnego zasilania zdalnych układów czujnikowych w budynkach z systemem zarządzania BMS	120
25	Ali Hasan Mousa, MOHD AZLISHAH BIN OTHMAN, Mohamed Zoinol Abidin, Ayman Mohammed Ibrahim - Sierpinski MIMO Antenna for 5G Applications	126
26	J. Samson Immanuel, *G. Manoj, Shajin Prince, H. Victor Du John - Analysis of FPGA accelerator architecture for Fast Statistical Convolutional Neural Network in real time Emotional Recognition System	132
27	Ivan SOLOVEI - Investigation of the influence of microwave irradiation of sowing material on grain yield	135
28	Przemysław SADŁOWSKI, Jerzy HICKIEWICZ - 100th anniversary of the Faculty of Electrical Engineering of the Warsaw University of Technology	138