Final Technical Program

Updated at Oct. 01th, 2013

Sunday – October 27th 2013 – 8:30 – 12:45

Sunday 27/Oct/2013
Tutorial Session T1 (8:30 – 12:45)
Room: Esmeralda
Integration of renewable generation into smart grids
Lecturer: Prof. Antonio Gomez-Exposito, Ph.D.

Sunday 27/Oct/2013
Tutorial Session T2 (8:30 – 12:45)
Room: Topazio
Introduction to LED drivers
Lecturer: Prof. Marcos Alonso, Ph.D.

Sunday – October 27th 2013 – 14:00 – 18:15

Sunday 27/Oct/2013
Tutorial Session T3 (14:00 – 18:15)
Room: Esmeralda
Performance enhancement in diesel-hybrid autonomous power systems (mini-grids)
Lecturer: Prof. Luiz Antonio Correa Lopes, Ph.D.

Sunday 27/Oct/2013
Tutorial Session T4 (14:00 – 18:15)
Room: Topazio
Power Electronics for distributed power systems: state of the art and future trends
Lecturer: Prof. Jose Antenor Pomilio, Ph.D.

Sunday 27/Oct/2013
Tutorial Session T5 (14:00 – 18:15)
Room: Turmalina
The modular multilevel converter and other multilevel topologies
Lecturer: Prof. Josep Pou, Ph.D.
Prof. Jordi Zaragoza, Ph.D.

Sunday – October 27th 2013 – 19:30 – 21:00

Sunday 27/Oct/2013
Plenary Session P1 (19:30 – 21:00)
Room: Rubi
Power Electronics for a sustainable society
Lecturer: Prof. Praveen Jain, Ph.D.

Monday – October 28th 2013 – 8:30 – 10:00

Monday 28/Oct/2013
Plenary Session P2 (8:30 – 10:00)
Room: Rubi
Smartgrids: Stakes, Reality and Perspectives
Lecturer: Prof. Nouredine Hadjsaid, Ph.D.
Eng. Oswaldo Kaschny, Ph.D.

Monday – October 28th 2013 – 10:20 – 12:25

Monday 28/Oct/2013
Technical Session S11 (10:20 – 12:25)
Room: Rubi
Power Converters Topologies and Design I: AC/DC Converters

iREP:2362
ISOLATED SINGLE-PHASE HIGH POWER FACTOR RECTIFIER USING ZETA CONVERTER OPERATING IN DCM WITH NON-DISSIPATIVE SNUBBER
Alan Dorneles Callegaro – Federal University of Santa Catarina – Brazil
Denizar Cruz Martins – Federal University of Santa Catarina – Brazil
Ivo Barbi – Federal University of Santa Catarina – Brazil

iREP:2172
DEVELOPMENT OF A NEW SINGLE PHASE HIGH POWER FACTOR RECTIFIER WITH ZVS COMMUTATION AND HIGH FREQUENCY ISOLATION
Daniel Bernardo de Alvarenga – Federal Technological University of Paraná – Brazil
Martin Breus Meier – Federal Technological University of Paraná – Brazil
Roger Gules – Federal Technological University of Paraná – Brazil
Alceu Badin – Federal Technological University of Paraná – Brazil
Eduardo Felix Ribeiro Romaneli – Federal Technological University of Paraná – Brazil
Amauri Amorin Assef – Federal Technological University of Paraná – Brazil

iREP:2331
AC-DC CUK CONVERTER WITH PFC BASED ON THREE-STATE SWITCHING CELL
Juliano de Oliveira Pacheco – Federal University of Ceará – Brazil
Ronny Glauber Almeida Cacau – Federal University of Ceará – Brazil
Francisco José Barbosa de Brito Júnior – Federal University of Ceará – Brazil
René Pastor Torrico-Bascopé – Federal University of Ceará – Brazil

iREP:2242
A THREE-PHASE POWER-FACTOR CORRECTION SCHEME USING AN AUTOTRANSFORMER AND TWO SINGLE-PHASE BUCK RECTIFIERS
Geovane Duarte Pinheiro – Federal Technological University of Paraná – Brazil
Alceu André Badin – Federal Technological University of Paraná – Brazil
Roger Gules – Federal Technological University of Paraná – Brazil
Eduardo Ribeiro Felix Romaneli – Federal Technological University of Paraná – Brazil

iREP:2263
FAULT-TOLERANT DC-AC CONVERTER WITH SPLIT-WOUND COUPLED INDUCTORS
Euzeli Cipriano dos Santos Júnior – Purdue School of Engineering and Technology – USA
Sally Sajadian – Purdue School of Engineering and Technology – USA

Monday – October 28th 2013 – 8:30 – 10:00

Monday 28/Oct/2013
Plenary Session P2 (8:30 – 10:00)
Room: Rubi
Smartgrids: Stakes, Reality and Perspectives
Lecturer: Prof. Nouredine Hadjsaid, Ph.D.
Eng. Oswaldo Kaschny, Ph.D.

Monday – October 28th 2013 – 10:20 – 12:25

Monday 28/Oct/2013
Technical Session S31 (10:20 – 12:25)
Room: Esmeralda
Modeling, Simulation and Control in Power Electronics I: Control in Power Electronics

iREP:2235
DIGITAL CONTROL/MODULATION PLATFORM FOR A MODULAR MULTILEVEL CONVERTER SYSTEM
Jackson Lago – Federal University of Santa Catarina – Brazil
Gean Jacques Maia de Sousa – Federal University of Santa Catarina – Brazil
Marcelo Lobo Heldwein – Federal University of Santa Catarina – Brazil

iREP:2310
MODELING AND CONTROL OF THE MODULAR MULTILEVEL CASCADE CONVERTER BASED ON CHOPPER-CELLS
Bruno Emmanuel de Oliveira Barros Luna – Federal University of Campina Grande – Brazil
Cursino Brandão Jacobina – Federal University of Campina Grande – Brazil
Alexandre Cunha Oliveira – Federal University of Campina Grande – Brazil

iREP:2342
A SIMPLE CONTROL STRATEGY TO INCREASE THE TOTAL EFFICIENCY OF MULTI-CONVERTER SYSTEMS
Fabricio Hoff Dupont – Federal University of Santa Maria – Brazil
Jordi Zaragoza – Technical University of Catalonia – Spain
Cassiano Rech – Federal University of Santa Maria – Brazil
José Renes Pinheiro – Federal University of Santa Maria – Brazil

iREP:2378
FPGA–BASED UNIFIED ONE-CYCLE CONTROLLER FOR SINGLE PHASE BOOST PFC
Aluízio Alves de Melo Bento – Federal University of Rio Grande do Norte – Brazil
Antonio Wallace Antunes Soares – Federal University of Rio Grande do Norte – Brazil

iREP:2375
POWER HARDWARE-IN-THE-LOOP (PHIL) BASED ON FPGA
Italo Roger Ferreira Moreno Pinheiro da Silva – Federal University of Campina Grande – Brazil
Camila Seibel Gehrke – Federal University of Campina Grande – Brazil
Alexandre Cunha Oliveira – Federal University of Campina Grande – Brazil
Antonio Marcus Nogueira Lima – Federal University of Campina Grande – Brazil

Monday – October 28th 2013 – 8:30 – 10:00

Monday 28/Oct/2013
Plenary Session P2 (8:30 – 10:00)
Room: Rubi
Smartgrids: Stakes, Reality and Perspectives
Lecturer: Prof. Nouredine Hadjsaid, Ph.D.
Eng. Oswaldo Kaschny, Ph.D.

Monday – October 28th 2013 – 10:20 – 12:25

Monday 28/Oct/2013
Technical Session S61 (10:20 – 12:25)
Room: Topázio
Renewable and Alternative Energy Systems I: Wind Power Applications

iREP:2352
MPPT FOR MAGNUS WIND TURBINES BASED ON CYLINDERS ROTATION SPEED
Leonardo Candido Corrêa – Federal University of Santa Maria – Brazil
João Manoel Lenz Vianna da Silva – Federal University of Santa Maria – Brazil
Cláudia Garrastazu Ribeiro – Federal University of Santa Maria – Brazil
Jordan Gustavo Trapp – Federal University of Santa Maria – Brazil
Felix Alberto Farret – Federal University of Santa Maria – Brazil

iREP:2196
POWER CONVERTER FOR VERTICAL WIND ENERGY CONVERSION SYSTEM
Bruno Ricardo de Almeida – Federal University of Ceará – Brazil
Demercil de Souza Oliveira Jr – Federal University of Ceará – Brazil

iREP:2146
CONTROL OF A WIND TURBINE TRAPEZOIDAL EMF PMSG UNDER NETWORK ASYMMETRICAL FAULTS
Josmar Ivanqui – Federal University of Santa Catarina – Brazil
Hélio Voltolini – Federal Technological University of Paraná – Brazil
Renato Carlson – Federal Technological University of Paraná – Brazil

iREP:2270
WIND TURBINE TORQUE-SPEED FEATURE EMULATOR USINGA DC MOTOR
Filipe Emanuel Vieira Taveiros – Federal University of Rio Grande do Norte – Brazil
Luciano Sales Barros – Federal University of Rio Grande do Norte – Brazil
Flávio Bezerra Costa – Federal University of Rio Grande do Norte – Brazil

iREP:2312
FAULT DETECTION FOR VARIABLE-SPEED WIND TURBINES USING VIBRATIONS AND ELECTRICAL MEASUREMENTS
José María Bossio – National University of Río Cuarto – Argentina
Guillermo Rubén Bossio – National University of Río Cuarto – Argentina
Cristian Hernán de Angelo – National University of Río Cuarto – Argentina

Monday – October 28th 2013 – 8:30 – 10:00

Monday 28/Oct/2013
Plenary Session P2 (8:30 – 10:00)
Room: Rubi
Smartgrids: Stakes, Reality and Perspectives
Lecturer: Prof. Nouredine Hadjsaid, Ph.D.
Eng. Oswaldo Kaschny, Ph.D.

Monday – October 28th 2013 – 10:20 – 12:25

Monday 28/Oct/2013
Technical Session S91 (10:20 – 12:25)
Room: Turmalina
Education and Special Topics I: Education in Power Electronics

iREP:2338
DEVELOPMENT OF A VARIABLE SPEED WIND TURBINE EMULATOR FOR RESEARCH AND TRAINING
Germano Henz – Federal University of Santa Maria – Brazil
Gustavo Koch – Federal University of Santa Maria – Brazil
Claiton Moro Franchi – Federal University of Santa Maria – Brazil
Humberto Pinheiro – Federal University of Santa Maria – Brazil

iREP:2394
DEVELOPMENT OF AN URBAN ELECTRIC VEHICLE AS MULTIDISCIPLINARY WORK IN ELECTRICAL ENGINEERING
Luciano Bonatto – Rio Grande do Sul North-Western Regional University – Brazil
Jonatas Kinas – Rio Grande do Sul North-Western Regional University – Brazil
Mauricio Campos – Rio Grande do Sul North-Western Regional University – Brazil
Paulo Sérgio Sausen – Rio Grande do Sul North-Western Regional University – Brazil
Manuel Martin Perez Reimbold – Rio Grande do Sul North-Western Regional University – Brazil
Airam Tereza Romcy Zago Sausen – Rio Grande do Sul North-Western Regional University – Brazil

iREP:2141
ANDROID BASED KIT TO GENERATE PWM SIGNALS FOR DC-DC CONVERTERS CONTROL
Laio Oriel Seman – University of Blumenau – Brazil
Cleiton Gili – University of Blumenau – Brazil
Luiz Carlos Gili – University of Blumenau – Brazil
Adriano Péres – University of Blumenau – Brazil
Romeu Hausmann – University of Blumenau – Brazil

iREP:2423
"LABORATORY": A PROJECT-BASED LEARNING EXAMPLE ON POWER ELECTRONICS
Jorge Garcia – University of Oviedo – Spain
Pablo García – University of Oviedo – Spain
Pablo Arboleya – University of Oviedo – Spain
Juan Manuel Guerrero – University of Oviedo – Spain

iREP:2181
DIDACTIC KIT FOR PRATICAL TESTING OF THE BASIC SWITCHED MODE POWER SUPPLY TOPOLOGIES
Isabelli Parente Viana – Federal Institute of Ceará – Brazil
Welton da Silva Lima – Federal Institute of Ceará – Brazil
Caio Araújo Aquino – Federal Institute of Ceará – Brazil
João Gabriel Ramalho Johannesson – Federal Institute of Ceará – Brazil
Cláudio Marques de Sá Medeiros – Federal Institute of Ceará – Brazil

Monday – October 28th 2013 – 14:00 – 16:05

Monday 28/Oct/2013
Technical Session S12 (14:00 – 16:05)
Room: Rubi
Power Converters Topologies and Design II: DC/DC Converters

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iREP:2236
DOUBLE QUADRATIC BUCK CONVERTER
Francieli Lima de Sá – Federal University of Santa Catarina – Brazil
Caio V. B. Eiterer – Federal University of Santa Catarina – Brazil
Domingo Ruiz Caballero – Pontifical Catholic University of Valparaíso – Chile
Samir A. Mussa – Federal University of Santa Catarina – Brazil

iREP:2239
QUADRATIC BOOST CONVERTER USING A SOFT SINGLE SWITCH
Leandro Sousa Vilefort – Federal University of Uberlandia – Brazil
Welker Gomes Silva – Federal University of Uberlandia – Brazil
Darizon Alves de Andrade – Federal University of Uberlandia – Brazil
Fábio Vicenzi Romualdo da Silva – Federal University of Uberlandia – Brazil
Luiz Carlos Gomes de Freitas – Federal University of Uberlandia – Brazil
Ernane Antônio Alves Coelho – Federal University of Uberlandia – Brazil
João Batista Vieira Júnior – Federal University of Uberlandia – Brazil

iREP:2299
HIGH STEP–UP INTEGRATED DC–DC CONVERTERS: METHODOLOGY OF SYNTHESIS AND ANALYSIS
Antonio Manuel S. S. Andrade – Federal University of Santa Maria – Brazil
Jacson R. Dreher – Federal Institute of Santa Catarina – Brazil
Mário Lúcio da Silva Martins – Federal University of Santa Maria – Brazil

iREP:2105
DC–DC NONISOLATED BOOST CONVERTER WITH HIGH VOLTAGE GAIN ADEQUATE FOR SPLIT-CAPACITOR INVERTER APPLICATIONS
George Cajazeiras Silveira – Federal University of Ceará – Brazil
Luiz Daniel Santos Bezerra – Federal University of Ceará – Brazil
René Pastor Torrico–Bascopé – Federal University of Ceará – Brazil
Fernando Lessa Tofoli –Universidade Federal de São João Del-Rei – Brazil

iREP:2132
COMPARISON OF QUADRATIC BOOST TOPOLOGIES OPERATING UNDER SLIDING-MODE CONTROL
Oswaldo Lopez-Santos – University of Toulouse – France
Luis Martinez-Salamero – University of Rovira i Virgili – Spain
Germain Garcia – University of Toulouse – France
Hugo Valderrama-Blavi – University of Rovira i Virgili – Spain
Tomas Sierra-Polanco – University of Ibagué – Colombia

Monday – October 28th 2013 – 14:00 – 16:05

Monday 28/Oct/2013
Technical Session S62 (14:00 – 16:05)
Room: Esmeralda
Renewable and Alternative Energy Systems II: PV Systems

iREP:2116
COMPARATIVE STUDY OF TOPOLOGIES FOR THREE-PHASE TRANSFORMERLESS PHOTOVOLTAIC SYSTEMS
Fabricio Bradaschia – Federal University of Pernambuco – Brazil
Marcelo Cabral Cavalcanti – Federal University of Pernambuco – Brazil
Pedro Ernesto Pereira Ferraz – Federal University of Pernambuco – Brazil
Francisco de Assis dos Santos Neves – Federal University of Pernambuco – Brazil
Carlos Menezes Diniz Neto – Federal University of Pernambuco – Brazil

iREP:2386
PHASE–CONTROLLED INVERTERS ASSOCIATED TO A MULTI–PULSE AUTOTRANSFORMER APPLIED TO PHOTOVOLTAIC COGENERATION
Lucas Lapolli Brighenti – Santa Catarina State University – Brazil
Luís G. Kremer – Santa Catarina State University – Brazil
Alessandro L. Batschauer – Santa Catarina State University – Brazil
Marcello Mezaroba – Santa Catarina State University – Brazil

iREP:2125
THREE-STATE THREE-PHASE Z-SOURCE INVERTER FOR TRANSFORMERLESS PHOTOVOLTAIC SYSTEMS
Marcelo Cabral Cavalcanti – Federal University of Pernambuco – Brazil
Milton Tavares Melo Neto – Federal University of Pernambuco – Brazil
Fabricio Bradaschia – Federal University of Pernambuco – Brazil
Leonardo Rodrigues Limongi – Federal University of Pernambuco – Brazil
Emilio Bueno – University of Alcala – Spain

iREP:2163
LEAKAGE CURRENT MINIMIZATION TECHNIQUES FOR SINGLE-PHASE TRANSFORMERLESS GRID-CONNECTED PV INVERTERS - AN OVERVIEW
Ricardo Souza Figueredo – University of São Paulo – Brazil
Kelly Caroline Mingorancia de Carvalho – University of São Paulo – Brazil
Naji Rajai Nasri Ama – University of São Paulo – Brazil
Lourenço Matakas Junior – University of São Paulo – Brazil

iREP:2115
TWO–STAGE CONVERTER WITH REDUCED LEAKAGE CURRENTS FOR TRANSFORMERLESS PHOTOVOLTAIC SYSTEMS
Pedro E. P. Ferraz – Federal University of Pernambuco – Brazil
Marcelo C. Cavalcanti – Federal University of Pernambuco – Brazil
Fabricio Bradaschia – Federal University of Pernambuco – Brazil
Gustavo M. S. Azevedo – Federal University of Pernambuco – Brazil
Francisco A. S. Neves – Federal University of Pernambuco – Brazil

Monday – October 28th 2013 – 14:00 – 16:05

Monday 28/Oct/2013
Technical Session S32 (14:00 – 16:05)
Room: Topázio
Modeling, Simulation and Control in Power Electronics II: Control in Power Electronics

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iREP:2372
NONLINEAR CONTROL OF A BIDIRECTIONAL DC–DC CONVERTER OPERATING WITH BOOST-TYPE CONSTANT-POWER LOADS
Vinicius Stramosk – Federal University of Santa Catarina – Brazil
Daniel Juan Pagano – Federal University of Santa Catarina – Brazil

iREP:2233
PERFORMANCE ENHANCEMENT OF SWITCHED AFFINE SYSTEMS BY SWITCHED QUADRATIC LYAPUNOV FUNCTIONS: APPLICATIONS IN DC-DCCONVERTERS
Victor Leonardo Yoshimura – Instituto Federal de Educação, Ciência e Tecnologia de Mato Grosso – Brazil
Edvaldo Assunção – Universidade Estadual Paulista – Brazil
Marcelo Carvalho Minhoto Teixeira – Paulista State University – Brazil
Edson Italo Mainardi Júnior – Instituto Federal de Educação, Ciência e Tecnologia Catarinense – Brazil

iREP:2210
PARALLELING OF DAB CONVERTER USING THE GYRATOR THEORY
Walbermark Marques dos Santos – Federal University of Santa Catarina – Brazil
Henrique Rocha e Mamede – Federal University of Santa Catarina – Brazil
Adriano Ruseler – Federal University of Santa Catarina – Brazil
Denizar Cruz Martins – Federal University of Santa Catarina – Brazil

iREP:2296
DIGITAL CONTROL SYSTEM FOR HIGH PRECISION POWER SUPPLIES OF THE NEW BRAZILIAN SYNCHROTRON SOURCE
Gabriel Oehlmeyer Brunheira – University of Campinas – Brazil
Jakson P. Bonaldo – University of Campinas – Brazil
João Nilton Henrique da Rosa – University of Campinas – Brazil
Cleber Rodrigues – University of Campinas – Brazil
José Antenor Pomílio – University of Campinas – Brazil

iREP:2211
CAPACITOR VOLTAGE BALANCING CONTROL OF MULTILEVEL DC-DC CONVERTER
Levy Ferreira Costa – Federal University of Santa Catarina – Brazil
Samir Ahmad Mussa – Federal University of Santa Catarina – Brazil
Ivo Barbi – Federal University of Santa Catarina – Brazil

Monday – October 28th 2013 – 14:00 – 16:05

Monday 28/Oct/2013
Technical Session S21(14:00 – 16:05)
Room: Turmalina
Electrical Machines and Drive Systems I: Induction Machines

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iREP:2093
A DIRECT TORQUE CONTROL STRATEGY BASED ON LOAD ANGLE FORINDUCTION MOTORS
Helio Gaziolla – Federal University of ABC – Brazil
Jose L. Azcue Puma – State University of Campinas – Brazil
Alfeu J. Sguarezi Filho – Federal University of ABC – Brazil
Ernesto Ruppert Filho – State University of Campinas – Brazil

iREP:2182
A NEW MODEL BASED CONTROL STRATEGY FOR ENERGY EFFICIENCY IMPROVEMENT OF INDUCTION MOTORS WITH VARIABLE LOAD
Jessé de Pelegrin – Federal University of Technology - Paraná – Brazil
César Rafael Claure Torrico – Federal University of Technology - Paraná – Brazil
Emerson Giovani Carati – Federal University of Technology - Paraná – Brazil

iREP:2420
ELECTRICAL DISTURBANCE COMPENSATION ALGORITHM APPLIED TO THREE-PHASE INDUCTION MOTORS
Leandro Yoshio Morita – Federal University of Rio Grande – Brazil
Eduarda Almeida – Federal University of Rio Grande – Brazil
Rodrigo Azzolin – Federal University of Rio Grande – Brazil
Rodrigo Vieira – Federal University of Pampa – Brazil
Cristiane Gastaldini – Federal University of Pampa – Brazil
Thiago Bernardes – Federal University of Santa Maria – Brazil
Hilton A. Gründling – Federal University of Santa Maria – Brazil

iREP:2315
FAULT TOLERANT HIGH PERFORMANCE DRIVE SYSTEM USING SIX-PHASE INDUCTION MACHINE
Gilson Rogério Batista – Federal University of Campina Grande – Brazil
Fabiano Salvadori – Federal University of Paraiba – Brazil
Cursino Brandão Jacobina – Federal University of Campina Grande – Brazil
Isaac Soares de Freitas – Federal University of Paraiba – Brazil

iREP:2178
DIGITALLY IMPLEMENTED NATURALLY SAMPLED SVM APPLIED IN SPEED SENSOR-LESS FIELD ORIENTED CONTROLLED INDUCTION MOTOR DRIVE
Péter Stumpf – Budapest University of Technology and Economics – Hungary
Rafael K. Járdán – Budapest University of Technology and Economics – Hungary
István Nagy – MTA-BME Control Engineering Research Group – Hungary

Monday – October 28th 2013 – 16:30 – 18:35

Monday 28/Oct/2013
Technical Session S71 (16:30 – 18:35)
Room: Rubi
Smart Grid and Utility applications I: Active Filters

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iREP:2339
CONSIDERATIONS ON THE MODELING AND CONTROL SCHEME OF GRID CONNECTED INVERTER WITH VOLTAGE SUPPORT CAPABILITY
Danilo Iglesias Brandão – Universidade Estadual de Campinas – Brazil
Fernando Pinhabel Marafão – Universidade Estadual Paulista – Brazil
Marcelo Godoy Simões – Colorado School of Mines – USA
José Antenor Pomilio – Universidade Estadual de Campinas – Brazil

iREP:2112
DIRECT VOLTAGE CONTROL IN GRIDS WITH INTERMITTENT SOURCES USING UPFC
S. L. Barcelos – Universidade Federal do Rio de Janeiro – Brazil
R. F. S. Dias – Universidade Federal do Rio de Janeiro – Brazil
E. H. Watanabe – Universidade Federal do Rio de Janeiro – Brazil

iREP:2200
A COMPARATIVE ANALYSIS BETWEEN THE PI AND FUZZY CONTROLLERS FOR CURRENT CONDITIONING USING A SHUNT ACTIVE POWER FILTER
Victor B. Malvezzi – Federal University of Technology - Paraná – Brazil
Sergio Augusto Oliveira da Silva – Federal University of Technology - Paraná – Brazil
Leonardo B. G. Campanhol – Federal University of Technology - Paraná – Brazil
Bruno A. Angélico – Federal University of Technology - Paraná – Brazil

iREP:2387
FLEXIBLE OPERATION OF GRID-TIED SINGLE-PHASE POWER CONVERTER
Jakson Paulo Bonaldo – University of Campinas – Brazil
Helmo Kelis Morales Paredes – Universidade Estadual Paulista – Brazil
José Antenor Pomilio – University of Campinas – Brazil

iREP:2191
INTEGRATED BIDIRECTIONAL SINGLE-PHASE VEHICLE-TO-GRID INTERFACE WITH ACTIVE POWER FILTER CAPABILITY
Márcio do Carmo Barbosa Poncilio Rodrigues – Federal University of Juiz de Fora – Brazil
Igor Souza – Federal University of Juiz de Fora – Brazil
André Augusto Ferreira – Federal University of Juiz de Fora – Brazil
Pedro Gomes Barbosa – Federal University of Juiz de Fora – Brazil
Henrique Antônio Carvalho Braga – Federal University of Juiz de Fora – Brazil

iREP:2343
DESIGN AND IMPLEMENTATION OF A MULTILEVEL ACTIVE POWER FILTER FOR MORE ELECTRIC AIRCRAFT VARIABLE FREQUENCY SYSTEMS
Joel Filipe Guerreiro – University of Campinas – Brazil
José Antenor Pomilio – University of Campinas – Brazil
Tiago Davi Curi Busarello – University of Campinas – Brazil

Monday – October 28th 2013 – 16:30 – 18:35

Monday 28/Oct/2013
Technical Session S63 (16:30 – 18:35)
Room: Esmeralda
Renewable and Alternative Energy Systems III: PV Systems

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iREP:2224
IMPACTS OF LOCAL CLIMATE CONDITIONS ON PHOTOVOLTAIC MODULE EFFICIENCY
Mauro Fernando Basquera Junior – Federal University of Santa Maria – Brazil
Renan Diego de Oliveira Reiter – Federal University of Santa Maria – Brazil
Fabrício Hoff Dupont – Federal University of Santa Maria – Brazil
Leandro Michels – Federal University of Santa Maria – Brazil

iREP:2419
DIFFERENT OPTIMUM DESIGNS INVESTIGATION OF DC/DC BOOST CONVERTER APPLIED TO THE PHOTOVOLTAIC SYSTEM
Fernando Beltrame – Federal Institute of Education - Science and Technology of Rio Grande do Sul – Brazil
Fabrício H. Dupont – Federal University of Santa Maria – Brazil
Hamiltom C. Sartori – Federal University of Santa Maria – Brazil
Leandro Roggia – Industrial Technical College of Santa Maria – Brazil
Everton C. Cancian – Federal University of Santa Maria – Brazil
José Renes Pinheiro – Federal University of Santa Maria – Brazil

iREP:2245
STUDY AND DESIGN OF A PHOTOVOLTAIC ARRAY SIMULATOR
Ricardo Lelis de Souza – Federal University of Minas Gerais – Brazil
Porfírio Cabaleiro Cortizo – Federal University of Minas Gerais – Brazil
Marcos Antônio Severo Mendes – Federal University of Minas Gerais – Brazil

iREP:2162
METHODOLOGY FOR PRODUCT DESIGN OF PHOTOVOLTAIC INVERTERS
Lucas Vizzotto Bellinaso – Federal University of Santa Maria – Brazil
Cassiano Rech – Federal University of Santa Maria – Brazil
Luciano Schuch – Federal University of Santa Maria – Brazil
Leandro Michels – Federal University of Santa Maria – Brazil

iREP:2118
THE NEW MPPT METHOD FOR PV SYSTEMS EMPLOYING INPUT CHARACTERISTIC IMPEDANCE
Jefferson William Zanotti – Federal University of Santa Catarina – Brazil
Walbermark Marques dos Santos – Federal University of Santa Catarina – Brazil
Denizar Cruz Martins – Federal University of Santa Catarina – Brazil

iREP:2111
LABORATORY PV GENERATOR FOR MPPT DYNAMIC RESPONSE TESTING
Simone Buso – University of Padova – Italy
Giorgio Spiazzi – University of Padova – Italy
Matteo Meneghini – University of Padova – Italy

Monday – October 28th 2013 – 16:30 – 18:35

Monday 28/Oct/2013
Technical Session S51 (16:30 – 18:35)
Room: Topázio
Industrial, Commercial and Residential Applications I: Power Electronics Applications

iREP:2389
DESIGN AND IMPLEMENTATION OF AN ELECTRONIC LOAD
Luís F. Guimarães – Universidade Tecnológica Federal do Paraná – Brazil
Luis G. Kawahara – Universidade Tecnológica Federal do Paraná – Brazil
Rafael C. Annunziato – Universidade Tecnológica Federal do Paraná – Brazil
Roger Gules – Universidade Tecnológica Federal do Paraná – Brazil

iREP:2355
ELECTRONICALLY ADJUSTABLE LOAD FOR TESTING THREE–PHASE AC SYSTEMS
Leandro Becker Kehler – Federal University of Santa Maria – Brazil
Leonardo Candido Corrêa – Federal University of Santa Maria – Brazil
Cláudia Garrastazu Ribeiro – Federal University of Santa Maria – Brazil
Jordan Gustavo Trapp – Federal University of Santa Maria – Brazil
João Manoel Lenz Vianna da Silva,Federal University of Santa Maria – Brazil
Felix Alberto Farret – Federal University of Santa Maria – Brazil

iREP:2248
ITERATIVE DESIGN METHOD OF WEAKLY COUPLED MAGNETIC ELEMENTS FOR INDUCTIVE POWER TRANSFER
Rodolfo Castanho Fernandes – Universidade de São Paulo – Brazil
Azauri Albano de Oliveira Júnior – Universidade de São Paulo – Brazil

iREP:2265
DC-DC-AC POWER CONVERTER FOR THREE-PHASE FOUR-WIRE WITH BIDIRECTIONAL CHARACTERISTIC
Mostafa Darabi – Indiana University - Purdue University Indianapolis – USA
Euzeli Cipriano dos Santos Júnior – Indiana University - Purdue University Indianapolis – USA

iREP:2285
HYBRID SYSTEM OF DISTRIBUTED POWER GENERATION AND STREET LIGHTING BASED ON LEDS: GRID CONNECTION
Maicol Flores de Melo – Federal University of Santa Maria – Brazil
Willian Vizzotto – Federal University of Santa Maria – Brazil
André L. Kirsten – Federal University of Santa Maria – Brazil
Marco Antonio Dalla Costa – Federal University of Santa Maria – Brazil
Jorge Garcia – University of Oviedo – Spain

iREP:2404
SHORT CIRCUIT FAULT DIAGNOSIS IN SWITCHES OF A SINGLE–PHASE FULL–BRIDGE INVERTER
André B. M. Oliveira – Federal Center of Technological Education of Minas Gerais – Brazil
Robson L. Moreno – Federal University of Itajubá – Brazil
Ênio Roberto Ribeiro – Federal University of Itajubá – Brazil

Monday – October 28th 2013 – 16:30 – 18:35

Monday 28/Oct/2013
Technical Session S22 (16:30 – 18:35)
Room: Turmalina
Electrical Machines and Drive Systems II: Permanent Magnet Machines

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iREP:2154
A METRIC FOR EVALUATION OF THE PERFORMANCE OF SALIENCY-TRACKING SELF-SENSING CONTROL OF PM MOTOR
Eisenhawer de Moura Fernandes – Federal University of Campina Grande – Brazil
Alexandre C. Oliveira – Federal University of Campina Grande – Brazil
Antonio M. N. Lima – Federal University of Campina Grande – Brazil
Cursino B. Jacobina – Federal University of Campina Grande – Brazil
Welflen R. N. Santos – Federal University of Piauí – Brazil
Robert D. Lorenz – University of Wisconsin-Madison – USA

iREP:2152
PERMANENT MAGNET SYNCHRONOUS MOTOR DRIVE IN VESSELS WITH ELECTRIC PROPULSION SYSTEM
Milton de Lima Pinheiro – Federal University of Rio de Janeiro – Brazil
Walter Issamu Suemitsu – Federal University of Rio de Janeiro – Brazil

iREP:2155
SELF–SENSING CONTROL OF PMSM MOTOR FOR WIDE-SPEED RANGE OPERATION
Eisenhawer de Moura Fernandes – Federal University of Campina Grande – Brazil
Alexandre C. Oliveira – Federal University of Campina Grande – Brazil
Antonio M. N. Lima – Federal University of Campina Grande – Brazil
Cursino B. Jacobina – Federal University of Campina Grande – Brazil
Welflen R. N. Santos – Federal University of Piauí – Brazil

iREP:2333
A COMPARATIVE EVALUATION OF SIGNAL INJECTION METHODS FOR PMSM SELF-SENSING CONTROL
Eisenhawer de Moura Fernandes – Federal University of Campina Grande – Brazil
Alexandre C. Oliveira – Federal University of Campina Grande – Brazil
Antonio M. N. Lima – Federal University of Campina Grande – Brazil
Cursino B. Jacobina – Federal University of Campina Grande – Brazil
Welflen R. N. Santos – Federal University of Piauí – Brazil

iREP:2113
ANFIS BASED MRAS SPEED ESTIMATOR FOR SENSORLESS CONTROL OF PMSM
Mohamed Hassan – Cairo University – Egypt
Osama Mahgoub – Cairo University – Egypt
Abdelatif El Shafei – Cairo University – Egypt

Monday – October 28th 2013 – 18:35 – 20:00

Monday 28/Oct/2013
RAP Session (18:35 – 20:00)
Room: Rubi
The Brazilian role in the scientific-technological-industrial area of renewable energies: a future perspective
Moderator: Prof. Humberto Pinheiro, Ph.D.
Speakers: Eng. Ildo Beth, (PHB Electronics)
Eng. Fabio Stacke Silva, Ph.D (ANEEL – Brazilian Electricity Regulatory Agency)

Tuesday – October 29th 2013 – 8:30 – 10:00

Tuesday 29/Oct/2013
Plenary Session P3 (8:30 – 10:00)
Room: Rubi
Modulation for Static Power Converters
Lecturer: Humberto Pinheiro

Tuesday – October 29th 2013 – 10:20 – 12:25

Tuesday 29/Oct/2013
Technical Session S13 (10:20 – 12:25)
Room: Rubi
Power Converters Topologies and Design III: Multilevel converters

iREP:2201
HYBRID THREE–PHASE MULTILEVEL INVERTER BASED ON NPC CASCADED TO HALF–BRIDGE CELLS
Gabriela Pereira da Silva – State University of Santa Catarina – Brazil
Fabricio Trentini – State University of Santa Catarina – Brazil
Vitor Telles Odaguiri – State University of Santa Catarina – Brazil
Marcos Vinicius Bressan – State University of Santa Catarina – Brazil
Marcelo Lobo Heldwein – Federal University of Santa Catarina – Brazil
Alessandro Luiz Batschauer – State University of Santa Catarina – Brazil

iREP:2321
A FIVE–LEVEL NPC BIDIRECTIONAL CONVERTER BASED ON MULTISTATE SWITCHING CELL OPERATING AS BOOST RECTIFIER
João Aberides Ferreira Neto – Federal University of Ceará – Brazil
Francisco J. Brito Júnior – Federal University of Ceará – Brazil
Davi R. Joca – Federal University of Ceará – Brazil
Marcos Antonio N. Nunes – Federal University of Ceará – Brazil
René Pastor Torrico–Bascopé – Federal University of Ceará – Brazil

iREP:2408
THREE–PHASE FIVE–LEVEL ACTIVE–NEUTRAL–POINT–CLAMPED CONVERTERS FOR MEDIUM VOLTAGE APPLICATIONS
Thiago Batista Soeiro – Federal University of Santa Catarina – Brazil
Roberto Carballo – National University of Rio Cuarto – Argentina
Joabel Moia – Federal University of Santa Catarina – Brazil
Guilhermo O. Garcia – National University of Rio Cuarto – Argentina
Marcelo L .Heldwein – Federal University of Santa Catarina – Brazil

iREP:2179
ASSOCIATING PWM AND BALANCING TECHNIQUES FOR PERFORMANCE IMPROVEMENT OF FLYING CAPACITOR INVERTER
Wesley Oliveira Maia – Pontifical Catholic University of Minas Gerais – Brazil
Zélia Myriam Assis Peixoto – Pontifical Catholic University of Minas Gerais – Brazil

iREP:2361
MODULAR MULTILEVEL CONVERTER CONTROL STRATEGY FOR FUTURE DC SUBSEA ELECTRIC TRANSMISSION AND DISTRIBUTION SYSTEMS
Gean Jacques Maia de Sousa – Federal University of Santa Catarina – Brazil
Marcelo Lobo Heldwein – Federal University of Santa Catarina – Brazil

Tuesday – October 29th 2013 – 8:30 – 10:00

Tuesday 29/Oct/2013
Plenary Session P3 (8:30 – 10:00)
Room: Rubi
Modulation for Static Power Converters
Lecturer: Humberto Pinheiro

Tuesday – October 29th 2013 – 10:20 – 12:25

Tuesday 29/Oct/2013
Technical Session S64 (10:20 – 12:25)
Room: Esmeralda
Renewable and Alternative Energy Systems IV: PV Systems

iREP:2247
A NEW HIGH GAIN NON-ISOLATED DC-DC BOOST CONVERTER FOR PHOTOVOLTAIC APPLICATION
João Bosco R. F. Cabral – Universidade do Estado de Santa Catarina– Brazil
Tiago Lemes da Silva – Universidade do Estado de Santa Catarina – Brazil
Sérgio Vidal Garcia Oliveira – Universidade do Estado de Santa Catarina – Brazil
Yales Rômulo de Novaes – Universidade do Estado de Santa Catarina – Brazil

iREP:2139
AN AUTONOMOUS PHOTOVOLTAIC SOLAR ENERGY GENERATION SYSTEM FOR TELEMETRY STATIONS
Julcemar Capellaro – Universidade Regional de Blumenau – Brazil
Romeu Hausmann – Universidade Regional de Blumenau – Brazil
Julio Cesar Dias – Universidade Regional de Blumenau – Brazil
Adriano Péres – Universidade Regional de Blumenau – Brazil
Sérgio Vidal Garcia Oliveira – Universidade Regional de Blumenau – Brazil

iREP:2246
SUPERVISORY CONTROL FOR STAND-ALONE PHOTOVOLTAIC SYSTEMS
Christoffer Daniel Schwertner – Federal University of Santa Maria – Brazil
Lucas Vizzotto Bellinaso – Federal University of Santa Maria – Brazil
Hélio Leães Hey – Federal University of Santa Maria – Brazil
Leandro Michels – Federal University of Santa Maria – Brazil

iREP:2327
DESIGN AND IMPLEMENTATION OF A 480W THREE-PHASE CONVERTER FOR PHOTOVOLTAIC REMOTE REGIONS WATER PUMPING SYSTEM
Flavio Palmiro – Federal University of Mato Grosso do Sul – Brazil
João Onofre Pereira Pinto – Federal University of Mato Grosso do Sul – Brazil
Lucio Henrique Pereira – Federal University of Mato Grosso do Sul – Brazil
Ruben Barros Godoy – Federal University of Mato Grosso do Sul – Brazil

iREP:2275
INPUT VOLTAGE REGULATION OF AN ISOLATED FULL-BRIDGE BOOST CONVERTER FED BY A PHOTOVOLTAIC DEVICE WITH THE STATE-SPACE FEEDBACK CONTROL METHOD
Leonardo Ruffeil de Oliveira – State University of Campinas – Brazil
Paulo Sergio Nascimento Filho – State University of Campinas – Brazil
Tarcio Andre dos Santos Barros – State University of Campinas – Brazil
Marcelo Gradella Villalva – State University of Campinas – Brazil
Ernesto Ruppert – State University of Campinas – Brazil

Tuesday – October 29th 2013 – 8:30 – 10:00

Tuesday 29/Oct/2013
Plenary Session P3 (8:30 – 10:00)
Room: Rubi
Modulation for Static Power Converters
Lecturer: Humberto Pinheiro

Tuesday – October 29th 2013 – 10:20 – 12:25

Tuesday 29/Oct/2013
Technical Session S81 (10:20 – 12:25)
Room: Topázio
Energy Efficiency, Power Quality and Electromagnetic Compatibility I: Power Quality

iREP:2351
STATCOM BASED ON MODIFIED SYNCHRONOUS REFERENCE FRAME
Robson Bauwelz Gonzatti – Universidade Federal de Itajubá – Brazil
Carlos Henrique da Silva – Universidade Federal de Itajubá – Brazil
Evandro M. Vaciloto – Universidade Federal de Itajubá – Brazil
Sílvia Costa Ferreira – Universidade Federal de Itajubá – Brazil
Luiz Eduardo Borges da Silva – Universidade Federal de Itajubá – Brazil
Germano Lambert–Torres – Universidade Federal de Itajubá – Brazil

iREP:2198
A SIMPLE CONTROL SCHEME TO A VOLTAGE REGULATOR BASED IN A CURRENT CONTROLLED STATCOM
Jean Carlo da Cunha – Santa Catarina State University – Brazil
Wendel de Oliveira Rossi – Santa Catarina State University – Brazil
Alessandro Luiz Batschauer – Santa Catarina State University – Brazil
Marcello Mezaroba – Santa Catarina State University – Brazil

iREP:2336
CONTROL STRATEGIES APPLIED TO AN HYBRID REACTIVE POWER COMPENSATOR TO SINGLE AND THREE PHASE SYSTEMS
Silvia Costa Ferreira – Federal University of Itajubá – Brazil
Robson Bauwelz Gonzati – Federal University of Itajubá – Brazil
Carlos Henrique da Silva – Federal University of Itajubá – Brazil
Luiz Eduardo Borges da Silva – Federal University of Itajubá – Brazil
Germano Lambert–Torres – Federal University of Itajubá – Brazil
Luiz Gonzaga Fernandez Silva – CPFL Energy – Brazil

iREP:2273
THREE–PHASE ACTIVE POWER FILTER BASED ON THE FOUR STATES COMMUTATION CELL DC-AC CONVERTER DESIGN AND IMPLEMENTATION
Daniel Cortez Flores – Federal University of Santa Catarina – Brazil
Boris Luis Corral Martinez – CIPEL Polytechnic Institute – Cuba
Ivo Barbi – Federal University of Santa Catarina – Brazil

iREP:2260
A SINGLE PHASE ACTIVE FILTER AS A HARMONIC COMPENSATOR
Jonathan Russi Mattar – University of Blumenau – Brazil
Jean Carlos Strutz – University of Blumenau – Brazil
Romeu Hausmann – University of Blumenau – Brazil
Sérgio Vidal Garcia Oliveira – University of Blumenau – Brazil
Adriano Péres – University of Blumenau – Brazil

Tuesday – October 29th 2013 – 8:30 – 10:00

Tuesday 29/Oct/2013
Plenary Session P3 (8:30 – 10:00)
Room: Rubi
Modulation for Static Power Converters
Lecturer: Humberto Pinheiro

Tuesday – October 29th 2013 – 10:20 – 12:25

Tuesday 29/Oct/2013
Technical Session S33 (10:20 – 12:25)
Room: Turmalina
Modeling, Simulation and Control in Power Electronics III: Advanced Control

iREP:2187
A LINEAR QUADRATIC CONTROL APPLIED TO BUCK CONVERTERS WITH H-INFINITY CONSTRAINTS
Luiz Antonio Maccari Junior – Federal University of Santa Maria – Brazil
Vinícius Foletto Montagner – Federal University of Santa Maria – Brazil
André Augusto Ferreira – Federal University of Juiz de Fora – Brazil

iREP:2416
FEEDBACK LINEARIZATION CONTROL WITH SLIDING MODE SPEED OBSERVER FOR THREE-PHASE INDUCTION MACHINES
Cristiane Cauduro Gastaldini – Pampa Federal University – Brazil
Rodrigo Padilha Vieira – Pampa Federal University – Brazil
Rodrigo Zelir Azzolin – Federal University of Rio Grande – Brazil
Hilton Abílio Grundling – Federal University of Santa Maria – Brazil

iREP:2128
DIGITAL REDESIGN LMI CONDITIONS FOR STATE FEEDBACK CONTROLLERS WITH AN APPLICATION FOR POWER ELECTRONICS
Luiz Antonio Maccari Junior – Federal University of Santa Maria – Brazil
Vinícius Foletto Montagner – Federal University of Santa Maria – Brazil
Ricardo Coração de Leão Fontoura de Oliveira – University of Campinas – Brazil

iREP:2106
FPGA BASED ROBUST CONTROLLER APPLIED TO A BOOST CONVERTER
João Teixeira de Carvalho Neto – Federal University of Rio Grande do Norte – Brazil
Andrés Ortiz Salazar – Federal University of Rio Grande do Norte – Brazil
Valentin Obac Roda – Federal University of Rio Grande do Norte – Brazil
José Alberto Nicolau de Oliveira – Federal University of Rio Grande do Norte – Brazil

iREP:2369
A LMI/MPC EMBEDDED CONTROLLER APPLIED TO A SWITCHED RELUCTANCE MACHINE
Rômulo Nunes de Carvalho Almeida – Federal University of Ceará – Brazil
Wilkley Bezerra Correia – Federal University of Ceará – Brazil
Wellington Assunção Silva – Federal University of Ceará – Brazil
Bismark Claure Torrico – Federal University of Ceará – Brazil
Laurinda Lúcia Nogueira dos Reis – Federal University of Ceará – Brazil
Vandilberto Pereira Pinto – Federal University of Ceará – Brazil

Tuesday – October 29th 2013 – 14:00 – 16:05

Tuesday 29/Oct/2013
Technical Session S34 (14:00 – 16:05)
Room: Rubi
Modeling, Simulation and Control in Power Electronics IV: Grid–Connected Converters

iREP:2280
NONLINEAR CONTROL OF A THREE-PHASE POWER CONVERTER WITH CONSTANT POWER LOAD IN A MICROGRID
Eduardo Lenz – Federal University of Santa Catarina – Brazil
Daniel J. Pagano – Federal University of Santa Catarina – Brazil

iREP:2129
ROBUST DISCRETE LINEAR QUADRATIC CONTROL APPLIED TO GRID–CONNECTED CONVERTERS WITH LCL FILTERS
Luiz Antonio Maccari Junior – Federal University of Santa Maria – Brazil
Claudio Luiz do Amaral Santini – Federal University of Rondônia – Brazil
Ricardo Coração de Leão Fontoura de Oliveira – University of Campinas – Brazil
Vinícius Foletto Montagner – Federal University of Santa Maria – Brazil

iREP:2305
COMPARISON AND CONSIDERATIONS IN THE IMPLEMENTATION OF DUAL LOOP SYNCHRONOUS AND STATIONARY CONTROLLERS FOR MICROGRIDS APPLICATIONS
Luis Claudio Gambôa Lopes – Centro Federal de Educação Tecnológica de Minas Gerais – Brazil
Edson Hirokazu Watanabe – Universidade Federal do Rio de Janeiro – Brazil

iREP:2306
SLIDING MODE OBSERVER FOR VOLTAGE SENSORLESS CURRENT CONTROL OF GRID-CONNECTED CONVERTERS
Rodrigo Gehrke Tonin – Federal University of Santa Maria – Brazil
Thiago Bernardes – Federal University of Santa Maria – Brazil
Jorge Rodrigo Massing – Federal University of Santa Maria – Brazil
Humberto Pinheiro – Federal University of Santa Maria – Brazil

iREP:2183
NONLINEAR VIRTUAL FLUX ORIENTED CONTROL FOR SENSORLESS ACTIVE FILTERS
Marcos B. Ketzer – Federal University of Campina Grande – Brazil
Cursino B. Jacobina – Federal University of Campina Grande – Brazil

Tuesday – October 29th 2013 – 14:00 – 16:05

Tuesday 29/Oct/2013
Technical Session S65 (14:00 – 16:05)
Room: Esmeralda
Renewable and Alternative Energy Systems V: Storage Systems

iREP:2405
ANALYSIS OF THE TIME–VARYING BEHAVIOR OF A PEM FUEL CELL STACK AND DYNAMICAL MODELING BY RECURRENT NEURAL NETWORKS
Francisco da Costa Lopes – Electrical Power Research Center – Brazil
Edson H. Watanabe – Federal University of Rio de Janeiro – Brazil
Luís Guilherme Barbosa Rolim – Federal University of Rio de Janeiro – Brazil

iREP:2131
STUDY OF THE APPLICATION OF BIDIRECTIONAL DUAL ACTIVE BRIDGE CONVERTERS IN DC NANOGRID ENERGY STORAGE SYSTEMS
Waner Wodson A. G. Silva – Federal University of Minas Gerais – Brazil
Pedro Francisco Donoso-Garcia – Federal University of Minas Gerais – Brazil
Seleme Isaac Seleme Jr. – Federal University of Minas Gerais – Brazil
Thiago Ribeiro de Oliveira – Federal University of Minas Gerais – Brazil
Claúdio H. G. Santos – Federal University of Ouro Preto – Brazil
Aécio da Silva Bolzon – Federal University of Minas Gerais – Brazil

iREP:2329
BIDIRECTIONAL BATTERY CHARGER WITH PLANAR TRANSFORMER
Fabio Dalla Vecchia Rocha – Federal University of Technology - Paraná – Brazil
Emerson Giovani Carati – Federal University of Technology - Paraná – Brazil
Rafael Cardoso – Federal University of Technology - Paraná – Brazil
Carlos Marcelo de Oliveira Stein – Federal University of Technology - Paraná – Brazil

iREP:2337
THREE–PHASE MODULAR MULTILEVEL CURRENT SOURCE RECTIFIERS FOR ELECTRIC VEHICLE BATTERY CHARGING SYSTEMS
Thiago Batista Soeiro – Federal University of Santa Catarina – Brazil
Marcelo Lobo Heldwein – Federal University of Santa Catarina – Brazil
Johann W. Kollar – Swiss Federal Institute of Technology – Switzerland

iREP:2424
A DESIGN OF BOOST CHOPPER CIRCUIT WITH THERMOELECTRIC GENERATOR FOR RECHARGEABLE BATTERY AND DEVELOPMENT OF MPPT ALGORITHM
Shota Nakayama – Tokyo University of Science – Japan
Hirotaka Koizumi – Tokyo University of Science – Japan

Tuesday – October 29th 2013 – 14:00 – 16:05

Tuesday 29/Oct/2013
Technical Session S52 (14:00 – 16:05)
Room: Topázio
Industrial, Commercial and Residential Applications II: Lighting Applications

iREP:2258
A FAMILY OF ISOLATED INTEGRATED DRIVERS WITH REDUCED CAPACITORS FOR LIGHT SYSTEM BASED ON POWER LEDS
Paulo Cesar Vargas Luz – Federal University of Santa Maria – Brazil
Marcelo Rafael Cosetin – Federal University of Santa Maria – Brazil
Priscila Ertmann Bolzan – Federal University of Santa Maria – Brazil
Thiago Maboni – Federal University of Santa Maria – Brazil
Ricardo Nederson do Prado – Federal University of Santa Maria – Brazil

iREP:2358
ANALYSIS AND DESIGN METHODOLOGY OF A SELF-OSCILLATING SYSTEM BASED ON INTEGRATED SEPIC HALF-BRIDGE FOR LED LIGHTNING APPLICATIONS
William Alegranci Venturini – Federal University of Santa Maria – Brazil
Eduardo Arthur Bitencourt – Federal University of Santa Maria – Brazil
Marson E. Schlittler – Federal University of Santa Maria – Brazil
Marcelo Freitas da Silva – Federal University of Santa Maria – Brazil
Ricardo Nederson do Prado – Federal University of Santa Maria – Brazil
Fábio Ecke Bisogno – Federal University of Santa Maria – Brazil

iREP:2286
SELF-OSCILLATING BUCK DRIVER FOR POWER LEDS
Edilson Mineiro Sá Junior – Instituto Federal de Educação, Ciência e Tecnologia do Ceará – Brazil
Kleber Cesar Alves de Souza – Instituto Federal de Educação, Ciência e Tecnologia do Ceará – Brazil
Ronaldo Portela Coutinho – Instituto Federal de Educação, Ciência e Tecnologia do Ceará – Brazil
Fernando Luiz Marcelo Antunes – Universidade Federal do Ceará – Brazil
Arnaldo Jose Perin – Universidade Federal de Santa Catarina – Brazil

iREP:2281
COMPARISON OF SINGLE STAGE SEPIC AND INTEGRATED SEPIC=BUCK CONVERTER AS OFF=LINE LED DRIVERS
Marcelo Rafael Cosetin – Federal University of Santa Maria – Brazil
Eduardo Arthur Bitencourt – Federal University of Santa Maria – Brazil
Thaís Ertmann Bolzan – Federal University of Santa Maria – Brazil
Marcelo Freitas da Silva – Federal University of Santa Maria – Brazil
José Marcos Alonso – University of Oviedo – Spain
Ricardo Nederson do Prado – Federal University of Santa Maria – Brazil

iREP:2215
SINGLE-STAGE HIGH POWER FACTOR CONVERTER USING A COUPLED INPUT BOOST INDUCTOR TO DRIVE POWER LEDS
Zito Palhano da Fonseca – Federal University of Technology - Paraná – Brazil
Claudinor Bitencourt Nascimento – Federal University of Technology - Paraná – Brazil

Tuesday – October 29th 2013 – 14:00 – 16:05

Tuesday 29/Oct/2013
Technical Session S23 (14:00 – 16:05)
Room: Turmalina
Electrical Machines and Drive Systems III: Special Machines

iREP:2309
AN I-F STARTING METHOD FOR SMOOTH AND FAST TRANSITION TO SENSORLESS CONTROL OF BLDC MOTORS
Cássio Luciano Baratieri – Federal University of Santa Maria – Brazil
Humberto Pinheiro – Federal University of Santa Maria – Brazil

iREP:2267
AC MOTOR DRIVE SYSTEM BASED ON A CUSTOM DESIGNED STRONTIUM FERRITE MOTOR
Marcos A. A. Costa – Federal University of Campina Grande – Brazil
Edgar R. Braga-Filho – Federal University of Campina Grande – Brazil
Antonio Marcus Nogueira Lima – Federal University of Campina Grande – Brazil

iREP:2213
A NPC IGBT BASED MEDIUM VOLTAGE INVERTER APPLIED TO SALIENT POLE WOUND ROTOR SYNCHRONOUS MACHINE
Gilberto da Cunha – WEG Drives & Controls – Brazil
Diogo Brum Cândido – WEG Drives & Controls – Brazil
Adriano da Silva Dias – WEG Drives & Controls – Brazil
Márcio Sari – WEG Drives & Controls – Brazil
Paulo José Torri – WEG Drives & Controls – Brazil

iREP:2266
BOND GRAPHS REPRESENTATION OF A BRUSHLESS DC MOTOR AND INVERTER DRIVER
Renato Ferreira Simão – Universidade Federal de Santa Catarina – Brazil
Nestor Roqueiro – Universidade Federal de Santa Catarina – Brazil
Luis Ignacio Silva – Universidad Nacional de Río Cuarto– Argentina
Cristian Hernan de Angelo – Universidad Nacional de Río Cuarto – Argentina

iREP:2384
ANTI-WINDUP METHOD FOR FUZZY PD+I, PI AND PID CONTROLLERS APPLIED IN BRUSHLESS DC MOTOR SPEED CONTROL
José Roberto Boffino de Almeida Monteiro – University of São Paulo – Brazil
William C. Andrade Pereira – University of São Paulo – Brazil
Marcelo Patrício de Santana – University of São Paulo – Brazil
Thales Eugenio Portes de Almeida – University of São Paulo – Brazil
Geyverson Teixeira de Paula – University of São Paulo – Brazil
Itamar Santini – University of São Paulo – Brazil

Tuesday – October 29th 2013 – 16:30 – 18:35

Tuesday 29/Oct/2013
Technical Session S82 (16:30 – 18:35)
Room: Rubi
Energy Efficiency, Power Quality and Electromagnetic Compatibility II: Power Quality

iREP:2253
THREE-PHASE SHUNT ACTIVE POWER FILTER BASED ON THE INTERCONNECTION OF SINGLE-PHASE AND THREE-PHASE CONVERTERS
Alvaro de Medeiros Maciel – Federal University of Campina Grande – Brazil
Cursino Brandão Jacobina – Federal University of Campina Grande – Brazil
Victor B. Melo – Federal University of Campina Grande – Brazil
Euzeli Cipriano dos Santos Júnior – Indiana University - Purdue School of Engineering and Technology – USA
Edgard Luiz Lopes Fabrício – Federal University of Campina Grande – Brazil

iREP:2332
TWO-PHASE, THREE-WIRE SHUNT ACTIVE POWER FILTER USING THE SINGLE-PHASE P-Q THEORY
Pablo Carlos de Siqueira Furtado – Federal University of Juiz de Fora – Brazil
Marcio do Carmos Barbosa Poncilio Rodrigues – Federal University of Juiz de Fora – Brazil
Henrique Antônio Carvalho Braga – Federal University of Juiz de Fora – Brazil
Pedro Gomes Barbosa – Federal University of Juiz de Fora – Brazil

iREP:2192
THREE–PHASE MULTIFUNCTION COMPENSATOR
Edgard Luiz Lopes Fabricio – Instituto Federal da Paraíba – Brazil
Cursino Brandão Jacobina – Universiade Federal de Campina Grande – Brazil
Alvaro de Medeiros Maciel – Instituto Federal da Paraíba – Brazil

iREP:2340
HYBRID ACTIVE POWER FILTER APPLIED TO HARMONIC COMPENSATION OF CURRENT-SOURCE TYPE AND VOLTAGE-SOURCE TYPE NONLINEAR LOADS
Robson Bauwelz Gonzatti – Universidade Federal de Itajubá – Brazil
Sílvia Costa Ferreira – Universidade Federal de Itajubá – Brazil
Carlos Henrique da Silva – Universidade Federal de Itajubá – Brazil
Luiz Eduardo Borges da Silva – Universidade Federal de Itajubá – Brazil
Germano Lambert–Torres – Universidade Federal de Itajubá – Brazil
Luiz Gonzaga Fernandez da Silva – CPFL Energy – Brazil

iREP:2330
DESIGN CRITERION FOR AN INTERFACING CONVERTER WITH REACTIVE POWER COMPENSATION CAPABILITY APPLIED TO A DC LIGHTING SYSTEM
Guilherme Marcio Soares – Federal University of Juiz de Fora – Brazil
Pedro Gomes Barbosa – Federal University of Juiz de Fora – Brazil
Henrique Antônio Carvalho Braga – Federal University of Juiz de Fora – Brazil

Tuesday – October 29th 2013 – 16:30 – 18:35

Tuesday29/Oct/2013
Technical Session S14 (16:30 – 18:35)
Room: Esmeralda
Power Converters Topologies and Design IV: DC-DC Converters

iREP:2326
THREE-PHASE FLYBACK-BOOST DC-DC CONVERTER WITH THREE PHASE HIGH FREQUENCY ISOLATION
Menaouar Berrehil El Katel – Universidade Regional de Blumenau – Brazil
Sérgio Vidal Garcia Oliveira – Universidade Regional de Blumenau – Brazil
Adriano Péres – Universidade Regional de Blumenau – Brazil
Romeu Hausmann – Universidade Regional de Blumenau – Brazil
Alessandro Braatz – Universidade Regional de Blumenau – Brazil
Julio Cesar Dias – Universidade Regional de Blumenau – Brazil

iREP:2149
A FAMILY OF THREE-LEVEL DC-DC CONVERTERS
Antonio José Bento Bottion – Federal University of Santa Catarina – Brazil
Ivo Barbi – Federal University of Santa Catarina – Brazil

iREP:2138
ISOLATED ZETA-SEPIC BIDIRECTIONAL DC-DC CONVERTER WITH ACTIVE-CLAMPING
Adriano Ruseler – Federal University of Santa Catarina – Brazil
Ivo Barbi – Federal University of Santa Catarina – Brazil

iREP:2311
SOFT-SWITCHING BIDIRECTIONAL ISOLATED THREE-PHASE DC-DC CONVERTER WITH DUAL PHASE-SHIFT AND VARIABLE DUTY CYCLE
Herminio Miguel de Oliveira Filho – Federal University of Ceará – Brazil
Demercil de Souza Oliveira Júnior – Federal University of Ceará – Brazil
Paulo Peixoto Praça – Federal University of Ceará – Brazil

iREP:2119
EFFECT OF A SPLIT TRANSFORMER LEAKAGE INDUCTANCE IN THE LLC CONVERTER WITH INTEGRATED MAGNETICS
Giorgio Spiazzi – University of Padova – Italy
Simone Buso – University of Padova – Italy

Tuesday – October 29th 2013 – 16:30 – 18:35

Tuesday 29/Oct/2013
Technical Session S35 (16:30 – 18:35)
Room: Topázio
Modeling, Simulation and Control in Power Electronics V: Control in Power Electronics

iREP:2218
CONTROL STRATEGY FOR MULTIFUNCTIONAL , THREE-PHASE, FOUR WIRE, AC-DC BOOST CONVERTER
Luiz Daniel Santos Bezerra – Instituto Federal de Educação Ciência e Tecnologia do Ceará – Brazil
René Pastor Torrico-Bascopé – Universidade Federal do Ceará – Brazil
Cícero Marcos Tavares Cruz – Universidade Federal do Ceará – Brazil

iREP:2230
OUTPUT POWER FEEDFORWARD TECHNIQUE APPLIED TO A HIGHPOWER FACTOR RECTIFIER WITH HIGH FREQUENCY TRANSFORMER
Júlio César Secolo Ganacim – Federal University of Technology - Paraná – Brazil
Martin Breus Meyer – Federal University of Technology - Paraná – Brazil
Alceu André Badin – Federal University of Technology - Paraná – Brazil
Roger Gules – Federal University of Technology - Paraná – Brazil
Eduardo Felix Ribeiro Romanel – Federal University of Technology - Paraná – Brazil
Amauri Amorin Assef – Federal University of Technology - Paraná – Brazil

iREP:2135
INCREMENTAL PASSIVITY BASED PARALLEL OPERATION OF UNINTERRUPTIBLE POWER SUPPLIES WITHOUT COMMUNICATION –TOWARDS A DIGITAL IMPLEMENTATION
Marcelo de Azevedo Ávila – Universidade Federal de Minas Gerais – Brazil
Leonardo Antônio Borges Tôrres – Universidade Federal de Minas Gerais – Brazil
Paulo Fernando Seixas – Universidade Federal de Minas Gerais – Brazil

iREP:2174
A SIMPLIFIED STRATEGY USED TO CONTROL THE OUTPUT VOLTAGE AND THE INPUT CURRENT OF A SINGLE-PHASE LINE-INTERACTIVE UPS SYSTEM
Rodrigo Augusto Modesto – Federal University of Technology - Paraná – Brazil
Rodrigo Barriviera – Federal Institute of Paraná – Brazil
Sergio Augusto Oliveira da Silva – Federal University of Technology - Paraná – Brazil
Azauri A. Oliveira Jr. – University of São Paulo – Brazil

iREP:2249
A DIGITAL CURRENT CONTROL STRATEGY FOR ONE-CYCLE CONTROL BASED UNIDIRECTIONAL THREE-LEVEL RECTIFIER TOPOLOGIES
Paula Karina Pérez Vieira – Federal University of Campina Grande – Brazil
Edison R. da Silva – Federal University of Campina Grande – Brazil
Antônio Isaac Luna de Lacerda – Federal University of Campina Grande – Brazil
Euzeli Cipriano dos Santos Jr. – Indiana University – Purdue School of Engineering and Technology – USA

Tuesday – October 29th 2013 – 16:30 – 18:35

Tuesday 29/Oct/2013
Technical Session S24 (16:30 – 18:35)
Room: Turmalina
Electrical Machines and Drive Systems IV: Electrical Machines Design

iREP:2157
FORCE AND CURRENT CHARACTERISTICS OF A LINEAR INDUCTION MOTOR USED FOR THE TRACTION OF A MAGLEV VEHICLE
Laércio Simas Mattos – Federal Center of Technological Education of Minas Gerais – Brazil
Roberto André Henrique de Oliveira – Federal University of Rio de Janeiro – Brazil
Antônio Carlos Ferreira – Federal University of Rio de Janeiro – Brazil
Richard Magdalena Stephan – Federal University of Rio de Janeiro – Brazil

iREP:2300
STUDY AND ENERGY EFFICIENCY IMPROVEMENT IN THE DESIGN OF AN INDUCTION MOTOR BASED ON INTERACTIVE CAD SOFTWARE
Victor de Paula Brandão Aguiar – Federal Rural University of Semi-Arid – Brazil
Ricardo Silva Thé Pontes – Federal University of Ceará – Brazil
Tobias Rafael Fernandes Neto – Federal University of Ceará – Brazil

iREP:2095
NUMERICAL AND EXPERIMENTAL ANALYSIS ON THE PLANAR FORCE AND THE MAGNETIC FIELD IN A DC LINEAR STEPPER MOTOR
Nolvi Francisco Baggio Filho – Federal Institute of Rio Grande do Sul – Brazil

iREP:2399
FIELD RECONSTRUCTION METHOD APPLIED FOR HARMONIC VOLTAGE MITIGATION IN SALIENT POLE SYNCHRONOUS GENERATORS
Marcio Luiz Magri Kimpara – Federal University of Itajubá – Brazil
João Onofre Pereira Pinto – Federal University of Mato Grosso do Sul – Brazil
Babak Fahimi – University of Texas at Dallas – USA
Pedro Eugênio Marcondes Justino Ribeiro – Federal University of Itajubá – Brazil
Ruben Barros Godoy – Federal University of Mato Grosso do Sul – Brazil
Luiz Eduardo Borges da Silva – Federal University of Itajubá – Brazil

iREP:2094
COMPARATIVE ANALYSIS ON THE PLANAR TRACTION FORCE IN TWO PLANAR ACTUATORS
Nolvi Francisco Baggio Filho – Federal Institute of Rio Grande do Sul – Brazil

Wednesday – October 30th 2013 – 8:30 – 10:00

Wednesday 30/Oct/2013
Plenary Session P4 (8:30 – 10:00)
Room: Rubi
Voltage-Source Converters for HVDC Systems
Lecturer: Prof. Josep Pou, Ph.D.

Wednesday – October 30th 2013 – 10:20 – 12:25

Wednesday 30/Oct/2013
Technical Session S15 (10:20 – 12:25)
Room: Rubi
Power Converters Topologies and Design V: Multilevel Converters

iREP:2308
UNIDIRECTIONAL RECTIFIER BASED ON HYBRID MODULAR MULTILEVEL CASCADE CONVERTER – DOUBLE-STAR CHOPPER-CELLS
Italo Roger F. M. P. da Silva – Federal University of Campina Grande – Brazil
Alexandre C. Oliveira – Federal University of Campina Grande – Brazil
Cursino B. Jacobina – Federal University of Campina Grande – Brazil
Camila S. Gehrke – Federal University of Campina Grande – Brazil

iREP:2313
SYMMETRICAL HYBRID MULTILEVEL DC-AC STEP-UP/DOWN CONVERTERS – SINGLE PHASE CIRCUITS
F. Chiarella Tapia – Pontificia Universidad Católica de Valparaíso – Chile
R. Sanhueza Robles – Pontificia Universidad Católica de Valparaíso – Chile
M. López González – Pontificia Universidad Católica de Valparaíso – Chile
S. Ahmad Mussa – Universidade Federal de Santa Catarina – Brazil
D. Ruiz-Caballero – Pontificia Universidad Católica de Valparaíso – Chile

iREP:2108
HYBRID MODULATION FOR ASYMMETRICAL CASCADED MULTILEVEL CONVERTERS UNDER FAULT CONDITIONS
Fernanda de Morais Carnielutti – Federal University of Santa Maria – Brazil
Humberto Pinheiro – Federal University of Santa Maria – Brazil

iREP:2314
HIGH-GAIN SYMMETRICAL HYBRID MULTILEVEL DC-AC CONVERTERS – SINGLE PHASE CIRCUITS
L. Colque Miranda – Pontificia Universidad Católica de Valparaíso – Chile
R. Sanhueza R. – Pontificia Universidad Católica de Valparaíso – Chile
M. López G. – Pontificia Universidad Católica de Valparaíso – Chile
S. Fingerhuth – Pontificia Universidad Católica de Valparaíso – Chile
S. Ahmad Mussa – Universidade Federal de Santa Catarina – Brazil
D. Ruiz-Caballero – Pontificia Universidad Católica de Valparaíso – Chile

iREP:2403
ANALYSIS AND DESIGN OF A SINGLE DC SOURCE HYBRID MULTILEVEL RECTIFIER
Tadeu Vargas – Federal University of Santa Maria – Brazil
Henrique H. Figueira – Federal University of Santa Maria – Brazil
José R. Pinheiro – Federal University of Santa Maria – Brazil
Humberto Pinheiro – Federal University of Santa Maria – Brazil
Cassiano Rech – Federal University of Santa Maria – Brazil

Wednesday – October 30th 2013 – 8:30 – 10:00

Wednesday 30/Oct/2013
Plenary Session P4 (8:30 – 10:00)
Room: Rubi
Voltage-Source Converters for HVDC Systems
Lecturer: Prof. Josep Pou, Ph.D.

Wednesday – October 30th 2013 – 10:20 – 12:25

Wednesday 30/Oct/2013
Technical Session S66 (10:20 – 12:25)
Room: Esmeralda
Renewable and Alternative Energy Systems VI: PV Systems

iREP:2231
DC MICROGRIDS WITH PHOTOVOLTAIC GENERATION AND HIGH FREQUENCY ISOLATION CONNECTED TO UTILITY GRID
Walbermark M. dos Santos – Federal University of Santa Catarina – Brazil
Adriano Ruseler – Federal University of Santa Catarina – Brazil
Denizar C Martins – Federal University of Santa Catarina – Brazil

iREP:2295
A GRID-CONNECTED PHOTOVOLTAIC POWER SYSTEM WITH ACTIVE POWER INJECTION, REACTIVE POWER COMPENSATION AND HARMONIC FILTERING
Leonardo B. G. Campanhol – Federal University of Technology - Paraná – Brazil
Sérgio A. Oliveira da Silva – Federal University of Technology - Paraná – Brazil
Leonardo P. Sampaio – Federal University of Technology - Paraná – Brazil
Azauri A. O. Junior – University of São Paulo – Brazil

iREP:2269
MICROGRID UNITS IN THE ISLANDED OPERATION MODE IMPLEMENTED IN THE dSPACE DS1103
W. F. Souza – Universidade Federal de Minas Gerais – Brazil
M. A. Severo-Mendes – Universidade Federal de Minas Gerais – Brazil
Luiz A. C. Lopes – Concordia University – Canada

iREP:2274
MPP TRACKING FOR GRID CONNECTED INVERTERS CONTROLLED BY DROOPING CURVES
Douglas B. Bizarro – Universidade Federal de Mato Grosso do Sul – Brazil
Ruben B. Godoy – Universidade Federal de Mato Grosso do Sul – Brazil
Pedro E. M. J. Ribeiro – Universidade Federal de Itajubá – Brazil
Leonardo A. Carniato – Instituto Federal de São Paulo – Brazil
Jurandir O. Soares – Universidade Federal de Mato Grosso do Sul – Brazil
Luigi G. Júnior – Universidade Federal de Mato Grosso do Sul – Brazil
João O. P Pinto – Universidade Federal de Mato Grosso do Sul – Brazil

iREP:2127
INTERNAL MODEL CONTROL OF THE ZETA CONVERTER FOR THE GRID CONNECTION OF PHOTOVOLTAIC PANELS
Gustavo H. Levin – Pontifícia Universidade Católica do Rio Grande do Sul – Brazil
Jeferson V. Flores – Pontifícia Universidade Católica do Rio Grande do Sul – Brazil
Aurélio Salton – Pontifícia Universidade Católica do Rio Grande do Sul – Brazil
Fernando S. dos Reis – Pontifícia Universidade Católica do Rio Grande do Sul – Brazil

Wednesday – October 30th 2013 – 8:30 – 10:00

Wednesday 30/Oct/2013
Plenary Session P4 (8:30 – 10:00)
Room: Rubi
Voltage-Source Converters for HVDC Systems
Lecturer: Prof. Josep Pou, Ph.D.

Wednesday – October 30th 2013 – 10:20 – 12:25

Wednesday 30/Oct/2013
Technical Session S25 (10:20 – 12:25)
Room: Topázio
Electrical Machines and Drive Systems V: Special Machines

iREP:2232
SPEED CONTROL IN SWITCHED RELUCTANCE MOTOR BASED ON GENERALIZED PREDICTIVE CONTROL
Wellington A. Silva – Universidade Federal do Ceará – Brazil
Laurinda L. N. dos Reis – Universidade Federal do Ceará – Brazil
Bismark C. Torrrico – Universidade Federal do Ceará – Brazil
Rômulo N. de C. Almeida – Universidade Federal do Ceará – Brazil

iREP:2297
STEPPER MOTOR DRIVE FOR COMPUTER NUMERICAL CONTROL MACHINES
Paulo Augusto Sherring da Rocha Junior – Universidade Federal do Pará – Brazil
Maria Emilia de Lima Tostes – Universidade Federal do Pará – Brazil

iREP:2217
SIX-PHASE MACHINE DRIVE SYSTEM BASED ON THREE THREE-LEG CONVERTERS
A. C. N. Maia – Federal University of Campina Grande – Brazil
C. B. Jacobina – Federal University of Campina Grande – Brazil

iREP:2317
AC-AC DRIVE SYSTEMS WITH OPEN-END FIVE-PHASE MACHINE AND SIXTEEN-LEG DC-LINK CONVERTER
Cursino B. Jacobina – Federal University of Campina Grande – Brazil
Isaac S. de Freitas – Federal University of Paraiba – Brazil
Lilian G. de Azevedo – Federal University of Campina Grande – Brazil
Maurício B. R. Corrêa – Federal University of Campina Grande – Brazil

iREP:2197
IMPLEMENTING A NEURAL PID SPEED CONTROLLER FOR A SINGLE STATOR AXIAL FLUX SWITCHED RELUCTANCE MOTOR AIMING TORQUE RIPPLE MINIMIZATION
Eric S. Sanches – Fluminense Federal University – Brazil
José A. Santisteban – Fluminense Federal University – Brazil

Wednesday – October 30th 2013 – 8:30 – 10:00

Wednesday 30/Oct/2013
Plenary Session P4 (8:30 – 10:00)
Room: Rubi
Voltage-Source Converters for HVDC Systems
Lecturer: Prof. Josep Pou, Ph.D.

Wednesday – October 30th 2013 – 10:20 – 12:25

Wednesday 30/Oct/2013
Technical Session S41 (10:20 – 12:25)
Room: Turmalina
Devices, Packaging, Integration, Magnetic Materials and Passive Components I

iREP:2417
EVALUATION OF AN OPTIMAL DESIGN FOR A SINGLE-PHASE BOOST PFC CONVERTER (CCM) CONSIDERING DIFFERENT MAGNETIC MATERIALS CORE
Hamiltom Confortin Sartori – Federal University of Santa Maria – Brazil
Fernando Beltrame – Federal University of Santa Maria – Brazil
Mário L. Martins – Federal University of Santa Maria – Brazil
José E. Baggio – Federal University of Santa Maria – Brazil
José Renes Pinheiro – Federal University of Santa Maria – Brazil

iREP:2293
A STUDY OF THE CORES OF AN ELECTRODELESS FLUORESCENT LAMP
N. B. Chagas – Federal University of Santa Maria – Brazil
V. Rosa – Federal University of Santa Maria – Brazil
A. Ferreira – Federal University of Santa Maria – Brazil
M. F. da Silva – Federal University of Santa Maria – Brazil
R. N. do Prado – Federal University of Santa Maria – Brazil

iREP:2418
POWER DENSITY COMPARATIVE ANALYSIS CONCERNING TO THREE TRANSISTOR TECHNOLOGIES APPLIED TO A CCM PFC BOOST CONVERTER USING OPTIMIZATION TECHNIQUES
Hamiltom C. Sartori – Federal University of Santa Maria – Brazil
Fernando Beltrame – Federal University of Santa Maria – Brazil
Henrique H. Figueira – Federal University of Santa Maria – Brazil
José E. Baggio – Federal University of Santa Maria – Brazil
José R. Pinheiro – Federal University of Santa Maria – Brazil

iREP:2316
AN FPGA-BASED SINGLE-PHASE INTERLEAVED BOOST-TYPE PFC CONVERTER EMPLOYING GAN HEMT DEVICES
Tiago K. Jappe – Federal University of Santa Catarina – Brazil
Ramiro R. Polla – Federal University of Santa Catarina – Brazil
Thiago B. Soeiro – Federal University of Santa Catarina – Brazil
Andre Fuerback – Federal University of Santa Catarina – Brazil
Marcelo L. Heldwein – Federal University of Santa Catarina – Brazil
Roberto Andrich – Embraco - Electronic Controls Unit – Brazil

iREP:2171
AN EFFICIENT TECHNIQUE TO CALCULATE THE ADMITTANCE AND SCATTERING PARAMETERS
Cicero Hildenberg L. de Oliveira – Federal University of Rondônia – Brazil
Wilson Arnaldo Artuzi Jr. – Federal University of Paraná – Brazil
Carlos A. T. Carvalho Jr. – Federal University of Rondônia – Brazil
Ciro José Egoavil Montero – Federal University of Rondônia – Brazil
Rogério Marcos da Silva – Federal University of Rondônia – Brazil

Wednesday – October 30th 2013 – 14:00 – 16:05

Wednesday 30/Oct/2013
Technical Session S26 (14:00 – 16:05)
Room: Rubi
Electrical Machines And Drive Systems VI: Drives

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iREP:2144
COMBINED REGENERATIVE AND MECHANICAL BRAKING IN ELECTRIC VEHICLE
M. G. S. P. Paredes – University of Campinas – Brazil
José A. Pomilio – University of Campinas – Brazil
Auteliano A. Santos – University of Campinas – Brazil

iREP:2350
INFLUENCE OF ENVIRONMENTAL FACTORS ON THE RELIABILITY OF ELECTRONIC COMPONENTS USED IN MOTOR DRIVE SYSTEMS
Frederico A. L. Souza – Universidade Federal de Minas Gerais – Brazil
Hélder de Paula – Universidade Federal de Minas Gerais – Brazil
Braz J. Cardoso Filho – Universidade Federal de Minas Gerais – Brazil
Anderson V. Rocha – Centro Federal de Educação Tecnológica de Minas Gerais– Brazil
Gideon I. C. Lobato – Universidade Federal de Minas Gerais – Brazil

iREP:2161
REGENERATIVE BREAKING OF A LINEAR INDUCTION MOTOR USED FOR THE TRACTION OF A MAGLEV VEHICLE
Roberto André Henrique de Oliveira – Federal University of Rio de Janeiro – Brazil
Laércio Simas Mattos – Federal Center of Technological Education of Minas Gerais – Brazil
Antônio Carlos Ferreira – Federal University of Rio de Janeiro – Brazil
Richard Magdalena Stephan – Federal University of Rio de Janeiro – Brazil

iREP:2291
A SIMPLIFIED MODEL FOR MECHANICAL LOADS UNDER ANGULAR MISALIGNMENT
Úrsula B. Ferraz – Federal University of Minas Gerais – Brazil
Paulo F. Seixas – Federal University of Minas Gerais – Brazil
Webber E. Aguiar – Federal University of Minas Gerais – Brazil

iREP:2134
IMPROVING THE EFFICIENCY OF AC-DRIVES
Adalberto Jose Rossa – Infineon Technologies AG – Germany
Klaus Vogel – Infineon Technologies AG – Germany

Wednesday – October 30th 2013 – 14:00 – 16:05

Wednesday 30/Oct/2013
Technical Session S83 (14:00 – 16:05)
Room: Esmeralda
Energy Efficiency, Power Quality and Electromagnetic Compatibility III: Power Quality

iREP:2164
EXPERIMENTAL SETUP OF FAULT CURRENT LIMITERS
Wilson Komatsu – Universidade de São Paulo – Brazil
Ronaldo Pedro Casolari – Foundation for the Technological Development of the Engineering Sciences – Brazil
Ricardo Leon Vasquez-Arnez – Foundation for the Technological Development of the Engineering Sciences – Brazil
Antonio Ricardo Giaretta – Universidade de São Paulo – Brazil
Rubens Domingos de Miranda – Universidade de São Paulo – Brazil
José Antonio Jardini – Universidade de São Paulo – Brazil

iREP:2169
HIGH-RESISTANCE NEUTRAL GROUNDING IN INDUSTRIAL SYSTEMS AND THE GROUND FAULT PROTECTION
Gladston A. F. Bernardi – Universidade Federal de Itajubá – Brazil
José Maria de Carvalho Filho – Universidade Federal de Itajubá – Brazil

iREP:2159
IEEE STANDARD 519-92 AND THE HARMONIC CURRENTES CAUSED BY THE INVERTER FED INDUCTION MOTOR
Wander G. da Silva – Universidade Federal de Goiás – Brazil
Marcos Antônio A. de Freitas – Instituto Federal de Goiás – Brazil
Igor Kopcak – Universidade Federal de Goiás – Brazil

iREP:2229
A COMPARISON BETWEEN A SINGLE AND A DOUBLE TUNED HYBRID POWER FILTER UNDER POWER QUALITY ANALYSIS
Francisco Kleber A. Lima – Federal University of Ceara – Brazil
Ernande Eugênio C. Morais – Federal University of Ceara – Brazil
Marcos Antonio N. Nunes – Federal University of Ceara – Brazil
Joacillo Luz Dantas – Federal Institute of Education Science and Technology of Ceara – Brazil
Carlos Gustavo C. Branco – Federal University of Ceara – Brazil

iREP:2130
POSITIVE AND NEGATIVE COMPONENTS EXTRACTION USING SPACE VECTORS' DOT PRODUCT
Kelly Caroline Mingorancia de Carvalho – Universidade de São Paulo – Brazil
Wilson Komatsu – Universidade de São Paulo – Brazil
Lourenço Matakas Junior – Universidade de São Paulo – Brazil

Wednesday – October 30th 2013 – 14:00 – 16:05

Wednesday 30/Oct/2013
Technical Session S16 (14:00 – 16:05)
Room: Topázio
Power Converters Topologies and Design VI: Modulation Strategies

iREP:2193
THD ANALYSIS OF A MODULATION TECHNIQUE APPLIED FOR THD REDUCTION
Davi R. Joca – Federal University of Ceara – Brazil
Luiz H. S. C. Barreto – Federal University of Ceara – Brazil
Denercil de S. Oliveira Jr. – Federal University of Ceara – Brazil
Paulo P. Praça – Federal University of Ceara – Brazil
Ranoyca N. A. L. Silva – Federal University of Piauí – Brazil
Gustavo A. L .Henn – Rural Federal University of Semi–Arid – Brazil

iREP:2396
GENERATION OF HYBRID CARRIER BASED MODULATION PATTERNS
Pedro A. M. Bezerra – Federal University of Santa Catarina – Brazil
Marcelo L. Heldwein – Federal University of Santa Catarina – Brazil

iREP:2223
STUDY AND IMPLEMENTATION OF AN CARRIER BASED ON OVERMODULATION STRATEGY WITH APPLICATION TO CONVENTIONAL MATRIX CONVERTER
Alessandro Braatz – Universidade Regional de Blumenau – Brazil
Cleiton Gili – Universidade Regional de Blumenau – Brazil
Laio O. Seman – Universidade Regional de Blumenau – Brazil
Luiz C. Gili – Universidade Regional de Blumenau – Brazil
Romeu Hausmann – Universidade Regional de Blumenau – Brazil
Adriano Péres – Universidade Regional de Blumenau – Brazil
Sérgio G. V. Oliveira – Universidade Regional de Blumenau – Brazil

iREP:2109
SPACE VECTOR MODULATION FOR A SINGLE-PHASE CONVERTER WITH PARALLEL LEGS USING VIRTUAL VECTORS CONCEPT
João Marcos Kanieski – Universidade Federal de Santa Maria – Brazil
Felipe Bovolini Grigoletto – Universidade Federal de Santa Maria – Brazil
Hilton Abílio Gründling – Universidade Federal de Santa Maria – Brazil
Humberto Pinheiro – Universidade Federal de Santa Maria – Brazil

iREP:2220
A NEW STRATEGY FOR MODULATION CMC IMPLEMENTED TO DSP
Alessandro Braatz – Universidade Regional de Blumenau – Brazil
Cleiton Gili – Universidade Regional de Blumenau – Brazil
Laio O. Seman – Universidade Regional de Blumenau – Brazil
Luiz Gili – Universidade Regional de Blumenau – Brazil
Sérgio V. G. Oliveira – Universidade Regional de Blumenau – Brazil

Wednesday – October 30th 2013 – 14:00 – 16:05

Wednesday 30/Oct/2013
Technical Session S53 (14:00 – 16:05)
Room: Turmalina
Industrial, Commercial and Residential Applications III: Lighting Applications

iREP:2371
ELECTROTHERMAL CHARACTERIZATION APPLIED TO THE STUDY OF CHROMATICITY COORDINATES IN RGB LEDS
William Dotto Vizzotto – Universidade Federal de Santa Maria – Brazil
Guilherme Gindri Pereira – Universidade Federal de Santa Maria – Brazil
Rodrigo Cordeiro – Universidade Federal de Santa Maria – Brazil
Vitor Cristiano Bender – Universidade Federal de Santa Maria – Brazil
Marco Antônio Dalla Costa – Universidade Federal de Santa Maria – Brazil
Tiago Bandeira Marchesan – Universidade Federal de Santa Maria – Brazil
Elvo Calixto Burini Jr. – Universidade de São Paulo – Brazil

iREP:2319
FINITE ELEMENT ANALYSIS OF A CLOSED COOLING SYSTEM APPLIED TO THERMAL MANAGEMENT OF LED LUMINAIRES
Odirlan Iaronka – Federal University of Santa Maria – Brazil
Vitor C. Bender – Federal University of Santa Maria – Brazil
Tiago B. Marchesan – Federal University of Santa Maria – Brazil

iREP:2240
DESIGN METHODOLOGY FOR STREET LIGHTING LUMINAIRES BASED ON A PHOTOMETRICAL ANALYSIS
Vitor C. Bender – Federal University of Santa Maria – Brazil
Fernanda B. Mendes – Federal University of Santa Maria – Brazil
Tiago Maggi – Federal University of Santa Maria – Brazil
Marco A. Dalla Costa – Federal University of Santa Maria – Brazil
Tiago B. Marchesan – Federal University of Santa Maria – Brazil

iREP:2382
LIGHT CONTROL FOR ELECTRONIC BALLAST POWERED BY A DC POWER SUPPLY
Vanesa Rueda – Pontificia Universidad Javeriana – Colombia
Andrea Perez – Pontificia Universidad Javeriana – Colombia
Rafael Diez – Pontificia Universidad Javeriana – Colombia
Gabriel Perilla – Pontificia Universidad Javeriana – Colombia

iREP:2160
IMPACT OF THE TRANSFORMER IN THE CURRENT MODE SUPPLY OF DIELECTRIC BARRIER DISCHARGE EXCIMER LAMPS
David Florez – Pontificia Universidad Javeriana – Colombia
Xavier Bonnin – Université de Toulouse – France
Rafael Diez – Pontificia Universidad Javeriana – Colombia
Hubert Piquet – Université de Toulouse – France

Wednesday – October 30th 2013 – 16:30 – 18:35

Wednesday 30/Oct/2013
Technical Session S72 (16:30 – 18:35)
Room: Rubi
Smart Grid and Utility Applications II: Microgrids

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iREP:2120
A CONTROL OF MICROGRID POWER CONVERTER WITH SMOOTH TRANSIENT RESPONSE DURING THE CHANGE OF CONNECTION MODE
Gustavo M. S. Azevedo – Federal University of Pernambuco – Brazil
Marcelo C. Cavalcanti – Federal University of Pernambuco – Brazil
Francisco A. S. Neves – Federal University of Pernambuco – Brazil
Leonardo R. Limongi – Federal University of Pernambuco – Brazil
Fabricio Bradaschia – Federal University of Pernambuco – Brazil

iREP:2234
A NEW METHOD FOR CONNECTING OF PHOTOVOLTAICS MODULES IN DC MICROGRID
Walbermark M. dos Santos – Federal University of Santa Catarina – Brazil
Hugo Larico – Federal University of Santa Catarina – Brazil
Andre T. Schneider – Federal University of Santa Catarina – Brazil
João Paulo Dias – Federal University of Santa Catarina – Brazil
Denizar Cruz Martins – Federal University of Santa Catarina – Brazil

iREP:2401
DYNAMIC ADAPTATION OF DROOP CONTROL CURVES FOR MICROGRID CONNECTED INVERTERS WITH VARIABLE INPUT POWER
L. A. Carniato – Federal University of Mato Grosso do Sul – Brazil
R. B. Godoy – Federal University of Mato Grosso do Sul – Brazil
J. O. P. Pinto – Federal University of Mato Grosso do Sul – Brazil
C. A. Canesin – São Paulo State University – Brazil
P. E. M. J. Ribeiro –– Federal University of Mato Grosso do Sul – Brazil

iREP:2368
APPLIED CONTROL STRATEGY IN A MICRO SYSTEM INTERCONNECTED BETWEEN A RENEWABLE ENERGY SOURCE AND A SINGLE-PHASE ELECTRIC POWER
Isaac S. de Freitas – Federal University of Paraíba – Brazil
Marcos C. Meira – Federal University of Paraíba – Brazil
Zariff M. Gomes – Federal University of Paraíba – Brazil
Arthur A. de Melo – Federal Institute of Education, Science and Technology of Paraíba – Brazil
Christian C. Azevedo – Federal University of Paraíba – Brazil
Fabiano Salvadori – Federal University of Paraíba – Brazil

iREP:2167
MANAGING A MICROGRID WITH INTERMITTENT RENEWABLES AND ENERGY STORAGE
Liu Jin – Harbin Institute of Technology – China
Yu Jilai – Harbin Institute of Technology – China
Liu Guangyi – China Electric Power Research Institute – China

Wednesday – October 30th 2013 – 16:30 – 18:35

Wednesday 30/Oct/2013
Technical Session S36 (16:30 – 18:35)
Room: Esmeralda
Modeling, Simulation and Control in Power Electronics VI: Modeling and Control

iREP:2348
IMPROVED STATE–SPACE AVERAGED REPRESENTATION OF LED DRIVERS CONSIDERING THE DYNAMIC MODEL OF THE LOAD
P. S. Almeida – Federal University of Juiz de Fora – Brazil
A. L. C. Mello – Federal University of Juiz de Fora – Brazil
V. M. Albuquerque – Federal University of Juiz de Fora – Brazil
G. M. Soares – Federal University of Juiz de Fora – Brazil
D. P. Pinto – Federal University of Juiz de Fora – Brazil
H. A. C. Braga – Federal University of Juiz de Fora – Brazil

iREP:2318
DESIGN OF BOOST CONVERTER OPERATING IN CRM CONTROLLED BY OCC
Montiê A. Vitorino – Federal University of Paraiba – Brazil
Aluísio A. M. Bento – Federal University of Rio Grande do Norte – Brazil
Darlan A. Fernandes – Federal University of Paraiba – Brazil
Maurício B. R. Corrêa – Federal University of Campina Grande – Brazil

iREP:2344
SMALL-SIGNAL MODELING AND CONTROL OF AN INTEGRATED BRIDGELESS BOOST - HALF-BRIDGE CONVERTER FOR LED DRIVING
P. S. Almeida – Federal University of Juiz de Fora – Brazil
M .A. Dalla Costa – Federal University of Santa Maria – Brazil
J. M. Alonso – Universidad de Oviedo – Spain
H. A. C. Braga – Federal University of Juiz de Fora – Brazil

iREP:2176
SMALL-SIGNAL MODELING OF THE INTERLEAVED BOOST WITH COUPLED INDUCTORS CONVERTER
G. Spiazzi – University of Padova – Italy
S. Buso – University of Padova – Italy

Wednesday – October 30th 2013 – 16:30 – 18:35

Wednesday 30/Oct/2013
Technical Session S67 (16:30 – 18:35)
Room: Topázio
Renewable and Alternative Energy Systems VII: Rotating Machines

iREP:2186
NEW HYBRID TOPOLOGY OF VOLTAGE REGULATION APPLIED IN THREE-PHASE FOUR-WIRE SYSTEM BASED ON INDUCTION GENERATOR
Lucas G. Scherer – Federal University of Santa Maria – Brazil
Celso B. Tischer – Federal University of Santa Maria – Brazil
Fábio C. Posser – Federal University of Santa Maria – Brazil
Claiton M. Franchi – Federal University of Santa Maria – Brazil
Robinson F. de Camargo – Federal University of Santa Maria – Brazil

iREP:2320
SINGLE-PHASE TO THREE-PHASE INDUCTION GENERATION SYSTEM WITH TWO PARALLEL SINGLE-PHASE HALF-BRIDGE CONVERTERS
Nady Rocha – Federal University of Paraíba – Brazil
Ely C. de Menezes – Federal University of Paraíba – Brazil
Ítalo A. Cavalcanti de Oliveira – Federal University of Paraíba – Brazil
Cursino B. Jacobina – Federal University of Campina Grande – Brazil

iREP:2148
EXPERIMENTAL RESULTS OF SLIDING-MODE POWER CONTROL FOR DOUBLY-FED INDUCTION GENERATOR
Filipe S. Trindade – State University of Campinas – Brazil
Alfeu J. Sguarezi Filho – Universidade Federal do ABC – Brazil
Rogério V. Jacomini – Universidade Federal do ABC – Brazil
Ernesto Ruppert – State University of Campinas – Brazil

iREP:2226
OPEN-END WINDING PERMANENT MAGNET SYNCHRONOUS GENERATOR SYSTEM WITH REDUCED CONTROLLED SWITCH COUNT
Cursino B. Jacobina – Federal University of Campina Grande – Brazil
Nady Rocha – Federal University of Paraíba – Brazil
Nustenil S. M. .L Marinus – Federal Institute of the Ceará – Brazil

iREP:2395
WAVELET-BASED METHOD FOR DETECTION OF ELECTRICAL AND ELECTROMECHANICAL OSCILLATIONS IN SYNCHRONOUS GENERATORS
C. M. S. Neto – Federal University of Rio Grande do Norte – Brazil
F. B. Costa – Federal University of Rio Grande do Norte – Brazil
R. L. Barreto – Federal University of Rio Grande do Norte – Brazil
T. O. A. Rocha – Federal University of Rio Grande do Norte – Brazil
R. L. A. Ribeiro – Federal University of Rio Grande do Norte – Brazil

Wednesday – October 30th 2013 – 16:30 – 18:35

Wednesday 30/Oct/2013
Technical Session S17 (16:30 – 18:35)
Room: Turmalina
Power Converters Topologies and Design VII: Converter Topologies

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iREP:2341
A NEW METHOD TO IMPROVE THE TOTAL EFFICIENCY OF PARALLEL CONVERTERS
Fabrício Hoff Dupont – Federal University of Santa Maria – Brazil
Jordi Zaragoza – Technical University of Catalonia – Spain
Cassiano Rech – Federal University of Santa Maria – Brazil
José Renes Pinheiro – Federal University of Santa Maria – Brazil

iREP:2252
MULTI-STATE AND INTERLEAVED CONVERTERS WITH PASSIVE IMPEDANCES FOR CURRENT SHARING
R. P. Torrico-Bascopé – Federal University of Ceará – Brazil
G. V. Torrico-Bascopé – GTB Power Electronics R&T AB – Sweden
F. J. B. Brito Jr. – Federal University of Ceará – Brazil
S. Daher – Federal University of Ceará – Brazil

iREP:2271
COMPARISON BETWEEN FULL-BRIDGE-FORWARD CONVERTER AND DAB CONVERTER
Leandro Roggia – Federal University of Santa Maria – Brazil
Fernando Beltrame – Federal Institute of Education, Science and Technology of Rio Grande do Sul – Brazil
Luciano Schuch – Federal University of Santa Maria – Brazil
José Renes Pinheiro – Federal University of Santa Maria – Brazil

iREP:2259
DIRECT BUCK-TYPE AC/AC CONVERTER BASED ON SWITCHED-CAPACITOR
Telles Brunelli Lazzarin – Federal University of Santa Catarina – Brazil
Marcos Paulo Moccelini – Federal University of Santa Catarina – Brazil
Ivo Barbi – Federal University of Santa Catarina – Brazil

iREP:2376
MAGNETIZING-CURRENT-ASSISTED WIDE ZVS RANGE ISOLATED DC-DC CONVERTERS
Otoniel Guilherme da Rocha – Federal University of Technology - Paraná – Brazil
Carlos Henrique Illa Font – Federal University of Technology - Paraná – Brazil
Eloi Agostini Junior – Federal University of Technology - Paraná – Brazil

Thursday – October 31th 2013 – 08:30 – 10:00

Thursday 31/Oct/2013
Plenary Session P5 (8:30 – 10:00)
Room: Rubi
Photovoltaic Energy Applications: State-of-the-Art and Perspectives
Lecturer: Prof. Roberto Ziles, Ph.D.

Thursday – October 31th 2013 – 10:20 – 12:25

Thursday 31/Oct/2013
Technical Session S18 (10:20 – 12:25)
Room: Rubi
Power Converters Topologies and Design VIII: Multilevel Converters

iREP:2334
A FAST SPACE-VECTOR ALGORITHM FOR COMMON-MODE VOLTAGE ELIMINATION IN MULTILEVEL CONVERTERS
Luis Gustavo Perreira de Castro – Federal University of Campina Grande – Brazil
Maurício Beltrão de Rossiter Correa – Federal University of Campina Grande – Brazil
Cursino Brandão Jacobina – Federal University of Campina Grande – Brazil

iREP:2288
AN IMPROVED PULSE-WIDTH-MODULATION FOR THE MODIFIED HYBRID 2/3-LEVEL CONVERTER
João Helder G. Muniz – Federal University of Campina Grande – Brazil
Edison R. da Silva – Federal University of Campina Grande – Brazil
Raphael B. da Nóbrega – Federal University of Campina Grande – Brazil
Euzelí C. dos Santos Jr – Indiana University - Purdue University Indianapolis – USA

iREP:2304
A TWO STAGE AC/DC SST BASED ON MODULAR MULTILEVEL CONVERTER
Demercil S. Oliveira Jr. – Federal University of Ceará – Brazil
Paulo Peixoto Praça – Federal University of Ceará – Brazil
Luiz Henrique Silva Colado Barreto – Federal University of Ceará – Brazil
Bruno Almeida Silva – Federal University of Ceará – Brazil
Herminio Miguel de Oliveira – Federal University of Ceará – Brazil
Dalton A. Honório – Federal University of Ceará – Brazil

iREP:2276
FIVE-LEVEL HYBRID HALF-BRIDGE/ANPC BACK-TO-BACK CONVERTER
Luiz Henrique Silva Colado Barreto – Federal University of Ceará – Brazil
Demercil S. de Oliveira – Federal University of Ceará – Brazil
Paulo P. Praça – Federal University of Ceará – Brazil
Ranoyca Nayana Alencar Leão e Silva – Federal University of Piauí – Brazil
Marcelo Lobo Heldwein – Federal University of Santa Catarina – Brazil

iREP:2205
PARAMETERS DESIGN FOR MODULAR MULTILEVEL CONVERTER (MMC)
Lucas Mondardo Cunico – State University of Santa Catarina – Brazil
Gustavo Lambert – State University of Santa Catarina – Brazil
Rodrigo P. Dacol – State University of Santa Catarina – Brazil
Sérgio Vidal Garcia Oliveira – State University of Santa Catarina – Brazil
Yales Rômulo de Novaes – State University of Santa Catarina – Brazil

Thursday – October 31th 2013 – 08:30 – 10:00

Thursday 31/Oct/2013
Plenary Session P5 (8:30 – 10:00)
Room: Rubi
Photovoltaic Energy Applications: State-of-the-Art and Perspectives
Lecturer: Prof. Roberto Ziles, Ph.D.

Thursday – October 31th 2013 – 10:20 – 12:25

Thursday 31/Oct/2013
Technical Session S73 (10:20 – 12:25)
Room: Esmeralda
Smart Grid and Utility Applications III: Smartgrids

iREP:2199
GRID-TIE THREE-PHASE INVERTER WITH ACTIVE AND REACTIVE POWER FLOW CONTROL CAPABILITY
Leonardo Poltronieri Sampaio – Federal Technological University - Paraná – Brazil
Moacyr Aureliano Gomes de Brito – São Paulo State University – Brazil
Guilherme de Azevedo e Melo – São Paulo State University – Brazil
Carlos Alberto Canesin – São Paulo State University – Brazil

iREP:2328
SMART DISTRIBUTION TRANSFORMER APPLIED TO SMART GRIDS
Josemar de O. Quevedo – Federal University of Santa Maria – Brazil
Julian C. Giacomini – Federal University of Santa Maria – Brazil
Rafael C. Beltrame – Federal University of Santa Maria – Brazil
Fabricio E. Cazakevicius – Federal University of Santa Maria – Brazil
Cassiano Rech – Federal University of Santa Maria – Brazil
Luciano Schuch – Federal University of Santa Maria – Brazil
Tiago B. Marchesan – Federal University of Santa Maria – Brazil
Maurício de Campos – Rio Grande do Sul North-Western Regional University – Brazil
Paulo S. Sausen – Rio Grande do Sul North-Western Regional University – Brazil
Jonatas R. Kinas – Rio Grande do Sul North-Western Regional University – Brazil

iREP:2289
WAVELET-BASED FAULT DETECTION IN GRID-CONNECTED PHOTOVOLTAIC SYSTEMS
R. L. Barreto – Federal University of Rio Grande do Norte – Brazil
F. B. Costa – Federal University of Rio Grande do Norte – Brazil
T. O. A. Rocha – Federal University of Rio Grande do Norte – Brazil
C. M. S. Neto – Federal University of Rio Grande do Norte – Brazil
J. R. V. Lira – Federal University of Rio Grande do Norte – Brazil
R. L. A. Ribeiro – Federal University of Rio Grande do Norte – Brazil

iREP:2365
PERFORMANCE ANALYSIS OF MODULAR CONVERTER FOR SOLID STATE TRANSFORMERS
André Luís Kirsten – Federal University of Santa Maria – Brazil
Theyllor H. de Oliveira – Federal University of Santa Maria – Brazil
João G. P. Roncalio – Federal University of Santa Maria – Brazil
Cassiano Rech – Federal University of Santa Maria – Brazil
Marco A. D. Costa – Federal University of Santa Maria – Brazil

iREP:2206
ANALYSIS OF NON-LINEAR ADAPTIVE VOLTAGE DROOP CONTROL METHOD APPLIED TO A GRID CONNECTED DC MICROGRID
Rodrigo Arruda Felício Ferreira – Federal University of Juiz de Fora – Brazil
Pedro Gomes Barbosa – Federal University of Juiz de Fora – Brazil
André Augusto Ferreira – Federal University of Juiz de Fora – Brazil
Henrique Antonio Carvalho Braga – Federal University of Juiz de Fora – Brazil

Thursday – October 31th 2013 – 08:30 – 10:00

Thursday 31/Oct/2013
Plenary Session P5 (8:30 – 10:00)
Room: Rubi
Photovoltaic Energy Applications: State-of-the-Art and Perspectives
Lecturer: Prof. Roberto Ziles, Ph.D.

Thursday – October 31th 2013 – 10:20 – 12:25

Thursday 31/Oct/2013
Technical Session S68 (10:20 – 12:25)
Room: Topázio
Renewable and Alternative Energy Systems VIII: Modeling and Control

iREP:2173
MODELING AND CONTROL OF AN ETHANOL VARIABLE SPEED GENSET
Jonas Roberto Tibola – Federal University of Santa Maria – Brazil
Alexandre Trevisan Pereira – Federal University of Santa Maria – Brazil
Macklini Dalla Nora – Federal University of Santa Maria – Brazil
Mario Martins – Federal University of Santa Maria – Brazil
Hilton Abílio Gründling – Federal University of Santa Maria – Brazil
Humberto Pinheiro – Federal University of Santa Maria – Brazil

iREP:2388
SYSTEM AND CONTROL METHOD FOR A VARIABLE SPEED GENSET
Alexandre Trevisan Pereira – Federal University of Santa Maria – Brazil
Jonas Roberto Tibola – Federal University of Santa Maria – Brazil
Humberto Pinheiro – Federal University of Santa Maria – Brazil
Hilton Abílio Gründling – Federal University of Santa Maria – Brazil

iREP:2392
ELECTRONIC LOAD CONTROLLER OF A MICRO-HYDRO GENERATOR FOR STAND-ALONE OPERATION
Érika Souza de Melo – Federal University of Itajubá – Brazil
Paulo César Rosa – Federal University of Itajubá – Brazil
Ênio Roberto Ribeiro – Federal University of Itajubá – Brazil

iREP:2184
SYNCHRONIZATION METHOD AND FREQUENCY TRACKING APPLIED ON VOLTAGE CONVERTERS
Celso Becker Tischer – Federal University of Santa Maria – Brazil
Lucas Giuliani Scherer – Federal University of Santa Maria – Brazil
Fábio Cadore Posser – Federal University of Santa Maria – Brazil
Vanessa Furtado de Lima – Federal University of Santa Maria – Brazil
Claiton Moro Franchi – Federal University of Santa Maria – Brazil
Robinson Figueiredo de Camargo – Federal University of Santa Maria – Brazil

iREP:2254
IMPLEMENTATION ASPECTS OF ADAPTIVE WINDOW MOVING AVERAGE FILTER APPLIED TO PLLs – COMPARATIVE STUDY
Rayra Destro – University of São Paulo – Brazil
Lourenco Matakas Junior – University of São Paulo – Brazil
Wilson Komatsu – University of São Paulo – Brazil
Naji Rajai Nasri Ama – University of São Paulo – Brazil

Thursday – October 31th 2013 – 08:30 – 10:00

Thursday 31/Oct/2013
Plenary Session P5 (8:30 – 10:00)
Room: Rubi
Photovoltaic Energy Applications: State-of-the-Art and Perspectives
Lecturer: Prof. Roberto Ziles, Ph.D.

Thursday – October 31th 2013 – 10:20 – 12:25

Thursday 31/Oct/2013
Technical Session S54 (10:20 – 12:25)
Room: Turmalina
Industrial, Commercial and Residential Applications IV: Lighting Applications

iREP:2278
ITERATIVE METHOD FOR ANALYSIS OF DIMMABLE SELF-OSCILLATING ELECTRONIC BALLAST UNDER BUS VOLTAGE CONTROL
M. F. Menke – Universidade Federal de Santa Maria – Brazil
C. S. Guedes – Universidade Federal de Santa Maria – Brazil
W. G. Rosa – Universidade Federal de Santa Maria – Brazil
J. P. Lopes – Universidade Federal de Santa Maria – Brazil
A. R. Seidel – Universidade Federal de Santa Maria – Brazil
M. S. Perdigão – Universidade de Coimbra – Portugal
J. M. Alonso – Universidad de Oviedo – Spain

iREP:2203
HPS LAMP MODELS BEHAVIOR ANALYSIS FOR CONTROLLED THIRD HARMONIC INJECTION OPERATION
Tiago Sá Ferreira – Federal University of Itajubá – Brazil
Lenin Martins Ferreira Morais – Federal University of Minas Gerais – Brazil
Seleme Isaac Seleme Júnior – Federal University of Minas Gerais – Brazil
Pedro Francisco Donoso-Garcia – Federal University of Minas Gerais – Brazil
Porfírio Cabaleiro Cortizo – Federal University of Minas Gerais – Brazil

iREP:2282
VOLTAGE-FREQUENCY CONTROL DIMMING METHOD FOR T5 FLUORESCENT LAMPS
Alysson Raniere Seidel – Universidade Federal de Santa Maria Maria – Brazil
Fábio Ecke Bisogno – Universidade Federal de Santa Maria – Brazil
José Marcos Alonso Álvarez – Universidad de Oviedo – Spain
Victor Hugo Schulz – Universidade de Passo Fundo – Brazil
Mikhail Polonskii – Universidade de Passo Fundo – Brazil

iREP:2180
A PERFORMANCE COMPARISON OF MODELS FOR HPS LAMPS WITH THIRD HARMONIC INJECTION TO AVOID ACOUSTIC RESONANCE
Tiago Sá Ferreira – Federal University of Itajubá – Brazil
Lenin Martins Ferreira Morais – Federal University of Minas Gerais – Brazil
Seleme Isaac Seleme Júnior – Federal University of Minas Gerais – Brazil
Pedro Francisco Donoso-Garcia – Federal University of Minas Gerais – Brazil
Porfírio Cabaleiro Cortizo – Federal University of Minas Gerais – Brazil

iREP:2279
COMPARISON BETWEEN INTEGRATED AND NON-INTEGRATED SEPIC HALF-BRIDGE ELECTRONIC BALLASTS FOR ELECTRODELESS FLUORESCENT LAMP APPLICATIONS
M. E. Schlittler – Federal University of Santa Maria – Brazil
J. Fraytag – Federal University of Santa Maria – Brazil
A. R. Seidel – Federal University of Santa Maria – Brazil
J. M. Alonso – Universidad de Oviedo – Spain
R. N. do Prado – Federal University of Santa Maria – Brazil
N. B. Chagas – Federal University of Santa Maria – Brazil
M. F. da Silva – Federal University of Santa Maria – Brazil