

PRZEGŁĄD ELEKTROTECHNICZNY Vol 2019, No 9

Contents

01	Konrad DĄBAŁA, Marian P. KAZMIERKOWSKI - Converter-Fed Electric Vehicle (Car) Drives – A Critical Review	1
02	Tadeusz KACZOREK - Generalized Frobenius matrices and angles between them in analysis of linear electrical circuits	13
03	Piotr RZEPKA, Mateusz SZABLICKI, Dawid JURCZYK, Adrian HALINKA - Simulative analysis of autonomous operation of the power generator in the mining plant under the wide catastrophic failure of the power system	20
04	Tomasz BEDNARCZYK, Mateusz SZABLICKI, Adrian HALINKA, Piotr RZEPKA - Effectiveness analysis of an adaptive change of the settings of the underimpedance function of the phase shifting transformer protection	24
05	Daria MACHA, Paweł SOWA - Reducing interference of the electromagnetic field on the torque sensor of the light electric vehicle	28
06	Grzegorz KAMIŃSKI, Łukasz ORDYSZEWSKI, Karol CIESIELSKI - Design of the tubular type linear motors	32
07	Jacek JENDO, Mateusz PASTERNAK - Ground penetrating radar prototype based on a low-cost software defined radio platform	36
08	Matej KUĆERA, Milan ŠEBOK, Miroslav GUTTEN, Daniel KORENČIAK, Paweł ZUKOWSKI, Tomasz KOLTUNOWICZ - Analysis of transformer condition by frequency and time methods	40
09	Waldemar DOLEGA - Assessment of national electric power infrastructure in area of generation in aspect of electric energy security	44
10	Issam GRICHE, Sabir MESSALTI¹, Kamel SAOUDI - Issam GRICHE, Sabir MESSALTI, Kamel SAOUDI - Parallel Fuzzy Logic and PI Controller for Transient Stability and Voltage Regulation of Power System Including Wind Turbine	51
11	Abdelhadi NAMOUNE, Rachid TALEB, Ahmed DERROUAZIN, Abdelkader BELBOULA, Azzedine HAMID - Integrated square shape inductor with magnetic core in a buck converter DC-DC	57
12	Yuriy BOBALO, Ivan HORBATYI, Myroslav KISELYCHNYK - Investigation of influence of parameters of the digital telecommunication system on its efficiency	62
13	Milan ŠIMKO, Milan CHUPÁČ - Practical applications of thermovision measurements on electric machines	67
14	Antonina DOLGIH, Vladimír MARTEMÝANOV, Valeriy BORIKOV - Dependence of the torque-rotor position characteristic from the tape winding current	71
15	Volodymyr HALCHENKO, Ruslana TREMBOVETSKA, Volodymyr TYCHKOV, Anatolii STORCHAK - Nonlinear surrogate synthesis of the surface circular eddy current probes	76
16	Abdeljalil ABDELKADER MEKKI, Abdelkader KANSAB, Mohamed MATALLAH, Mouloud FELIACHI - Fixed-band hysteresis temperature control of induction cooking system	83
17	Mohammed B. DEBBAT, Mohammed SALEM, Rochdi BACHIR-BOUIADJRA - LQR controller with an integral action for Z-source DC-DC converter	89
18	Hocine BOUCHEKHOU, Mohamed Rachid MEKIDECHE, Jean LEVEQUE - Torque simulation in a reluctance motor design incorporating HTS materials in both stator and rotor parts	94
19	Vishnu SURESH, Dominika KACZOROWSKA, Przemysław JANIK, Jacek REZMER - Load Flow Analysis in local microgrid with storage	98
20	Jacek KONOPACKI, Katarzyna MOŚCIŃSKA - Design of sparse narrowband FIR filters with very low group delay	103
21	Grzegorz KOŁASZCZYŃSKI, Piotr GUZDEK, Ewa KLIMIEC, Piotr MACKÓW, Jacek PIEKARSKI, Artur POLAK, Wojciech GRZESIAK - Implementation of specialized integrated circuits in wireless electrical energy transfer systems	107
22	Agata OBSTARCZYK, Danuta KACZMAREK, Michał MAZUR, Jarosław DOMARADZKI, Damian WOJCIESZAK - Impact of the thin films structure on electrical and optical properties of thin films based on a mixture of Hf and Ti oxides	111
23	Agata JASIK, Iwona SANKOWSKA, Krzysztof CZUBA, Dariusz SMOCZYŃSKI - MBE growth of LWIR photoconductor structures based on type II superlattices	115
24	Ewa PAPIS-POLAKOWSKA, Krzysztof CZUBA, Tomasz RUNKA, Tomasz MARTYŃSKI, Jarosław MAKOWIECKI, Agata JASIK - The self-assembled octadecanethiol (ODT) monolayer on the (100) GaSb surface	119
25	Mateusz KOTOWSKI^{1,2}, Krzysztof CZUBA², Dariusz SMOCZYŃSKI², Agata JASIK - Determination of the electrical parameters of GaSb:Be layers with various doping concentration grown on conductive p-type substrate	123
26	Robert P. SARZAŁA, Patrycja ŚPIEWAK - Impact of the imperfections in fabrication of selected elements of a nitride VCSEL on its emission characteristics	127
27	Jan MACHETA, Mateusz KUBASZEK, Łukasz KRZAK, Cezary WOREK, Szymon ZAWORA - Synchronous lowpower wireless sensor network for monitoring of industrial processes	131
28	Mirosław MIKOŁAJEWSKI - Wzmacniacz klasy E ze zmienną impedancją obciążenia	136
29	Jakub PIKOZUB, Krzysztof TOMCZYK, Paweł STRUMIŁŁO, Maciej PIKOZUB - A sensor glove allowing the real-time recognition of the position of the fingers	142
30	Wiesław CITKO, Wiesław SIEŃKO - The Feasibility of Quantum Algorithms Using Machine Learning Models	146
31	Kalina DETKA, Krzysztof GÓRECKI - The methods of measurement the power losses in the core of inductor	150
32	Tymoteusz CIUK, Wawrzyniec KASZUB, Kinga KOŚCIEWICZ, Dariusz CZOŁAK, Artur DOBROWOLSKI, Jakub JAGIEŁŁO, Adrianna CHAMRYGA, Rafał BUDZICH, Beata STAŃCZYK, Krystyna PRZYBOROWSKA, Anna HARMASZ, Krzysztof GÓRA, Andrzej KOZŁOWSKI, Paweł Piotr MICHAŁOWSKI, Paweł CIEPIELEWSKI, Iwona JÓZWIK, Dominika TEKLINSKA, Emil TYMICKI, Roman KOZŁOWSKI, Michał KOZUBAL, Paweł KAMIŃSKI - Silicon Carbide Homoepitaxy for Power Devices at Lukasiewicz Research Network – ITME	154
33	Adam SZYSZKA, Mateusz WOŚKO, Regina PASZKIEWICZ - Characterization of the electrical properties of AlGaN/GaN heterostructures on a silicon substrate by scanning capacitance and scanning surface potential microscopy	157
34	Paweł KARASINSK - Dielectric layers fabricated via sol-gel method and dip-coating technique for applications in optoelectronics	161
35	Jacek DĄBROWSKI - Techniques for rapid production of prototype printed circuit boards	165
36	Ewa MANDOWSKA, Magdalena BIERNACKA, Arkadiusz MANDOWSKI - Spectral and dosimetric properties of polycrystalline sodium chloride - the natural detector of ionizing radiation	169
37	Norbert KWIETNIEWSKI, Jakub SZARAFIŃSKI, Mariusz SOCHACKI, Jan SZMIDT, Wawrzyniec KASZUB, Tymoteusz CIUK - Thermal formation of titanium ohmic contacts for 4H-SiC silicon carbide	172
38	Bartłomiej STONIO, Norbert KWIETNIEWSKI, Piotr FIREK, Mateusz SŁOWIKOWSKI, Krystian PAVLOV, Piotr CABAN, Mariusz SOCHACKI, Jan SZMIDT - Investigation of reactive ion etching using BC13 plasma on the 4H-SiC surface quality	175
39	Łukasz TOPOLSKI, Krzysztof WOŹNY, Zbigniew HANZELKA - Mitigation of current and voltage asymmetry caused by low-carbon technologies using the balancing transformer on low-voltage electricity network	178
40	Piotr ZIMOCH - Evaluation of SiC and GaN FETs in Zero-Voltage Switching Interleaved Boost Converters	186
41	Józef GROMBA, Grzegorz SIEKLICKI, Sylwester SOBIERAJ - Speed of the PID algorithm written in Structured Control Language (SCL)	193