

PRZEGŁĄD ELEKTROTECHNICZNY Vol 2011, No 5

Contents

01	Tomasz ADRIKOWSKI, Dawid BUŁA, Marian PASKO - Simulation of Active Power Filter with prediction control in MATLAB and OrCAD environments with using SLPS interface	1
02	Mariana BEŇOVÁ, Branislav DOBRUCKÝ - Methodological approach to steady-state and transient investigation of electric circuits using numerical infinite series of two-phase system	6
03	Piotr BILSKI - Automated selection of kernel parameters in diagnostics of analog systems	9
04	Yuriy BOBALO, Leonid NEDOSTUP, Myroslav KISELYCHNYK, Mykhaylo MELEN - Research into emergence of radio electronic devices quality forming systems	11
05	Andrzej BOBON, Stefan PASZEK, Piotr PRUSKI, Tomasz KRASZEWSKI, Maria BOJARSKA - Computer-aided determining of parameters of generating unit models based on measurement tests	17
06	Ivo DOLEŽEL, Václav KOTLAN, Bohuš ULRYCH - Electromagnetic-thermoelastic actuator for accurate wide-range setting of position	22
07	Ivo DOLEŽEL, Václav KOTLAN, Bohuš ULRYCH - Magnetohydrodynamic pumps for molten salts in cooling loops of high-temperature nuclear reactors	28
08	Dagmar FAKTOROVÁ, Katarína ISTENÍKOVÁ - Modelling of scattering parameters in biological tissues	34
09	Daniela GOMBARSKA, Milan SMETANA - Wavelet based signal analysis of pulsed eddy current signals	37
10	Stanisław HAŁGAS, Michał TADEUSIEWICZ - Analysis of CMOS circuits having multiple DC operating points	40
11	Roman HAMAR, Pavel TRNKA - Gliding discharges in rotary machine insulation – diagnostics, simulation and measurement	43
12	Mariya HOWYKOWYCZ, Nataliya KASATKINA - Analysis of borderline cases of electromagnetic field variational problem	46
13	Paweł JABŁOŃSKI - Cylindrical conductor in an arbitrary time-harmonic transverse magnetic field	49
14	Jacek JAKUBOWSKI, Andrzej MICHALSKI - Estimation of flow velocity in open channels with the use of electromagnetic flowmeter and neural network	54
15	Ladislav JANOUŠEK, Milan SMETANA, Marcel ALMAN - Interactions of partially conductive cracks with eddy currents in non-destructive evaluation	59
16	Adam JÓSKO, Jerzy OŁĘDZKI - Measurement setup with dual channel simultaneous sampling A/D converter - uncertainty of jitter estimation	62
17	Adam JÓSKO - Evaluation of the QRS complex wavelet based detection algorithm	66
18	Marcin KOŁODZIEJ, Andrzej MAJKOWSKI, Remigiusz RAK - Implementation of genetic algorithms to feature selection for the use of brain-computer interface	71
19	Marek KORZYBSKI - Two-stage algorithm for soft fault diagnosis in analog dynamic circuits	74
20	Tomas KRIZ - Initial conditions and regularization parameter influence in EIT image reconstruction	77
21	Michał KRUK, Stanisław OSOWSKI, Robert KOKTYSZ - Numerical characterization of the images of prostate cancer for recognition of Gleason scale	81
22	Andrzej KUCZYŃSKI - Parametric fault detection in analog circuits containing MOS transistors	84
23	Jarosław KUREK, Bartosz ŚWIDERSKI, Stanisław OSOWSKI - Assessment of financial condition of companies using neural networks	88
24	Eugeniusz KURGAN - Forces acting on multilayer dielectric particle in DC dielectrophoresis	92
25	Eugeniusz KURGAN, Agnieszka WANTUCH - Impressed cathodic protection of underground structures	96
26	František MACH, Pavel KARBAN - Dynamic behavior of electromagnetic brake system consisting of permanent magnets	100
27	Tomasz MARKIEWICZ - Comparison of single and sequential thresholding applied to segmentation of a cell cluster at Ki-67 staining	104
28	Andrzej MICHALSKI, Zbigniew WATRAL, Jacek STARZYŃSKI, Robert SZMURLO, Jan SIENKIEWICZ - Practical validation of flow meter design environment	107
29	Kazimierz MIKOŁAJUK, Andrzej TOBOŁA - Ripple estimation in active power filters	111
30	Ksenia OSTANINA - Methodology for EIT image reconstruction of brain tissue	116
31	David PÁNEK, Petr KROPÍK, Antonín PŘEDOTA - On fractal dimension estimation	120
32	Łukasz PIĄTEK - A new algorithm for generating cuts set in undirected graphs representing electric systems	123
33	Zygmunt PIĄTEK, Dariusz KUSIAK, Tomasz SZCZEGIELNIAK - The impact of the displacement of the both the tubular conductor and screen axes on the magnetic field in high current busducts	126
34	Zygmunt PIĄTEK, Tomasz SZCZEGIELNIAK, Dariusz KUSIAK - Power losses in the screen of bifilar high current busduct	130
35	Joanna KOLAŃSKA-PŁUSKA, Jerzy BARGLIK, Bernard BARON, Zygmunt PIĄTEK - The magnetic field of the tubular rectangular high current busduct of finite length	134
36	Joanna KOLAŃSKA-PŁUSKA, Jerzy BARGLIK, Bernard BARON, Zygmunt PIĄTEK - Inductance of tubular rectangular high current busduct of finite length	138
37	Antonín PŘEDOTA, Zdeňka BENEŠOVÁ - Fast transient overvoltage in transformer winding	142
38	Serhiy RENDZINYAK - Simulation of spatial coordinate of movable ferromagnetic solid object in induced magnetic field by diakoptics methods	146
39	Tomasz RYMARCZYK, Stefan F. FILIPOWICZ, Jan SIKORA - Image reconstruction with discontinuous coefficient in electrical impedance tomography	149
40	Bartosz SAWICKI - Adaptive mesh refinement for magnetic stimulation modeling	152

PRZEGŁĄD ELEKTROTECHNICZNY Vol 2011, No 5

41	Yuriy SHAPOVALOV, Bohdan MANDZIY, Spartak MANKOVSKY - Peculiarities of frequency symbolic method applied to parametric circuits analysis	155
42	Serhiy SHCHERBOVSKYKH, Orest LOZYNSKY, Yaroslav MARUSHCHAK - Failure Intensity determination for system with standby doubling	160
43	Petro STAKHIV, Oksana HOHOLYUK, Liliana BYCZKOWSKA-LIPÍNSKA - Mathematical models and macromodels of electric power transformers	163
44	Tatiana STRAPACOVA, Klara CAPOVA - Single leg fracture in artificial heart valve - electromagnetic detection of impedance changes	166
45	Markiy SUMYK, Ivan PRUDYUS, Roman YANKEVYCH - Systems of recurrent polyphase signals	169
46	Maria TRZASKA, Zdzisław TRZASKA - Energetic process modelling of thin-layer electrocrystallization	173
47	Michał BORYSIAK, Zuzanna KRAWCZYK, Jacek STARZYŃSKI, Robert SZMURŁO, Stanisław WINCENCIAK - CUDA accelerated finite element mesh morpher	176
48	Miloslav KOSEK, Martin TRUHLAR, Ales RICHTER - Skin effect in massive conductors at technical frequencies	179
49	Franciszek WÓJCIK - Theoretical analysis of possibilities for improvement in the effective operation of DC magnetic blow-out circuit breakers	186
50	Jerzy MIKULIK - The impact of disturbed input data sets on the accuracy of mathematical modelling of intelligent building security	193
51	Jarosław ZYGARICKI, Janusz MROCZKA - Practical use of Reduced Prony's method – investigations of voltage input circuit for power monitoring system	199
52	Alen BERNADIĆ, Zbigniew LEONOWICZ - Power line fault location using the Complex Space-Phasor and Hilbert-Huang Transform	204
53	Paweł SZCZEPAŃKOWSKI, Janusz NIEZNAŃSKI, Wojciech ŚLESZYŃSKI - A new approach of feedforward modulation based on finite element' shape functions for three level NPC converter	208
54	Maciej SIWCZYŃSKI, Marcin JARACZEWSKI - Principle of similar equations for optimization of electric power and energy theory - combined tasks	214
55	Jacek SMOŁKA, Andrzej J. NOWAK - Effective coil cooling of electrical transformer using optimal shape of cooling ducts	218
56	Jan PROKOP - Analytical method of torque calculation for non-linear switched reluctance machines	224
57	Krzysztof MAKOWSKI, Marcin J. WILK - Determination of dynamic characteristics of the single-phase capacitor induction motor	231
58	Jan MRÓZ - Distribution of current density in double squirrel cage winding applied for heating calculations	238
59	Grzegorz POPEK, Marian KAMPIK - Correction of the impact of finite-resolution DAC to the value of the effective sinusoidal signal generated by the digital source of standard AC voltage	242
60	Kamil JANECKEK, Grażyna KOZIOL - Performance characteristics of UHF RFID tags used in identification on liquids	246
61	Kamil KUBIAK - Alternative method of checking of correctness of the illumination concept	250
62	Lucian PARVULESCU, Dan FLORICAU, Mircea COVRIG - A new control method for the three level active neutral point clamped converter for low speed applications	253
63	Peter BRIDA, Juraj MACHAJ, Frantisek GABORIK, Norbert MAJER - Performance analysis of positioning in wireless sensor networks	257
64	Muhammad ZUBAIR, Zaffar HAIDER, Shahid A. KHAN, Jamal NASIR - Atmospheric influences on satellite communications	261
65	Marek PENHAKER, Radovan HAOVSKY, David KORPAS - Measurement and analysis EMC parameters of implantable pacemaker	265
66	Mehmet GEDIKPINAR - The speed control of DC motors with Support Vector Machine	269
67	Wendong ZHENG, Yong QIAN, Chengjun HUANG, Xiucheng JIANG - Study of signal processing and feature extraction method for partial discharge in subway DC cables	272
68	Algirdas BASKYS, Vytautas BLEIZGYS, Tadas LIPINSKIS - An analysis of the inverter overvoltage generated by the motor	275
69	Wiktor HUDY, Kazimierz JARACZ - Identification of mathematical model induction motor's parameters with using evolutionary algorithm and multiple criteria of quality	279
70	Witold MAZGAJ, Zbigniew SZULAR, Tomasz WĘGIEL, Tadeusz SOBCZYK - Small Hydropower Plant with variable speed PM generator	282
71	Bashir Mahdi EBRAHIMI, Jawad FAIZ, Mohammad ETEMADREZAIE, Mojtaba BABAIE - Eccentricity fault identification in round rotor synchronous motors considering load variation	288
72	Mahir DURSUN, Harun ÖZBAY - Design and analysis of a double sided linear switched reluctance motor driver for elevator door	293