

- Accepted papers for:**
“11th Spanish Portuguese Conference on Eléctrical Engineering (11CHLIE)”
- | Nº | Title/Authors |
|-----------|---|
| 101 | <p>Real-time power-hardware-in-the-loop system. Application to power electronics compensators Seddik Bacha¹, Christian Dufour², Dan Ocnasu³, Daniel Roye¹ ¹ G2Elab-ENSIEG. France ² Montreal-Canada ³ DCMAP-66163. Northgate Business Centre. Romania</p> |
| 102 | <p>Lightning surges on wind power systems: Study of Electromagnetic transient R.B. Rodrigues¹, V.M.F. Mendes², J.P.S. Catalão¹ ¹Departamento de Electromechanical Engineering. University of Beira Interior. R. Fonte do Lameiro. Covilhã. Portugal ²Department of Electrical Engineering and Automation. Instituto Superior de Engenharia de Lisboa. Portugal</p> |
| 103 | <p>Result comparison from simulation and measurement on wind power plant F. Rajský¹, M.P. Donsión², F.T. Oliveira³ ¹ Faculty of Electrical Engineering, The University of West Bohemia in Pilsen. Czech Republic ² Department of Electrical Engineering, University of Vigo. Spain ³ Department of Electrical Engineering, School of Technology and Management of Leiria. Portugal</p> |
| 104 | <p>On-grid and off-grid operation of multi-input single-output DC/DC converter based fuel cell generation system Noroozian R¹, Abedi M², Gharehpetian G.B², Hosseini S.H³ ¹ Department of Electrical Engineering, Faculty of Engineering, University of Zanjan. Iran ² Department of Electrical Engineering, Amirkabir University of Technology. Iran ³ Department of Electrical and Computer Engineering, Tabriz University. Iran</p> |
| 105 | <p>Workcell design for automatic assembling ECU for cars João Vilaça¹, Jaime Fonseca¹, A. Marque Pinho² ¹ Department of Industrial Electronics. D.E.I. Minho University. Portugal ² Department of Mechanical (DEM). Guimarães. Portugal</p> |
| 107 | <p>Improving power density and efficiency of high-voltage DC/DC converters for traction applications D. Vinnikov¹, R. Strzelecki² ¹ Department of Electrical Drives and Power Electronics. Tallin University of Technology. Estonia</p> |

² Department of Ship Automation Gdynia Maritime Academy.
Poland

- 110 Fault diagnosis and vibration testing of rotating machine using kalman filter
A. Almansi
Department of Rotating Equipment. Técnicas Reunidas S.A. Madrid.
Spain
- 111 Rotor large deformation analysis for high speed electric machines
A. Almansi
Department of Rotating Equipment. Técnicas Reunidas S.A. Madrid.
Spain
- 112 SCADA systems in transportation tunnels
Ahmed O. Abduk Salam
Roads Lighting and Traffic Signals, Roads Department, Rods and
Transport Authority. Dubai
- 114 Optimal power flow with expected-security-costs. A model with
decomposition
Jesús Sagredo, Victoria Abad
Departamento de Ingeniería Electromecánica. Escuela Politécnica
Superior, Universidad de Burgos. España
- 115 A new high-power DC/DC converter for residencial fuel cell power
systems
D. Vinnikov
Department of Electrical Drives and Power Electronics. Tallinn
University of Technology. Estonia
- 117 Improved lumped parameter thermal modelling of synchronous
machines
Carlos Mejuto¹, Markus Mueller¹, Martin Shanel²
¹ Institute for Energy Systems, School of Engineering and Electronics
The University of Edinburg. United Kingdom
² Cummins Generator Technologies. United Kingdom
- 118 Improving HV shunt reactors REF relaying
F. Uriondo¹, G. Aguirre¹, J.R. Hernández¹, J.M. García²
¹ Department of Electrical Engineering. E.S.I. Bilbao, University of The
Basque Country. Spain
² INGETEAM T&D. Basauri. Spain
- 119 Unit power factor converter to charge embarked supercapacitors
M.Y. Ayad, A. Djerdir, M. Becherif
Se T Laboratory, UTBM University. France
- 120 Energy management of a fuel cell and supercapacitors by passivity-
based control and sliding mode control

M.Y. Ayad¹, M. Becherif^{1,2}, A. Henni³, A. Aboubou⁴, M. Wack¹

¹ Se T Laboratory, UTBM University. France

² FC-lab Fuel Cell Laboratory, Belfort, France

³ Alstom Power System, Alstom, France

⁴ LMSE Laboratory, Bilkra University, Algeria

An evaluation of flicker and interharmonics caused by aperiodics and aperiodic loads

122 Mario Brugnoli, Alejandro Jurado

Energy and Environment Group. Department of Electrotechnics,
School of Engineering, University of Buenos Aires. Argentina

PV on flat roofs: parameters for the choice of the best technology and tilt angle

123

Angel A. Bayod Rujula, Abel Ortego Bielsa, Amaya Martínez Gracia
CIRCE/University of Zaragoza. Spain

Small cogeneration by biomass gasification on the decentralized energy production

J. Galvão¹, S. Leitão², S. Malheiro², T. Gaio³

125 ¹ Department of Electrical Engineering. E.S.T.G. Leiria Polytechnic
Institute. Portugal

² Department of Engineering Trás-os- Montes e Alto Douro University.
Portugal

³ Turismarvão. Portugal

Aplicación de la calculadora programable HP48 emulada a la teoría de circuitos

126

G. Aguirre Zamalloa, F. Uriondo Arrue, J.R. Hernández González
Departamento de Ingeniería Eléctrica. Escuela Técnica Superior de
Ingeniería de Bilbao. Universidad del País Vasco. España

Current tendencies in the integration of renewable resources and modeling of wind energy systems

Bizuayehu Abebe Worke¹, J. Antonio Domínguez Navarro²

128 ¹ CPS, Mechanical Engineering Department, Renewable Energy and
Energetic Efficiency Program Student. Spain

² CPS, Electrical Engineering Department. University of Zaragoza.
Spain

Global load demand forecasting of Spain using a self-organizing map network model

129

Carolina Senabre¹, Sergio Valero¹, Antonio Gabaldón², Mario Ortíz¹
Manuel González¹

¹ Departamento de Ingeniería de Sistemas Industriales. E.P.S.E.
Universidad Miguel Hernández de Elche. España

² Departamento de Ingeniería Eléctrica. Escuela Técnica Superior de
Ingeniería Industrial. Universidad Politécnica de Cartagena. España

130 Study of distribution of the magnetic and electric fields for overhead

- high-voltage power lines. Particularization to 220 kV and 400 kV lines
 J.J. Ugartemendia¹ J. A. Güemes² P.M. García¹
¹ University of The Basque Country. Department of Electrical
 Engineering. San Sebastián. Spain
² EUITI de Bilbao. University of the Basque Country. Spain
- Simulation of two-level and multilevel converters for wind power
 systems: analysis of power quality and dynamic stability
 R. Melício¹, V.M.F. Mendes², J.P.S. Catalão¹
 132 ¹ Department of Electromechanical Engineering. University of Beira
 Interior. Portugal
² Department of Electrical Engineering and Automation. Instituto
 Superior de Engenharia de Lisboa. Portugal
- Short-term hydro scheduling: mixed-integer nonlinear optimisation
 methodology
 J.P.S. Catalão¹, H.M.I. Pousinho¹, V.M.F. Mendes²
 133 ¹ Department of Electromechanical Engineering. University of Beira
 Interior. Portugal
² Department of Electrical Engineering and Automation. Instituto
 Superior de Engenharia de Lisboa. Portugal
- Wind generation stabilization of fixed speed wind turbine farms with
 hydrogen buffer
 J.J. Ugartemendia¹, X. Ostolaza², V. Moreno¹, J.J. Molina¹, I. Zubia¹
 135 ¹ Department of Electrical Engineering of the University of the Basque
 Country, San Sebastián. Spain
² Department of Systems Engineering & Control of the University of
 the Basque Country. San Sebastián. Spain
- An approach to find the most flexible plan among the solutions of
 transmission expansion planning (TEP) problem
 136 M. Gholami, H.Y. Panahi, G. Gharehpetian
 Department of Electrical Engineering Amirkabir University. Iran
- Técnicas aplicadas na distribuição de energia eléctrica para veículos
 lançadores de satélites
 Francisco Carlos Parquet Bizarria^{1,2}, José Walter Parquet Bizarria²,
 Fábio Duarte Spina¹
 138 ¹ Divisão de Eletrônica. Instituto de Aeronáutica e Espaço.
 São Paulo. Brasil
² Departamento de Informática. Universidade de Taubaté. São Paulo.
 Brasil
- Application of sigma-delta modulation in multifunction current controller
 for inverter-based distributed generation
 139 M. Davari, I. Salabeigi, G.B. Gharehpetian, S.H. Fathi, J. Milimonfared
 Department of Electrical Engineering, Amirkabir University of
 Technology, Iran

- Dynamic phasors modelling of the wound rotor induction generator for electromagnetic and electromechanical analysis
Alberto Coronado Mendoza¹, José Antonio Domínguez Navarro²
140 ¹ Renewable Energy and Energetic Efficiency Program Doctorate Degree Candidate
^{1,2} Department of Electrical Engineering. CPS, Zaragoza University. Spain
- Optimal tuning of current controller for sigma-delta modulation inverter-based distributed generation using particle-swarm optimization method
M. Davari¹, A. Kashefi Kaviani², Salabeigi¹, G.B. Gharehpetian¹, S.H. Fathi¹
141 ¹ Department of Electrical Engineering, Amirkabir University of Technology. Iran
² Department of Electrical and Computer Engineering, Florida International University. USA
- The needed adaptability for ERP systems
Ricardo Almeida
142 Faculdade de Engenharia Universidade do Porto. Portugal
- Small signal stability analysis of wind turbines
Yuri Ulianov López¹, José Antonio Domínguez²
144 ¹ Department of Electrical Engineering, Universidad Autónoma de Occidente. Colombia
² Department of Electrical Engineering, University of Zaragoza. Spain
- Development of a web-based infrared remote control system for energy management
Yu-Chi Wu, Bo-Sen Chang
145 Department of Electrical Engineering. National United University. Taiwan
- Axial movement effect on inverted winding's FRA of power transformer
H. Mobaraki, a. Vahedi
146 Department of Electrical Engineering. Iran University of Science and Technology Narmak. Iran
- Modelling of the impact of phase asymmetries on the torque waveform of permanent magnet synchronous motor
X.D. Zhao¹, J. Corda¹, T.X. Mei²
148 ¹ School of Electronic and Electrical Engineering. University of Leeds. United Kingdom
² School of Computing, Science and Engineering. Salford University. United Kingdom
- Water level control system for a low-head run-of-river variable speed small hydropower plant
J.I. Pérez Díaz, J.R. Wilhelmi, P. García Gutiérrez, J. Fraile Ardanuy, J. Fraile Mora, J.A. Sánchez Fernández, J.I. Sarasúa
150

Department of Hydraulic and Energy Engineering. Technical University of Madrid (UPM). Spain

- 151 The induction motor as a mechanical fault sensor in elevator systems
A.Q. Flores¹, A.J.M. Cardoso², J.B. Carvalho³
^{1,3} Electrical Engineering Department. I.S.E.P.- Instituto Superior de Engenharia do Porto. Portugal
² Department of Electrical and Computer Engineering. F.C.T.U.C./ I.T. University of Coimbra. Portugal
- 152 Critical clearing time evaluation of power system with UPFC by energetic method
B. Boussahoua, M. Boudour
Faculty of Electrical Engineering, USTHB, Algiers
- 153 Optimal dispatch of combined heat power units under day-ahead electricity markets
José M. Yusta¹, Paulo M. de Oliveira de Jesus²
¹ Department of Electrical Engineering. Zaragoza University. Spain
² Conversion and Energy Delivery, Department Simón Bolívar University. Caracas. Venezuela
- 155 Impacto de las instalaciones eólicas sobre la avifauna y murciélagos. Caso de las Islas Canarias
M. Martínez Melgarejo¹, A. Pulido Alonso¹, C. Roca González², J. Romero Mayoral¹, P. González Domínguez¹
¹ Departamento de Ingeniería Eléctrica
² Departamento de Cartografía y Expresión Gráfica en la Ingeniería. E.T.S.I.I. Universidad de Las Palmas de Gran Canaria. España
- 157 On-site assessment of high voltage motors insulation operating in oil facilities
Antonio Carvajal, V. Rodolfo García Colón
Department of Electrical Equipment Electrical Research Institute. México
- 158 Stability and accuracy of digital filters in the presence of interharmonics
José Félix Miñambres¹, Jorge Lázaro², Miguel Angel Zorrozuá¹, Maribel Sánchez², Begoña Larrea², Iñigo Antiza³
¹ Departamento de Ingeniería Eléctrica
² Departamento de Matemática Aplicada. E.T.S.I. Universidad del País Vasco. Bilbao. España
³ GE Multilin. España
- 160 Optimización en el corto plazo de un sistema hidroeléctrico con

bombeo

Alejandro Perea¹, José R. Wilhelmi²

¹ Iberdrola. Madrid. Spain

² Departamento de Ingeniería Civil, Hidráulica y Energética.
Universidad Politécnica de Madrid (UPM). España

Phase asymmetry: a new parameter for detecting low current faults in
high impedance grounded networks

K.J. Sagastabeitia¹, I. Zamora², A.J. Mazón², Z. Aginako¹, G. Buigues²

161 ¹ Department of Electrical Engineering. E.U.I.T.I. of Bilbao. University
of the Basque Country. Spain

² Department of Electrical Engineering. E.T.S.I. of Bilbao. University
of the Basque Country. Spain

Electrical energy management program (EEMP) at the BNB (Banco do
Nordeste do Brasil)

162 Tomaz Nunes Cavalcanti Neto, Pontes R.S.T.

Departamento de Engenharia Elétrica. Centro de Tecnologia.
Universidade Federal do Ceará. Brasil

Technique of dry washing of the insulators of the electrical nets of
distribution

Rafael Oliveira de Sousa¹, R.S.T. Pontes¹, V.P.B. Aguiar², Anadite
Maria de Luna³

163 ¹ Departamento de Engenharia Elétrica. Centro de Tecnologia.
Universidade Federal do Ceará. Brasil

² Departamento de Engenharia e Física. Núcleo de Ciência e
Tecnologia, Fundação Universidade Federal de Rondônia (UNIR)
Brasil

³ Consultoria em Ciências e Engenharia dos Materiais Ltda. Brasil

Electrical and thermal simulation of PVT panels

Angel Antonio Bayod- Rújula¹, Sergio Diaz de Garaio¹, Alejandro del
Amo²

165 ¹ Centro Politécnico Superior/ CIRCE. Universidad de Zaragoza.
Spain

² ADES Pol. Malpica-Alfinden. Spain

Curtosis coefficient and Hopfield neural net application in classification
of electricity customers

166 José Jesús López Vázquez, José Antonio Aguado Sánchez, Francisco
Martín Moreno, Francisco Muñoz Gutiérrez, Alejandro Rodríguez
Gómez, José Ernesto Ruiz González

Departamento de Ingeniería Elétrica. Universidad de Málaga. España

Wavelet and artificial neural network comparison results in
classification of power quality disturbances

167 A. Rodríguez, J. Aguado, J.J. López, F. Martín, F. Muñoz, J.E. Ruiz

Department of Electrical Engineering. E.T.S.I.I.- E.U.P. Málaga University. Spain

- 169 Autoassociative neural network for patterns restoration
Ana Beatriz Alvarez, José Raimundo de Oliveira
Department of Computer Engineering and Industrial Automation (DCA). School of Electrical and Computer Engineering (FEEC). State University of Campinas, SP. Brasil
- 170 Parameter identification for vector controlled induction wind turbines
I. Zubia,¹ C. Alcalde², A. Zatarain², X. Ostolaza³
¹ Department of Electrical Engineering. EUP- Donostia. University of the Basque Country. Spain
² Department of Applied Mathematics. EUP- Donostia. University of the Basque Country. Spain
³ Department of Systems Engineering and Automation. EUP- Donostia. University of the Basque Country. Spain
- 171 Electrical engineering teaching. Virtual tools in potential high risk environments
Vicente Barranco López, David Bullejos Martín, F. Lara Raya
Department of Electrical Engineering, University of Córdoba. High Polytechnic School. Spain
- 173 Microproduction with photovoltaic and wind systems. Analysis of economical profitability and of impacts in the electric system
André Agostinho, Humberto Jorge
Departamento de Engenharia Electrotécnica e de Computadores. Faculdade de Ciências e Tecnologia da Universidade de Coimbra. Portugal
- 175 Virtual instruments in power factory
J.A . Ramos Hernanz¹, J.J.. Campayo Martín¹, I. Zamora Belver¹, E. Puelles Pérez¹, J.A. Métrico Gogeoascoechea¹, J. Arrugaeta², J. Larrañaga Lesaka³
¹ Department of Electrical Engineering. E.U.I. Vitoria. University of the Basque Country. Spain
² Department of Mechanical Engineering. E.U.I. Bilbao. University of the Basque Country. Spain
³ Department of Industrial Organisation. E.U.I. Vitoria. University of the Basque Country
- 176 Influence of constructive parameters of the cogging torque in PMSMS
P.M. García¹, J.A. Güemes², V. Moreno¹, A.M. Iraolagoitia²
¹ Department of Electrical Engineering. E.U.P. San Sebastián. University of the Basque Country. Spain
² Department of Electrical Engineering. E.U.I.T.I. Bilbao. University of the Basque Country. Spain
- 178 Wind farm layout optimization with genetic algorithms and

- geographical information systems
L.A. Fernández Jiménez, A. Falces de Andrés, M. Mendoza Villena, A. Muñoz Jiménez, P. Lara Santillán, P.J. Zorzano Santamaría
Departamento de Ingeniería Eléctrica. E.T.S.I.I. Universidad de La Rioja. España
- 179 Short term load forecasting for low-voltage substations using genetically optimized fuzzy inference systems
A. Yanguas Peña, M. Mendoza Villena, A. Falces de Andrés, P. Lara Santillán, E. García Garrido, E. Zorzano Alba
Departamento de Ingeniería Eléctrica . E.T.S.I.I. Universidad de La Rioja. España
- 181 MV bay controller with integrated protection, power quality análisis and extender self-testing functions
A. Nowakowski, A. Lisowiec, Z. Kolodziejczyk
Centre of Teleinformation systems and Hardware Applications. Tele and Radio Research Institute. Poland
- 183 Short-term forecasting models for PV systems
A. Muñoz Jiménez, P. Zorzano Santamaría, L.A. Fernández Jiménez, E. Zorzano Alba, A. Yanguas Peña, E. García Garrido
Departamento de Ingeniería Eléctrica . E.T.S.I.I. Universidad de La Rioja. España
- 184 Simulation applications to hydropower systems management and design
Alejandro Perea¹, Jesús M^a Latorre², Andrés Ramos², Santiago Cerisola², Rafael Bellido¹
¹ Iberdrola Generación. Madrid. Spain
² Instituto de Investigación Tecnológica. ICAI- Universidad Pontificia Comillas de Madrid. España
- 186 Study of the end-effects on the performance of the linear switched reluctance motor
J. García Amorós¹, P. Andrada Gascón²
¹ GRENGELI Grupo de Ingeniería Eléctrica e Instrumentación. Departamento de Ingeniería Electrónica, Eléctrica y Automática E.T.S.E. Universidad Rovira i Virgili. Tarragona. España
² GAECE Grupo de Accionamientos Eléctricos y Conmutación Electrónica. Departamento de Ingeniería Eléctrica. EPSEVG-UPC Vilanova i la Geltrú. España
- 187 HTLS and HVDC solutions for overhead lines uprating
Santiago Cascante Nogales¹, José Antonio Lama Miñana², M. Paz Comech³, Miguel García Gracia³, Eduardo Martín³, Adrián Alonso³
¹ ENDESA. Barcelona. Spain
² ENDESA. Sevilla. Spain
³ CIRCE. Zaragoza. Spain

- 188 Analisis of a scada system of a thermal power plant
Mohamed Najeh Lakhoua
ISSAT. Tunisia
- 189 The finite element method for parametric identification of a three-phase induction machine with genetic algorithms
Leopoldo Simón, José M. Monzón
Departamento de Ingeniería Eléctrica. Universidad de Las Palmas de Gran Canaria. España
- 190 Application of FACTS devices in transmission expansion to overcome the problems related to delays
H. Yazdanpanahi, G. Gharehpetian, H. Hosseinian
Department of Electrical Engineering. Amirkabir University. Iran
- 191 Autonomous tele-information network for power systems switchgear equipment e-diagnostics
A. Lisowiec, A. Nowakowski, Z. Kolodziejczyk
Centre for Tele-Information systems and Hardware Applications. Tele and Radio Research Institute. Poland
- 192 Analysis of the stable performance of self-excited reluctance generators under variable conditions in the load, excitation capacitance and speed
Fernando Martínez García¹, Sonia Navarro Gómez²
¹ Departamento de Energía Eléctrica, Electrónica, Automática y Comunicaciones. Escuela Universitaria de Almadén. Universidad de Castilla la Mancha. Spain
² Departamento de Electrónica. Escuela Politécnica Superior. Universidad de Alcalá. Spain
- 193 Flow of molten metal in a pipe driven by electromagnetic field
J. Cerveny¹, L. Dubcova¹, I. Dolezel¹, J. Barglik²
¹ Institute of Thermomechanics, Academy of Sciences of the Czech Republic.
² Department of Electrotechnology, Silesian University of Technology. Poland
- 194 Induction heating of cylindrical billets by rotation in uniform magnetic field solved as mechanical transient
M. Donatova¹, P. Karban², I. Dolezel²
¹ Department of Theory of Electrical Engineering. Faculty of Electrical Engineering. University of West Bohemia. Czech Republic
² Department of Electrical Power Engineering. Faculty of Electrical Engineering. Czech Technical University. Czech Republic
- 195 Increase in equipments efficiency performance- The Brazilian mandatory standards experience-
Cássio T.C. Andrade¹, Ricardo S.T. Pontes²
¹ Regulatory Agency of the Delegated Public Services of Ceará

- (ARCE). Brasil
² Department of Electrical Engineering. Federal University of Ceará.
 Brasil
- Three-phase induction motors energy efficiency standars – A study of case
 Cássio T.C. Andrade¹, Ricardo S.T. Pontes²
 196 ¹ Regulatory Agency of the Delegated Public Services of Ceará
 (ARCE). Brasil
² Department of Electrical Engineering. Federal University of Ceará.
 Brasil
- Harmonic distortion analysis in MV and LV distribution networks:
 problems, influencing factors and possible solutions
 198 Fernando Bastião, Humberto Jorge
 Department of Electrical Engineering and Computers . F.C.T.U.C.
 University of Coimbra. Portugal
- El vehículo eléctrico y la eficiencia energética global
 199 Ramón Bargalló, Joan Llaverías, Helena Martín
 Departamento de Ingeniería Eléctrica. Universidad Politécnica de
 Catalunya. España
- Test power system for load flow, short-circuit and stability analysis
 200 C. Franco Guillén, C. Goyo Barrientos
 Fundación para el Desarrollo del Servicio Eléctrico (FUNDELEC)
 Ministerio del Poder Popular para la Energía y Petróleo. Venezuela
- Switched reluctance motor drive for 42 V electric power steering
 202 P. Andrada, B. Blanqué, E. Martínez, J.I. Perat, J.A. Sánchez, M.
 Torrent
 GAECE. EPS de Ingeniería de Vilanova i la Geltrú. Departamento de
 Ingeniería Eléctrica. Technical University of Cataluña. Spain
- ELF Magnetic field security zones around high voltage power lines
 203 Carlos Lemos Antunes
 Lab. CAD/CAE, Electrical Engineering Department. University of
 Coimbra. Portugal
 APDEE- Assoc.Port. Prom. Desenv. Eng. Electrotécnica. Portugal
- Short-term stochastic equilibrium models for oligopolistic electricity
 205 markets
 Sebastián Martín Rivas, José Antonio Aguado Sánchez
 Electrical Engineering Department. University of Málaga. Spain
- Soft magnetic compositive core- A new perspective for small AC
 206 Motors design
 L. Petkosvska, G. Cvetkovski
 Ss. Cyril and Methodius University. Faculty of Electrical Engineering
 and Information Technologies. Macedonia

- A low-cost dual programmable power source based on a three-leg inverter
D. Foito¹, M. Guerreiro¹, A. Cordeiro²
207 ¹ Escola Superior Tecnologia de Setúbal. Instituto Politécnico de Setúbal. Portugal
² Instituto Superior de Engenharia de Lisboa. Instituto Politécnico de Lisboa. Portugal
- Transient stability classification of an electric power network using a Bayesian approach
C.M. Machado Ferreira¹, F.P. Maciel Barbosa²
209 ¹ Departamento de Engenharia Electrotécnica. ISEC. Instituto Superior de Engenharia de Coimbra. Portugal
² Departamento de Engenharia Electrotécnica e de Computadores FEUP. Faculdade de Engenharia da Universidade do Porto. Portugal
- An ANN system to on-line detection of sag, swell and transient voltages
210 F.J. Alcántara, J.R. Vázquez, P. Salmerón, A. Pérez
Departamento de Ingeniería Eléctrica y Térmica. Escuela Politécnica Superior. Universidad de Huelva. Spain
- Distortion sources identification in electric power systems
211 R.S. Herrera, A. Pérez, P. Salmerón, J.R. Vázquez, S. P. Litrán
Department of Electrical Engineering. E.P.S. University of Huelva. Spain
- A sliding maximum power point tracker for a photovoltaic system
212 M.I. Arteaga Orozco, J.R. Vázquez, P. Salmerón, A. Pérez
Departamento de Ingeniería Eléctrica y Térmica. Escuela Politécnica Superior. Universidad de Huelva. España
- Brushless DC motor control using PLC
214 M. Tawadros, J. Rizk, M. Nagrial
School of Engineering. University of Western Sydney. Australia
- Analysis and performance of a switched reluctance generator for wind energy conversion
215 M. Nassereddine, J. Rizk, M. Nagrial
School of Engineering. University of Western Sydney. Australia
- New tool for power performance characterization
216 J.J. Pérez Aragüés, C. Beltrán, J.J. Melero, A. Llombart
Department of Electrical Engineering. University of Zaragoza. Spain
- A new evolutionary controller implemented on a robotic manipulator
218 I. Hassanzadeh, H. Kharrati, F. Hashemzadeh

Department of Electrical Engineering. University of Tabriz. Iran

- 219 Application of superconducting fault current limiters to enhancement of power system transient stability
R. Aligholizadeh, H. Heydari
Center of Excellence for Power System Automation and Operation
Electrical Engineering Department. Iran University of Science and Technology. Iran
- 220 New protection scheme based on IEC61850
Samuel Borroy Vicente, Laura Jiménez de Urtasun, Mayte Villén Martínez, Diego López Andía, Miguel García Gracia
CIRCE. C.P.S. University of Zaragoza. Spain
- 222 Evaluation and optimize control of energy processes in indoor swimming pools-HVAC system management
E. Ribeiro¹, H.M. Jorge², D. Quintela³
¹ Polytechnic Institute of Leiria. School of Technology and Management. Portugal
² University of Coimbra. Department of Electrical Engineering and Computers. Portugal
³ University of Coimbra. Department of Mechanical Engineering. Portugal
- 223 Direct torque control of PWM current-source-inverter-fed induction motor
M. Babaei, H. Heydari
Center of Excellence for Power System Automation and Operation
Electrical Engineering Department. Iran University of Science and Technology. Iran
- 224 A new method to obtain multiple load flow solutions
Rosa M^a. de Castro Fernández, Angel Pérez Coyto
Departamento de Ingeniería Eléctrica. E.T.S.I.I. Universidad Politécnica de Madrid. España
- 225 3D Hyper-redundant robot
Luís Marques¹, João Dinis¹, A.Paulo Coimbra¹, Manuel M. Crisóstomo¹, João P. Ferreira^{1,2}
¹ Institute of Systems and Robotic, Electrical and Computer Engineering Department of University of Coimbra. Portugal
² Institute Superior of Engineering of Coimbra. Portugal
- 226 Design and implementation of lane departure avoidance system using fuzzy logic controller
Iraj Hassanzedeh¹, Hamidreza Sahandi Esfanjani¹, Mir Javad Musavinia²
¹ Department of Control Engineering. University of Tabriz. Iran
² Department of Communication Engineering. University of Tabriz. Iran

- Power quality problems in the mould industry
L. Moreira^{1,2}, S. Leitão², Z. Vale³
228 ¹ Instituto Politécnico de Leiria. Escola Superior de Tecnologia e
Gestão. Portugal
² Universidade de Trás-os- Montes e Alto Douro. Department de
Engenharias. Vila Real. Portugal
³ Instituto Superior de Engenharia do Porto. Instituto Politécnico do
Porto. Portugal
- Protection against DC faults in voltage sourced converters
D. M. Larruskain¹, I. Zamora¹, J.J. Zamora², O. Abaratregui¹
229 ¹ Department of Electrical Engineering
² Department of Electronics and Telecommunications
University of the Basque Country. Spain
- The costs and benefits of replacing older household's appliances
P. Correia¹, A. Gomes²
231 ¹ Department of Electrical Engineering. School of Technology.
Polytechnic Institute of Viseu. Portugal
² Department of Electrical Engineering and Computers. F.C.T.
University of Coimbra. Portugal
- Improvement of resistive reach of distance protection through a power
flow-based adaptive parameterization
233 N.El Halabi, S. Martín, S. Borroy, D. López, M. García Gracia
Centre of Research of Energy Resources and Consumption, CIRCE
Spain
- A customer management system for the Spanish transport system
operator
234 Julia Díaz, José R. Dorronsoro, Ángela Fernández, Sandra Fresnillo,
Teresa Huelín, Alvaro Valera
Instituto de Ingeniería del Conocimiento (IIC). UAM-Cantoblanco.
Madrid. España
- Design and control of the brushless doubly fed twin induction
generator (BDFTIG)
235 A. Bensadeq, P.W. Lefley
Department of Electrical Engineering
Leicester University, University Road. United Kingdom
- Development of a single phase PM BLDC motor from a novel generic
model
236 S. Ahmed, P. Lefley
Department of Electrical Engineering. University of Leicester. United
Kingdom
- 237 Simulating scenarios and prediction intervals in wind power forecasting
with Beta distribution

Alvaro Jaramillo¹, Ismael Sánchez², Edgardo Castronuovo¹, Julio Usaola¹

¹ Department of Electrical Engineering

² Department of Statics

Carlos III of Madrid University. Spain

238 Fault relative location: evaluation of the algorithm based on phase change sequence current using gathered asymmetrical voltage sags
Victor A. Barrera Núñez, Joaquim Meléndez i Frigola, Sergio Herraiz Jaramillo

Power maximization of a PV-wind HRES by DC-link voltage boosting
Marco Beccali¹, Massimiliano Luna¹, Marcello Pucci², Gianpaolo Vitale²

240 ¹ D.R.E.AM. Dipartimento di Ricerche Energetiche e Ambientali
Università degli Studi di Palermo. Italy

² I.S.S.I.A-C.N.R. Section of Palermo (Institute on Intelligent Systems for the Automation). Italy

Estimation of the zero-sequence impedance of undergrounds cables for single-phase fault location in distribution systems

242 S. Herraiz¹, J. Meléndez², V.A. Barrera¹, J. Sánchez², M. Castro²

¹ Institute of Informatics and Applications. University of Girona. Spain

² ENDESA Distribución S.L. Spain

Custom power equipment to facilitate the penetration of embedded generation in distribution networks

Melchor Gómez¹, Miguel Ángel Cámara¹, Emilio Jiménez², Eduardo Martínez Cámara³

243 ¹ Electrical Engineering Department. E.U. de Ingenieros de Vitoria. Spain

² Electrical Engineering Department. ETSII. University of La Rioja. Spain

³ Mechanical Engineering Department. ETSII. University of La Rioja. Spain

Application of the finite elements method to the capacitance calculation

245 José M. Bueno Barrachina, César S. Cañas Peñuelas, Saturnino Catalan Izquierdo

Instituto de Tecnología Eléctrica. Universidad Politécnica de Valencia. España

Optimization of grounding electrode systems

246 César s. Cañas Peñuelas, Saturnino Catalan Izquierdo, José M. Bueno Barrachina

Instituto de Tecnología Eléctrica. Universidad Politécnica de Valencia. España

Arquitectura de medida inteligente para entornos domésticos

247 M. Mañana¹, A. Ortíz¹, C. Renedo¹, S. Pérez¹, F. Delgado¹, M.A. Cavia¹, J. Ruiz²

¹ Department of Electrical and Energy Engineering. University of Cantabria. Spain

² Energy Watch Consulting. Torrelavega. Spain

The trompe of water or the trompe of the Pyrenees. Recovery of the functional principle for pumping applications. Approximation by using electromagnetic equations

248 Ricard Bosch I Tous¹, Víctor Fuses Navarra²

¹ Department of Electrical Engineering. E.T.S.E.I.B. University Politècnica de Catalunya (UPC). Spain

² DEE-ETSEIB-UPC). Spain

Theoretical and experimental analysis of the short circuit current components in salient pole synchronous generators

249 Laura L. Juárez Caltzontzin, Gustavo Trinidad Hernández, Tomás I. Asiaín Olivares, Daniel Ruiz Vega
SEPI-ESIME.IPN. México

Inter-liner dynamic voltage restore and fault current limiter (IDVR-FCL)
M. Firouzi¹, M. Pishvaie¹, G.B. Gharehpetian², F. Razavi¹

250 ¹ Department of Electrical Engineering. University of Tafresh. Iran

² Department of Electrical Engineering. Amirkabir University of Technology. Iran

Control of a grid-connected synchronous generator wind turbine for power generation and harmonic current mitigation with an efficient procedure to design passive LC filters

251 M. Hacil, A. Khezzar, DJ. Kardoune

Département d' Electrotechnique. University Mentouri, Constantine. Algérie

On line magnetic characterization of a switched reluctance motor based on a Dspace data acquisition board

Francisco José Pérez Cebolla¹, Abelardo Martínez¹, Javier Vicuña², Bonifacio Martín¹, Eduardo Laloja¹, Tomás Pollán¹, Beatriz Sánchez³, Juan Lladó³

252 ¹ Departamento de Ingeniería Electrónica y Comunicaciones. Universidad de Zaragoza. España

² Departamento de Ingeniería Eléctrica. Univesidad de La Rioja. España

³ Departamento de Ingeniería Mecánica. Universidad de Zaragoza. España

Efficient hybrid renewable energy systems

253 M. Nagrial, K. Mitchell, J. Rizk

School of Engineering. University of Western Sydney. Australia

Sensorless control of synchronous reluctance (Syncrel) drive.System

254 M.H. Nagrial¹, M.A. Mohamed²

¹ School of Engineering. University of Western Sydney. Australia

² Al- Tahdi University Beni-Walid. Libya

Nuevas formas de divulgación científica a través de Leonardo Energy en español

255 Andreas Sumper¹, Rodrigo Ramírez¹, Fernando Nuño², Roberto Villafáfila¹, Hans de Keulenaer²

¹ CITCEA-UPC. Department of Electrical Engineering. Spain

² Centro Español de Información del Cobre (CEDIC). European Copper Institute (ECI). Madrid

Sliding mode controller for self-excited induction generator

256 L. Louze, A. L. Nemmour, A. Khezzar, M. Boucherma
Department of Electrical Engineering. Mentouri University.
Constantine. Algeria

Methodologies applied for modeling and analysis of impulsive grounding systems- A study review

Daniel S. Gazzana¹, Arturo S. Bretas¹, Guilherme A.D. Dias², Marcos Telló³

257 ¹ Department of Electrical Engineering. UFRGS University. Porto Alegre. Brasil

² Impulse Engenharia. Porto Alegre. Brasil

³ Department of Electrical Engineering. PUCRS University. Porto Alegre. Brazil

A new tool for wind farm optimal design

J. Serrano González¹, A.G. González Rodríguez², J. Castro Mora³, J. Riquelme Santos¹, M. Burgos Payán¹

258 ¹ Department of Electrical Engineering of the University of Sevilla. Spain

² Department of Electronic and Control Engineering of the University of Jaen. Spain

³ Persan S.A. Sevilla. Spain

Optimal power flow with non-smooth cost functions using decomposed genetic algorithm

259 B. Mahdad, k. Srairi, T. Bouktir, M.E.H. Benbouzid

Monitorização digital de parâmetros associados à qualidade da energia eléctrica

José Baptista¹, Raul Morais¹, António M. Moura², Paulo Amaral¹, Ricardo Costa¹

260 ¹ Departamento de Engenharias da Universidade de Trás-os-Montes e Alto Douro. Portugal

² Faculdade de Engenharia da Universidade do Porto. Departamento de Engenharia Electrotécnica e Computadores. Porto. Portugal

- 261 Simulation of voltage gap response of a DC microgrid
Miguel A. Alonso, José Francisco Sanz, Juan Luis Villa, Jesús Sallán
CIRCE Institute. University of Zaragoza. Department of Electrical
Engineering. Spain
- 262 High efficiency full bridge current-fed DC-DC converter for a fuel cell
power system
O.A. Ahmed, J.A.M. Bleijs
Department of Engineering. University of Leicester. United Kingdom
- 264 Comparison of solutions for pumping systems in northern Chile: grid
extension, diesel generators and photovoltaics
Francisco Chueco, Ángel Bayod
- 266 Control of hybrid active filter without phase locked loop in the feedback
and feedforward loops
Mohamed Abdusalam¹, Philippe Poure², Shahrokh Saadate¹
¹Groupe de Recherche en Electrotechnique et Electronique de Nancy
(GREEN), France
Laboratoire d'Instrumentation Electronique de Nancy (LIEN).
Université Henri Poincaré. Vandoeuvre lès Nancy. France.

