

2015 13th International Conference on Engineering of Modern Electric Systems

(EMES 2015)

**Oradea, Romania
11-12 June 2015**



**IEEE Catalog Number: CFP15A89-POD
ISBN: 978-1-4799-7651-5**

Table of Contents

Author(s)	Paper Title
D. Astanei, F. Munteanu, C. Nemes, S. Pellerin, B. Hnatiuc	<i>Electrical Diagnostic of High Voltage Discharges Produced by a New Spark-Plug...1</i>
A. Michaelides	<i>Integrated Inductive-Capacitive Component used as a Filter for Harmonic Modulations in the Grid....5</i>
A.C. Viorel, I.-A. Viorel	<i>A Discussion on Variants of Stand-Alone Electric Powerplant Equipped with Transverse Flux Generators....9</i>
A.C. Viorel, L. Strete, I.-A. Viorel	<i>Transverse Flux Generators a Solution for Stand-Alone Wind Mill....13</i>
F. Constantinescu, O. Taus, A.G. Gheorghe	<i>A New Behavioral Model for Frequency Domain Analysis of Power BAW Filters....17</i>
R. Radu, D.O. Micu, D.D. Micu, A. Ceclan	<i>Analytical Model for a Medium Voltage Distribution Grid's Main Elements – Transformers and Cables....21</i>
L.I. Dulău, D. Bică	<i>Optimization of a Power System with Distributed Generation Sources....25</i>
S.B. Efe	<i>Harmonic Filter Application for an Industrial Installation....29</i>
S.B. Efe, M. Cebeci, H. Erdoğan, G. Öztürkmen	<i>A Novel Approach to Power Flow Analysis for Grid Connected Micro Grid....33</i>
A. Beteringhe, M.A. Costea	<i>Photovoltaic Devices Based on Fullerene Derivatives as Electron Donors. Solubility and other Characteristics for These Electron Donors....37</i>
A. Setel, M. Gordan, C. Antal, D. Bococi	<i>Use of Geothermal Energy to Produce Electricity at Average Temperatures....41</i>
A. Setel, C. Antal, D. Bococi, M. Gordan	<i>Considerations on the Design of a Low-Power Electric Plant and Analysis of Influence Factors....45</i>
L. Bandici, T. Leuca, S. Vicaș, G.E. Bandici	<i>The Influence of the High Frequency Electromagnetic Field on Grape Processing....49</i>
D. Toader, C. Blaj, A. Lihaciu	<i>Modelization of Electrostatic Spraying Device....53</i>
V. Tatu, O. Drosu, C. Popescu	<i>Effectiveness Analysis of Different Screens and Frequency Influence on Electromagnetic Attenuation....57</i>
L.I. Gliga, C.C. Mihai, C. Lupu, D. Popescu	<i>Adaptive – Robust Control. A Computational Efficient Real Time Simulation....63</i>
C. Lupu, D. Chiriță	<i>Performance Control for Cascade Reservoirs Systems....67</i>

Author(s)	Paper Title
L.I. Dulău, M. Abrudean	<i>Simulation of a Power System with Renewable Energy Sources Considering Load Profiles....73</i>
L. Bandici, S. Vicaș, G.E. Bandici, A.C. Teușdea, D. Popa	<i>Physical-Chemical, Biological, and Sensory Analyses in Grape Processing Using the High Frequency Electromagnetic Field....77</i>
S. Coman, O. Coman, T. Leuca	<i>Optimal Design of the Microwave Heating Process using Neural Networks and Genetic Algorithms....83</i>
M. Laza, S. Coman, T. Leuca	<i>Temperature Variation in the Process of Heating Oak Wood Using Radio Frequency....87</i>
M. Popa	<i>Numerical Modelling of the Transient Regime for a DC Electromagnetic Relay....91</i>
M. Bogdan, M. Panu	<i>LabVIEW Modeling and Simulation of the Lowpass and High-pass Analog Filters....95</i>
M. Bogdan, M. Panu	<i>LabVIEW Modeling and Simulation of the Digital Filters....99</i>
L.M. Matica	<i>Appreciation of the Maximum Available Active Power by the Power Factor Definition....103</i>
A.M. Grava, C. Grava, M. Novac	<i>Bond-Graph Modeling of the Equivalent RL and RC Scheme of the Circuits Composing an Electrical Transmission Line....107</i>
A.M. Grava, C. Grava, O. Novac	<i>Bond-graph Modeling of the Equivalent Scheme of an Electrical Transmission Line....111</i>
M. Durgău, R. Sebeșan	<i>Study on the Conversion of Geothermal Water into Electricity....115</i>
D.A. Hoble, C.O. Stașac	<i>Study on the Influence of Vibrations on Electrical Contact Resistance....119</i>
O.D. Popovici, M.B. Tataru, F.I. Hathazi, D.M. Popovici	<i>The Behaviour of the Direct Methanol Fuel Cell Under Low Frequency Acoustic Vibrations....123</i>
G.M. Vasilescu, M. Maricaru, O. M. Drosu, M.A. Costea, F.I. Hantila, M. Stanculescu	<i>The Study of the Electric Field in Electroporation....127</i>
M. Maricaru, S. Marinescu, M. Stanculescu, P.C. Andrei, F.I. Hantila	<i>Equipment for the Magnetization Characteristic Evaluation of a Ferromagnetic Body....133</i>
M. Nosál', J. Porubán	<i>Program Comprehension with Four-layered Mental Model....137</i>
R. Sepeši, M. Nosál'	<i>Towards Developer-friendly Annotation-based Code Generation....141</i>
J. Juhár, L. Vokorokos	<i>Understanding Source Code Through Projectional Editor....145</i>

Author(s)	Paper Title
S. Chodarev, E. Pietriková, J Kollár	<i>Haskell Clone Detection using Pattern Comparing Algorithm....149</i>
J. Porubän, S. Chodarev	<i>Model-aware Language Specification with Java....153</i>
M. Sulír, J. Porubän	<i>Trend Analysis on the Metadata of Program Comprehension Papers....157</i>
J. Kollár	<i>The Evolution of the Machine Mind Language....161</i>
M. Sičák	<i>Higher Order Regular Expressions....165</i>
M. Spišiak	<i>Penetration Points Method....169</i>
M. Bačíková, D. Surgent	<i>A New Hybrid Technique for Visualizing Unbalanced Tree Structures....173</i>
V.C. Pau, M.I. Mihailescu	<i>Internet of Things and its Role in Biometrics Technologies and eLearning Applications....177</i>
R. Györödi, C. Györödi, G. Borha, M. Burtic, L. Pal, J. Ferenczi	<i>Acquaintance Reminder using Google Glass....181</i>
O. Novac, J. Sztrik, C. Grava	<i>Comparative Study Regarding two Implementations of an SEC-DED code with FPGA circuits....185</i>
C. Györödi, R. Györödi, G. Pecherle, A. Olah	<i>A Comparative Study: MongoDB vs. MySQL....189</i>
E.I. Gergely, C.R. Costea, L. Coroiu, G. Husi, H. Silaghi	<i>Method for Identifying the Environmental Noise Model for City Traffic....195</i>
R.D. Albu	<i>Face Anti-Spoofing Based on Radon Transform....199</i>
H. Silaghi, V. Spoială, E. Gergely, C. Costea, T. Barabas	<i>Analysis of Two-Phase Asynchronous Motor with Non-orthogonal Windings in Dynamic Regime....203</i>
A. Bara, S. Dale, C. Rusu, H. Silaghi	<i>DC Electrical Drive Control with Fuzzy Systems....207</i>
M. Paun, R. Tamas, I. Marghescu	<i>A Software Radio Approach for Electric Arc Locating....211</i>
R. Munteanu jr., A. R. Vulea, D. Iudean, R. Copindean	<i>Carbon Monoxide Pollution in the Center of Cluj-Napoca City....215</i>
G. Suciuc, C. Butca, V. Suciuc	<i>M2M Sensors for Future Internet Of Things Monitoring....219</i>
R. Munteanu jr., D. Iudean, C. Muresan, V. Petean	<i>Access System in Restricted Areas Based on Programmable Logic Controller and GSM Modem....223</i>
N. Patrascioiu, I.C. Barbu	<i>Understanding the Dynamics of Systems Through the Use of Virtual Instrumentation....227</i>

Author(s)	Paper Title
M. Secara, D.M. Sas	<i>Mathematical Model for ¹⁸O Separation Column Based on Chemical Exchange between Nitric Oxides and Nitric Acid Solution operated at Total Reflux....231</i>
M. Secara, D.M. Sas	<i>Mathematical Model for ¹⁸O Isotope Separation Column Operated by Product Extraction Regime....235</i>
D.M. Sas, M. Secara	<i>Preliminaries in Numerical Simulation of Isotope Separation Closed-loop Processes....239</i>
D.M. Sas, M. Secara	<i>Preliminaries in Numerical Simulation of Isotope Separation Open-loop Processes....243</i>
T. Rusu, A.C. Pop, L. Szabó, C. Marțiș	<i>Study of Winding Arrangement and Material Quality Effects on the Core Losses in High Speed Switched Reluctance Machines....247</i>
M. Dulău, S.E. Oltean, A.V. Duka	<i>R-S-T Conventional Controller Design for Slow Processes....251</i>
T. Leuca, T.A. Burca, M. Maricaru, N.D. Trip, I.V. Nemoianu	<i>Thermal Treatment of Ferromagnetic Pieces at Medium Frequency....255</i>
A.G. Husu, M.F. Stan, C. Cobianu, N. Fidel, O. Nedelcu	<i>An Inedited Solution to Increase the Energy Efficiency of Photovoltaic Panels for Regions with Snow....261</i>
C. Cobianu, M.F. Stan, A.G. Husu, N. Fidel, E.O. Virjoghe	<i>Magnetic Sensors Thin Layer Cu and Co Deposited on Silicon Oxide. Construction, Characteristics and Applications....265</i>
I. Gavrilut, L. Tepelea, A. Gacsádi	<i>Path Planning based on Intermediate Targets using Cellular Neural Networks....269</i>
G.L. Scurtu	<i>Numerical Modeling of Induction Heating of Paramagnetic Billets....273</i>