

# RE&PQJ'15 INDEX



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Renewable Energy,  
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# RE&PQJ'15

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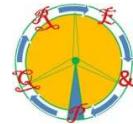


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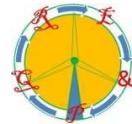
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303	<b>Electrical Characterization of PV Modules employing Supercapacitors – A Scalable Method for Field Metrology</b> S. Basu Pal(1), K. Das (Bhattacharya)(1), D. Mukherjee(2), D. Paul(3) 1. Department of Electrical Engineering Indian Institute of Engineering Science and Technology, Shibpur P.O. Botanic Garden, Shalimar Shibpur Howrah, West Bengal .India 2. Department of Electronics and Telecommunication Engineering Indian Institute of



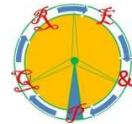
	Engineering Science and Technology, Shibpur P.O. Botanic Garden, Shalimar Shibpur Howrah, West Bengal. India
	<b>PP:310-312</b>
<b>304</b>	<b>Functionalized Graphene and Hexagonal Boron Nitride (hBN) Two-Dimensional Heterosystems for Solar Cell Applications</b> A.I. Shkrebtti(1), M. Rohlffing(2) 1. University of Ontario Institute of Technology, 2000 Simcoe St. N., Oshawa, Ontario. Canada 2. Institut für Festkörpertheorie, Westfälische Wilhelms-Universität Münster. Germany
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<b>305</b>	<b>Reabsorption Losses in Luminescent Solar Concentrators: Effect of the Band Gap of Semiconductor Quantum Dots, their Size and Dispersion</b> A.I. Shkrebtti(1), A.V. Sachenko(2), I.O. Sokolovskyi(2), V.P. Kostylyov(2), M.R. Kulish(2), D.V. Khomenko(2) 1. University of Ontario Institute of Technology, 2000 Simcoe St. N., Oshawa, Ontario. Canada 2. V. Lashkaryov Institute of Semiconductor Physics, NAS of Ukraine, Kyiv. Ukraine
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<b>306</b>	<b>Optimization of Recloser Placement in DG-Enhanced Distribution Networks Using a Multi-Objective Optimization Approach</b> Fabián López, Andrés Pantoja Department of Electronics, Universidad de Nariño, Pasto. Colombia
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<b>308</b>	<b>Superconductivity and their Applications</b> A. Roque(1,2), D. Sousa(2,3), V. Fernão Pires(1,2), E. Margato(4) 1. Department of Electrical Engineering. ESTSetúbal/Instituto Politécnico de Setúbal. Portugal 2. INESC-ID. Lisboa. Portugal 3. DEEC AC-Energia, Instituto Superior Técnico, Universidade de Lisboa. Portugal 4. CEEI, ISEL-Instituto Superior de Engenharia de Lisboa, Instituto Politécnico de Lisboa, and INESC-ID. Portugal
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<b>309</b>	<b>Model Predictive Control of STATCOM for Grid Voltage Regulation</b> Nima Kadivarian, Mohammad Tavakoli Bina, Mohsen Akbari Department of Electrical Engineering. K.N. Toosi University of Technology Tehran. Iran
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<b>312</b>	<b>Home energy management systems and electric vehicles: challenges and opportunities</b> I. Junquera, J. García-Villalobos, I. Zamora, P. Eguía, J. I. San Martín Department of Electrical Engineering - University of Basque Country – UPV/EHU. Bilbao. Spain



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314	<b>Reliability applied to the Preventive Maintenance on Wind Farms using Weibull distribution with a Financial Approach</b> Leandro Ribeiro Alves da Silva, Ricardo Ferreira Pinheiro Department of Electrical Engineering. MPEE, Universidade Federal do Rio Grande do Norte, Natal. Brazil
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	<b>PP:350-355</b>
316	<b>Comparative analysis methodologies formulation powers in the frequency domain</b> G.J. Schäffer, S.L. Modesto, T. S. Menezes, Y. V. Tresso, F. A. M. Moura, M. V. B. Mendonça, P. H. O. Rezende, M. R. M. Castillo Universidade Federal do Triângulo Mineiro, Electrical Engineering Department, Uberaba- Minas Gerais. Brazil
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320	<b>Modeling and Control of a Microgrid in Islanding Mode</b> F. Dulce(1), A. Gauthier(1), A. Pantoja(2) 1. Departamento de Ingeniería Eléctrica y Electrónica. Universidad de los Andes Bogotá. Colombia 2. Departamento de Ingeniería Electrónica. Universidad de Nariño. Pasto. Colombia
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323	<b>Photovoltaic potential assessment and ranking of rooftops segments based on LiDAR data</b> N. Lukač, B. Žalik, G. Štumberger University of Maribor. Faculty of Electrical Engineering and Computer Science. Slovenia
	<b>PP:371-376</b>
325	<b>Improving the Summation Law for Harmonic Current Emissions of Parallel Operated PV Inverters by Considering Equivalent Grid Impedance</b>



	H.A. Moghadam, F. Ackermann, S. Rogalla Department of Power Electronics. Fraunhofer Institute for Solar Energy Systems ISE. Freiburg. Germany
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<b>326</b>	<b>Economic and operational risks in wind energy projects in Latvia</b> D. Bezrukova, A. Sauhatas Riga Technical University RTU . Latvia
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<b>328</b>	<b>Sizing Electric Battery Storage for Electric Racing Motorcycle</b> A. Rodríguez, J. M. González-González, J. A. Aguado Department of Electrical Engineering. E.T.S.I.I., University of Málaga. Spain
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<b>329</b>	<b>Protection Measures on Wind Turbines against Lightning Strikes</b> Sokratis Pastromas, E. Pyrgioti High Voltage Laboratory, University of Patras. Greece
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<b>330</b>	<b>Battery state-of-charge estimating using Adaptive Extended Kalman Filter with Fuzzy modelling of the nominal battery capacity</b> A. Boutte(1), F.Lakhdiri(2),A. Midoun(2) , A.Hayani(1) 1. Spacecraft Integration Department "D-AIT" Satellites Development Center "CDS" Oran. Algeria 2. Laboratory of Power Electronics and Solar Energy "LEPES" University of Sciences and Technology of Oran, U.S.T.O.Oran. Algeria
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<b>332</b>	<b>Voltage Control Areas in Transmission Systems with Distributed Generation</b> W. R. Faria(1), M. E. De Oliveira(1), E. S. Hoji(2), G. P. Viajante(1) 1. Federal Institute of Education, Science and Technology of Goiás at Itumbiara, NUPSE. Brazil 2. Federal Institute of Education, Science and Technology of São Paulo at Birigui. Brazil
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<b>333</b>	<b>A literature survey on power quality disturbances in the frequency range of 2-150 kHz</b> S. Subhani, V. Cuk, J.F.G. Cobben Department of Electrical Energy Systems. Eindhoven University of Technology Eindhoven. The Netherlands
	<b>PP:411-416</b>
<b>336</b>	<b>High-voltage Gain DC-DC Boost Converter with Coupled Inductors and Interleaved for a PV System to Supply Data Centers</b> Katiúscia Lopes dos Santos, Fernando Luiz Marcelo Antunes Department of Electrical Engineering. Federal University of Ceará. Brazil



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338	<b>A Fixed-Frequency Soft-Switched Interleaved 3-Phase AC-to-DC Converter</b> Y. Du(2), A.K.S. Bhat(1) 1. Department of Electrical and Computer Engineering. University of Victoria. Canada 2. Is now with Rinte pipe Ecomaterial Co., Ltd., Chang Zhou. China
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343	<b>Multistage configurations for hybrid thermosolar gas turbine power plants</b> C. Miguel, R.P. Merchán, M.J. Santos, A. Calvo Hernández, A. Medina Department of Applied Physics. University of Salamanca. Spain
	<b>PP:427-432</b>
344	<b>Corrosion testing of a diesel engine common rail system using various types of biodiesel</b> A. Alcántara-Carmona, J. Sáez-Bastante, M.P. Dorado Department of Physical Chemistry and Applied Thermodynamics E.P.S., University of Córdoba. Spain
	<b>PP:433-437</b>
347	<b>Comfort temperature and humidity evaluation of a bioclimatic design building</b> J. Bello Llorente(1), C. Cabo Landeira(2), A. López-Agüera(2) 1. Department of Construction and Civil Engineering. CIFP Someso A Coruña. Spain 2. Sustainable Energetic Applications Group, Department of Particle Physics Physics Faculty, Santiago de Compostela University. Spain
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348	<b>Voltage Behavior in the Switched Reluctance Generator Due to Different Speed Profiles Aimed at Use in Small Wind Turbines</b> R. Fidelis(2), G. Viajante(1), L. Coutinho(2), E. Nery(1), F. Mendonça(1), D. Andrade(2), M. Escobar(1), L. Miranda(1) 1. Federal Institute of Education, Science and Technology Goiás, NUPSE Itumbiara. Brazil 2. Electric Drives Laboratory, Federal University of Uberlândia. Brazil
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349	<b>Design, Simulation and Performance of a Four Phases Linear Variable Reluctance Motor</b> B.B. Miranda, J.R. Camacho, A.C.F. Mamede School of Electrical Engineering. UFU – Universidade Federal de Uberlândia. Brazil
	<b>PP:449-452</b>
350	<b>Electrocatalytic performance comparison of Pt/V and Pd/V electrocatalysts for ethanol oxidation reaction</b> E. L. da Silva(1), A. Cuña(2,1), S. Khan(1), M. Cadorin(1), S. Pianaro(3), R. B.

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	<b>PP:453-457</b>
352	<b>Methodology to Design and Validate a Sustainable Isolated Solar Photovoltaic System</b> Yuri. Ulianov López(1), Hugo A. Macias M.S(2) 1. Department of Electrical and Mechanic Engineering. Universidad Autónoma de Occidente. Colombia 2. Department of Electronics and Telecommunications Engineering, Universidad Autónoma de Occidente. Colombia
	<b>PP:458-462</b>
353	<b>A tool for computation of electric losses in wind farms</b> L. Rouco(1), I. Campos(2), M. Hernández(2), J. C. Pérez Campión(2), I. Gómez de Olea(2) 1. Universidad Pontificia Comillas. Madrid. Spain 2. Iberdrola. Madrid. Spain
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355	<b>Modeling of nonlinear loads in high-voltage network by measured parameters</b> L.I. Kovernikova(1), Luong Van Chung(2) 1. The Siberia Branch of the Russian Academy of Sciences Energy Systems Institute, Irkutsk. Russia 2. National Research Irkutsk State Technical University Hung Yen. Vietnam
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356	<b>Photodegradation of Glycerol using Nanostructured TiO<sub>2</sub> Catalyst</b> E. Coser(1,2), A. Bervian(1), S. Khan(1), A. De León(3), J. Bussi(3), S. A. Pianaro(2), R. B. Otto(4), C. Aguzoli (5) C. F. Malfatti(1) 1. Metallurgical Department (DEMET), Pros-graduation Program in Mining Metallurgical and Materials. Laboratory of Corrosion Research (LAPEC), Federal University of Rio Grande do Sul (UFRGS). Brasil 2. Department of Materials Engineering (LIMAC), State University of Ponta Grossa (UEPG). Brasil 3. Surface Physical-chemistry Laboratory /DETEMA, Faculty of Chemistry, University of the Republic Montevideo. Uruguay 4. Automation and Simulation of Electrical Systems Laboratory (Lasse)- Itaipu Technological Park (PTI) Foz do Iguaçu – Paraná. Brazil 5. Programa de Pós-Graduação em Engenharia e Ciência dos Materiais - PGMAT, Universidade de Caxias do Sul - UCS, 130 - Caxias do Sul, RS, Brazil.

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<b>358</b>	<b>An Open-phase Fault Detection Method for Six-phase Induction Motor Drives</b> N. Rios-Garcia(1), M.J. Duran(1), I. Gonzalez-Prieto(1), C. Martin(2), F. Barrero(2) 1. Department of Electrical Engineering. E.T.S.I.I., Málaga University . Spain 2. Department of Electronic Engineering. E.T.S.I, Sevilla University. Spain
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<b>359</b>	<b>Analysis of the Power Quality in Six-phase Induction Motor Drives with Arbitrary Winding Spatial Shifting</b> J.J. Aciego(1), M.J. Duran(1), I. Gonzalez-Prieto(1), F. Barrero(2) 1. Department of Electrical Engineering. E.T.S.I.I., University of Málaga. Spain 2. Department of Electronic Engineering. University of Sevilla. Spain
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<b>363</b>	<b>Regulatory harmonization in the illumination of sport facilities: a challenge for energy savings and users well-being</b> R. Amorim(1), V. Molina(2), A. Peña-García(1) 1. Department of Civil Engineering 2. Department of Management E.T.S.I. Caminos, Canales y Puertos., University of Granada. Spain
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<b>369</b>	<b>Development of small-scale wind energy systems adaptable to climatic conditions using chattering torque control - PI pitch control and CAES strategy</b> N. Luo(1), T. Pujol(1), L. Pacheco(1), J.R. González(1), J.V. Bramon(2), A. Massaguer(1) 1. Polytechnic School, University of Girona. Spain 2. Structural Integrity and Composites, Aerospace Engineering, TU Delft. Netherland.
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<b>370</b>	<b>Efficient Utilization of Offshore Wind Energy Generation and Transmission during Normal Speed and Wind Gust through Pitch Control and HVDC Lines</b> M.A. Mahfouz(1), Mohamed A. El-Sayed(2) 1. Department of Electrical Power and Machines, Faculty of Engineering, Helwan University, Cairo. Egypt 2. Department of Electrical Engineering, College of Engineering and Petroleum, Kuwait University

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375	<b>Simultaneity of consumption and solar energy production of a Hungarian household</b> Attila Sándor Kazsoki, Bálint Hartmann Department of Electric Power Engineering. Budapest University of Technology and Economics. Hungary
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376	<b>CFD Simulation of a Horizontal Axis Hydrokinetic Turbine</b> L.T. Contreras(1), Y.U. López(2), S. Laín(1) 1. Modelling, Analysis & Simulation of Environmental & Industrial Processes (PAI+) Research Group 2. Energy Research Group Energetics and Mechanics Department, Faculty of Engineering, Universidad Autónoma de Occidente. Colombia
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381	<b>Production under feed-in tariffs in Portugal</b> P. Lourenço, C. Almeida EDP Serviço Universal, SA. Direção Compra de Energia . Coimbra. Portugal
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382	<b>A Compact DC-DC converter for offshore Wind Farm Application</b> S. M. Alagab, S.B. Tennakoon, C.A. Gould School of Engineering, Staffordshire University. United Kingdom
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385	<b>Comparative Analysis of Single-Phase Grid-Tied PV Systems with Single and Double Power Conversion Stages</b> L. P. Sampaio, S. A. O. Silva, M. Miranda Department of Electrical Engineering. Federal University of Technology – UTFPR-Cornélio Procópio – PR - Brazil
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386	<b>An On-board Energy Storage System for Catenary Free Operation of a Tram</b> H. M. Al-Ezee(1), S. Tennakoon(1), I. Taylor(1), D. Schedeicker(2), J. Schweickart(2) 1. Faculty of Computing, Engineering and Sciences. Staffordshire University. U.K. 2. NewTL S.A.S. Ernolsheim sur Bruche

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387	<b>Effective thermal conductance of thermoelectric generator modules</b> I. Ruiz(1), M. Borrelli(2), T. Pujol(1), N. Luo(1), L. Pacheco(1), A. Massaguer(1), L. Montoro(1) 1. Polytechnic School, University of Girona. Spain 2. Università degli Studi del Sannio, Benevento. Italy
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388	<b>Plate fin heat sink modelling and design considerations for thermoelectric generators</b> I. T'Jolyn(1), T. Pujol(2), M. De Paepe(1), A. Massaguer(2), L. Montoro(2) 1. Department of Flow, Heat and Combustion Mechanics Ghent University – Ugent. Belgium 2. Department of Mechanical Engineering and Industrial Construction University of Girona . Spain
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391	<b>Operation and Maintenance Cost Effect on Optimal Sizing of PV Array and Battery for a Grid-Connected House</b> M.A Hejazi(1), Ali Khorrami(1), Gevork B. Gharehpetian(2) 1. Electrical and Computer Engineering Department, University of Kashan, Kashan. Iran 2. Electrical Engineering Department, Amirkabir University of Technology, Tehran. Iran
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397	<b>About power quality monitoring in residential grids</b> M. Buzdugan, H. Balan Technical University of Cluj-Napoca. Romania
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399	<b>The Simulation Analysis for Increasing Output Power in Photovoltaic System by Using Segmented String and Constant Voltage Boost Chopper with MPPT</b> Xiaoyang Li, Teruhisa Kumano Electrical Engineering Program at Graduate School of Science and Technology, Meiji University. Japan
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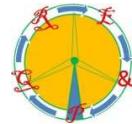
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<b>402</b>	<b>Strategies for Electricity with Zero Carbon Emissions at 2050 using the water Management at Mallorca-Menorca Electric system</b> Andreu Moià-Pol, Vincent Canals, Víctor Martínez-Moll Energy Engineering Research Group (GREEN) Physics Department, Universitat de les Illes Balears. Spain
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<b>403</b>	<b>Analysis of Three-Phase Four-Wire Shunt Active Power Filter Topologies Implemented Using Single-Phase Full-Bridge Inverters</b> R. D. Silveira, S. A. O. Silva, L. P. Sampaio Federal University of Technology – UTFPR-CP Department of Electrical Engineering . Brazil
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<b>405</b>	<b>Analysis of Radio Signal coverage of a feeder using Radio Mobile Software</b> Arnulfo Barroso de Vasconcellos(1), Saulo Roberto Sodré dos Reis(1), Gabriela Pessoa Campos(1), Priscila Costa Nascimento(1), Fabricio Parra Santilio(1), Teresa Irene de Ribeiro de Carvalho Malheiro(2) <ol style="list-style-type: none"><li>1. Department of Electrical Engineering. Federal University of Mato Grosso – UFMT. - District Boa Esperança. Cuiabá - MT. Brazil</li><li>2. Federal Institute of Mato Grosso - IFMT. Cuiabá - MT. Brazil</li></ol>
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<b>406</b>	<b>Analysis of yield and power quality of a Micro Photovoltaic generation power plant</b> Gabriela Nunes Lopes(1), Gabriela Pessoa Campos(1), Arnulfo Barroso de Vasconcellos(1), Etiane Oliveira Ponciano de Carvalho(1), Teresa Irene de Ribeiro de Carvalho Malheiro(2), Lutero Paes de Barros(3) <ol style="list-style-type: none"><li>1. Electrical Engineering Department. Federal University of Mato Grosso - UFMT. Boa Esperança. Cuiabá - MT. Brazil</li><li>2. Federal Institute of Mato Grosso - IFMT. Cuiabá - MT. Brazil</li><li>3. Energisa Mato Grosso. Brazil</li></ol>
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<b>408</b>	<b>A Contribution for the Diagnosis of Insulation Cables due different conditions of degradation, voltage stress and frequency</b> F. N. Lima, R. W. D. R. França, A. P. Finazzi, B. C. Carvalho, Ariela Zanoni Conejo, Marina Timo de Sá, Iago de Moura Faria Federal University of Mato Grosso (UFMT), Department of Electrical Engineering– Cuiabá. Brazil



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409	<b>Experiments and Simulations of an Automotive Exhaust Thermoelectric System</b> A. Massaguer(1), E. Massaguer(1), M. Comamala(1), A. Cabot(2), J.R. González(1), A. Deltell(1) 1. Department of Mechanical Engineering and Industrial Construction Polytechnic High School, University of Girona. Spain 2. Institut de Recerca en Energia de Catalunya, Barcelona. Spain
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410	<b>Experimental analysis of an automotive thermoelectric generator under different engine operating regimes</b> A. Massaguer(1), E. Massaguer(2), M. Comamala(1), A. Cabot(3), J. Ricart(1), A. Deltell(1) 1. Department of Mechanical Engineering and Industrial Construction Polytechnic High School, University of Girona. Spain 2. NABLA Thermoelectrics S.L. Girona. Spain 3. Institut de Recerca en Energia de Catalunya, Barcelona. Spain
	<b>PP:624-629</b>
412	<b>Energy efficient improvement of an office building model</b> Fraga De Cal B. Department of Industrial II Engineering. E.P.S., A Coruña University. Spain
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416	<b>The Newton Raphson Method in the Extraction of Parameters of PV Modules</b> L. R. D. Reis, J. R. Camacho, D. F. Novacki School of Electrical Engineering. Universidade Federal de Uberlândia (UFU). Brazil
	<b>PP:640-645</b>
418	<b>Estimating Future Grid Harmonics Due to Changing Harmonic Sources</b> William Howe, Matthew Rylander Power Quality Research Program (Program 1) Electric Power Research Institute Boulder. USA
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419	<b>PV Solar System for Stand Alone Smart Home with DC Supply</b> M. Nassereddine(1), J. Rizk(2), M. Nagrial(2), A. Hellany(2) 1. National Electrical Engineering Consultancy, Sydney. Australia 2. School of Computing, Engineering & Mathematics. Western Sydney University



	Penrith. Australia
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<b>420</b>	<b>Power Quality Analysis of a Biogas Micro-Generation Unit; Performance Comparative of Distributed Generation in respect to Brazilian National and International Standards</b> Ferreira, L. R. A(1), , Otto, R. B.(1,2) , Kitamura, D. S(1).., Scherer, H.V.(1), De Souza, S. N. M.(2), Ando Junior, O. H.(3) 1. Automation and Simulation of Electrical Systems Laboratory (Lasse) Itaipu Technological Park (PTI) Foz do Iguacu – Parana. Brazil 2. Programa de Pos-Graduacao em Engenharia de Energia na Agricultura - PPGEA UNIOESTE, State University of Western Parana. Cascavel-PR. Brazil 3. Departament of Renewable Energies. UNILA, Federal University of Latin American Integration. Foz do Iguacu-PR. Brazil
	<b>PP:658-662</b>
<b>421</b>	<b>On Sizing of Standalone Hybrid Wind/Solar/Battery Micro-grid System</b> Umer Akram, Muhammad Khalid, Saifullah Shafiq Electrical Engineering Department, King Fahd University of Petroleum & Minerals (KFUPM). Saudi Arabia
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<b>422</b>	<b>Utilization of residual heat in Diesel engines, CFD simulation of a thermoelectric generator</b> L. Montoro, A. Massaguer, E. Massaguer, M. Comamala, R. Fernández, A. Deltell University of Girona. Spain
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<b>426</b>	<b>PWM strategy with harmonics injection and modulated frequency triangular carrier. A review</b> A. Ruiz-González(1), M. Meco-Gutierrez(1), F.M. Pérez-Hidalgo(1), F. Vargas Merino(1), J. Heredia-Larrubia(2) 1. Department of Electrical Engineering. E.T.S.I.I., Málaga University. Spain 2. Department of Technology Electronic. E.T.S.I.I., Málaga University. Spain
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<b>429</b>	<b>Power Control with Static Synchronous Series Compensator for Distribution Network integrating Wind Farm based on DFIGs</b> O. Aouchenni(1), R. Babouri(1), D. Aouzellag(1), F. Chabour(2), C. Nichita(2) 1. Department of Electrical Engineering, Laboratoire de Maitrise des Energies Renouvelables, BEJAIA University. Algeria



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<b>433</b>	<b>Non-linear inductor modelling for a DC/DC Buck converter</b> G. Lullo(1), D. Scirè(1), G. Vitale(2) 1. Dipartimento di Energia, Ingegneria dell'Informazione, e modelli Matematici Università di Palermo. Italy 2. Istituto di Studi sui Sistemi Intelligenti per l'Automazione (ISSIA), Consiglio Nazionale delle Ricerche (CNR), Palermo. Italy
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<b>435</b>	<b>Comparison of li-ion battery ageing models applied in photovoltaic stand-alone systems</b> R. Dufo-López, S. Marquino Leonar, J.L. Bernal-Agustín Department of Electrical Engineering. EINA, University of Zaragoza. Spain
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463	<b>Analysis of the Energy Transmission System Performance after the use of Linear Reactor and Saturated Reactors for Voltage Regulation</b> A. B. Vasconcellos(1), T.I.R.C. Malheiro(2), I.M. Faria(1), G.N.Lopes(1), V.H.F. Brito(1) 1. Federal University of Mato Grosso (UFMT), Electrical Engineering Department – Cuiabá. Brazil 2. Federal Institution of Education, Science and Technology of Mato Grosso – I



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