

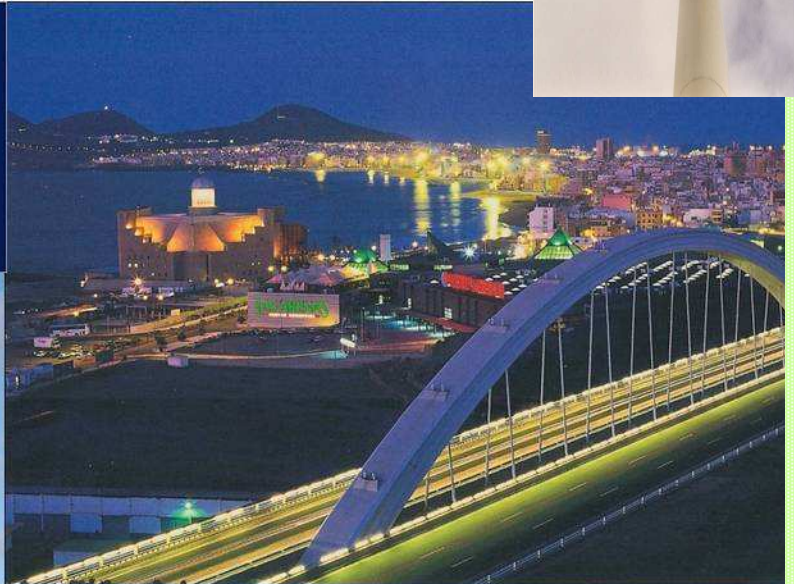
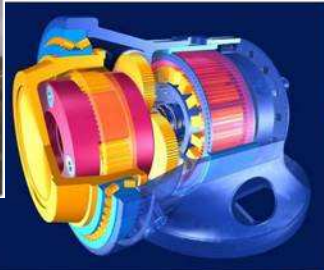
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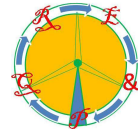
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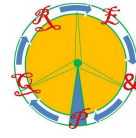


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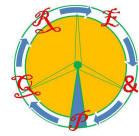
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1. Federal Fluminense University, TEM/PGMEC/MSG. Brazil

2. UBEE. Rio de Janeiro. Brazil

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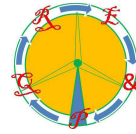
(1) Department of Electrical Engineering. School of Technology and Management. Polytechnic Institute of Leiria. Portugal

Institute for Systems and Computer Engineering at Coimbra. Portugal

(2) Department of Mechanical Engineering. University of Vigo. Spain

(3) Department of Electrical Engineering. University of Vigo. Spain

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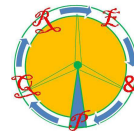
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1. Electrical Engineering Department, Amirkabir University of Technology, Tehran. Iran

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2. Department of Applied Physics. E.I.I. Extremadura University. Spain

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2. Normatel Engenharia Ltda, Fortaleza. Brazil

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 2. Center for Innovation in Electrical and Energy Engineering, Instituto Superior Técnico Lisboa. Portugal

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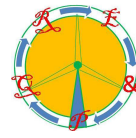
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 1. Iran Grid Secure Operation Research Centre (IGSORC)
 3. Department of Electrical Engineering Department, Amirkabir University of Technology. (AUT), Tehran. Iran
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 2. Iran Grid Secure Operation Research Centre (IGSORC) Amirkabir University of Technology (AUT), Tehran. Iran
 3. School of Electrical Engineering and Telecommunications, University of New South Wales (UNSW), Sydney. Australia
 4. Faculty of Electrical and Computer Engineering, University of Tabriz. Iran

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 3. Institute of Thermomechanics, Academy of Sciences of the Czech Republic



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1.Sustainable Environment Research Centre (SERC), Renewable Hydrogen Research & Demonstration Centre, University of Glamorgan. United Kingdom

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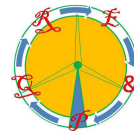
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Faculty of Computing, Engineering and Technology, Staffordshire University. United Kingdom



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2. Department of Electrical Engineering, ETSI, University of the Basque Country, Bilbao.Spain

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2. Institute of Chemical Engineering, Vienna University of Technology. Austria
3. Bioenergy2020, Güssing. Austria

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2. Department of Soil Science and Geology, University of La Laguna. Spain

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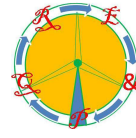
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1. Agencia Local Gestora de la Energía de Las Palmas de Gran Canaria. Spain
2. Escuela de Ingenierías Industriales y Civiles, University of Las Palmas de Gran Canaria. Spain

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2. Faculty of Mechanical Engineering, Federal Univeresity of Uberlândia. Brazil
3. Instituto Federal de Educação, Ciência e Tecnologia de Goiás. Brazil

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2. Center for Innovation in Electrical and Energy Engineering, Instituto Superior Técnico. Lisboa. Portugal
3. Instituto Superior de Engenharia de Lisboa. Portugal

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Department of Electrical Engineering, Netaji Subhash Engineering College, Garia, Kolkata. India

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Department of Engineering Physics, Tsinghua University. Beijing. China

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1. Faculty of Electrical Engineering, Automatic Control and Informatics, Opole University of Technology. Poland
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Agustín García Santana(1), Dan El Montoya Andrade(2), Antonio de la Villa Jaén(3)

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3. Departamento de Ingeniería Eléctrica, University of Sevilla. Spain

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1. C.P.S.-E.U.I.T.Z. University of Zaragoza. Spain
2. Electrical Engineering Department, University of Zaragoza. Spain

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Manuel Weiland, Gerhard Herold

Institute of Electrical Power Systems, University of Erlangen-Nuremberg. Germany

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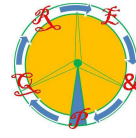
L. Sainz(1), J. Balcells(2)

1. Department of Electrical Engineering. E.T.S.E.I.B, Technical University of Catalonia. Spain
2. Department of Electronics Engineering. E.T.S.E.I.T, Technical University of Catalonia. Spain

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L. Sainz(1), J.J. Mesas(1), J. Balcells(2)

1. Department of Electrical Engineering. E.T.S.E.I.B, Technical University of Catalonia. Spain
2. Department of Electronics Engineering. E.T.S.E.I.T, Technical University of Catalonia. Spain



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L. Sainz(1), J. Cunill Solà(2)

1. Department of Electrical Engineering. E.T.S.E.I.B, Technical University of Catalonia. Spain
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1. Renewable Energy Integration Group CIRCE Foundation, University of Zaragoza. Spain
2. Electrical Engineering Department, University of Zaragoza. Spain

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Institute of Electrical Technology, Universidad Politécnica de Valencia. Spain

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1. Department of Electrical, Control and Computer Engineering, Opole University of Technology. Poland
2. Electronic and Photonic Metrology, Wrocław University of Technology. Poland

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1. Department of Electrical Engineering. University of Valladolid. Spain
2. Department of Statistics and Operational Research. University of Valladolid. Spain

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A. Filgueira Vizoso(1), L. Piegari(2), P. Tricoli(3)

1. Industrial Engineering II Department, University of La Coruña, Ferrol. Spain
2. Department of Electrical Engineering, Politecnico di Milano. Italy
3. Department of Electrical Engineering, University of Naples Federico II. Italy

359 Advantages and barriers for the development of the use of renewable energy sources in Latvia

P. Shipkovs(1,2), G. Kashkarova(1), K. Lebedeva(1), L. Migla(1,2), J. Shipkovs(1), M. Pankars(2)

1. Institute of Physycal Energetics. Latvia
2. Riga Technical University. Latvia

360 Latvian experience of energy supply in the environment-friendly buildings in biosphere reservation

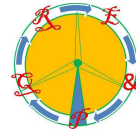
P. Shipkovs(1,2), G. Kashkarova(1), L. Migla(1,2), A. Ikaunieks(2), M. Jirgens(1)

1. Institute of Physycal Energetics. Latvia
2. Riga Technical University. Latvia

361 Investigation of solar collector's in Latvian conditions

P. Shipkovs(1,2), G. Kashkarova(1), A. Snegirjovs(1,2), M. Vanags(1), K. Lebedeva(1), J. Shipkovs(1), L. Migla(1,2)

1. Institute of Physycal Energetics. Latvia
2. Riga Technical University. Latvia



362 Development and characterization of a multi-platform data acquisition system for power quality metrological certification

M. Caciotta, S. Giarnetti, G. Lattanzi Cinquegrani, F. Leccese, D. Trinca
Department of Electronic Engineering, Roma III University. Italy

364 Study on flow characteristic of lubricant in the main Shaft of transmission in commercial vehicle

Ji Hun Yun(1), Jeong Se Suh(2), Chung Seob Yi(2), Chul Ki Song(2), In Guk Jeong (1), Joong Hwan Park(3)

1. Graduate School of Mechanical Engineering, Gyeongsang National University, Jinju, Gyeongnam. Korea

2. School of Mechanical and Aerospace Engineering, Gyeongsang National University, Jinju, Gyeongnam. Korea

3. S&T Dynamics, Seongsan-gu, Changwon, Gyeongnam, Korea

366 Computer simulation of power balance of a solar vehicle depending on its parameters and outside factors

G. Frydrychowicz-Jastrzębska(1), E. Pérez Gómez(2)

1. Poznań University of Technology, Institute of Industrial Electrical and Electronical Engineering. Poznań. Poland

2. Universidad Politécnica de Cartagena. Spain

367 The effect of spatial orientation of solar energy receiver on the energetic gain

G. Frydrychowicz-Jastrzębska

Poznań University of Technology, Institute of Industrial Electrical and Electronical Engineering. Poznań. Poland

370 Solar radiation increase over a capturing surface considering Rb factor, for Braşov urban area

C. Şerban, L. Coste

Department of Renewable Energy Systems and Recycling, Transilvania University of Braşov. România

371 Simulation model in trnsys of a solar house from Braşov, Romania

C. Şerban, E. Eftimie, L. Coste

Department of Renewable Energy Systems and Recycling, Transilvania University of Braşov . România

374 Empirical model for estimating global solar radiation for Braşov urban area

L. Coste, E. Eftimie, C. Şerban

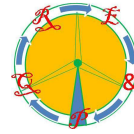
Department of Renewable Energy Systems and Recycling, Transilvania University of Braşov . România

376 A study on the cooling of electronic component by a flat heat pipe

Hamdy Hassan(1), Souad Harmand(2)

1. Mechanical Engineering Department, Faculty of Engineering, Assuit University.Egypt

2. UVHC, TEMPO-DF2T. France



378 LIFE+ zero Hytechpark: Toward a sustainable building with thermal, photovoltaic and hydrogen technology

Natalia Moreno, Alfonso Arnedo, Jesús Simon, Arturo Cabello

Foundation for the Development of New Hydrogen Technologies in Aragon. Spain

379 Hydrogen production for solar energy storage

P. Moldrik, Z. Hradilek

Department of Electrical Power Engineering FEI, VSB- Technical University of Ostrava, Poruba. Czech Republic

380 The application of trust region method to estimate the parameters of photovoltaic modules through the use of single and double exponential models

P. Rodrigues(1), J.R. Camacho(1), F.B. Matos(2)

1. School of Electrical Engineering, Universidade Federal de Uberlândia. Brazil

2. Informatics Department, Instituto Federal Goiano- Campus Urutaí. Brazil

381 Self-growing colored petri net for offshore wind turbines maintenance systems

M. Pérez, A. Correcher, E. García, F. Morant, E. Quiles

Department of Fault Diagnosis, Industrial Automation Institute (AI2). E.T.S.I.I., Universidad Politécnica de Valencia. Spain

383 Synchronization control of parametric pendulums for wave energy extraction

A.Najdecka, V. Vaziri, M. Wiercigroch

University of Aberdeen, Centre for Applied Dynamics Research, School of Engineering. United Kingdom

387 DC/DC converters as linkages between photovoltaic plants and module integrated multilevel-inverters

G. Mehlmann, F. Schirmer, M. Zeuß, G. Herold

Institute of Electrical Power Systems, University of Erlangen- Nuremberg. Germany

388 Optimal energy storage system control in a smart grid including renewable generation units

A.Andreotti, G. Carpinelli, F. Mottola

Department of Electrical Engineering, University Federico II of Naples. Italy

389 Investigation into harmonics of LVDC power distribution system using EMTDC/PSCAD software

Andrey Lana, Tero Kaipia, Jarmo Partanen

Department of Electrical Engineering.Lappeenranta University of Technology. Finland

390 Ground source heat pump on building acclimatization in Coimbra, Portugal

L. Coelho(1), J. Garcia(1), A. Almeida(2), N. Tavares(1), R. Cerdeira(1), K. Karytsas(3), D. Mendrinós(3), B. Sanner(4), E. Auzenet(5)

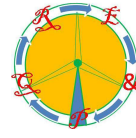
1. Polytechnic Institute of Setúbal, Escola Superior de Tecnologia de Setúbal. Portugal

2. Instituto de Sistemas e Robótica, Departamento de Engenharia Electrotécnica- Pólo II, Universidade de Coimbra. Portugal

3. Centre for Renewable Energy Sources

4. European Geothermal Energy Council (EGEC)

5. CIAT

**392 Wave energy and supply chain opportunities**

A. Álvarez(1), C. Anido(2), S. Martín(1), P.B. González(1)

1. UDC Shipbuilding Department, UDC Marine Innovation Group, E.U.P. A Coruña, University. Ferrol. Spain
2. UDC Marine Innovation Group, E.U.P. A Coruña University. Ferrol. Spain

393 Theoretical efficiency of a gear based azimuthal tracked photovoltaic platform

B. Butuc, G. Moldovean, N. Creanga

Department of Renewable Energy Systems and Recycling, Transilvania University of Braşov. Romania

394 Wind and weight induced loads on a gear azimuthal photovoltaic platform

B. Butuc, G. Moldovean, R. Velicu

Department of Renewable Energy Systems and Recycling, Transilvania University of Braşov. Romania

395 New efficient filter design for a heat sink

J. Kulanayagam(1), J. H. Hagmann(1), K. F. Hoffmann(2), S. Dickmann(1)

1. Institute for Electrical Engineering
2. Institute for Power Electronics Helmut-Schmidt-University/ University of the Federal Armed Forces Hamburg. Germany

396 Interconnection of a photovoltaic generator (PVG) to a main supply: a simulation study

Maamar Taleb

Department of Electrical and Electronics Engineering. University of Bahrain

398 Energy storage technologies for electric applications

J.I. San Martín(1), I. Zamora(2), J.J. San Martín(1), V. Aperribay(1), P. Eguía(2)

1. Department of Electrical Engineering, University of the Basque Country, Escuela de Ingeniería de Eibar. Spain
2. Department of Electrical Engineering, University of the Basque Country, Escuela Técnica Superior de Ingeniería de Bilbao. Spain

399 PEM fuel cells in applications of urban public transport

I.Zamora(1), J.I. San Martín(2), J. García(1), F.J. Asensio(1), O. Oñederra(1), J.J. San Martín(2), V. Aperribay(2)

1. Department of Electrical Engineering, University of the Basque Country, Escuela Técnica Superior de Ingeniería de Bilbao. Spain
2. Department of Electrical Engineering, University of the Basque Country, Escuela de Ingeniería de Eibar. Spain

400 Smart grid: What's news?

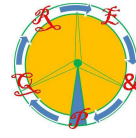
M. Cacciotta, M.D'Addazio, S. Giarnetti, M. Grossoni, F. Leccese

Department of Electronic Engineering, Roma III University. Italy

401 Battery response analyzer using a high current DC-DC converter as an electronic load

F. Ibañez, J.M. Echeverría, J.Vadillo, F. Martín, L. Fontán

CEIT and Tecnun (University of Navarra), San Sebastián. Spain



404 Minimum DC link voltages for the generator bridge converter of a SCIG based variable speed wind turbine with fully rated converters

U.I. Dayaratne, S.B. Tennakoon, J.S. Knight, N.Y.A. Shammam

Faculty of Computing, Engineering and Technology, Staffordshire University. United Kingdom

405 The effect of surface impurities on photovoltaic panels

L. Dorobantu, M.O.Popescu, Cl. Popescu, A. Craciunescu

Electrical Engineering Faculty Politehnica University of Bucharest. Romania

407 Characterization of solar panels for powering sensor applications

M. Alves(1), J.M. Dias Pereira(1,2), J.P.S. Catalão(3,4)

1. ESTSetúbal- LabIM/IPS, Setúbal. Portugal

2. Instituto de Telecomunicações, Instituto Superior Técnico, Lisboa. Portugal

3. University of Beira Interior, Covilhã. Portugal

4. Center for Innovation in Electrical and Energy Engineering, Instituto Superior Técnico, Lisboa. Portugal

408 Effect of transient flux compensation control on fault ride through of doubly fed induction generator wind turbine

A.S. Mäkinen, H. Tuusa

Department of Electrical Energy Engineering, Tampere University of Technology. Finland

410 Geothermal energy heating and hot water for a detached house project in Oviedo (Spain)

Elena M^a Fernández Rodríguez, Eunice Villicaña Ortiz, Jorge Xiberta Bernat

Department of Energy, E.T.S.I.M.O. Oviedo University. Spain

414 Advances in phase change materials for thermal solar power plants quality

I.Fernández, C.J. Renedo, S. Pérez, J. Carcedo, M. Mañana

Department of Electrical Engineering, E.T.S.I.I.T. Cantabria University. Spain

415 Time domain variable speed wind energy conversion systems modelling using ATP platform

F.H. Costa(1). E.B. Alvarenga(1), J.C. Oliveira(1), G.C. Guimarães(1), A.F. Bonelli(2), Z.S. Vitória J(3)

1. Faculty of Electrical Engineering, UFU Federal University of Uberlândia. Brazil

2. LACTEC- Institute of Technology for Development, Centro Politécnico da UFPR, Curitiba, Paraná. Brazil

3. Furnas Centrais Elétricas S.A. Cuiabá-MT. Brazil

416 Comparison of load inverter topologies in a bipolar LVDC-distribution

Jenni Rekola, Heikki Tuusa

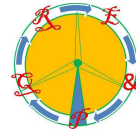
Department of Electrical Energy Engineering, Tampere University of Technology. Finland

417 Design of a sustainable residential microgrid system with DC and AC buses including PHEV and energy storage device

L. Roggia(1,2), L. Schuch(1), C. Rech(1), H.L. Hey(1), J.R. Pinheiro(1)

1. Power Electronics and Control Research Group GEPOC, DPEE, PPGEE, Federal University of Santa Maria. Brazil

2. Federal Institute of Rio Grande do Sul. Brazil

**418 A performance analysis of a hydrogenerator in the case of field short-circuit using FEM**

S.E. Dallas, A.N. Safacas, J.C. Kappatou

Department of Electrical and Computer Engineering, University of Patras. Greece

419 Model based controller design for hydrogen fuel cell systems

K.K.T. Thanapalan, G.C. Premier, A.J. Guwy

Sustainable Environment Research Centre (SERC), Renewable Hydrogen Research & Demonstration Centre, University of Glamorgan. United Kingdom

421 Testing and evaluation of wind power plant protection system

M. Kezunovic, B. Matic Cuka

Department of Electrical and Computer Engineering, Texas A & M University. USA

422 Buck converter design for photovoltaic generators with supercapacitor energy storage

Dariga Meekhun(1), Vincent Boitier(1,2), Jean Marie Dilhac(1,2), Stéphane Petibon(1,2), Corinne Alonso(1,2), Bruno Estibals(1,2)

1. CNRS; LAAS. Toulouse. France

2. Université de Toulouse; UPS, INSA, INP,ISAE; LASS. France

424 Three-dimensional numerical simulation of rear point contact crystalline silicon solar cells

M. Zanuccoli(1), H.W. Guo(2), E. Sangiorgi(1), C. Fiegna(1)

1. ARCES-DEIS, University of Bologna and IUNET, Cesena. Italy

2. APPLIED MATERIALS, Inc. USA

425 Hydrogen production by aluminium corrosion: experimental investigation and mathematical modelling

C.B. Porciúncula, N.R. Marcilio, I.C. Tessaro, M. Gerchmann

Department of Chemical Engineering, UFRGS, Federal University of Rio Grande do Sul. Brazil

426 Induction motor capacitances calculation using FEA for common mode current studies in ATP

C.S. Chaves(1), J.R. Camacho(1), H.de Paula(2), M.L.R. Chaves(1), E. Saraiva(1)

1. Electromagnetic Transients Laboratory, School of Electrical Engineering, Universidade Federal de Uberlândia-UFU. Brazil

2. Industrial Applications Laboratory, Universidade Federal de Minas Gerais-UFMG. Brazil

428 Nowcasting of Wind speed using support vector regression. Experiments with time series from Gran Canaria

I.Espino, M. Hernández

Institute for Intelligent Systems (SIANI), University of Las Palmas de Gran Canaria. Spain

429 Photoabsorption efficiency improvement for photovoltaic solar cells by using the honeycomb nanostructures

Alexander I. Fedoseyev(1), František Čajko(1,2)

1. CFD Research Corporation, Huntsville, Alabama. USA

2. FMRI Lab; University of Michigan. USA

431 Load management for price-based demand response scheduling- a block scheduling model

Ding Li, Sudharman K. Jayaweera, Olga Lavrova, Ramiro Jordan

Department of Electrical and Computer Engineering, University of New México, Albuquerque. U.S.A.

432 Modelling and analysis of electromechanical stress in transformers caused by short-circuits

Rosentino Jr. A.J.P.(1), Saraiva E.(1), Delaiba A.C(1), Guimarães R.(1), Lynce M.(1), De Oliveira J.C.(1), Fernandez Jr.D.(2),
Neves W.(2)

1. Faculty of Electrical Engineering, Federal University of Uberlândia. Brazil
2. Center of Electrical Engineering and Computer Science, Electrical Engineering. Department, Federal University of Campina Grande. Brazil

434 Research and design of fixed-pitch non-grid-connected wind power system

Ma Yundong, Wang Junqi, Yang Hong, Hu Zurong
Jiangsu Key Laboratory of New Energy Generation and Power Conversion, Nanjing University of Aeronautics & Astronautics. China

436 Optimisation of concentrator in the solar photonic optoelectronic transformer: comparison of geometrical performance and cost of implementation

F. Muhammad-Sukki(1), R. Ramirez Iniguez(1), S.G. McMeekin(1), B.G. Stewart(1), B. Clive(2)

1. School of Engineering and Computing, Glasgow Caledonian University. United Kingdom
2. Solar Empower Ltd. England. United Kingdom

437 Power quality improvement using renewable energy

Gelu Gurguiatu(1), Ionel Vechiu(2), Toader Munteanu(1)

1. Department of Control and Electrical Engineering, University "Dunărea de Jos" of Galati. România
2. ESTIA-Recherche Bidart. France

438 Human behaviorchanging based on the simulation of the temperature control of a house

Radu Bălan, Vlad Mureșan, Radu Donca, A. Bălan, Sergiu Stan

Department of Mechatronics, Technical University of Cluj-Napoca. Romania

440 Piezoresistive sensor for strain measurement on turbine blade with wireless telemetry data acquisition

P. Kulha, M. Husak

Department of Microelectronics, Czech Technical University, Prague. Czech Republic

441 Combustion characteristics of CI engine running with biodiesel blends

B. Tesfa, R. Mishra, F. Gu, A. Ball

Computing and Engineering, University of Huddersfield. United Kingdom

444 Dynamic properties of the virtual synchronous machine (VISMA)

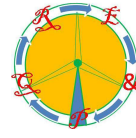
Yong Chen, Ralf Hesse, Dirk Turschner, Hans Peter Beck

Institute of Electrical Power Engineering, Clausthal-Zellerfeld. Germany

445 Performances and acoustic noise of intelligent wind power unit

K. Kubo(1,3), T. Kanemoto(2)

1. School of Engineering, Kyushu Institute of Tecnology. Japan
2. Faculty of Engineering, Kyushu Institute of Tecnology, Kitakyushu. Japan
3. Research Fellow of the Japan Society for the Promotion of Science. Japan



446 Grid Connection improvements by control strategy selection for wave energy converters

M. Santos(1), E. Tedeschi(2), P. Ricci(1), M. Molinas(2), J.L. Martín(3)

1. Tecnalia. Zamudio. Spain
2. Department of Electric Power Engineering, Norwegian University of Science and Technology, Trondheim. Norway
3. Department of Electronics and Telecommunications, University of the Basque Country. Bilbao. Spain

449 Semiactive control for floating offshore wind turbines subject to aero-hydro dynamic loads

N. Luo(1), C.L. Bottasso(2), H.R. Karimi(3), M. Zapateiro(4)

1. Institute of Informatics and Applications, University of Girona. Spain
2. Dipartimento di Ingegneria Aerospaziale, Politecnico di Milano. Italy
3. Department of Engineering, Faculty of Engineering and Science, University of Agder, Grimstad. Norway
4. Department of Applied Mathematics III, Universitat Politècnica de Catalunya, Barcelona. Spain

450 Using ANN to estimate the voltage of unobservable buses when one PMU or its communication fails

M. Gholami(1), G.B. Gharehpetian(1), B. Fahimi(2), M.J. Sanjari(1)

1. Electrical Engineering Department, Amirkabir University of Technology, Tehran. Iran
2. Electrical Engineering Department, University of Texas at Dallas

451 Voltage state estimation by ANNS with reduction of PMUS

M. Gholami(1), G.B. Gharehpetian(1), B. Fahimi(2), M.J. Sanjari(1)

1. Electrical Engineering Department, Amirkabir University of Technology, Tehran. Iran
2. Electrical Engineering Department, University of Texas at Dallas

452 Planning of power systems with distributed generation and storage

C. Ponce Corral(1), H. Bludszuweit(2), J.A. Domínguez Navarro(3)

1. Institute of Engineering and Technology, Universidad Autónoma de Ciudad Juárez.. México
2. CIRCE Research Institute, University of Zaragoza. Spain
3. Department of Electrical Engineering, C.P.S. University of Zaragoza. Spain

453 Electric vehicles and their effects on low-voltage grids

J. Teuscher, A. Götz, W. Schufft

Faculty of Electrical Engineering and Information Technology, Chemnitz University of Technology. Germany

454 A novel approach to frequency control in an islanded microgrid by load shedding scheduling

M. Kohansal, M.J. Sanjari, G.B. Gharehpetian

Electrical Engineering Department, Amirkabir University of Technology, Tehran. Iran

455 Solar panels for auger southern observatory:” SPIDERSHADOWS”

A. López Agüera(1,2), I. Rodríguez Cabo(1,2), D. Rey Rey(1,2), V. Gándara Villagoñiga(1), M. Vázquez García(1), E. Vieites Montes(1)

1. Department of Particle Physics & Galician Institute of High Energy Physics, Sustainable Energetic Applications Group. Santiago de Compostela University. Spain
2. Department of Particle Physics & Galician Institute of High Energy Physics, Astroparticle Group. Santiago de Compostela University. Spain

456 Geared linkage driven by linear actuator used for PV platform azimuth orientation

N.C. Creanga, I. Visa, D.V. Diaconescu, I.S. Hermenean, B.R. Butuc

Department Renewable Energy Systems and Recycling, Transilvania University of Braşov. Romania

459 Concept study of offshore wind and tidal hybrid conversion based on real time simulation

G. Caraiman(1), C. Nichita(2), V. Mînză(1), B. Dakyo(2), C.H. Jo(3)

1. Department of Electrical Energy Conversion System, University " Dunărea de Jos" of Galati. Romania

2. Group of Research in Electronics and Automatics of Le Havre, University of Le Havre. France

3. Ocean Engineering Laboratory, Inha University, Korea

462 Sensorless iterative solar tracking in multiple on-grid photovoltaic generators with improved tracking strategy

Guilherme F. Cittolin, Jéssica V. Mazuroski, Rafael C. Gonçalves, Marcel G. Kroetz, Carlo A.Z. Pece, Winderson E.Santos

Laboratório de Processamento Eletrônico de Energia, Departamento Acadêmico de Eletrotécnia, Universidade Tecnológica Federal do Paraná- UTFPR. Brazil

463 Computational flow field analysis of a vertical axis wind turbine

G. Colley, R. Mishra, H.V. Rao, R. Woolhead

Department of Engineering & Tecnology, Huddersfield University. United Kingdom

465 Cost estimation of wind farm with battery-supported output power limit operation

Y. Yasuda(1), T. Funabashi(2)

1. Department of Electrical Engineering and Computer Science, Kansai University. Japan

2. Meidensha Corporation, Shinagawa-Ku, Tokio. Japan

469 Relationship between interstitial oxygen, substitutional carbon, resistivity and minority carrier lifetime in metallurgical

multycrystalline silicon

Virginie Mong-The Yen(1), Olivier Palais(1,2), Marcel Pasquinelli(1,2), Daniel Barakel(1,2), Isabelle Périchaud(1,2)

1. Aix- Marseille University, IM2NP

2. CNRS,IM2NP (UMR 6242). Faculté des Sciences et Techniques, Marseille Cedex. France

470 Design of a monitoring and test system for PV based renewable energy systems

S.Berberkic , P.J. Mather, V. Holmes,M. Sibley

School of Computing and Engineering, University of Huddersfield. United Kingdom

474 A semi-empirical procedure for the evaluation of multi-stage turbine performances

D. Barsi, R. Canepa, A. Satta

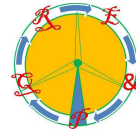
DIMSET, University of Genoa. Italy

476 Integrated ZVT cell applied to decentralized multi-string PV system

R.C. Beltrame(1), M.I. Desconzi(1), M.L.S. Martins(2), J.R. Pinheiro(1), H.L. Hey(1)

1. Power Electronics and Control Research Group, Federal University of Santa Maria. Brazil

2. Power Analysis and Processing Research Group, Federal University of Technology,Paraná. Brazil

**477 Proposal for the use of solar heaters in small residences of Curitiba**

Alysson M. Schuindt, Marcus A. Caldeira, Roberto C. Betini
Academic Department of Electrotechnique, Federal Technological University of Paraná. Brazil

478 Energy response of a mono-axis tracked solar thermal collector with vacuum tubes

V.E. Dombi, I. Visa, D.V. Diaconescu, M.M. Vatasescu, N.I. Tatu
Department Renewable Energy Systems and Recycling, Transilvania University of Braşov. Romania

479 Photovoltaic stand-alone power generation system with multilevel inverter

M.I. Desconzi, R.C. Beltrame, C. Rech, L. Schuch, H.L. Hey
Power Electronics and Control Research Group, Federal University of Santa Maria. Brazil

480 Optimization with genetic algorithms of PVT system global efficiency

G. Fabbri(1), M. Greppi(2), M. Lorenzini(1)
1. D.I.E.N.C.A. Dipartimento di Ingegneria Energetica, Nucleare e del Controllo Ambientale. Università degli Studi di Bologna. Italy
2. Università di Bologna Seconda Facoltà di Ingegneria. Italy

483 A single stage DC-DC converter feasible to battery charging from PV panels with high voltage step up capability

Paulo P. Praça, Gustavo A.L. Henn, Ranoyca N.A.L.S., Demercil S. Oliveira, Luiz H.S.C. Barreto
Energy and Control Processing Group- GPEC, Department of Electrical Engineering, Universidade Federal do Ceará. Fortaleza-CE. Brazil

485 Annealing of ZnO and SnO₂ transparent conductive oxides

K. Lagha (1,2), MS Belkaid(1), M. Pasquinelli(2), D. Barakel(2), L. Escoubas(2)
1. Laboratoire des Technologies Avancées du Génie Electrique, Université de Tizi-Ouzou. Algérie
2. Institut Matériaux Microélectronique Nanosciences de Provence IM2NP, Université d' Aix Marseille. France

487 Energy valuing of forest biomass residues in Bizkaia

E. Mateos(1), J.M. González(2), J.M. Eguzkiza(3)
1. Department of Chemical and Environmental Engineering
2. Department of English and German Philology
3. Department of Applied Mathematics. E.U.I.T.I., University of the Basque Country, Bilbao. Spain

488 The wind energy apply to water pumping in isolated place

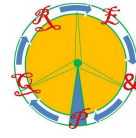
Juraci Carlos de Castro Nóbrega, Thelmo Silva de Araújo
Department of Electrical Engineering, U.F.A.M. Amazonas University. Brazil

490 Modeling and power control of wind turbine driving DFIG connected to the utility grid

Karim Belmokhtar, Mamadou Lamine Doumbia, Kodjo Agbossou
Département of Electrical and Computer Engineering, Université du Québec à Trois-Rivières. Canada

492 Direct driven axial flux permanent magnet generator for small scale wind power applications

A.P. Ferreira(1), A.F. Costa(2)
1. School of Technology and Management, Polytechnic Institute of Bragança. Portugal
2. Department of Electrical and Computer Engineering, FEUP, Porto. Portugal



494 A novel method to eliminate negative time period of SVPWM using DSP TMS320F2812

Ronad B.F, Naik R.L, Jangamshetti Suresh H.

Department of Electrical & Electronics Engineering, Basaveshwar Engineering College, Bagalkot, Karnataka. India

496 Grounding system modelling and its impact on computational refunding analysis for equipment damages

I.N. Gondim(1), J.C.de Oliveira(1), C.E. Tavares(1) , J.A.F. Barbosa(1), M.V.B. Mendonça(2)

1. Faculty of Electrical Engineering, UFU Federal University of Uberlândia. Brazil

2. Department of Electrical Engineering, UnB, University of Brasilia. Brazil

497 A computational method to optimize energy savings of tension structures set in road tunnels

L.M. Gil Martín(1), A. Peña García(2), R. Escribano(3), A. Espín Estrella(2)

1. Department of Structural Mechanics, ETSICCP, University of Granada. Spain

2. Department of Civil Engineering, ETSICCP, University of Granada. Spain

3. Department of Graphical Expression in Architecture and Engineering, ETSIE, University of Granada. Spain

498 A novel 3D TCAD simulation of a thermoelectric couple configured for thermoelectric power generation

C.A. Gould, N.Y.A. Shammam, S. Grainger, I. Taylor

Faculty of Computing, Engineering and Technology, Staffordshire University. United Kingdom

499 Dual frequency system for power-demanding measurement in the isolated areas

A. Boura, M. Husak

Department of Microelectronics, Faculty of Electrical Engineering, Czech Technical University in Prague. Czech Republic

501 Integrated interdisciplinary design. The environment as part of architectural education

Marios C. Phocas(1), Aimilios Michael(1), Paris Fokaides(2)

1. Department of Architecture, Faculty of Engineering, University of Cyprus, Nicosia. Cyprus

2. Environmental Fluid Mechanics Laboratory, Department of Civil and Environmental Engineering, Faculty of Engineering, University of Cyprus, Nicosia. Cyprus

504 Combinatorial optimization for electric vehicles management

Nora Touati-Moungla, Vincent Jost

LIX, Ecole Polytechnique, Palaiseau Cedex. France

507 Optimized gas pricing policy to have maximally peak shaving

A. Sheikhi, M. Khosravi, B. Mozafari, A.M. Ranjbar, A. Hajjam

Sharif University of Technology, Tehran. Iran

509 Some procedures in mitigating conducted electromagnetic interference

M.I. Buzdugan, H. Bălan, T.I. Buzdugan

Technical University from Cluj-Napoca. Romania

510 An optimal virtual inertia controller to support frequency regulation in autonomous diesel power systems with high penetration of renewables

Miguel Torres, Luiz A.C. Lopes

Power Electronics and Energy Research Group, Department of Electrical and Computer Engineering, Concordia University, Montreal, Quebec. Canada

511 Determination losses and estimate life of distribution transformers with three computational, measurement and simulation methods, despite harmonic loads

M.H. Amrollahi(1), S. Hasani(2)

1. Electrical Engineering Department, Urmia University of Technology, Urmia. Iran
2. West Azerbaijan Power Distribution Company, Urmia. Iran

512 Modeling, simulation and a comparative study between a single-phase switched reluctance machine (6x6) and a three-phase switched reluctance machine

R.J. Dias, D.A. Andrade, L.G. Cabral, A.W.F.V. Silveira, A.F.V. Silveira, L.C. Gomes, C.A. Bissochi
Laboratório de acionamentos elétricos, Depto de Engenharia Elétrica, Universidade Federal de Uberlândia. Brazil

517 Hysteresis loss in brushless doubly fed induction machines

M. Ahmadian, B. Jandaghi, H. Oraee

Department of Electrical Engineering, Sharif University of Technology, Tehran. Iran

518 Maximun torque per ampere operation of brushless doubly fed induction machines

M. Ahmadian, B. Jandaghi, H. Oraee

Department of Electrical Engineering, Sharif University of Technology, Tehran. Iran

520 Numerical study of performance optimization in a proton exchange membrane fuel cell

Chang-Ming Ling(1), Chun-Hua Min(2), Xiao-Long Ruan(1), Zhang-Jing Zheng(1)

1. School of Engineering, Guangkong Ocean University, Zhanjiang. China
2. School of Energy and Environmental Engineering, Hebei University of Technology, Tianjin. China

523 Thermal design and analysis of a direct-water cooled permanent magnet synchronous generator for high power

direct-drive wind turbine applications

M. Polikarpova, P. Røytä, S. Semken, J. Nerg, J. Pyrhönen

Department of Electrical Engineering, Lappeenranta University of Technology. Finland

525 New integrated converter for hydrogen buffer interfacing in distributed energy systems

D. Vinnikov, A. Andrijanoviš, I. Roasto, T. Lehtla

Department of Electrical Drives and Power Electronics, Tallinn University of Technology. Estonia

526 Quality of ashes produced in the co-combustion of coal and MBM in a fluidized bed reactor

Rui Barbosa(1), N. Lapa(1), Helena Lopes(2), Ibrahim Gulyurtlu(2), Benilde Mendes(1)

1. UBIA, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa. Caparica. Portugal
2. LNEG, UEZ, Lisboa. Portugal

527 Renewable energy policy and market developments in Kosovo

Nysret Avdiu, Ali Hamiti

Energy Regulatory Office of Kosovo

528 Investigation on the impact of design wind speed and control strategy on the performance of fixed-pitch variable-speed wind turbines

Xiongwei Liu(1), Lin Wang(2), Xinzi Tang(1)

1. School of Computing, Engineering and Physical Sciences, University of Central Lancashire, Preston. United Kingdom
2. School of Mechanical Engineering, Xiangtan University. China

534 Artificial intelligence techniques for controlling spacecraft power system

Hanaa T.El-Madany(1), Faten H. Fahmy(1), Ninet M.A. El-Rahman(1), Hassan T. Dorrah(2)

1. Photovoltaic cells Department, Electronics Research Institute, National Research Center Building, Cairo. Egypt
2. Electrical Power & Machines Department, Cairo University. Egypt

536 Artificial intelligence techniques based on aquaculture solar thermal water heating system control

Doaa M. Atia(1), Faten H. Fahmy(1), Ninet M. Ahmed(1), Hassen T. Dorrah(2)

1. Fothovolotaic Cell Department, Electronics Research Institute, National Research Center Building, Cairo. Egypt
2. Faculty of Engineering, Department of Electrical Power Machines, Cairo University. Egypt

537 Losses comparison among carrier-based PWM modulation strategies in three-level neutral-point-clamped inverter

C.A.dos Santos, F.L.M. Antunes

Energy Processing and Control Group, Departamento de Engenharia Elétrica, Universidade Federal do Ceará, Fortaleza, Brazil

538 Comparing SCIG and DFIG for wind generating conditions in Macedonia

Sanja Vitanova, Vlatko Stoilkov, Vladimir Dimcev

Faculty of Electrical Engineering and Information Technology, Skopje. Macedonia

540 Comparative analysis of a new planetary transmission with deformable element usable in RES

O. Climescu, R. Săulescu, n C. Jaliu, D.V. Diaconescu, M. Neagoe

Department of Product Design and Robotics, Transilvania University of Braşov. Romania

541 Novel TiO₂ Microstructures for low cost dye sensitized solar cells

P. Fuierrer(1), A. Gueye(2), A. Varghese(3), B. Roy(4)

1. Department of Materials & Metallurgical Eng, New Mexico Institute of Mining & Tech, Socorro. USA
2. Pletronics, Inc. Pittsburgh. USA
3. CIRIMAT INP-CNRS, Institute National Polytechnique de Toulouse. France
4. Chemical Engineering Department, New Mexico Institute of Mining & Technology, Socorro. USA

543 Integrating high levels of wind in island systems: lessons from Hawaii

Nicholas Miller(1), Devon Manz(1), Harjeer Johal(1), Sebastian Achilles(1), Leon Roose(2), James P. Griffin(3)

1. GE Energy, Schenectady, NY. USA
2. Hawaiian Electric Company, Honolulu, HI. USA
3. University of Hawaii, Hawaii Natural Energy Institute, Honolulu, HI. USA

546 Economic-technical feasibility study of the “Sierra de Tineo” wind farm expansion. Tineo-Principality of Asturias. (Spain)

Guillermo Laine Cuervo, Yoreley Cancino Solórzano, Jorge Xiberta Bernat
Department of Energy. E.T.S.I.M.O. Oviedo University. Spain

548 Hydrogen production by means pyrolysis and steam gasification of glycerol

J.M. Encinar(1), J.F. González(2), G. Martínez(1), N. Sánchez(1), I.M. Sanguino(1)
1. Departamento de Ingeniería Química y Química Física, University of Extremadura. Spain
2. Departamento Física Aplicada, University of Extremadura. Spain

549 Synthesis and characterization of biodiesel obtained from castor oil transesterification

J.M. Encinar(1), J.F. González(2), G. Martínez(1), N. Sánchez(1), G.C González(1)
1. Departamento de Ingeniería Química y Química Física, University of Extremadura. Spain
2. Departamento Física Aplicada, University of Extremadura. Spain

550 Experimental verification of novel bi-directional qZSI based DC/DC converter for short term energy storage systems

J. Zakis(1), D. Vinnikov(1), I. Roasto(1), L. Ribickis(2)
1. Department of Electrical Drives and Power Electronics, Tallinn University of Technology. Estonia
2. Institute of Industrial Electronics and Electrical Engineering, Riga Technical University. Latvia

552 Rotating electric machine thermal study

A.I. Chirilă. C. Ghiță, A. Crăciunescu I.D. Deaconu. V. Năvrăpescu, M. Catrinoiu
Department of Electrical Engineering, University Politehnica of Bucharest. Romania

553 Optimal operation of smart grids including distributed generation units and plug in vehicles

A. Bracale(1), P. Caramia(1), D. Proto(2)
1. Department for Technologies, University Parthenope of Napoli. Italy
2. Department of Electrical Engineering, University Federico II of Naples. Italy

557 Magnetic field density analysis in switchgears

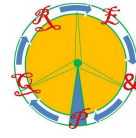
J.A. Güemes(1), J. Izagirre(2), L.del Rio(2), J.E. Rodríguez Seco(3), A.M. Iraolagoitia(1), P. Fernández(4)
1. Department of Electrical Engineering, Escuela Universitaria de Ingeniería Técnica Industrial. Bilbao.
2. Ormazabal Corporate Technology. Spain
3. Unidad de Energía, Tecnalia Research & Innovation. Derio. Spain
4. Department of Electronics and Telecommunications. Escuela Universitaria de Ingeniería Técnica Industrial. Bilbao. Spain

558 ULISES: Autonomous mobile robot using ultracapacitors-storage energy system

J.S. Artal, R. Bandrés, G. Fernández
Department of Electrical Engineering, Escuela de Ingeniería Técnica Industrial. University of Zaragoza. Spain

560 Preliminary study for the implementation of the “Wave Dragon” in Gran Canaria, Canary Islands, Spain

A. Miguel Sagaseta de Ilurdoz Cortadellas(1), B. Miguel Angel Guerra Rodríguez(1), C. Raquel Ramos Pereda(2), Pedro D. Cuesta Moreno(3)
1. E.I.I.C., Las Palmas de Gran Canaria University- ULPGC. Spain
2. RALEY Estudios Costeros S.C.P. Las Palmas de Gran Canaria. Spain
3. Department of Mathematics Engineering, E.I.I.C, Las Palmas de Gran Canaria-ULPG. Spain



564 Perspectives of demand-side management in a smart metered environment

A. Dán, D. Divényi, B.Hartmann, P. Kiss, D. Raisz, I. Vokony

Department of Electric Power Engineering, Budapest University of Technology and Economics.
Hungary

569 The technical & economic feasibility of energy recovery in water supply networks

A. McNabola(1), P. Coughlan(2), A.P. Williams(3)

1. Department of Civil, Structural & Environmental Engineering, Trinity College, Dublin. Ireland

2. School of Business, Trinity College, Dublin. Ireland

3. School of the Environment, Natural Resources and Geography, Bangor University. Wales. United Kingdom

572 Real heating-value based cost-accounting method with networking capabilities in natural gas distribution systems

G. Barta, T. Csubák

Department of Control Engineering and Information Technology, Budapest University of Technology and Economics. Hungary

577 Comprehensive utilization of energy in sugar factory using renewable energy sources, maximizing the power cogeneration

E. Gil Illescas, L.A. Bujedo Nieto, L. Gorostiaga Canepa

Fundación CARTIF, Valladolid. Spain

579 Neural networks applications for fault detection on wind turbines

R.F. Mesquita Brandão(1), J.A. Belezza Carvalho(1), F.P. Maciel Barbosa(2)

1. Department of Electrical Engineering, ISEP, Oporto Polytechnic Institute. Portugal

2. Department of Electrical Engineering, FEUP & INESC. Oporto University. Portugal

580 Analysis of remote islanding detection methods for distributed resources

A. Etxegarai, P. Eguía, I. Zamora

Department of Electrical Engineering, University of the Basque Country. Escuela Técnica Superior de Ingeniería de Bilbao. Spain

582 Increase of the annual energy output in hydraulic powerplants through active flow control

M.V. Magnoli, R. Schilling

Institute of Fluid Mechanics, Munich University of Technology, Garching. Germany

583 Evaluation of reactive power capability by optimal control of wind-vanadium redox battery stations in electricity market

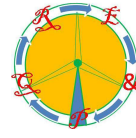
Aouss Gabash, Pu Li

Department of Simulation and Optimal Processes, Institute of Automation and Systems Engineering, Ilmenau University of Technology. Germany

585 Smart meter based energy management system

Péter Kádár

Óbuda University, Department of Power Systems, Budapest. Hungary

**586 Economic viability of bamboo dust based gasification plant for a paper mill**

A.K. Sinha, Meghna Barkakat , Dibakar Nath, Saurav Kumar Sarma, Uday Reddy, Abhinav Verma, Kranthi Kiran Ch
Department of Electrical Engineering, National Institute of Technology Silchar Assam. India

587 Creating public awareness of renewable energy by combining of a photovoltaic system and nature

Arnold Knott(1), Dorthe Hedensted Lund(2), Thomas Andersen(1)
1.Technical University of Denmark, DTU Elektro. Denmark
2.University of Copenhagen, Forest & Landscape, Faculty of Life Sciences. Denmark

589 Energy efficiency in data processing centers: Technical-economic viability study for a trigeneration

Carlos Redondo Gil(1,2), Alvaro Fernández González(1)
1. Castile and León Technological Center for Supercomputing (FCSC) University of León. Spain
2. Electrical Engineering & Systems Engineering and Automatic Control Department, Faculty of Industrial and Computer Engineering, University of León. Spain

590 Stabilized power AC-DC-AC converter using polygon transformer

Mona F. Moussa, Nermeen Biomy, Yasser G. Dessouky
Arab Academy for Science and Technology, AASTMT, Alexandria. Egypt

591 Design of a trigeneration system for a hospital complex in Gran Canaria

C.M. González Navarro, A.M. Blanco Marigorta, J.A. Peña Quintana
Department of Process Engineering, University of Las Palmas de Gran Canaria. Spain

593 Dynamic voltage stability of an electric power network with double fed induction wind power generators

R.M. Monteiro Pereira(1), C. Machado Ferreira(1), F.P. Maciel Barbosa(2)
1. ISEC, College of Engineering of Coimbra/ DEE. Portugal
2. Faculty of Engineering of the University of Porto. Portugal

594 Reliability analysis of residential photovoltaic systems

Alfredo Garro, F. Barrara
Department of Electronics, Computer and System Science, D.E.I.S., University of Calabria, Rende. Italy

595 Comparison between the short-term observed and long-term estimated wind power density using artificial neural networks. A case study

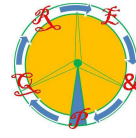
S. Velázquez(1), JA Carta(2)
1. Department of Electronics and Automatics Engineering, University of Las Palmas de Gran Canaria. Spain
2. Department of Mechanical Engineering, University of Las Palmas de Gran Canaria. Spain

597 Filtering and processing IR images of PV modules

S. Vergura, O. Falcone
Dipartimento di Elettrotecnica ed Elettronica, Politecnico di Bari. Italy

598 Cumulative statistical analysis to monitor the energy performance of PV plants

S. Vergura
Dipartimento di Elettrotecnica ed Elettronica, Politecnico di Bari. Italy



601 The effect of substrate temperature on the active layer for spray-deposition process in organic solar cells

Jin-Ju Bae(1), Kyu-Jin Kim(1), Byoung-Ho Kang(1), Se-Hyuk Yeom(1), Dae-Hyuk Kwon(2), Hak-Rin Kim(3), Shin-Won Kang(3)

1. Department of Electrical Engineering and Computer Science, Kyungpook National University, Daegu. Korea
2. School of Electronic Information and Communication Engineering, Kyungil University Republic of Korea
3. School of Electronics Engineering, College of IT Engineering, Daegu. Republic of Korea

603 Is it economically possible repowering wind farms. A general analysis in Spain

L. Castro(1), A. Filgueira(1), M^a A. Seijo(1), E. Muñoz(1), L. Piegiari(2)

1. Department of Industrial Engineering II University of A Coruña, Ferrol. Spain
2. Department of Electrical Engineering. Politecnico di Milano, Milan. Italy

604 Online thevenin's equivalent using local PMU measurements

Sobhy M. Abdelkader

School of Electronics, Electrical Engineering & Computer Science, Queen`s University Belfast. United Kingdom

606 Cell method and modified nodal method in eddy current electromagnetic problems

L. Simón Rodríguez, J.M. Monzón Verona

Department of Electrical Engineering, University of Las Palmas de Gran Canaria. Spain

607 Fuzzy multi-agent based voltage and reactive power control

Bessie Monchusi, Adedayo Yusuff, Josiah Munda, Adisa Jimoh

Department of Electrical Engineering, Tshwane University of Technology, Pretoria. South Africa

609 Meat and bone meal as a renewable energy source in cement kilns: investigation of optimum feeding rate

W.K.H. Ariyaratne(1), M.C. Melaaen(1), Kristin Eine(2), L.A. Tokheim(1)

1. Department of Process, Energy & Environmental Technology, Telemark University College, Porsgrunn. Norway
2. Norcem AS Brevic. Norway

610 Comparative study of biodiesel production from ethanol and babassu oil using mechanical agitation and ultrasounds

Eduardo J. Mendes de Paiva, Jayne Carlos S. Barboza, Maria Lucia Caetano Pinto da Silva, Heizir Ferreira de Castro, Domingos Sávio Giordani

Department of Chemical Engineering, School of Engineering of Lorena, University of São Paulo. Brazil

615 Optimization of the electric power generated by a brake of water

E. Martínez Prado, P. Lara Santillán, A. Falces de Andrés, M. Mendoza Villena, A. Yangüas Peña

Department of Electrical Engineering, E.T.S.I.I. La Rioja University, Logroño. Spain

617 Survey on knowledge based methods to assist fault restoration in power distribution networks

Youssef Oualmakran(1), Joaquím Meléndez(1), Sergio Herraiz(1), Mercedes López Perea(2), Eloy González(2)

1. Department of Informatics and Applications, Research GroupeXiT, Girona University. Spain
2. Indra Software Labs, Madrid. Spain

618 Effect on rain on vertical axis wind turbines

B.C.Al(1), C. Klumpner(2), D.B. Hann(1)

1. Energy and Sustainability Division and Electrical Systems and Optics Division, University of Nottingham. United Kingdom
2. Electrical Systems and Optics Division, University of Nottingham. United Kingdom

619 Fault causes analysis in feeders of power distribution networks

Oscar A. Quiroga, Joaquim Meléndez, Sergio Herraiz

Institute of Informatics and Applications, University of Girona. Spain

620 Notes on the solar map of Asturias

J.I. Prieto J.C. Martínez García, D. García, R. Santoro

Department of Physics. University of Oviedo, Polytechnic School of Engineering, Gijón. Spain

622 Control with floating- and fixed- point DSPs of a low-cost flexible platform for a photovoltaics grid-connected system working as an agent in a distributed generation structure

Alexis B. Rey-Boué(1), F. Ruz Vila(2), José M. Torrelo(3), Salvador Subiela(3)

1. Departamento de Electrónica, Tecnología de Computadores y Proyectos, Universidad Politécnica de Cartagena, Murcia. Spain
2. Departamento de Ingeniería Eléctrica, Universidad Politécnica de Cartagena, Murcia. Spain
3. Instituto de Tecnología Eléctrica (ITE), Valencia. Spain

623 High frequency modelling of cables in PWM motor drives by using polynomial functions based parameters

M.C Di Piazza, A. Ragusa, G. Vitale

Consiglio Nazionale delle Ricerche, Istituto di Studi sui Sistemi Intelligenti per L'Automazione, (ISSIA-CNR) Palermo. Italy

625 An integral and flexible wireless power monitoring system

S. Blanc, P. Yuste, A. Lorente, J.J. Serrano

Department of Computer Engineering, Universitat Politècnica de València. Spain

628 Mechanically stacked solar cells for concentrator photovoltaics

Ian Mathews(1), Donagh O'Mahony(1), Weiwei Yu(1), Declan Gordan(1), Nicolas Cordero(1), Brian Corbett(1), Alan P. Morrison(1,2)

1. Tyndall National Institute UCC, Lee Maltings, Prospect Row, Cork. Ireland
2. Department of Electrical and Electronic Engineering, University College, Cork. Ireland

630 Parallel-connected legs in a grid-tied inverter system for distributed generation

G.J. Capellá(1), J. Pou(1), J.Zaragoza(1), S. Ceballos(2), I. Gabiola(2), E. Robles(2)

1. Department of Electronical Engineering, Technical University of Catalonia, Terrassa. Spain
2. Tecnalia Technology Corporation, Energy Unit, Zamudio-Bizkaia. Spain

633 Prediction system based on domestic weather sensors for the energy production of solar power plants

Domingo Benítez, Carlos González Muñoz, José F. Medina

SIANI University Institute, University of Las Palmas de Gran Canaria. Spain

635 The implementation of the low voltage ride-through curve on the protection system of a wind power plant

R.P.S. Leão(1), J.B. Almada(1), P.A. Souza(2), R.J. Cardoso(1), R.F. Sampaio(1), F.K.A. Lima(1), J.G. Silveira(2), L.E.P. Formiga(2)

1. Department of Electrical Engineering, Federal University of Ceará, Fortaleza. Brazil
2. Companhia Energética do Ceará, Fortaleza. Brazil

637 Doubly fed induction generator and conventional synchronous generator based power plants: operation during grid fault

M.C Salles(1), A.P. Grilo(2), J.R. Cardoso(1)

1. LMAG- Laboratory of Applied Electromagnetism, PEA-Polytechnic School, University of São Paulo.
2. Engineering, Modelling and Applied Social Science Center, Federal University of ABC, Great São Paulo. Brazil

639 Issues about monitoring the energy performance of a PV plants constellation

S. Vergura

Dipartimento di Elettrotecnica ed Elettronica, Politecnico di Bari. Italy

640 Orientation system of solar panels based on a robot manipulator

Ahmed Chaïb, Dalila Acheli, Mohamed Kesraoui

Applied Control Laboratory, University of Boumerdes. Algeria

642 Cornice modular wind collector © for collection and amplification of the vertical wind component in buildings for generation of small wind electric energy

J.C. Sáenz Díez Muro(1), J.M. Blanco Barrero(1), E. Jiménez Macías(1), J. Blanco Fernández(2), M. Pérez de la Parte(2)

1. Department of Electrical Engineering
2. Department of Mechanical Engineering. E.T.S.I.I., La Rioja University, Logroño. Spain

643 Comparison in the application of the exploitation by optimal head model to hydroelectric power station in run-of-the-river systems equipped with different types of turbines

J.M. Blanco Barrero(1), J.C. Sáenz Díez Muro(1), E. Jiménez Macías(1), J. Blanco Fernández(2), M. Pérez de la Parte(2)

1. Department of Electrical Engineering
2. Department of Mechanical Engineering. E.T.S.I.I., La Rioja University, Logroño. Spain

646 Large scale integration of wind power-influence of geographical allocation

L.Reichenberg L. Göransson, F. Johnsson, M. Odenberger

Department of Energy and Environmental Chalmers University of Technology, Göteborg. Sweden

649 Analysis of current-bidirectional buck-boost based switch-mode audio amplifier

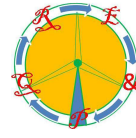
Gert Bolten Maizonave(1), Michael A.E. Andersen(1), Claus Kjaergaard(1), Kristian L. Lund(2), Lars B.R. Hansen(2)

1. Department of Electrical Engineering, Technical University of Denmark, Lyngby. Denmark
2. Bang & Olufsen ICEpower a/s. Denmark

650 Isolated bidirectional DC-DC converter for supercapacitor applications

Sayed Mohammad Dehghan Dehnavi(1), Gokhan Sen(2), Ole C. Thomsen(2), Michael A.E. Andersen(2), Lars Møller(3)

1. Power Electronic & Protection Lab. Faculty of Electrical and Computer Engineering, Tarbiat Modares University, Tehran. Iran
2. Department of Electrical Engineering, Technical University of Denmark
3. H2 Logic A/S. Denmark

**651 On the search of efficient uses for glycerine: steam gasification**

J.F. González(1), G. Engo(1), S. Román(1), M.C. Rayo(1), F.J. Masa(1), J.M. Encinar(2)

1. Department of Applied Physics, University of Extremadura. Spain
2. Department of Chemical Engineering and Physical Chemistry, University of Extremadura, Badajoz. Spain

652 Probabilistic model for distributed generation expansion in distribution power network

C.Ponce Corral(1), H. Bludszuweit(2), J.A. Domínguez Navarro(3)

1. Institute of Engineering and Technology, Universidad Autónoma de Ciudad Juárez.. México
2. Electrical Engineering Division, CIRCE Foundation, Zaragoza. Spain
3. Department of Electrical Engineering, C.P.S., University of Zaragoza. Spain

656 Control design of a two degree of freedom combined with repetitive controller applied to a single phase inverter power generation in the context of microgrids

R. Ortega(1,2), E. Figueres(2), G. Garcerá(2), O. Carranza(1,2), C.L. Trujillo(1,3)

1. Escuela Superior de Cómputo, Instituto Politécnico Nacional. México
2. Departamento de Ingeniería Electrónica, UPV, Valencia. Spain
3. Department of Electronic Engineering, Universidad Distrital Francisco José de Caldas. Bogotá. Colombia

658 On-line cable diagnostic possibilities in an artificial aging environment

Christian Freitag, Christian Weindl, Ivana Mladenovic

Institute for Electrical Power Systems, University of Erlangen- Nuremberg. Germany

660 Energy consumption and CO2 emissions evaluation for electric and internal combustion vehicles using a LCA approach

Sérgio Faias(1,2), Jorge Sousa(1,2) Luís Xavier(3), Pedro Ferreira(3)

1. ISEL. Instituto Superior de Engenharia de Lisboa. Portugal
2. Cle, Center for Innovation in Electrical and Energy Engineering, Technical University of Lisboa. Portugal
3. EDP, Energias de Portugal, Lisboa. Portugal

662 Equipment safety in renewable energies exploitation

Blaise Nsom(1), Karim Bouchlaghem(1,2)

1. Université de Bretagne Occidentale, LBMS EA. France
2. Unité de Recherche "Energétique et Environmental", Sousse Ibn Khaldoun. Tunisia

663 Practical experience with electricity production from unused energy at the water management company

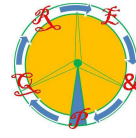
M. Gono(1), M. Kyncl(1), R. Gono(2)

1. Sm VaK a.s. Ostrava. Czech Republic
2. Department of Electrical Power Engineering, FEECS, VSB, Technical University of Ostrava, Poruba. Czech Republic

671 A comparison of transformer HF models and their application to PQ analysis

C. Capellán, M. Mañana, A. Arroyo, L.M. Muñoz, F. Delgado

Department of Electrical Engineering, E.T.S.I.I.T., University of Cantabria, Santander. Spain

**672 Laboratory platform for small wind energy generators**

A. Arroyo(1), M. Mañana(1), L.M. Muñoz(1), C.J. Renedo(1), S. Pérez(1), I. Fernández(1), C. Gómez(2), R. Prieto(2)

1. Department of Electrical Engineering, E.T.S.I.I.T., University of Cantabria, Santander. Spain
2. Instituto de Ingeniería y Tecnología de Cantabria (ITEC), Santander. Spain

674 Increasing penetration of renewals in isolated power systems using energy storage systems

L. Rouco(1), I. Azpiri(2), I. Gómez de Olea(2), J. Tabernero(1)

1. Universidad Pontificia de Comillas, Madrid. Spain
2. Iberdrola Renovables, Madrid. Spain

675 Optimal dispatch of a multiple energy carrier system equipped with a CCHP

A. Sheikhi, A.M. Ranjbar, F. Safe

Department of Electrical Engineering, Sharif University of Technology, Tehran. Iran

676 Providing an added-value to biodiesel by-products: pyrolysis of glicerol.**Thermogravimetric study and analysis of sulphur emissions**

J.F. González(1), G. Engo(1), S. Román(1), J.I. Arranz(2), J.M. Encinar(3)

1. Department of Applied Physics
2. Department of Mechanical, Energetics and Materials Engineering
3. Department of Chemistry Engineering and Physical Chemistry, University of Extremadura. Spain

682 Active balancing circuit for advanced lithium-ion batteries used in photovoltaic application

J.F. Reynaud(1,2), C.E. Carrejo(1), O. Gantet(1), P. Aloïsi(1), B. Estibals(1,2), C. Alonso(1,2)

1. CNRS; LAAS, Toulouse. France
2. Université de Toulouse; UPS, INSA, INP, ISAE; LAAS. France

683 Control laws to improve efficiency and average life time of an adaptive multi-phases converter dedicated to photovoltaic applications

A. Berasategi(1,2,3), Y. El Basri(1,2,3), C. Cabal(1), B. Estibals(1,2), M. Vermeersch(3), C. Alonso(1,2)

1. CNRS; LAAS, Toulouse. France
2. Université de Toulouse; UPS, INSA, INP, ISAE; LAAS. France
3. Department Solar & New Energies, TOTAL S.A.. France

685 Synchronization of a single-phase wind energy generator with the low-voltage utility grid

Nader Anani(1), Omar AL-Kharji AL-Ali(1), P. Ponnappalli(1), S.R.AL-Araji(2), M.AL-Qutayri (2)

1. School of Engineering, Division of Electrical and Electronic Engineering, Manchester Metropolitan University. United Kingdom
2. College of Engineering, Khalifa University of Science, Tech, and Research. UAE

686 Modernisation of high power laboratory to fulfill the technical and qualitative conditions for tests according to standards in force

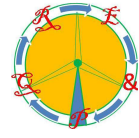
George Curcanu, Corneliu Chiciu, Constantin Ilinca, Horia Ionescu

R&D National Institute ICMET-Craiova. Romania

695 A step-by-step tracking program for a string of photovoltaic modules

N.I. Tatu, C. Alexandru, V.E. Dombi

Department of Renewable Energy Systems and Recycling, Transilvania University of Braşov. România

**696 Mono-axis vs Bi-axis tracking for a string of photovoltaic modules**

N.I. Tatu, C. Alexandru

Department of Renewable Energy Systems and Recycling, Transilvania University of Braşov.
România**697 A review on existing efficiency indications on sustainable energy**

R. M. Robles(1), V. Barranco(1), A. M. Castillo(2) , J. M. Ramirez(3) , F.R. Lara(1)

1. Department of Electrical Engineering. University of Córdoba. Spain

2. Department of Economy Applied. University of Córdoba. Spain

3. EATCO Research Group. University of Córdoba. Spain

