

CONTENTS

Special Section

- 647 Advances in electrical power engineering**
Lukasz Nogal, Sylwester Robak, Janusz Bialek
- 651 Economic Dispatch for on-line operation of grid-connected microgrids**
Alessia Cagnano, Enrico De Tuglie, Francesco Marcone, Giuseppe Porro, Desire Dauphin Rasolomampionona
- 661 Effective approach to distributed optimal operation control in rural low voltage microgrids**
Mirosław Parol, Piotr Kapler, Jerzy Marzecki, Rafał Parol, Michał Połecki, Łukasz Rokicki
- 679 Standardization tests for the industrialization of grid-friendly Virtual Synchronous Generators**
Audrey Moulitchon, Vincent Debusschere, Lauric Garbuio, Mustapha Amine Rahmani, Mazen Alamir, Nouredine Hadjsaid
- 689 Implementation of IEC 61850 power protection tester in Linux environment**
Karol Kurek, Łukasz Nogal, Ryszard Kowalik, Marcin Januszewski
- 697 Comprehensive forecast of electromobility mid-term development in Poland and its impacts on power system demand**
Paweł Piotrowski, Dariusz, Sylwester Robak, Marcin Kopyt, Michał Piekarz, Mateusz Polewaczyk
- 711 Strategies influencing energy efficiency of lighting solutions**
Piotr Pracki, Andrzej Wiśniewski, Dariusz Czyżewski, Rafał Krupiński, Krzysztof Skarzyński, Marcin Wesołowski, Adam Czaplicki
- 721 Sizing of prosumer hybrid renewable energy systems in Poland**
Magdalena Bartecka, Paweł Terlikowski, Mariusz Kłos, Łukasz Michalski
- 733 Stationary supercapacitor energy storage operation algorithm based on neural network learning system**
Włodzimierz Jefimowski, Anatolij Nikitenko, Zbigniew Drażek, Maciej Wieczorek
- 739 Methods for designing and simulating optical systems for luminaires**
Wojciech Żagan, Sławomir Zalewski, Sebastian Słomiński, Kamil Kubiak
- 751 Uncertainty of the characteristics of electrical devices based on the measurements of time-current characteristics of MV fuses**
Tadeusz Daszczyński, Zbigniew Pochanke, Łukasz Kolimas
- 759 Influence of contact gaps on the conditions of vehicles supply and wear and tear of catenary wires in a 3 kV DC traction system**
Tadeusz Maciołek, Mirosław Lewandowski, Adam Szeląg, Marcin Steczek
- 769 Substation reliability evaluation in the context of the stability prediction of power grids**
Michał Borecki, Maciej Ciuba, Yevhen Kharchenko, Yuriy Khanas

Power Systems and Power Electronics

- 777 Optimal selection of inner-branches parameters of matching circuits under the minimum branch-current RMS values and zero active-power conditions**
Marcin Jaraczewski
- 785 GaN-based soft-switched active power buffer operating at ZCS – problems of start-up and shut-down**
Jacek Rąbkowski, Krystian Król, Mariusz Zdanowski, Mariusz Sochacki
- 793 Performance evaluation of ZVS/ZCS high efficiency AC/DC converter for high power applications**
Abdar Ali, Jiang Chuanwen, Muhammad Mansoor Khan, Salman Habib, Yaqoob Ali
- 809 Calculations of energy savings using lighting control systems**
Andrzej Wiśniewski

Electronics, Telecommunication and Optoelectronics

- 819 Analysis of supply parameters of single- and double-string LED lamps with integrated AC direct capacitorless drivers**
Jacek Chęciński, Zdzisław Filus
- 829 Energy-based spectrum sensing with copulas for cognitive radios**
Fatih Yavuz Ilgin
- 835 A MUX based signed-floating-point MAC architecture using UCM algorithm**
Rajkumar Sarma, Cherry Bhargava, Shruti Jain
- 845 Comparison of performance limits of the HOT HgCdTe photodiodes with colloidal quantum dot infrared detectors**
Antoni Rogalski, Małgorzata Kopytko, Piotr Martyniuk, Weida Hu
- 857 The influence of the data packet size on positioning parameters of UWB system for the purpose of tagging smart city infrastructure**
Krzysztof Hanzel, Krzysztof Paszek, Damian E. Grzechca

Control, Informatics and Robotics

- 869 Online scheduling for a Testing-as-a-Service system**
Jarosław Rudy, Czesław Smutnicki
- 883 Application-oriented experiment design for model predictive control**
Wiktoria Jakowluk, Mirosław Świercz
- 893 Control system and measurements of coil actuators parameters for magnetomotive micropump concept**
Łukasz Kolimas, Krzysztof Bieńkowski, Sebastian Łapczyński, Michał Szulborski, Łukasz Kozarek, Karol Birek

Varia

- 903 The effect of high-pressure plastic forming on the structure and strength of AA5083 and AA5754 alloys intended for fasteners**
Mariusz Kulczyk, Jacek Skiba, Waclaw Pachla, Julita Smalc-Koziorowska, Sylwia Przybysz, Mariusz Przybysz
- 913 Fatigue life prediction for acid-resistant steel plate under operating loads**
Tomasz Tomaszewski, Przemysław Strzelecki, Marcin Wachowski, Michał Stopel
- 923 Multi-factor signcryption scheme for secure authentication using hyper elliptic curve cryptography and bio-hash function**
Vani Rajasekar, Jayapaul Premalatha, K. Sathya
- 937 Statistical model for traffic noise prediction in signalised roundabouts**
Marek Motylewicz, Władysław Gardziejczyk
- 949 The analysis of working liquid flow in a hydrostatic line with the use of frequency characteristics**
Leszek Ulanowicz, Grzegorz Jastrzębski