

**INTERNATIONAL CONFERENCE
ON RENEWABLE ENERGY AND
POWER QUALITY
(ICREPQ'10)**

WELCOME TO ICREPQ'10

On behalf of the Steering Committee and the Local Organizing Committee we want to give you a very warm welcome to ICREPQ'10 and to Granada.

Our International Programme Committee has selected a high quality 318 papers (among 534 proposals) from which 290 will be presented at the Conference, 40 at oral sessions and 130 at poster sessions (dialogue), along the three days of the ICREPQ'10. All of these papers are included in the final programme. Also four special papers will be presented in plenary sessions.

ICREPQ'09 covers the whole range of problems and solutions especially concerning with renewable energies and power quality and all the papers have direct relation with these two fields of research and practical work.

We would like to thank all the authors, session chairmen, participants without papers and the International Program Committee members who have made important contributions by reviewing the proposals.

In addition to the technical sessions, a number of social events have been arranged. On Wednesday evening (15th April, 19:00 H) we will hold a Civic Reception with aperitif in "Salón de Cristal. Ajuntament de Valencia" and on Thursday (16th April, 20:30 H) the Conference Banquet at "Sorolla Palace" where we will deliver presents to those companies/institutions that collaborate with the organisation of the Conference and on Friday (17th of April from 15:00 H to 19:00 H) we have arranged a Cultural Excursion in two Tourist Buses along Valencia and finally a visit to the City of Arts and Sciences.

We hope that you will find the conference intellectually stimulating, that you will make many fruitful personal contacts here and that you will thoroughly enjoy your visit to Valencia and the surrounding area.

Best regards,

Prof. Manuel Pérez-Donsión
Chairman of the Steering Committee

Prof. Francisco Cavallé Sesé
Chairman of the Local Committee

ORGANISED BY:

- European Association for the Development of Renewable Energies, Environment and Power Quality (EA4EPQ)
- University of Vigo
- University of Granada



CONFERENCE LANGUAGE

The Conference language is English. All papers and presentations should be made in English.

OBJECTIVES AND TOPICS

The intention of the organisers is to give an opportunity to academics, scientists, engineers, manufacturers and users from all over the world to come together in a pleasant location to discuss recent development in the areas of Renewable Energy and Power Quality.

The International Conference on Renewable Energy and Power Quality (ICREPQ'10) will be structured in:

- **Plenary Sessions:** speech of 45 minutes in one room for all the participants
- **Oral Sessions:** speech of about 15 minutes for each paper (12 minutes for the presentation and 3 minutes for questions) . Simultaneously in two rooms.
- **Posters Sessions:** In 45-minute periods during the coffee breaks.

1. RENEWABLE ENERGY:

Topics include, but are not limited to:

- Wind Energy, Small Hydro Energy, Solar Energy, Photovoltaic Energy, Ocean Energy, Geothermal, Biomass,...
- Classical and special electrical generators: Theory, design, analysis, losses, efficiency, heating and cooling, vibration and noise, modelling and simulation, control strategies, protection systems, maintenance, mechanical behaviour, new methods of testing, parallel operation, stability,...
- Power plants. Distributed generation. Fuel cells. Co-generation. Hybrid Systems. Original solutions,...
- Energy conversion, conservation and energy efficiency.
- Energy saving policy. Energy storage. Batteries,...
- Energy and the environment. Ecological balance. Ecosystem,...
- Application of the renewable energy. Best practice projects.
- Legislation in the area of renewable energies.
- Biomass combustion techniques. The energy use of agricultural and forest residues. Production and energy exploitation of bio-gas. Environment. Social importance...
- Interconnection and transport problems.
- Planning and control of the power system take into account the renewable energy. Stability. Protection...

- Economic analysis of the power system taking into account the renewable energy.
- Regulation/des-regulation of the power market. Influence of the renewable energy.
- Models and simulation of the power systems. Models and estimation of loads. Software tools.
- Application of the telecommunications, internet, artificial intelligence for the renewable energy.
- Security assessment and risk analysis in renewable energy.
- Electric vehicles.
- Power electronics. Control strategies.
- Sensors and actuators.
- Renewable Energies Teaching.

2. POWER QUALITY:

Topics include, but are not limited to:

- Electromagnetic compatibility (EMC).
- Power Quality in Transport and Distribution.
- Economic Studies of the Power Quality.
- Low-frequency conducted disturbances: Voltage deviations, voltage fluctuations/flicker, voltage dips and short interruptions, harmonics and inter-harmonics, transient over-voltages, voltage unbalance (imbalance), temporary power-frequency variations.
- Sources, effects and mitigation methods of the disturbances.
- Measurements of the power quality in networks, industrial installations and Laboratories. Equipment, procedures and measurement methods. Standards.
- Modelling and simulation of the power quality. Software tools.
- Transmission of the disturbances.
- Filtering techniques.
- Power factor compensation. Capacitor switching techniques.
- Optimization techniques.
- Telecommunication, internet and artificial intelligence.
- Permanent monitoring techniques and online diagnosis.
- Intelligent energy delivery systems. Uninterrupted power supplies.
- Expert systems applications.
- Devices, equipment and power systems. Control centres.
- Specific problems and studies cases.
- Power quality influence in deregulated markets.
- High frequency disturbances (radiated).
- Data security and electromagnetic pulses.
- Protection against natural and intentional EMI.

STEERING COMMITTEE

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 Manuel Burgos Payán
 Debora Coll-Mayor
 Mario Mañana Canteli
 Mariano Sanz-Badía

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 María José Mercado Vargas

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Flores, Antonio (Portugal)	Shibli, Murad (Arab Emirats)
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Ghita, Constantin (Romania)	Traça de Almeida, A. (Portugal)
Göl, Ozdemir (Australia)	Tudorache, Tiberiu (Romania)
Güemes Alonso, J.A. (Spain)	Valouch, V. (Czech Republic)
Hermoso Alameda, B. (Spain)	Vitale, Gianpaolo (Italy)
Iwaszkiewicz, J. (Poland)	Zamora Belver, I. (Spain)

SPONSORSHIP

Sincere thanks are expressed to the organisations listed below who have given valuable support to ICREPQ'10:

- EA4EPQ (European Association for the Development of Renewable Energies, Environment and Power Quality)
- University of Granada
- University of Vigo
- Endesa
- Circutor
- Assyce
- Ministerio de Ciencia e Innovación
- AEDIE (Asociación Española para el Desarrollo de la Ingeniería Eléctrica)

ICREPQ'10 SCHEDULE

Monday March 22 nd 2010						
17:00 – 19:00	Registration “ICREPQ'10 Secretariat”					
Tuesday March 23 rd 2010						
9:30 – 13:00	Registration “ICREPQ'10 Secretariat”					
10:45 – 11:30	Opening Ceremony ROOM A “Endesa”					
11:30 - 12:15	PL1	The Renewables in the present and future of Energy Carlos Gascó Travesedo. Head of the Prospective Unit. Iberdrola Renewable Energies. Spain				
EXTRA TIME FOR DISCUSSION						
12:15 – 13:00	Posters Session at Room C “Assyce” (Session C1) Coffee Break		<i>Poster Session C1</i>			
202 203 206 210 211 212						
214 218 219 224 227 231						
242 244 245 250 253 257						
259 261 264 278 280 284						
296 328 334 339 342 349						
350 456 461 559 564 565						
596 611 644 645 680 712						
726 728						
13:00 – 15:00	Welcome Lunch					
15:00 – 16:30	ROOM A “Endesa”			ROOM B “Circuitur”		
<i>Oral Session A1</i>			<i>Oral Session B1</i>			
410 467 506			200 207 252			
572 690 732			271 433 563			
EXTRA TIME FOR DISCUSSION						
16:30 – 17:15	Poster Session at Room C “Assyce” (Session C2) Coffee Break		<i>Poster Session C2</i>			
223 260 272 273 284 285						
287 288 290 291 293 298						
299 305 309 311 318 323						
325 330 331 340 343 344						
345 347 356 357 360 365						
367 368 375 376 377 378						
380 384 390 397 398 670						
671 696						
17:15 – 18:30	ROOM A “Endesa”			ROOM B “Circuitur”		
<i>Oral Session A2</i>			<i>Oral Session B2</i>			
255 256 301			276 308 312			
302 303			315 585			
EXTRA TIME FOR DISCUSSION						
19:30 – 21:30	Welcome Civic Reception					

Wednesday 24 March 24th 2010							
9:30 – 13:00	Registration“ICREPQ’10 Secretariat”						
	ROOM A “Endesa” Plenary Sessions PL2 and PL3						
9:30-10:15	PL2	Copper contribution to renewables and energy efficiency Fernando Nuño. European Copper Institute (ECI). Leonardo Energy Community					
10:15 – 11:00	PL3	Energy and Sustainability Cayetano López Martínez Head of CIEMAT Energy Division					
	EXTRA TIME FOR DISCUSSION						
11:00 – 11:45	Poster Session at Room C “Assyce” (Session C3) Coffee Break	Poster Session C3					
		202	354	389	401	404	406
		412	414	416	419	423	425
		426	428	429	432	436	437
		438	439	441	453	455	458
		460	463	464	469	477	478
		480	483	484	485	489	490
		493	494	496	497	499	502
		510	522	523	525	599	625
	681	688					
11:45 – 13:00	ROOM A “Endesa”			ROOM B “Circutor”			
	<i>Oral Session A3</i>			<i>Oral Session B3</i>			
	314	317	320	216	336	355	
	322	583		362	383		
	EXTRA TIME FOR DISCUSSION						
13:00 – 15:00	Lunch						
	Sala B “CIRCUTOR”						
15:00 - 16:30	Análisis y diseño de máquinas eléctricas usando elementos finitos. Una introducción usando software libre con aplicación al caso de la máquina asíncrona trifásica. Ramón Bargalló Perpiña Catedrático de EU. Universidad Politécnica de Catalunya						
16:30 - 17:00	Café						
17:00 - 18:30	Mesa Redonda : Espacio Europeo de Educación Superior (EEES). Situación actual en diferentes universidades XXRGIIE (In Spanish)						
20:30 - 24:00	Conference Banquet in Hotel AC Palacio de Santa Paula. Gran Vía de Colón, 31 (Optional)						

Thursday 25 March 25th 2010							
9:45 – 13:00	Registration “ICREPQ’10 Secretariat”						
	ROOM A “Endesa”			ROOM B “Circutor”			
9:45 – 11:00	<i>Oral Session A4</i>			<i>Oral Session B4</i>			
	473	503	533	400	449	629	
	609	662		640	701		
EXTRA TIME FOR DISCUSSION							
11:00 – 11:45	Poster Session at Room C “Assyce” (Session C4) Coffee Break	<i>Poster Session C4</i>					
		421	500	510	520	529	535
		536	538	541	547	549	551
		560	569	589	591	594	597
		598	601	603	604	607	608
		613	614	615	616	618	619
		620	621	622	626	627	631
		632	633	634	635	637	638
	642	647	669	676	695	734	
11:45 – 13:00	ROOM A “Endesa”			ROOM B “Circutor”			
	<i>Oral Session A5</i>			<i>Oral Session B5</i>			
	415	418	430	294	505	507	
	440	443		511	528		
EXTRA TIME FOR DISCUSSION							
13:00 – 15:00	Farewell Lunch						
15:00 – 16:30	ROOM A “Endesa”			ROOM B “Circutor”			
	<i>Oral Session A6</i>			<i>Oral Session B6</i>			
	221	338	446	233	270	530	
	447	590	733	546	555	580	
EXTRA TIME FOR DISCUSSION							
16:30 - 17:15	Poster Session at Room C “Assyce” (Session C5) Coffee Break	<i>Poster Session C5</i>					
		246	306	307	333	475	493
		509	543	648	649	651	652
		655	656	659	661	664	665
		666	668	669	673	675	677
		679	682	683	685	686	698
		692	693	699	700	702	703
		704	706	707	708	710	711
	718	721	723	727	729	730	
17:15 - 17:30	Introducing the Integrated Knowledge Center of Energy at Budapest University of Technology and Economics						
17:30 - 18:15	CLOSING SESSION Conclusions and time for the next conference (ICREPQ’11) Awards for the three best posters						

AUTHORS

Oral Presentations

Each speaker of an oral presentation has an available time of **15 minutes** (12 minutes for the presentation and 3 minutes for questions) and must be in the session room 10 minutes before of the beginning of the session for to test the audiovisual equipment and for to exchange opinions with the Session Chairman. We suggest that the speakers of one oral presentation prepare their material in Power Point 2003.

Poster Presentations

The poster must be put on the pin board that you previously can chose about 15 minutes before of the beginning of the session and it must be take off 15 minutes after of the end of the session. The author(s) must be stay near the poster along the 45 minutes of the session duration for to answer all the questions that the audience or the chairmen could formulate. The maximum available surface for each poster will be **950 mm x 2340 mm** (width x high).

SESSION CHAIRMEN

On behalf of the International Program Committee, Steering Committee and the Organising Committee of the ICREPQ'10 and take into account their eminent position in the world of science we have selected 40 session chairmen. It is an honour for us their collaboration for to chair the sessions of ICREPQ'10 and their contribution would be greatly appreciated. We wish to express our warmest thanks.

Traditionally the Chairmen of each Session are independent in organising the Session. Nevertheless it is of special importance that the different session chairmen prepare some questions about the papers of their session in order to get a more dynamic one. Furthermore we expect of the session chairmen the following:

Plenary sessions

Each plenary session should not exceed **45 minutes** including presentation and discussion, (40 minutes for presentation and 5 minutes for questions).

Oral sessions

Each oral paper presentation should not exceed 15 minutes including presentation and discussion, (12 minutes for presentation and 3 minutes for questions).

Poster sessions

The author(s) of a poster presentation must be stay near the poster during the 45 minutes of the session duration and in order to get a more dynamic session it is important that along this period of time each of the chairmen of the poster sessions formulate questions to the authors and check that all is OK. The chairmen also file up a sheet with puntuactions for each presented poster and

then take into account these evaluations the Organizers will deliver during the Closing Session a present to the three best posters.

TABLE I. Chairmen Session distribution

Tuesday 23rd March, 2010		
11:30-12:15	PLENARY SESSION PL1	Carlos Redondo Gil
12:15-13:00	POSTER SESSION C1	Alfred McMichael
		Eduard Latosov
		Seul-Ki Kim
		Pere Andrada
		Augusto Fleury
15:00-16:15	ORAL SESSION A1	Gevork B. Gharehpetian
	ORAL SESSION B1	Buzdugan Mircea-Ion
16:15-17:00	POSTER SESSION C2	Ángel Gómez Moreno
		Santiago Martín Criado
		Joao Carlos Oliveira Matias
		Radek Polanský
17:00-18:15	ORAL SESSION A2	Gianpaolo Vitale
	ORAL SESSION B2	Sergio Redondo Faias
Wenesday 24th March, 2010		
9:30-10:15	PLENARY SESSION PL2	Gevork B. Gharehpetian
10:15-11:00	PLENARY SESSION PL3	José R. Wilhelmi
11:00-11:45	POSTER SESSION C3	Miguel Martínez Melgarejo
		Manuel E. García Melero
		Ivan Glesk
		Jigeng Li
		Aleksander Lisowiec
11:45-13:00	ORAL SESSION A3	Gerald Edelstein
	ORAL SESSION B3	Viktor Valouch
Thursday 25th March, 2010		
9:45-11:00	ORAL SESSION A4	Enrique Alameda
	ORAL SESSION B4	Dan András
11:00-11:45	POSTER SESSION C4	Tariq Masood
		Kádar Péter
		Javier Rivas Conde
		Anna Volkova
		David Raisz
11:45-13:00	ORAL SESSION A5	Gorazd Stumberger
11:45-13:00	ORAL SESSION B5	Mario Mañana Canteli
15:00-16:15	ORAL SESSION A6	Aurelian Craciunescu
15:00-16:15	ORAL SESSION B6	Mario J. Durán Martínez
16:15-17:00	POSTER SESSION C5	Mostafa Abd El-Geliel
		Babak Abdi Varmiab
		Kamel Fawzi Abu Ghali
		Raul Barrio Perotti
		Clemente Cárdenas

Tuesday March 23rd 2010

10:45-11:30 OPENING CEREMONY

ROOM A “Endesa”

11:30-12:15 Plenary Session PL1

ROOM A “Endesa”

Chairman: Carlos Redondo Gil

The Renewables in the present and future of Energy.

Carlos Gascó Travesedo. Head of the Prospective Unit. Iberdrola Renewable Energies. Spain.

Tuesday March 23rd 2010

12:15-13:00 Poster Session C1 – Coffee Break

ROOM C “Assyce”

Chairmen: Alfred McMichael, Eduard Latosov, Seul-Ki Kim, Pere Andrada, Augusto Fleury

13:00 – 15:00 Welcome Lunch

“la Vella Restaurant”

Wednesday 15th April 2009

15:00-16:15 Oral Session A1

ROOM A “Iberdrola”

Chairman: Gevork B. Gharehpetian

Nº	We have received till now the following accepted papers for the “INTERNATIONAL CONFERENCE ON RENEWABLE ENERGIES AND POWER QUALITY (ICREPQ’10)” <i>Title/Authors</i>
200	Power Generation Limits in Thermal, Chemical and Electrochemical Systems S. Sieniutycz Faculty of Chemical and Process Engineering. Warsaw University of Technology. Warsaw. Poland.
202	Biogas Energy: Unexplored Source of a Renewable Energy in Jordan Abu-Hamatteh Z.S.H.(1), Al-Jufout, Saleh (2), Abbassi, B.(3), Besieso, M.S.(4) (1) Faculty of Engineering Technology, Al-Balqa' Applied University. Amman. Jordan (2) Electrical Engineering Department, Faculty of Engineering. Tafila Technical University. Jordan (3) Department of Water Resources and Environmental Management. Faculty of Agricultural Technology. Al-Balqa' Applied University. Jordan

	(4) Jordan Oil Shale Energy Company PLC. Jordan
207	Optimizing World-wide Utilization of Renewable Energy Sources in the Power Sector Tino Aboumahboub (1), Peter Tzscheuschler (1), Thomas Hamacher (2) (1) Faculty of Electrical Engineering. Institute for Energy Economy and Application Technology. München. Germany (2) Research Group for Energy and System Studies, Max Plank Institute for Plasma Physics. München. Germany
210	<i>Bioclimatic parameters in the design of contemporary buildings. The proposal for the new Town Hall of Deryneia. Cyprus</i> Aimilios Michael (1), Christos Hadjichristos (1), F. Bougiatioti (2), A. Oikonomou (3) (1) Program of Architecture. School of Engineering. University of Cyprus (2) National Technical University of Athens. School of Architecture. Athens. Greece (3) University of Patras. Department of Architecture. Patras. Greece
211	<i>Bioclimatic approaches of modern residential architecture in Cyprus, 1952-1974</i> Aimilios Michael , Marios C. Phocas Department of Architecture. Faculty of Engineering. University of Cyprus
212	<i>Modelling and analysis of a traction control system for two Independent wheel drives-electric vehicle</i> S.M. Wasfy(1), M.M.Eissa (1,2),(SMIEEE), G.M.A.Sowilam(1), M.Abdel Monem(1) (1) Electrical Power & Machines Department. Helwan University. Egypt (2) Faculty of Engineering, Electrical Engineering Department. King Abdul Aziz University. Saudi Arabia
214	<i>Sensorless AC Current Control with Backstepping Desing for a PWM AC-DC Converter</i> B. Bourahla (1), B. Mazari (1), S.Moureau (2), G. Champenois (2) (1) University of Sciences and Technology of Oran. Algeria (2) LAll- University of Poitiers. France
216	<i>Proposed New Structure for Fault Current Limiting and Power Quality Improving Functions</i> M. Firouzi (1), G.B.Gharehpetian (2) , M. Pishvaie (1) (1) Department of Electrical Engineering, University of Tafresh.Iran (2) Department of Electrical Engineering.Amirkabir University of Technology, Tehran. Iran
218	<i>Comparative study of various renewable fuels blends to run a diesel power plant</i> Eloisa Torres-Jimenez (1), Marta Svoljšak Jerman (2), Andreja Gregorc (2), M. P. Dorado (3), Breda Kegl (4) (1)Department Mechanics and Mining Engineering. E.T.S. University of Jaén. Spain (2) Petrol d.d. Slovenia (3) Department of Chemical Physics and Applied Thermodynamics. University of Córdoba. Spain (4) Faculty of Mechanical Engineering. University of Maribor. Slovenia
219	<i>A Direct Power Controller for Doubly-Fed Induction Generator</i> Alfeu J. Sguarezi Filho and Ernesto Ruppert DSCE-FEEC-UNICAMP. Brasil

221	<i>Online Gearbox-Load- Monitoring to Increase Gearbox Reliability</i> Volver Kreidler Winergy AG Germany
223	<i>Dynamics parameters estimation of an asynchronous machine plus mechanical shaft set through orbit frequency response analysis</i> Filipe Oliveira (1), Gerardo Peláez (2), Manuel P. Donsión (3) (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
224	<i>Study of a particular stack performance in a building</i> G. La Fianza, F. Fucci, L. Brunetti Department S.A.V.A., Faculty of Agriculture. University of Molise, Campobasso. Italy
227	<i>Two Axes Sun Tracking System: Comparison with a Fixed System</i> M. Serhan, L.EL-Chaar Department of Electrical Engineering. Petroleum Institute. Abu-Dhabi (UAE)
231	<i>Process of a Territorial Energy Plan in an Isle</i> M. Martínez, A. Pulido, J. Romero, J.C.Quintana, J. Cruz Department of Electrical Engineering. E.T.S.I.I. Las Palmas de Gran Canaria University. Spain
233	<i>Modeling, Controller Design and Simulation of Power System Friendly Power Supply</i> A. P.N. Tekwani (1), B. G.N. Khanduja (2) (1) Department of Electrical Engineering. Institute of Technology Nirma University Ahmedabad. Gujarat, India (2) Department of Electrical Engineering, Laljibhai Chaturbhai Institute of Technology, Bhandu, Mehsana. Gujarat. India
242	<i>Energy and Autohydrolysis By-Products from Industrial Crops</i> López, F, Feria, M.J, García, J.C, Zamudio, M.A.M., Pérez, A. Department of Chemical Engineering. Faculty of Experimental Science.University of Huelva. Spain
244	<i>Neuro-Fuzzy Approach to Forecast Wind Power in Portugal</i> H.M.I. Pousinho (1), V.M.F. Mendes (2), J.P.S. Catalão(1) (1) Department of Electromechanical Engineering. University of Beira Interior. Covilhã. Portugal (2) Department of Electrical Engineering and Automation. Instituto Superior de Engenharia de Lisboa. Portugal
245	<i>EMTP-RV Analysis of Lightning Surges on Wind Turbines</i> R.B.Rodrigues (1), V.M.F. Mendes (1), J.P.S. Catalão(2) (1) Department of Electrical Engineering and Automation. Instituto Superior de Engenharia de Lisboa. Portugal (2) Department of Electromechanical Engineering. University of Beira Interior.Covilhã. Portugal
246	<i>Informing decision on transportation pilot study through stakeholder consultation</i> F.S.Gil, J.F.Fernandes, Tomaz Dentinho University of Azores. Portugal

250	Improved Maximum Power Point Tracking Algorithm for Photovoltaic Systems L. Maclsaac , A. Knox Department of Electronics and Electrical Engineering. University of Glasgow. United Kingdom
252	Simulation of Storage Systems for increasing the Power Quality of Renewable Energy Sources J. Méndez, A. Falcon , D. Hernández Institute of Intelligent Systems (SIANI) Las Palmas de Gran Canaria University. Spain
253	Software phase lock loops for pulse width modulated rectifiers Petr Simek (1), Jiri Skramlik (1), Josef Tlustý (2), Viktor Valouch (1), Ivo Pecha (3) (1) Department of Power Engineering. Faculty of Electrical Engineering. CTU, Prague. Czech Republic (2) Institute of Thermomechanics, Academy of Sciences of the Czech Republic (3) Elektro. Bouzov. Czech Republic
255	Selection of the Electrical Generator for a Wave Energy Converter J.L. Osa Amilibia (1), A. Iturregi Ajo (2) (1) Mechanical Engineering Department. University College of Engineering, University of The Basque Country. Spain (2) Department of Electrical Engineering. University College of Technical Mining and Civil Engineering. University of The Basque Country. Spain
256	A Study of the Current Disturbance Caused by Wind Induced Vibrations of Photovoltaic Modules J. Schmid (1), E. Kancsar (1), M. Drapalik (1) V. Schlosser (1), G. Klinger (2) (1) University of Vienna, Department of Electronic Properties of Materials, Faculty of Physics. Austria (2) University of Vienna, Department of Meteorology and Geophysics. Austria
257	Optimum Electrical Machine Selection for Spacecraft Electro-Mechanical Battery B. Abdi (1), J. Milimonfared (2), J. SH. Moghani (2) (1) Islamic Azad University-Damavand Branch.Tehran.Iran (2) AmirKabar University of Technology. Tehran. Iran
259	Cogging Torque Reduction in PM Machines used in Electro-Mechanical Battery B. Abdi (1,2), J. Milimonfared (1) J. S. Moghani (1,2) (1) Satellite Research Center of Amirkabir University (AUTSAT) (2) Elec. Eng. Dep., Amirkabir University of technology. Tehran. Iran
260	Cogging Torque Reduction in PM machines Used in Electro-Mechanical Battery B. Abdi Islamic Azad University, Tehran. Iran
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285	<i>Performance Evaluation of Microgrid Management Function in KERI pilot plant</i> Jong-Yul Kim, Jin-Hong Jeon, Seul-Ki Kim New and Renewable Energy Research Center Korea Electrotechnology Research Institute. Changwon. Korea
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288	<i>Distributed Generation with Voltage Control Capability in the Low Voltage Network</i> F.Sulla, J. Björnstedt, O. Samuelsson Department of Industrial Electrical Engineering and Automation LTH Lund University
290	<i>Energy System Diagnosis and Analysis with“Three - Links” Models in Pulp and Paper Mill</i> Li Jigeng (1), Liu Huanbin (1), Yin Yongjin (1), Tao Jinsong (1), Kong Lingbo (1), Li Yugang (1), Jia Jingjiang (2) (1) South China University of Technology, State Key Laboratory of Pulp and Paper Engineering. Guangzho. China (2) Gold East Paper(Jiangsu)Co.,Ltd. Jiangsu. China
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293	<i>Detection of inter-coil short circuits in coils of salient pole synchronous generator field winding on the basis of analysis of magnetic field in the machine</i> Ante Elez (1), Branko Tomčić (2), Miroslav Petrinić (1) (1) Končar – Electric Engineering Institute Inc. Zagreb. Croatia (2) Končar – Generators and Motors, Inc. Croatia
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298	<i>Analytical approach to the design of a high-force density double-sided linear switched reluctance motor</i> J. Garcia Amorós (1), P. Andrada (2) (1) Departament d'Enginyeria Electrònica, Eléctrica i Automàtica E.T.S.E., Universitat Rovira i Virgili. Spain (2) GAECE. Grup d'Accionaments Elèctrics amb Commutació Electrònica. Departament d'Enginyeria Elèctrica, EPSEVG. Universidad Politècnica de Cataluña UPC. Spain

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305	<p><i>Conversion Analysis of a Planetary Chain-Set Speed Reducer into a Speed Increaser to Be used in RES</i> Codruta Jaliu, Dorin Diaconescu, Radu Săulescu, Oliver Climescu Department of Product Design and Robotics. Transilvania University of Brasov. România</p>
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309	<i>New Tools for Easing System Integration, Deployment, Monitoring and Maintenance of Ocean Energy Devices</i> Edin Omerdic , Daniel Toal, P. Finn Electronic and Computer Engineering (ECE) Department.University of Limerick. Ireland
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336	<i>Investigation of line-commutated three-phase converters under voltage unbalance</i> Manuel Weiland, Gerhard Herold. Institute of Electrical Power Systems. University of Erlangen- Nuremberg. Germany
338	<i>Advanced Concept for Participation of Large Wind Farms to Ancillary Services</i> Ahmad-Rami Al-Awaad KEMA Consulting GmbH. Bonn. Germany
339	<i>A new method for identification of zones with similar wind patterns using Hierarchical Clustering Techniques</i> J. C. Palomares Salas, A. Agüera Pérez, J. J. G. de la Rosa, J. G. Ramiro Research Unit PAIDI-TIC-168. University of Cadiz. Electronic Area. Escuela Politécnica Superior. Spain

340	<i>Design of Modeling and Online Simulation for Energy Systems in Papermaking Mill</i> Yan-Ming Zhou (1,2), Ji-Geng Li(1), Jin-Song Tao (1) Yong-Jun Yin (1), Huan-Bin Liu (1) (1) State Key Laboratory of Pulp and Paper Engineering. South China University of Technology, Guangzhou. China (2) University of Electronic Science and Technology of China Zhongshan Institute. Zhongshan. Guangdong. China
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343	<i>Two axis solar tracker based on solar maps, controlled by a low-power microcontroller</i> Francisco Duarte, Pedro Dinis Gaspar, Luís Carrilho Gonçalves Electromechanical Engineering Department – Engineering Faculty University of Beira Interior. Covilhã. Portugal
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347	<i>Wind loads acting on an azimuthal photovoltaic platform. Experimental study</i> R. Velicu, G. Moldovean, I. Scaletchi, B.R. Butuc Product Design Centre for Sustainable Development, Transilvania University of Braşov. România
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350	<i>Genetic Fuzzy Learning of local wind conditions</i> Agustín Agüera Pérez, Juan J. González de la Rosa, J. Gabriel Ramiro Leo, J.C. Palomares Salas Research Group PAIDI-TIC 168. University of Cádiz. Spain
354	<i>Low Bandgap GaInAsSbP Pentanary Thermophotovoltaic cells</i> P. J. Carrington (1), A. Krier, K.J. Cheethan, N.B. Cook, M. Yin (1) Physics Department, Lancaster University, Lancaster. United Kingdom
355	<i>Experimentally evaluated impact of nonlinear loads on the energy transmission losses and distortion of</i>

	<p>voltage waveforms Gorazd Štumberger(1), Miran Rošer(2), Ivan Škratek(2), Viktor Tajnšek(2) (1) University of Maribor. Faculty of Electrical Engineering and Computer Science. Slovenia (2) Elektro Celje d.d. Slovenia</p>
356	<p>Linke Turbidity Modelling for Braşov Urban Area L. Coste, E. Eftimie Department of Product Design and Robotics Transilvania University of Braşov. România.</p>
357	<p>Radiative Parameters Specific to Braşov Urban Area L. Coste, C. Şerban Department of Product Design and Robotics Transilvania University of Braşov. România</p>
360	<p>Advanced Voltage Positive Feedback for Anti-islanding of aDistribution Generation Inverter Seul-Ki Kim, Jin-Hong Jeon, Heung-Kwan Choi Renewable Energy System Research Center. Republic of Korea</p>
362	<p>Addressing LV network power quality issues through the implementation of a microgrid Lava, J (1), Cobben, J. F. G (1,2), Kling, W.L (1), Van Overbeeke, F (3) (1) Department of Electrical Engineering, Eindhoven University of Technology. The Netherlands (2) Alliander N.V. The Netherlands (3) EMforce B.V. The Netherlands</p>
365	<p>Centralized normalization of harmonic voltages by the third-order passive filter L.I.Kovernikova The Siberia Branch of the Russian Academy of Sciences Energy Systems Institute. Russia</p>
367	<p>Agent-Based Services for Building Markets in Distributed Energy Environments I. Lopez Rodriguez,M. Hernández Tejera SIANI University Institute.University of Las Palmas de Gran Canaria. Spain</p>
368	<p>Investigation of gaseous emissions and ash deposition in a pilot-scale PF combustor co-firing cereal co-product biomass with coal Ala Khodier, Nigel Simms, Paul Kilgallon, Nigel Legrave Energy Technology Centre, School of Applied Sciences, Cranfield University. England. United Kigdom</p>
375	<p>Real Problems in Utility High Voltage Network due to Grid Connected Photovoltaic Power Generation. The experience of Endesa Javier de la Cruz (1), Pedro Gómez (2) (1) Endesa Distribución Eléctrica S.L.U.Granada. Spain (2) Grupo de Investigación IDEA, Escuela Politécnica Superior, University of Jaén. Spain</p>
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378	<p><i>Technical and business economic study of photovoltaic systems</i> B. Verhelst (1,2), J. Desmet (1,2), C. Debruyne (1,2), H. Van Landeghem (3) L. Vandeveldel (2), (1) HOWEST, Department PIH Kortrijk. Belgium (2) Ghent University, Department EESA. Belgium (3) Ghent University, Department Industrial Management. Belgium</p>
380	<p><i>Environmental energetic model for the energy industry in Spain</i> M.A.Verdejo (1), J.R. Saenz (2), J. Fernández (1) ,M.Duran (3) (1) Electrical Engineering Department. E.P.S.of Linares. University of Jaén. Spain (2) Electrical Engineering Department. E.S.I. University of Cádiz. Spain (3) Electrical Engineering Department. University of Málaga, Spain</p>
383	<p><i>Implementation of a New Method for an Improved Voltage Dips Evaluation by the Italian Power Quality Monitoring System in Presence of VT Saturation Effects</i> R. Chiumeo(1), M. de Nigris (1), L. Garbero (1), C. Gandolfi (1), L. Tenti (1), E. Carpaneto (2) (1) ERSE - Enea Ricerche Sul Sistema Elettrico. Milano. Italy (2) Politecnico di Torino - Dipartimento di Energia Elettrica. Italy</p>
384	<p><i>An innovative transmission mechanism applicable to variable speed wind turbines</i> G. S. Hwang (1), J. C. Lin (2), D. M. Tsay (2) J. H. Kuang (2), T.L. Chern(3) (1) Department of Computer Science and Information Engineering Nanhua University. Taiwan (2) Department of Mechanical & Electro-Mechanical Engineering. National Sun Yat-Sen University. Taiwan (3) Department of Electrical Engineering. National Sun Yat-Sen University.Taiwan</p>
389	<p><i>Distributed Voltage Control Strategies in a LV Distribution Network</i> R. D'hulst , E. Peeters VITO. Mol. Belgium</p>
390	<p><i>Performance Evaluation of Microgrid Management System by using a Hareware-In-Loop-Simulation Method</i> JinHong Jeon, JongYul Kim, SeulKi Kim New and Renewable Energy Research Center Korea Electrotechnology Research Institute. Korea</p>
394	<p><i>Analysis of unstable phenomenon in TCSC by experiment and simulation</i> Junya Matsuki , Hiroki Muramatsu University of Fukui. Japan</p>
397	<p><i>Voltage Control for a Loop Distribution System with Renewable Energy Sources</i> Y. Hanai (1), Y. Hayashi (2), J. Matsuki (1) (1) School of Electrical and Electronics Engineering. University of Fukui. Japan (2) Department of Electrical Engineering and Bioscience. Waseda University. Tokyo. Japan</p>

398	<i>CUSUM based Fault Detection of Stator Winding Short Circuits in Doubly-Fed Induction Generator based Wind Energy Conversion Systems</i> Jawwad Zafar, Johan Gyselinck Department of Electrical Engineering. Université Libre de Bruxelles (ULB) Belgium
400	<i>Evaluation of Loss Coefficient for Stand Alone Radiator</i> G.Pillutla (1), R. Mishra (1), S.M.Barrans (1), J.Barrans (2) (1) University of Huddersfield, Queensgate, Huddersfield. United Kingdom (2) Heights – UK Limited, Halifax.United kingdom
401	<i>Fuzzy Logic Application of Steady-state Harmonic Distortion Limits for the Time-Varying Harmonics</i> J.H. Han, G. Jang School of Electrical Engineering. Korea University. Seoul. Korea
404	<i>The effect of inrush transients on PV inverters grid impedance measurement based on inter-harmonic injection</i> V. Čuk (1), S. Bhattacharyya (1), J.F.G. Cobben (1), W.L. Kling (1), R.B. Timens (1), F.B.J. Leferink (2) (1) Department of Electrical Engineering, Eindhoven University of Technology. The Netherland (2) Department of Electrical Engineering, University of Twente. The Netherlands
406	<i>New Issues on Electromagnetic Biocompatibility</i> Mircea Ion Buzdugan(1), Horia Bălan(1), Dan Doru Micu, Dorin Mureşan(2) (1) Department of Electrical Engineering, Technical University Cluj-Napoca. România (2) Emmergency County Hospital from Cluj-Napoca. România
410	<i>Evaluating Switching Overvoltage of a Wind Farm using Monte Carlo Technique & Fully Digital Parallel Simulators</i> Jean Belanger, Philippe Venne, Jean- Nicolas Paquin Opal-RT Technologies Inc. Montreal, Quebec. Canada
412	<i>New input circuits used for parameters determination of circuit breaker voltage and current paths</i> A. Lisowiec, A. Nowakowski The Research Centre for IT Systems and Hardware Applications Tele & Radio Research Institute. Warsaw. Poland
414	<i>Powering for Long Term Monitoring in the Enclosed Areas</i> A. Boura, M. Husak Department of Microelectronics, Faculty of Electrical Engineering Czech Technical University of Prague. Czech Republic
415	<i>Creation a Stability Index for Micro Grids</i> I. Vokony, A. Dán Dr. Department of Electric Power Engineering.Group of Power Systems and Environment. Faculty of Engineering, Budapest University of Technology and Economics. Hungary
416	<i>The effect of Fault Ride-Through requirements on voltage dips and post-fault voltage recovery in a Dutch Distribution Network</i> P. Karaliolios (1), E.J. Coster (1,2), J.G. Slootweg (1,3), W.L. Kling (1)

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418	<p><i>A Comparative Study on Variable-Speed Operations of a Wind Generation System using Vector Control</i></p> <p>A.J. Mahdi, W.H. Tang, L. Jiang, Q.H. Wu</p> <p>Department of Electrical Engineering and Electronics</p> <p>The University of Liverpool. United Kingdom</p>
419	<p><i>Improvement of a MPPT Algorithm for PV Systems and Its Experimental Validation</i></p> <p>A.J. Mahdi, W.H. Tang and Q.H. Wu</p> <p>Department of Electrical Engineering and Electronics</p> <p>The University of Liverpool. United Kingdom</p>
421	<p><i>Analysis of incentive systems for photovoltaic power plants in six countries of the European Union</i></p> <p>M. Pasetti (1), P. Iora (1), P. Chiesa (2) C. Invernizzi (1) A. Salogni (1)</p> <p>(1) Department of Mechanical and Industrial Engineering</p> <p>Università degli Studi di Brescia. Italy</p> <p>(2) Department of Energetics. Politecnico di Milano. Italy</p>
423	<p><i>E-Diagnostics of the Switchgear Equipment Using IEC 61850</i></p> <p>Zdzisław Kołodziejczyk (1), Andrzej K. Wach (2)</p> <p>(1) Research Centre for IT Systems and Hardware Applications</p> <p>(2) Research Centre for Quality. Tele & Radio Research Institute Warsaw. Poland</p>
425	<p><i>Stochastic performances estimate of a universal and flexible power management system for the future European electricity network</i></p> <p>Micaela Caserza Magro, Stefano Savio</p> <p>Department of Electrical Engineering – University of Genova. Italy</p>
426	<p><i>Maximum power injection acceptance in a residential area</i></p> <p>C. Debruyne (1,2), J. Desmet (1,2), J. Vanalme (1,2), B. Verhelst (1,2), G. Vanalme (1,2), L. Vandeveldel (2)</p> <p>(1) HOWEST, Department PIH Kortrijk. Belgium</p> <p>(2) Ghent University, Department EESA. Belgium</p>
428	<p><i>A Dynamic Model of an Absorption Chiller for Air Conditioning</i></p> <p>S. Bittanti (1), A. De Marco (2), M. Giannatempo (3), V. Prandoni (4)</p> <p>(1) Dipartimento di Elettronica e Informazione. Politecnico di Milano. Italy</p> <p>(2) Process Engineer</p> <p>(3) Politecnico di Milano. Italy</p> <p>(4) ENEA Ricerca Sistema Elettrico (ERSE), Milano. Italy</p>
429	<p><i>2008 Norwegian Quality of Supply Survey. State of Art and Reported Needs</i></p> <p>Kjell Sand</p> <p>Energy System Department. SINTEF Energy Research. Trondheim. Norway</p> <p>Department of Electric Power Engineering. The Norwegian University of Technology and Science</p>
430	<p><i>Operational properties of a photovoltaic system with three single phase inverters</i></p> <p>S. Seme, G. Stumberger, J. Voršič</p> <p>University of Maribor. Faculty of Electrical Engineering and Computer Science. Slovenia</p>

432	<i>A biomass powered Ringbom-Stirling engine for developing countries: a low-budget solution for distributed electricity generation</i> S. Parmigiani, C. Invernizzi, A. Mazzù, V. Villa, A. Lezzi Department of Mechanical & Industrial Engineering Università degli Studi di Brescia. Italy
433	<i>Mesoscale modelling for wind resource evaluation purposes. A test case in complex terrain</i> A. Soares (1), P. Pinto (1), R. Pilão (2) (1) MEGAJOULE, SA. Portugal (2) Instituto Superior de Engenharia do Porto, ISEP. Portugal
436	<i>Study and Construction of a small scale hybrid R.E.S Power System of Wind Generator with Photovoltaic</i> Iakovos Yiakoumi, Athanasios Safacas Electromechanical Conversion Laboratory, Electrical and Computer Engineering. University of Patras. Greece
437	<i>Fully Automated MV Cable Monitoring and Measurement System for Multi-Sample Acquisition of Artificial Aging Parameters</i> Christian Freitag , Ivana Mladenovic, Christian Weindl Institute for Electrical Power Systems. University of Erlangen-Nuremberg. Germany
438	<i>Analysis of Event Sequences in Power Distribution Systems</i> O.A.Quiroga (1), J. Meléndez (1), S. Herraiz (1), J. Sánchez (2) (1) Institute of Informatics and Applications. Girona University. Spain (2) Endesa Distribución Eléctrica SLU. Spain
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440	<i>A control system for low-head diversion run-of-river small hydro plants with pressure conduits considering the tailwater level variation</i> J.I. Pérez-Díaz, J.I. Sarasúa, J. Fraile Ardanuy, J.R. Wilhelmi Department of Hydraulic and Energy Engineering E.T.S. Ingenieros de Caminos, Canales y Puertos. Technical University of Madrid (UPM). Spain
441	<i>Power Quality Measurement Capabilities of “Smart” Energy Meters</i> Tarjei Solvang, Luís Aleixo, Helge Seljeseth SINTEF. Energy Research. Norway
443	<i>Novel AC Side P&O Maximum Power transfer control for Grid Connected Photovoltaic Systems</i> M. Hanif, M. Basu , K. Gaughan Department of Electrical Engineering Systems. Dublin Institute of Technology. Ireland
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456	<i>Performance analysis of a PEM fuel cell</i> J.I. San Martín (1), I. Zamora (2), J.J. San Martín (1) V. Aperribay (1), P. Eguía (2) Department of Electrical Engineering. University of the Basque Country (1) Escuela Universitaria de Ingeniería Técnica Industrial de Eibar Department of Electrical Engineering.University of The Basque Country. Spain (2) Escuela Técnica Superior de Ingeniería de Bilbao. Department of Electrical Engineering.University of The Basque Country. Spain
458	<i>Microalgae Zero Energy Farm for Bio fuel Production in Galicia</i> Á. López Agüera , M. Vázquez García, V.Gándara Villadóniga, Iago Rodríguez Cabo Sustentable Energetic Applications Group. Department of Particle Physics & Galician Institute of High Energy Physics. University of Santiago of Compostela. Spain
460	<i>Geothermal application on an artificial lake powered using photovoltaic energy</i> Gándara Villadóniga, V., López Agüera A., Vázquez García, M., Rodríguez Cabo, I. Sustentable Energetic Applications Group. Department of Particle Physics & Galician Institute of High Energy Physics. University of Santiago of Compostela. Spain
461	<i>Optimal reactive power compensation using synchronous generators</i> Constantin Ghită, Aurelian Crăciunescu, Valentin Năvrănescu, Ioan Dragos Deaconu, Aurel – Ionuț Chirilă, Ion-Daniel Ilina Electrical Machines and Drives Department Electrical Engineering Faculty, Universitatea Politehnica Bucuresti. Romania
463	<i>Quality of Pellets from Olive Grove Residual Biomass</i> A. García Maraver(1), A. F. Ramos Ridao(1), D.P. Ruiz(2), M. Zamorano(1) (1) Department of Civil Engineering (2) Department of Applied Physics University of Granada. E.T.S Ingenieros de Caminos. Canales y Puertos. Spain
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483	<i>Selected Problems of Optimization of a Switched Reluctance Motor for an Electric Vehicle using Analytical Calculations</i> Michal Majchrowicz, Wieslaw Jazdzynski Elec. Eng., Automatics, Comp. Sc. and Electronics Dept., AGH University of Science and Technology. Cracow. Poland
484	<i>Optimal location of a biomass power plant in the province of Granada analyzed by multicriteria evaluation using appropriate Geographic Information System according to the Analytic Hierarchy Process</i> M. A. Herrera Seara, F. Aznar Dols, M. Zamorano , E. Alameda Hernández Department of Civil Engineering. School of Civil Engineering University of Granada. Spain
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496	<i>Voltage and Current Sensor for State Estimation in Distribution Network with Generation</i> C. Gouveia, H. Leite, I. Ferreira Department of Electrical Engineering. FEUP. Porto University. Portugal
497	<i>Statistical study of the influence of the data sampling interval on the estimation of wind turbine energy</i> Dhaker Abbes(1), André Martinez (1), Gérard Champenois (2), Jean Paul Gaubert (2) (1) EIGSI. La Rochelle Cedex . France (2) LAII- ESIP Poitiers Cedex France
499	<i>History of the amorphous silicon on crystalline silicon heterojunction solar cell</i> H. C. Neitzert (1), W.R. Fahrner (2) (1) Department of Electrical Engineering. DIIIIE. Salerno University. Italy (2) Department of Electrical Engineering. Hagen University. Germany

500	<i>Multi-criteria decision methods applied to the assessment of photovoltaic technologies</i> J. Miguel Sánchez Lozano, M. Socorro García Cascales, Nieves Espinosa Martínez, Antonio Urbina Departamento de Electrónica, Tecnología de Computadoras y Proyectos. Universidad de Politécnica de Cartagena. Murcia. Spain
502	<i>Analysis of the Impact of Distributed Generation in the Location of Faults in Power Distribution Systems</i> J. Faig(1), J. Melendez(1), S. Herraiz(1), J. Sánchez(2) (1) Institut d'Informàtica i Aplicacions (IliA). University of Girona. Spain (2) ENDESA Distribución. Barcelona. Spain
503	<i>Voltage Disturbances and Inrush Current of DC Power Supplies</i> Adam. J. Collin , Saša Ž. Djokić Institute for Energy Systems.The University of Edinburgh. United Kingdom
505	<i>Power Quality in Grid connected Renewable Energy Systems: Role of Custom Power Devices</i> Shafiuzzaman Khan Khadem, Michael Conlon Electric Power Research Group.School of Electrical Engineering Systems, Dublin Institute of Technology. Ireland
506	<i>Finite element analysis of an eddy currents heater for wind or water kinetic energy conversion into heat</i> O. Nebi, V. Fireșteanu EPM_NM Laboratory. Politehnica University of Bucharest. România
507	<i>Simulation of Integration of Distributed Generation into Power System Control</i> Dániel Divényi, Dr. András Dán Power System and Environment Group, Department of Electric Power Engineering. Budapest University of Technology and Economics.Hungary
509	<i>Development of an Installation to Reduce the Temperature Photovoltaic Modules and Improve Efficiency</i> R. Mazon Hernandez, J.R. Garcia Cascales, F. Vera Garcia, A. Sanchez Kaiser, B. Zamora Parra Thermal and Fluid Engineering Department, Technical University of Cartagena. Murcia. Spain
510	<i>Design and Fabrication of Piezoresistive Strain-Gauges for Harsh Environment Applications</i> P. Kulha, A. Boura, M. Husak Department of Microelectronics. Czech Technical University. Prague. Czech Republic
511	<i>New solar angles and their corresponding tracking systems efficiency</i> M. Vătăsescu, I. Vișa, D. Diaconescu, I. Hermenean, N. Creangă, D. Tohoneyanu Department of Product Design for Sustainable Development Transilvania University of Brasov. România
520	<i>Technical feasibility study for a solar energy system at Amsterdam Airport Schiphol (AAS)</i> P.N.J.W. Janssen (1,2), J.M.A. Myrzik (1) ,W.L. Kling (1), L. Reinders (2) (1) Department of Electrical Engineering Technical University Eindhoven. The Netherlands (2) Schiphol Group .Amsterdam Airport Schiphol. The Netherlands

522	<p>Results of an experimental study of a solar cooling system in Jaén using single effect lithium bromide absorption chiller</p> <p>A. Gómez Moreno (1), P.J. Casanova Peláez (2), F.A. Díaz Garrido (1), J.M. Palomar Carnicero (1) R. López García (1), F. Cruz Peragón (1)</p> <p>(1) Department of Mechanics and Mining Engineering. E.P.S. of Jaén University. Spain</p> <p>(2) Department of Electronic Engineering. E.P.S. of Jaén University.Spain</p>
523	<p>Response fitting in low-cost radiation sensors</p> <p>A. Gómez Moreno (1), P.J. Casanova Peláez (2), F.A. Díaz Garrido (1), J.M. Palomar Carnicero (1) R. López García (1), F. Cruz Peragón (1)</p> <p>(1) Department of Mechanics and Mining Engineering. E.P.S. of Jaén University. Spain</p> <p>(2) Department of Electronic Engineering. E.P.S. of Jaén University.Spain</p>
525	<p>Simulation of a solar cooling system.</p> <p>A. Gómez Moreno, J.M. Palomar Carnicero, F. Cruz Peragón</p> <p>Department of Mechanics and Mining Engineering. E.P.S. of Jaén. Spain</p>
528	<p>Polymer Based Piezoelectric Energy Microgenerator</p> <p>V. Janicek, M. Husak</p> <p>Department od Microelectronics, FEE CTU, Prague. Czech Republic</p>
529	<p>Influence of electrical phenomena on the drive train of wind power plants</p> <p>D. Turschner (1), R. Hesse (2), B. Musasa (1)</p> <p>(1) Institute of Electrical Power Engineering - Clausthal University of Technology. Germany</p> <p>(2) IEHW Ingenieurbüro Elektrotechnik Wernigerode. Germany</p>
530	<p>Feasibility study of establishing a PV power plant to generate electricity in Saudi Arabia from technical, geographical and economical viewpoints</p> <p>E. Al-Ammar (1,2), A. Al-Aotabi (3)</p> <p>(1) Sustainable Energy Technology Innovation Program (SETIP)</p> <p>(2) Department of Electrical Engineering. King Saud University Riyadh Saudi Arabia</p> <p>(3) Saudi Electricity Company Riyadh. Saudi Arabia</p>
533	<p>Simulation of Photovoltaic Generators and Comparison of two common Maximun Power Point Trackers</p> <p>Abdallah Zegaoui (1,2), Pierre Petit (1,3), Jean Paul Sawicki (1,3), Jean Pierre Charles (1), Michel Aillerie (1), M. Della Krachai (4) A.O.Belarbi (4)</p> <p>(1) LMOPS.University Paul Verlaine of Metz and Supélec. France.</p> <p>(2) University Hassiba Ben Bouali. Algeria</p> <p>(3) LMOPS, University Paul Verlaine of Metz and Supélec, IUT of Thionville Yutz. France</p> <p>(4) University of Technological Sciences of Oran. Algeria</p>
535	<p>Off-grid PV system to supply a rural scholl on DC network</p> <p>Freitas, A. A. (1), Daher, S. (1), Antunes, F.(1), Ximenes, S (1), Cruz, C (1) Sá Jr, E.(2), Silva, F. S. (3)</p> <p>(1) Electric Engineering Department. Universidade Federal do Ceará Fortaleza/CE. Brasil</p> <p>(2) IFCE – Instituto Federal de Educação, Ciência e Tecnologia do Ceará. Brasil</p> <p>(3) IFPI – Instituto Federal de Educação, Ciência e Tecnologia do Piauí. Brasil</p>

536	<i>A Computational Tool for Simulation an Design of Multilevel Inverters</i> A. Samuel Jó de Mesquita, B. Fernando Luiz Marcelo Antunes , C. Sérgio Daher, C. Marins, Oliveira Jr, D. Federal University of Ceará. Electrical Engineering Department. Brasil
538	<i>Comparison of different solutions for blocking diode applications in a photovoltaic panel under varying ambient conditions</i> H.C. Neitzert (1), A. Astone (1,2) (1) Department of Electrical Engineering. DIIIIE, Salerno University. Italy (2) Telefon Italia Mobile (TIM). Trieste. Italy
541	<i>Gasification of Cake of Coconut Macaúba, of Firewood of Eucalyptus and Coal Plant Fruit for Dehydration</i> Santos Filho, Jaime dos (1); Silva, Jadir Nogueira da (2); Souza, Durval de Almeida (1,3) ; Grisi, Edson Fraga (3); Costa, Carlos André da (2) (1) Instituto Federal da Bahia. Brasil (2) Universidade Federal de Viçosa. (3) University of Zaragoza. Department Engineering Electric. Spain
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547	<i>Towards Low-Cost Manufacturing of Organic Solar Cells: Multi Criteria Assessment of Fabrication Technologies</i> Nieves Espinosa, Rafael García Valverde, M. Socorro García Cascales, Antonio Urbina Departamento de Electrónica, Tecnología de Computadores y Proyectos. Universidad Politécnica de Cartagena. Murcia. Spain
549	<i>Data Driven Model for a Fuel Cell stack development in a complex Multi-source Hybrid Renewable Energy System</i> G. Napoli, M. Ferraro, G. Brunaccini, G. Dispenza, V. Antonucci CNR-ITAE, Consiglio Nazionale delle Ricerche - Istituto di Tecnologie Avanzate per l'Energia "Nicola Giordano". Messina. Italy
551	<i>Interconnection of a Photovoltaic Generator (PVG) to a Main Supply: A Practical Study</i> Maamar Taleb University of Bahrain. Department of Electrical and Electronics Engineering. Bahrain
555	<i>Investigation of Power Quality in Health Care Facility</i> Rusdy Hartungi, Liben Jiang School of Built and Natural Environment. University of Central Lancashire. United Kingdom

559	<p><i>Short-Term Hydro Scheduling considering Risk Aversion in a MINLP Approach</i> J.P.S. Catalão (1), H.M.I. Pousinho (1), V.M.F. Mendes (2) (1) Department of Electromechanical Engineering University of Beira Interior. Covilhã. Portugal (2) Department of Electrical Engineering and Automation. Instituto Superior de Engenharia de Lisboa. Portugal</p>
560	<p><i>Early Detection of Voltage Instability in Distribution System utilizing Phasor Measurement Units</i> A. Noha H. El-Amary, B. S. El Safty Department of Electrical and Computer Control Engineering. College of Engineering. Arab Academy for Science and Maritime Transport (AASTMT). Egypt</p>
563	<p><i>Renewable energy plants: environmental compatibility and external costs assessment at global, regional and local scale</i> E. Brizio (1), G. Genon (2), F. Becchis (3), D. Russolillo(3) (1) Environmental Protection Agency of Piedmont. Cuneo. Italy (2) Department DITAG, Politecnico di Torino. Italy (3) Fondazione per l'Ambiente "T. Fenoglio". Politecnico di Torino and Università del Piemonte Orientale. Italy</p>
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565	<p><i>Comparative Study of Two Cogeneration Systems based on Energy Recovery of Fumes from a Casting Process</i> M. Fernandez (1), Carlos J Renedo (1), J. García (2), S. Pérez (1), I. Fernández (1), M. Mañana (1) (1) Department of Electrical and Energy Engineering of the University of Cantabria. Spain (2) NISSAN MOTOR IBERICA, S.A. Cantabria. Spain</p>
569	<p><i>Effects of Time Delays on the Behavior of a Centralized Control System for Providing System Ancillary Services in an Active Distribution Network</i> R. Angelino(1), A. Bracale(2), G. Carpinelli(1), M. Mangoni(1), D. Proto(1) (1) Department of Electrical Engineering. University of Napoli Federico III. Italy (2) Department for Technologies. University Parthenope of Napoli. Italy</p>
570	<p><i>Dynamic Behaviour of an Hybrid Wind – Fuel Cell Generation System: Active and Reactive Power Control</i> J.J. Ugartemendia (1), X. Ostolaza (2), , I. Zubia (1), A. Olano (1) (1) Department of Electrical Engineering of the University of The Basque Country. Spain (2) Department of Systems Engineering & Control of The University of the Basque Country. Spain</p>

572	<p><i>Power Limitation at High Wind Speeds for a Variable Speed Fixed Pitch Wind Turbine Using Closed-Loop Scalar Control</i> N.Rosmin , S.J.Watson , M.Tompson Centre of Renewable Energy System Technology (CREST) Department of Electronics and Electrical Engineering. Loughborough University. United Kingdom</p>
575	<p><i>The role of the dc-bus in voltage sags experienced by three-phase adjustable-speed drives</i> Mañana, M, Muñiz, L.M, Ortiz, A, Aranda R, Arroyo A, Delgado F. Department of Electrical Engineering. E.T.S.I.I.T. University of Cantabria. Spain</p>
580	<p><i>Energy Efficiency in Data Processing Centers</i> Carlos Redondo Gil Castille and León Technological Center for Supercomputing (FCSC) Edificio CRAI-TIC. León. Spain Electrical Engineering & Systems Engineering and Automatic Control Department. Faculty of Industrial and Computer Engineering. University of León. Spain</p>
583	<p><i>Power Quality aspects of Smart Grids</i> Math Bollen (1,2), Jin Zhong (3), Francisc Zavoda (4), Jan Meyer (5), Alex McEachern (6), Felipe Córcoles López (1) STRI AB.Sweden (2) Luleå University of Technology . Skellefteå, Sweden (3) University of Hong Kong (4) IREQ. Québec.Canada (5) Technische Universität Dresden. Germany (6) Power Stands Labs. San Francisco. USA (7) Politechnical University of Catalonia. Spain</p>
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589	<p><i>Integration of Renewable Generation into the Portuguese Power System: The Impact of Different Hydrological Regimes</i> Sérgio Faias (1), Jorge Sousa (1), Rui Castro (2) (1) Instituto Superior de Engenharia de Lisboa, DEEA/ISEL. Portugal (2) Instituto Superior Técnico / Technical University of Lisbon, IST/TUL Portugal</p>
590	<p><i>Decentralised Energy Management System to Virtual Power Plants</i> J.A. Barbosa, R.P.S. Leão, C.F.P. Lima ,M.C. O. Rego Department of Electrical Engineering. Federal University of Ceará. Brazil</p>
591	<p><i>Three Phase Grid Connected Photovoltaic System with Active and Reactive Power Control Using “Instantaneous Reactive Power Theory”</i> G. Adamidis,G. Tsengenes, K. Kelesidis Department of Electrical Engineering and Computer Engineering. Democritus University of Thrace.Greece</p>
594	<p><i>A study on the improvement of portable fuel cell fan</i></p>

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596	<i>Contribution to the evaluation of the illuminated solar cells parameters</i> K. Bouzidi (1), M. Chegaar (1), M. Aillerie (2), J. P. Charles (2) (1) L.O.C, Physics Department, Ferhat Abbas University.Sétif, Algeria (2) LMOPS, Université Paul Verlaine Metz & Supelec. France
597	<i>Optimal Design of Trigeneration and District Energy in the Presence of Energy Storage</i> S. Bruno, S. Lamonaca, M. La Scala, U. Stecchi Dipartimento di Elettrotecnica ed Elettronica. Politecnico di Bari. Italy
598	<i>Design of a Microcontroller Based Automated Pyranometer</i> M. Laghrouche A.Attaf, R. Ziani, S, Ameer Mouloud Mammeri Universit./Department of Electronics. Tizi-Ouzou. Algeria
599	<i>Photovoltaic system behaviour with different loads</i> Campayo Martín, J.J. (1), Ramos Hernanz, J.A. (1), Zamora Belver, I. (1) Larrañaga Lesaka, J. (2), Zulueta Guerrero, E. (3), Motrico Gogeaskoetxea, J. (1) (1)Department of Electrical Engineering. University of The Basque Country. Spain (2) Department of Management and Production Engineering University of The Basque Country. Spain (3) Department of Systems Engineering and Automatic. University of The Basque Country. Spain
601	<i>Energy storage systems for wind power application</i> Raúl Sarrias (1) , Luis M. Fernández (1), Carlos A. García(1), Francisco Jurado (2) (1) Department of Electrical Engineering. University of Cadiz.EPS Algeciras. Spain (2) Department of Electrical Engineering. University of Jaen. EPS Linares. Spain
603	<i>A review of linear advanced current control techniques for grid connected PV inverters</i> Javier Monreal, Ignacio Benítez, Laura Moreno , Andrés Lluna, Inma Díaz Department of Capital Goods and Automation. Instituto Tecnológico de la Energía (ITE). Valencia. Spain
604	<i>Biomass for energy production characteristics, amount an distribution in Latvia</i> Janis Kalnacs (1), Andis Lazdinsh (2) (1) State Research Institute "Institute of Physical Energetics", Riga. Latvia (2) Latvian State Forestry Research Institute "Silava" Riga. Latvia
607	<i>A New Solution for Maintenance Scheduling of Distributed Generations based on Monte-Carlo Simulation and Game Theory</i> M. Manbachi (1), A.H. Parsaeifard (1), M.R. Haghifam (2) (1) Department of Electrical Engineering. Islamic Azad University. Tehran.Iran (2) Department of Electrical Engineering.Tarbiat Modares University Tehran. Iran

608	<p><i>Optimization Analysis of Multiple Steam Turbines and Condensers in Paper Mill Power Plant</i> Jinsong Tao (1), Huanbin Liu (1), Jigeng Li (1), Yongjun Yin (1), Yanming Zhou (1) Jingjia Jia (2) (1) State Key Laboratory of Pulp and Paper Engineering, South China University of Technology, Tianhe. Guangzhou.China (2) Gold East Paper Jiangsu Dagang. ZhenJiang.China</p>
609	<p><i>Optimization of Direct Power Control of Three-Phase Active Rectifiers by using Multiple Switching Tables</i> J.G. Norriella, J.M. Cano, G.A. Orcajo, C.H. Rojas, J.F. Pedrayes, M.F. Cabanas, M.G. Melero University of Oviedo. Department of Electric Engineering. Gijón. Spain</p>
612	<p><i>Probabilistic energy storage sizing for reducing wind power forecast uncertainty</i> H. Bludszuweit (1), J.A. Domínguez (2) (1) Electrical Engineering Division. CIRCE Foundation. Spain (2) Department of Electrical Engineering. University of Zaragoza. Spain</p>
613	<p><i>Virtual Power System: Novel approach for Distributed Generation and Consumption Coordination</i> E. Cagno (1), F. Castelli Dezza (2), M. Delfanti (3), M. Merlo (3), A.Trianni(1) (1) Department of Management, Economics and Industrial Engineering. Politecnico di Milano. Italy (2) Department of Mechanical Engineering.Politecnico di Milano. Italy (3) Energy Department. Politecnico di Milano. Italy</p>
614	<p><i>Integrating Wind Energy into Weak Power Grid Using Fuzzy Controlled TSC Compensator</i> Mohamed A. El-Sayed Utilities Engineering. University of Trinidad and Tobago</p>
615	<p><i>Use of Energy Storage for Leveling Wind Generation – a Parametric Approach Concerning the Capacity of the Storage</i> Bálint Hartmann András Dán Department of Electric Power Engineering. Budapest University of Technology and Economics. Hungary</p>
616	<p><i>Optimal Placement and Sizing of DG for Loss Recuction, Voltage Profile Improvement and Voltage Sag Mitigation</i> S. M. Farashbashi-Astaneh (1,2), A. Dastfan (1) (1) Department of Electrical and Robotic Engineering Shahrood University of Technology. Iran (2) Khorasan Regional Electric Company. Mashad. Iran</p>
618	<p><i>Hybrid Power Systems Planning with Geographical Information System Models</i> P.J. Zorzano Santamaría, A. Falces de Andrés, L.A. Fernández Jiménez, E. García Garrido, E. Zorzano Alba, M. Mendoza Villena, P. Lara Santillán Department of Electrical Engineering. E.T.S.I.I., La Rioja University. Spain</p>
619	<p><i>Modelling of Photovoltaic Module.</i> Ramos Hernanz, J.A.(1), Campayo Martín, J.J. (1) Zamora Belver, I.(1), Larrañaga Lesaka, J.(2), Zulueta Guerrero, E.(3), Puelles Pérez, E.(1) (1) Department of Electrical Engineering (2) Department of Management and Production Engineering (3) Department of Systems Engineering and Automatic E.U.I., Vitoria-Gasteiz. University of The Basque Country. Spain</p>

620	<p>Identification of Photovoltaic Array Model Parameters. Modelling and Experimental Verification</p> <p>I. Houssamo (1), M. Sechilariu (1), F. Locment (1) G. Friedrich (2) (1) University of Technology of Compiègne. Avenues Team Research. France (2) LEC, EA 1006. Compiègne Cedex .France</p>
621	<p>Design of a PFC rectifier with fast start up response and low input current distortion</p> <p>Ahmadreza Amirahmadi(1), Ali Dastfan(1), Seyed Mohamad Reza Rafiei(2) (1) Department of Electrical & Robotics Engineering, Shahrood University of Technology. Iran (2) Department of Electrical Engineering, Politecnico di Torino. Turin, Italy</p>
622	<p>Experimental Measure and Analyses of the Self and Mutual Inductances in Two Different Switched Reluctance Machines</p> <p>Fleury, (1,2) A. (1,2), Silveira A. W. F. V. (3) Rissatti, M.F (1), Nadler, V.B.V.(1), Borges, L. S. (1), Pedroza, A.R. (1), Rocha, R. (1), Oliveira, J.I.(1) (1) Electrical Machines and Drives Laboratory. Pontifical Catholic University of Goias.Goiania. Brazil (2) Physics Laboratory. State University of Goias. Brazil (3) Electrical Drives Laboratory. Federal University of Uberlandia. Brazil</p>
625	<p>Grid manager design using Battery Energy Storage Systems in weak power systems with high penetration of wind energy</p> <p>A. Goikoetxea (1), J. A. Barrena (1), M. A. Rodríguez (2), G. Abad (1) (1) Faculty of Engineering, University of Mondragon. Spain (2) Ingeteam Transmission & Distribution, S.A., Protección y control de redes eléctricas. Basauri.Bizkaia.Spain</p>
626	<p>Optimization of Single-phase PWM Rectifier Performance by Using the Genetic Algorith</p> <p>F.Jafari, A.Dastfan Department of Electrical Engineering. Shahrood University of Technology. Iran</p>
627	<p>Capacity Markets</p> <p>T. Saraiva, C. Jesus,L. Ferreira Department of Electrical and Computers Engineering. Instituto Superior Tecnico, Lisbon Technical University. Portugal</p>
629	<p>An Improved Electronic Circuit for Tracing the I-V Characteristics of Photovoltaic Modules and Strings</p> <p>Vicente Leite(1), Faustino Chenlo(2) (1) Polytechnic Institute of Bragança, School of Technology and Management. Bragança. Portugal (2) CIEMAT, Research Centre for Energy, Environment and Technology Madrid. Spain</p>
631	<p>Renewable Energy for Desalinization Using Reverse Osmosis</p> <p>J. Salazar, F. Tadeo, C. Prada Department of Systems Engineering and Automatic Control University of Valladolid. Spain</p>
632	<p>Defects in poly-Silicon and amorphous Silicon solar cells</p> <p>G. Acciani, O. Falcone, S. Vergura Dipartimento di Elettrotecnica ed Elettronica. Politecnico di Bari. Italy</p>
633	<p>Analysis of the thermal heating of poly-Si and a-Si photovoltaic cell by means of</p>

	<p>Fem G. Acciani, O. Falcone, S. Vergura Dipartimento di Elettrotecnica ed Elettronica. Politecnico di Bari. Italy</p>
634	<p><i>Thermographic Análisis of Photovoltaic Panels</i> G. Acciani, G.B. Simione, S. Vergura Dipartimento di elettrotecnica ed elettronica. Politecnico di Bari. Italy</p>
635	<p><i>Labview-Matlab Integration for Analyzing Energy Data of PV Panels</i> S. Vergura, E. Natangelo Dipartimento di Elettrotecnica ed Elettronica. Politecnico di Bari. Italy</p>
637	<p><i>Photovoltaic Systems Coupled to Solar Heaters of Water</i> Eliseu Burda, Roberto Cesar Betini Academic Department of Electrotechnique. Federal Technological University of Paraná. Brasil</p>
638	<p><i>Self-Powered Passive Adaptive Control of Pitch Angle and Betz-Shaped Wind Tunnel</i> S.C. Li School of Engineering. University of Warwick. United Kingdom</p>
640	<p><i>Renewable Marine Energies in Galicia: Potential and Monitoring Tools</i> Primitivo B. González (1), Santiago Martín (1), Ana Álvarez (1), Cristina Anido (2) (1) UDC Department of Naval Construction. A Coruña University. Ferrol. Spain (1,2) UDC Marine Innovation Group. E.U.P. A Coruña University. Ferrol. Spain</p>
642	<p><i>The Oldest Newsprint Paper Mill Redesign and Rebuild for Energy-Saving and Water-Reducing in China</i> Peng Jiang (1,2), Huan-Bin Liu (1) (1) State Key Laboratory of Pulp and Paper Engineering. South China University of Technology. Guangzhou. China (2) Guangzhou Paper Co. China</p>
644	<p><i>Rewiew of Local and Remote Techniques for Islanding Detection in Distributed Generators</i> D. Velasco (1), C.L. Trujillo (1,2), G. Garcerá (1), E. Figueres (1), O. Carranza (3) (1) Department of Electronic Engineering. Universidad Politécnica de Valencia. Spain (2) Department of Electronic Engineering. Universidad Distrital Francisco José de Caldas. Bogotá. Colombia (3) Escuela Superior de Cómputo. Instituto Politécnica Nacional. Mexico</p>
645	<p><i>Analysis of Active Islanding Methods for Single Phase Inverters</i> C.L. Trujillo (1,2), D. Velasco (1), G. Garcerá (1), E. Figueres (1), O. Carranza (3) (1) Department of Electronic Engineering. Universidad Politécnica de Valencia. Spain (2) Department of Electronic Engineering. Universidad Distrital Francisco José de Caldas. Bogotá. Colombia (3) Escuela Superior de Cómputo. Instituto Politécnica Nacional. Mexico</p>
647	<p><i>Metrological Confirmation of Total Harmonic Distortion of Voltage Meters Used in Brazilian Electrical Power System</i></p>

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648	<p><i>Study of Current Distribution Over a Power Cable Presenting Non-Uniform Geometry Using the Partial Differential Equations Approach</i> Ghazi Bousaleh (2), Fahd Hassoun (1), Rafic Hage Chehade (2) (1) France Telecom R&D. France (2) Lebanese University. IUT Saida. Lebanon</p>
649	<p><i>Integrated Design and Optimization of a Direct Drive Axial Flux Permanent Magnet Generator for a Tidal Turbine</i> O. Keysan (1), A.S.McDonald, M.Mueller (1) (1) School of Engineering. Institute for Energy Systems. University of Edinburg. United Kingdom</p>
651	<p><i>Analysis of the Radiation from a Complex Multi-Conductor Transmission Line</i> Fahd Hassoun (1), Ghazi Bousaleh (2), R. Hage Chehade (2) (1) France Telecom R&D. France (2) Lebanese University. IUT Saida. Lebanon</p>
652	<p><i>Ambient RF Energy Harvesting</i> D. Bouchouicha (1), F. Dupont (1), M. Latrach (3), L. Ventura (2) (1) STMicroelectronics. Tours. France (2) Laboratoire de Microélectronique de Puissance-Université de Tours. France. (3) Groupe RF& Hyperfréquence- École Supérieure d'électronique de l'ouest (ESEO) Angers. France</p>
655	<p><i>STATCOM Model against SVC Control Model Performance Analyses Technique by MATLAB</i> Tariq Masood (1), R.K Aggarwal (1), S.A. Qureshi (2), R.A.J. Khan (3) (1) Department of Electronics and Electrical Engineering. University of Bath United Kingdom (2) Department of Electrical Engineering. University of Engineering and Technology. Lahore. Pakistan (3) Department of Electrical Engineering. Rachna College of Engineering and Technology. Gujranwala. Pakistan</p>
656	<p><i>STATCOM Control Reconfiguration Technique for Steady State and Dynamic Performance Optimization during Network Fault Conditions</i> Tariq Masood (1), R.K Aggarwal (1), S.A. Qureshi (2), R.A.J. Khan (3) (1) Department of Electronics and Electrical Engineering. University of Bath United Kingdom (2) Department of Electrical Engineering. University of Engineering and Technology. Lahore. Pakistan (3) Department of Electrical Engineering. Rachna College of Engineering and Technology. Gujranwala. Pakistan</p>
659	<p><i>Three-Phase to Two-Phase Matrix Converter with Reduced Switches</i> M.Rahideh, A.Dastf Department of Electrical and Robotic Engineering. Shahrood University of Technology. Iran</p>
661	<p><i>Distributed Generation Stability During Fault Conditions</i> S. El Safty, M. Abd El Geliel, C. M. Ammar Department of Electrical Power & Control Engineering. Arab Academy for Science and</p>

	Technology and Maritime Transport.Egypt
662	<i>A Modular Architecture for Energy Efficient Wireless Sensor Networks Nodes</i> José Catela (1), Rui Rocha (1), Moisés Piedade (2) (1) Instituto de Telecomunicações. Instituto Superior Técnico. Portugal (2) Instituto de Engenharia de Sistemas e Computadores. Lisboa .Portugal
664	<i>Planning biomass energy production in a farming area</i> G. Fiorese (1,2), E. Cozzolino (3), G. Guariso (1), G. Paris (2) (1) Department of Electronics and Information. Politecnico di Milano. Italy (2) LEAP Laboratorio Energia & Ambiente Piacenza. Italy (3) CRPV Centro Ricerche Produzioni Vegetali. Cesena. Italy
665	<i>Increased Penetration of Renewable Energy Using Demand Side Management: Immersion Heater Analysis</i> P.Finn (1), C.Fitzpatrick (2), L.Relihan (3) (1) Department of Electrical & Computer Engineering. University of Limerick. Ireland (2) Department of Physics. University of Limerick. Ireland (3) ResourceKraft Ltd. Limerick. Ireland
666	<i>Cost Benefit Analysis to Select Clean Energy Solutions in Dairy Farm milk Collection post in Azores</i> Ana Rodrigues (1), Tomaz Dentinho (1), C. Silva (2), E. Azevedo (3) (1) Gabinete de Gestão e Conservação da Natureza. University of Azores. Departamento das Ciências Agrárias. Portugal (2) Instituto Superior Técnico. Technical University of Lisbon. Portugal (3) Centro de Estudos do Clima, Metereologia e Mudanças Globais. University of Azores. Portugal
668	<i>Fault Location and Compensation of the Harmonic Content of the Residual Fault Current during Single-Phase to Ground Faults in Compensated Networks</i> András.M.Dán, David Raisz Department of Electric Power Engineering. Budapest University of Technology and Economics. Hungary
669	<i>The Economic Crisis and the Urban Electric Power Curve Demand</i> P. Lara Santillán, P. Zorzano Santamaría, M. Mendoza Villena,E. Zorzano Alba, E. García Garrido, L.A. Fernández Jiménez, A. Falces de Andrés Department of Electrical Engineering.E.P.S.I.I. La Rioja University. Spain
670	<i>A New Energetics Scenario with Renewable Energy</i> Melchor Gómez (1), Miguel Ángel Cámara (1), Emilio Jiménez (2), Eduardo Martínez Cámara (3) (1) Departamento de Ingeniería Eléctrica. E.U.de Ingenieros de Vitoria Universidad del País Vasco. Spain (2) Departamento de Ingeniería Eléctrica (3) Departamento de Ingeniería Mecánica. Escuela Técnica Superior de Ingeniería Industrial. Universidad de La Rioja. Spain
671	<i>Two-Dimensional Model of Wind Flow on Buildings to Optimize the Implementation of Mini Wind Turbines in Urban Spaces</i> J.C.Sáenz Díaz Muro (1), E.Jiménez Macías (1), J.M.Blanco Barrero (1), M.Pérez de la Parte (2), J.Blanco Fernández (2)

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673	<i>SHERPEC-Hybrid System of Renewable Energies for Production of Electricity and Climatization</i> Iolanda Sousa(1), José Pereira(1), Hernâni Alcobia(1), Paulo Pereirinha(2,3) (1) Net Plan. Telecomunicações e Energia, S.A.Lisboa. Portugal (2) IPC-ISEC, Polytechnic Institute of Coimbra. Portugal (3) INESC-Coimbra. Institute for Systems and Computers Engineering at Coimbra. Portugal
675	<i>Wind Powered Switched Reluctance Generator for Rural Properties and Small Communities</i> Fleury, A (1,2), Andrade D.A (3), Silveira A.W.F.V (3), Ribeiro,P.H.F (1), Melo, F.S.L.F (1), Migliorini,L.A.G (1), Dias, D.N (1), Oliveira, J.I (1) (1) Electrical Machines and Drives Laboratory. Pontifical Catholic University of Goias. Brasil (2) Physics Laboratoty. State University of Goias. Brasil (3) Electrical Drives Laboratory Federal University of Uberlandia. Brasil
676	<i>Is n-type multicrystalline silicon the best candidate for short-term high-efficiency lower-cost solar cells?</i> João Ferreira (1), Olivier Palais (1,2), Marcel Pasquinelli (1,2), Damien Barakel (1,2) (1) Aix-Marseille University, IM2NP (2) CNRS, IM2NP (UMR 6242) (3) Faculté des Sciences et Techniques. Marseille Cedex, France
677	<i>Summer Energy Saving in Indoor Enviromements Using a New Free Cooling System</i> C.Isetti (1), E.Nannei (2), B. Orlandini (2) (1) Department of Architectural Design and Constructionl University of Genoa. Italy (2) Department of Production Engineering, Thermo-Energetic and Mathematical Models. University of Genoa. Italy
679	<i>A Dynamic Model of a Photovoltaic Generator Based on Experimental Data</i> Maria Carmela Di Piazza, Antonella Ragusa, Massimiliano Luna, Gianpaolo Vitale Consiglio Nazionale Delle Ricerche. Instituto di Studi sui Sistemi Intelligenti per L'Automazione (ISSIA-CNR). Palermo. Italy
680	<i>Statistical Processing of Wind Speed Data for Energy Forecast and Planning</i> Annalisa Di Piazza, Maria Carmela Di Piazza, Antonella Ragusa, Gianpaolo Vitale Consiglio Nazionale Delle Ricerche. Instituto di Studi sui Sistemi Intelligenti per L'Automazione (ISSIA-CNR). Palermo. Italy
681	<i>Experimental Application of Leakage Flux to the Detection of Insulation Faults on Disc-Type Winding Transformers</i> M.F.Cabanas, M.G.Melero, C.H. Rojas, G.A. Orcajo, J.M. Cano, F. Pedrayes González, J.G. Norniella, S. Díaz Rozada University of Oviedo. Electrical Engineering Department.Gijón. Spain
682	<i>Performance Prediction for a Centrifugal Pump Working in Direct and Reverse Mode Using Computational Fluid Dynamics</i>

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683	<i>Solar Festival-Renewable Energy Awareness for Microproduction and Building Integration</i> Iolanda Sousa (1), Hernâni Alcobia (1), Paulo Pereirinha (2,3) (1) Net Plan. Telecomunicações e Energia. Lisboa. Portugal (2) IPC-ISEC, Polytechnic Institute of Coimbra. Portugal (3) INESC-Coimbra. Institute for Systems and Computers Engineering at Coimbra. Portugal
685	<i>Comparison of MPPT Strategies for Solar Modules</i> M. Calavia (1), J.M. Perié (1), J.F.Sanz (2), J. Sallán (2) (1) CIRCE Institute. Zaragoza.Spain (2) CIRCE Institute. University of Zaragoza. Electrical Engineering Department. Spain
686	<i>Characterization of wind energy potential and availability at Beira Interior (Portugal)</i> Francisco Serra Correia, Luís Carrilho Gonçalves, Luís Carvalho Pires Electromechanical Engineering Department . Engineering Faculty University of Beira Interior. Covilhã. Portugal
690	<i>An Experimental Study on the Effects of Oxygen in Bio-Gasification- Part 1</i> Deshai Botheju, Gamunu Samarakoon, Chen Chen, Rune Bakke Faculty of Technology. Telemark University College. Norway
692	<i>Autotransformer Monitoring System</i> Ryszard Kowalik, Pawel Kopański, Krzysztof Glik Warsaw University of Technology. Institute of Electric Power Engineering. Poland
693	<i>Microprocessor Controller WAGO, as the Controller of the Active Group of Radiators in HV Autotransformer</i> Pawel Kopański, Ryszard Kowalik, Krzysztof Glik Warsaw University of Technology. Institute of Electric Power Engineering. Poland
695	<i>A Control Strategy for Combined Series-Parallel Pumps</i> José M. Bueno Barrachina, César S. Cañas Peñuelas, S. Catalán Izquierdo Instituto de Tecnología Eléctrica. Universidad Politécnica de Valencia. Spain
696	<i>Improved Control Strategy for DFIG in Wind Energy Applications</i> Ali M. Eltamaly, A.I. Alolah, M.H. Abdel Rahman Electrical Engineering Department. King Saud University. Riyadh. Saudi Arabia
698	<i>Comparative Study of Speed Estimators Applied to Wind Turbine with Harmonic Distortion in the Currents and the</i>

	<p>Voltages Oscar Carranza (1), Gabriel Garcera (2), E. Figueres (2), C.L. Trujillo (3), D. Velasco (2) (1) Escuela Superior de Cómputo. Instituto Politécnico Nacional. Mexico (2) Grupo de Sistemas Electrónicos Industriales del Departamento de Ingeniería Electrónica. University Politechnique of Valencia. Spain (3) Departamento de Ingeniería Electrónica. Universidad Distrital Francisco José de Caldas, Bogotá, Colombia.</p>
699	<p><i>Determination of the Earth Fault Factor in Power Systems For Different Earthed Neutrals</i> M.R.A. Calado, S.J.P.S. Mariano Department of Electromechanical Engineering. University of Beira Interior. Covilhã. Portugal</p>
700	<p><i>Profit-Based Optimal Operation of a Head-Dependent Hydroelectric Power Station in the Bilateral Market</i> S.J.P.S. Mariano (1), M.R.A. Calado (1), L.A.F.M. Ferreira (2) (1) Department of Electromechanical Engineering. University of Beira Interior. Covilhã. Portugal (2) Department of Electrical Engineering and Computers. Instituto Superior Técnico. Technical University of Lisboa. Portugal</p>
701	<p><i>Electrical Car. Implantations in the Infrastructures, Usage Installations and Electrical Regulation</i> A. Carvalho de Andrade, A. António Gomes Department of Electrical Engineering. Polytechnic Institute of Porto. Portugal</p>
702	<p><i>Structural and Optical Study of Titanium Dioxide thin Films Elaborated by APCVD for Application in Silicon Solar Cells</i> Dalila Hocine (1,2), M. Pasquinelli (1), L. Escoubas (1), P. Torchio (1), A. Moreau (1), MS. Belkaid (2) (1) Aix-Marseille University. Institute Matériaux Microélectronique Nanosciences de Provenze. France (2) LATAGE. Faculty of Electrical and Computer Engineering. Mouloud Mammeri University. Tizi-Ouzou. Algeria</p>
703	<p><i>Software Tool for the Analysis of Electromagnetic Disturbances Propagation</i> M. Chindris (1), A. Cziker (1), A. Mirón(1), A. Sumper (2,3), A. Sudrià Andreu(2,3), R. Villafafila Robles (2) (1) Department of Power Systems. Electrical Engineering Faculty. Technical University of Cluj-Napoca. România (2) Universidad Politécnica de Cataluña.CITCEA-UPC). Departamento de Ingeniería Eléctrica.Barcelona. Spain (3) Catalonia Institute for Energy Research (IREC). Barcelona. Spain</p>
704	<p><i>Deterministic and Probabilistic Assessment of the Impact of the Electrical Vehicles on the Power Grid</i> Eduardo Valseira Naranjo (1), Andreas Sumper (1,2), Pau Lloret Gallego (1) Roberto Villafafila Robles (1), Antoni Sudrià Andreu (1,2) (1)Electrical Engineering Department. Universidad Politécnica de Cataluña. CITCEA. Barcelona. Spain (2) IREC Catalonia Institute for Energy Research. Spain</p>
706	<p><i>AC/AC Boost Converter with Active Power Factor Correction Using One Cycle Control Technique (OCC)</i> Christian Villada, Johnny Posada</p>

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707	<i>Single-Phase Single-Stage AC-DC Converter with Reduced Line-Current Harmonics</i> Nader Anani,John Wiliamson, Prasad V.S. Ponnappalli Department of Engineering and Technology. Manchester Metropolitan University. United Kingdom
708	<i>Biomass Utilisation in Energy Process</i> E. Mateos(1), J.González (2) (1) Department of Chemical and Environmental Engineering. E.U.I.T.I. University of The Basque Country. Bilbao. Spain (2) Department of English and German Philology. University of The Basque Country.Spain
710	<i>Comparing Different Sinks of Heat Rejection of an Existing Solar Powered Absorption Cooling System</i> A. Monné, Carlos (1),B. Palacín,F (2), S. Alonso (1) (1) Department of Mechanical Engineering. GITSE.Aragón Institute of Engineering Research. University of Zaragoza. Spain (2) Bioclimatic Architecture Department National Renewable Energy Centre (CENER). Navarra. Spain
711	<i>Series Active Compensation of Current Harmonics Generated by High Power Rectifiers</i> Diego Figueroa (1), Luis Morán (1), Geza Joos (2), Juan Dixon (3) (1) Department of Electrical Engineering. University of Concepción. Chile (2) Department of Electrical Engineering. McGill University. Canada (3) Department of Electrical Engineering.Pontificia Universidad Católica De Santiago. Chile
712	<i>Modeling of full Photovoltaic Systems Applied to Advanced Control Strategies</i> Carlos Andrés Ramos-Paja(1), Efraín Pérez(1), Daniel González Montoya(1), Carlos E. Carrejo(2), Adan Simon-Muela(4), Corinne Alonso(2,3) (1)Escuela de Mecatrónica, Universidad Nacional de Colombia - sede Medellín, Colombia (2) LAAS-CNRS, 7 Avenue du Colonel Roche, F-31077, Toulouse, France (3) Université de Toulouse; UPS, INSA, INP, ISAE, LAAS, F-31077, Toulouse, France (4) Electronic Engineering Department, Universidad de Sevilla, Spain
718	<i>Technical Features and Italian Regulations for Small Hydropower Plants: a Case Study in Southern Italy</i> G.De Martino, A. Ranucci Department of Hydraulic, Geotechnical and Environmental Engineering. University of Naples "Federico II". Italy
721	<i>A Design Methodology for the Prediction and Measurement of Squeeze Film Stiffness and Damping Characteristics in Hibrid Journal Bearings under Pulsatile Load Conditions</i> D. Kinnear (1), R. Mishra (1), C. Padget t(2), W. Weston(1) (1) Department of Engineering and Technology. Scholl of Computing and Engineering. University of Huddersfield. United Kingdom (2) Padgett Racing Motorcycles. United Kingdom
723	<i>Review of Present UK Marine Energy Policy and Developments</i> M.R. Willis, A. Cook, A.J. Williams, I. Masters, T.N. Croft

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726	<i>Microcontroller-Based Moving Message Display Powered by Photovoltaic Energy</i> S.M. Sadek, N.M. Ahamed, M.B. Zahran, Abd El-Shafy A. Nafeh Electronics Research Institute, PV Department. Egypt
727	<i>Proposed Technique for Optimally Sizing a Pv/Diesel Hybrid Systems</i> Abd El-Shafy A. Nafeh Electronics Research Institute. Cairo. Egypt
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