

CONTENTS

<i>Modelling of Transformer Windings and Computation of Very Fast Transient Over-Voltages</i> – Gloria Ciumbulea, Sorin Deleanu, Mihai Iordache, Ciprian Curteanu, Neculai Galan, Anton Anastasie Moscu	1
<i>Control circuit of an Electronically Controlled Capacitor for the Optimization of the Single Phase Induction Motor</i> – Radu Câmpeanu, Adrian Dănilă	9
<i>Predictive versus Classic Control of the Induction Motor Drives</i> – Sergiu Ivanov, Vladimir Răsvan, Eugen Bobașu, Dan Popescu, Florin Stîngă, Virginia Ivanov	15
<i>Analytical-Numerical Method for Design of a Single-Phase AC Inductors with Ferromagnetic Core</i> – Ioan Popa, Alin-Iulian Dolan, Florian Ștefănescu, Constantin Florin Ocoleanu	22
<i>Optimal Heating Time for Cylindrical Items Removal from the Shaft</i> – Grigore A. Cividjian	30
<i>Analytical Algorithms for Synthesis of Modal Controllers by the Maximum Stability Degree Criterion</i> – Ion Fiodorov, Bartolomeu Izvooreanu, Irina Cojuhari, Dumitru Moraru	36
<i>Analysis of a Step-Down DC-DC Converter: Linear Versus Nonlinear Circuit</i> – Ioana-Gabriela Sîrbu, Marius Voinea, Mihai Iordache.....	43
<i>Designing a Simultaneous Control of Several Motors with a VHL Programming Language for a Single Microcontroller</i> – Dan Mihai	54
<i>Hardware Experiments for Simultaneous Control of Several Motors by a Microcontroller and a VHL Programming Language</i> – Dan Mihai	61
<i>Study of Low Power Alternating Current Motors by Functional and Energy Aspect</i> – Ion Vlad, Aurel Campeanu, Sorin Enache, Monica-Adela Enache	67
<i>Performance of an Active DC-Traction Substation with 12-Pulse Parallel Rectifier and Indirect Current Control</i> – Mihaela Popescu, Alexandru Bitoleanu, Alexandra Preda	73
<i>The Online Temperature Control</i> – Florin Ravigan, Nicolae Boteanu, Laurențiu Alboteanu	80
<i>Numerical Determination of Inductance of a SMES Device Using the Response Surface Methodology Applied on FEM Modeling</i> – Alin-Iulian Dolan, Florian Stefanescu	86
<i>Hybrid Petri Nets in Modeling the Packing Processes: Case Study</i> – Mircea Adrian Drighiciu, Daniel Cristian Cismaru	93
<i>Electromagnetic Field Coupling Between Over-Head Power Lines and Nearby Metallic Pipelines in Case of Direct Lightning</i> – Denisa Stet, Levente Czumbil, Dan D. Micu	101
<i>Modern Techniques for Monitoring Circuit Breakers by using Microcontroller System</i> – Virginia Ivanov, Maria Brojboiu, Sergiu Ivanov	107
<i>About the Analytical Methods Applying for Fault Diagnosis of the Static Converters from the Electric Locomotive</i> – Maria Brojboiu, Ivanov Virginia, Andrei Savescu	113
<i>Aspects Regarding Influences of Voltage and Resistant Torque on Asynchronous Motors Operation</i> – Sorin Enache, Aurel Campeanu, Ion Vlad, Monica-Adela Enache	119
<i>Lead Acid Battery Pack Charging Optimization</i> – Constantin-Daniel Oancea, Florin Călin	125
<i>Management of Renewable Energy Sources Integrated in a Micro Smart Grid</i> – Laurențiu Alboteanu, Gheorghe Manolea, Sergiu Ivanov	131

<i>Factors Involved in Choosing LEDs for General Lighting Applications: a Critical Review</i> – Dorin Dumitru Lucache, Cătălin Daniel Gălățanu, Elena Dănilă	138
<i>Transversal Shape Optimization of a Brushless DC Motor for Electric Vehicles</i> – Ion Vlad, Sorin Enache, Lucian Mandache, Monica-Adela Enache	144
<i>Information and Communication Technology in Urban Electric Transportation</i> – Ilie Nucă, Iurie Nucă, Alexandr Motroi, Vitalie Eșanu	150
<i>Study of Indirect Current Control Methods for Urban Traction Active DC Substations</i> – Constantin Vlad Suru, Mihaela Popescu, Ionut Deaconu	157
<i>Energetic Influence of Motor Power in Drive Systems with Space-Vector Static Converters and Induction Motors</i> – Mihăiță Lincă, Constantin Vlad Suru, Alexandru Bogdan Lupu	164
<i>Increasing Safety of the Tests Carried Out in Laboratories by Using Electronic Devices</i> – Marinel Popescu	170
<i>Virtual Synchronoscope for Connecting Synchronous Generator on the Grid</i> – Gheorghe-Eugen Subtirelu, Mircea Dobriceanu, Monica-Adela Enache	176
<i>Use of Modern Computing Technique to Improve the Energy Indicators of Drive Motors of the Coal Mills</i> – Silvia-Maria Digă, Daniela Popescu, Nicolae Digă	182
<i>Estimation of the Heat Cumulated Inside a Wall with Cylindrical Symmetry</i> – Mitică Iustinian Neacă, Andreea Maria Neacă	189
<i>Fuzzy Control of Centrifugal Pumps Flow</i> – Daniela Popescu, Jenica-Ileana Corcău	194
<i>Object Oriented Video Retrieval System Based on Domain Ontologies</i> – Ion Eugen Ganea	200
<i>Evolution of the Electric Power Components Definitions</i> – Adrian A. Adăscăliței, Alexander E. Emanuel.....	206
<i>Active Power Filter Study Using Dedicated Matlab GUI</i> – Cristina Alexandra Preda, Mihăiță Lincă, Constantin Vlad Suru	212