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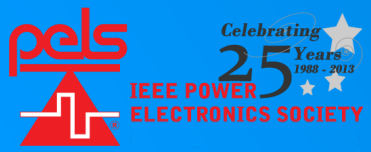
IEEE Power Electronics Society
&
IEEE Industry Applications Society

Awards Ceremony

19 September 2013



Officers of the Power Electronics Society

President - Don Tan
Immediate Past President - Dushan Boroyevich
Senior Past President - Deepak Divan
Treasurer - Jian Sun
VP Meetings - Braham Ferreira
VP Operations - Alan Mantooth
VP Products - Prasad Enjeti
Awards Chair - Andreas Lindemann

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President - Blake Lloyd
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Awards Chair - Mohammad Islam

ECCE 2013 Awards Chair

Emmanuel Agamloh

Master of Ceremonies

Iqbal Husain

PELS Staff

PELS Executive Director - Michael Kelly
Technical Community Program Specialists
Donna Florek
Jo-Ellen Snyder
Michael Markowycz

IAS Staff

Technical Community Program Specialist
Lynda Bernstein

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ECCE 2013 PELS & IAS Student Travel Grant Awardees

PELS and IAS have combined their student reimbursement programs for student members who present a paper at ECCE 2013 in Denver, CO.

Hiroki Takahashi
Aitor Vazquez Ardura
Bin Gu
Cong Zheng
Babak Farhangi
Ajit Anbiah Renjit
Eli Hamo
Alon Cervera
Ke Ma
Doan Bang
Sanna Vesti
Kyung Tae Kim
Luciano Andres Garcia Rodriguez
David Arancibia
Ethan Williams
Ivan David Riano Salamanca
Ricardo Lizana Fuentes
Nicolas P. Muller Pollmann
Krishna Kiran Uppalapati
Luca Tarisciotti
Zhiyuan Hu
Eduardo Burguete
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Andres Escobar
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Andrew Paquette
Kazuhiro Koiwa
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Mehdy Khayamy
Andoni Urtasun

Ernesto Barrios
Kenta Tanaka
Xiaohu Liu
Ana Vidal
Siamak Mehrnami
Yuxiang Shi
Lenos Hadjidemetriou
Haiyu Zhang
Dingguo Lu
Yan Zhou
Tan Ma
Hamid Reza Keyhani
Ali Shojaei
Donghua Pan
Katherine Kim
Saeed Safari
Shibin Qin
Ravindranath Adda
Peng Zhang
Weiqiang Chen
Ye Zhao
Hsin Chih Chen
Mohammad Shadmand
Chia-Hsi Chang
Taesic Kim
Michael Evzelman
Chia Tse Lee
Mingshuo Li
Yongheng yang
Chia Ling Kuo

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Presentation Schedule

- IEEE William E. Newell Power Electronics Award
- IEEE Richard Harold Kaufmann Award
- IEEE Fellows
- IEEE Power Electronics Society Harry A. Owen, Jr. Distinguished Service Award
- Richard M. Bass Outstanding Young Power Electronics Engineer Award
- IEEE Power Electronics Society R. David Middlebrook Achievement Award
- IEEE IAS Industrial Power Conversion Systems Department Gerald Kliman Innovator Award
- IEEE Power Electronics Society Transactions Prize Paper Awards
- IEEE Power Electronics Society Prize Letter Award
- IEEE Power Electronics Society Best Chapter Award

Recognition of Professional Achievement

For nearly a century, the IEEE Awards program has paid tribute to technical professionals whose exceptional achievements and outstanding contributions have made a lasting impact on technology, society and the engineering profession.

That tradition of public recognition continues today. In the 21st century, IEEE Awards are valued as among the highest honors a technical professional can receive. They are an esteemed symbol of the admiration of one's peers—the most prized form of prestige—bestowed upon individuals whose accomplishments have enhanced the global economy while improving the quality of daily life .

Legacy of Innovation

IEEE Awards recognize and encourage important contributions to technology, science and the profession. They honor achievements in education, industry, research and service, and they encompass the breadth of the many IEEE technical interest areas from computer science, electrical engineering, information technologies and microelectronics, to optoelectronics, radar technologies, signal processing and beyond. Each award has its own unique mission and criteria, and offers the opportunity to honor distinguished colleagues, inspiring teachers and corporate leaders.

Through the Awards program, the IEEE, and the societies that preceded it, also have played an important role in encouraging innovation. Individuals honored with IEEE Awards join a remarkable group of such well-known pioneers as Bell, Edison, Marconi, Noyce and Grove—among many others. These individuals, in turn, provide inspiration and personal role models for aspiring professionals.

IEEE Awards Selection Process

Nominations for IEEE awards and recognitions are initiated by the members and others, then reviewed by a panel of peers—professionals who are especially knowledgeable in a particular field. Their recommendations are, in turn, submitted to the IEEE Awards Board for further review prior to final approval by the IEEE Board of Directors. The awards fall into seven categories:

Medals
Honorary Memberships
Service Awards
Corporate Recognitions
Technical Field Awards
Prize Paper Awards
Scholarship Awards

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IAS Distinguished Lecturers

Clark Gellings — Energy Efficiency, Demand Response, Demand Side Management, Demand Side Planning, Renewable Power Generation, Electrification, Power Quality, Smart Grid, Micro-grids, reducing CO2 Emissions

Iqbal Husain — Electric Motor Drives and Power Electronics for Electric/Hybrid Vehicles and Renewable Energy Systems, Power electronics in renewable energy systems, Electric Motor Drives and Power Electronics for More Electric Transportation, Actuators and electromechanical systems in vehicles, Motor driven electromechanical brake systems, Motors and controls for electric power steering, Motor drives for Air conditioning units, Electric machines and drives for electric/hybrid vehicles

John Miller — Wireless Charging of Plug-in Electric Vehicles (PEV's), Electrification of Transportation, Energy Storage Systems

Pankaj K. Sen — Power Systems, Protection and Relaying, Electric Machines, Renewable Energy and Energy Policy, Power Quality, Engineering Education and Arc Flash, and Safety

Pragasen Pillay — Renewable Energy, Biomass power, Osmotic power, Urban wind and solar, Integration of renewable energy sources, Energy storage using flywheels for remote areas , Energy Efficiency— Machine core loss analysis and modeling , Machine rotational core loss measurement

Peter Sutherland — Human Response to Electrical Stimuli, Electrical Arc Flash Hazards - Is your company in compliance?, Harmonics Assessment in Industrial Power Systems

PELS Distinguished Lecturers

Ralph Kennel — Predictive Control—The Powerful Method to Control Power Converters and Drives in the Future, Encoderless Control of AC Drives, Encoders for Simultaneous Sensing of Position and Speed—A Bottleneck in Electrical Drives and Digital Control, Optimizing Electrical Drives with Cascades Control by the Modulus Optimum and/or the Symmetrical Optimum, Hardware-in-the-Loop Systems with Power Electronics— A Powerful Simulation Tool

Johann Kolar — The Essence of Three-Phase Rectifier Systems, The Essence of Three-Phase AC-AC Converter Systems, Pareto-Optimal Design of Airborne Wind Turbine Power Electronics, Performance Trends and Limitations of Power Electronics Systems, Exploring the Pareto-Front of Multi-Objective PWM Converter Design Optimization

Xiangning He — Test and Measurement of Switching Dynamical Characteristics for IGBTs and IGBT Inverters — From Off Line to On Line, High Step-Up (down) and Interleaved DC-DC Converters with Active and Passive Soft-Switching, Multi-level Converter Topologies and PWM Controls

Dragan Maksimovic — Digital Control of High-frequency Switched-mode DC-DC Power Converters, Analog and Digital Control Techniques for Single-Phase Power Factor Correction (PFC) Rectifiers, Averages-Switch Modeling of DC-DC Converters, Current-Model Control, Power Management Techniques for Portable Applications

Seth Sanders — The Road to Integrated Power Conversion via the Switched Capacitor Approach, Digital PWM: Theory and Design for High Frequency Power Conversion Applications, Distributed Solar Thermal Power Generation, Flywheel Energy Storage: The Utility Scale Energy Storage Solution

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IEEE Award Sponsors

IEEE proudly acknowledges the sponsorship of its 2013 awards by some of the world's leading corporations, foundations, and individuals who are interested in the technological disciplines within the scope of interest of IEEE. These sponsors (funders) include:

Bell Labs, Alcatel-Lucent
Brunetti Bequest
The Federation of Electric Power Companies, Japan
Charles LeGeyt Fortescue Graduate Scholarship Fund
The Grainger Foundation
Robert and Ruth Halperin Foundation in Memory of Herman and Edna Halperin
Hitachi Data Systems
IBM Corporation
Intel Foundation
Keithley Instruments, Inc.
KDDI R&D Laboratories, Inc.
Leon K. Kirchmayer Memorial Fund
MathWorks
NEC Corporation
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Dr. Kiyo Tomiyasu
Toyota Motor Corporation
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IEEE Society Sponsors of 2013 Awards

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IEEE Circuits and Systems Society
IEEE Communications Society
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IEEE Control Systems Society
IEEE Education Society
IEEE Electromagnetic Compatibility Society
IEEE Electron Devices Society
IEEE Engineering in Medicine and Biology Society
IEEE Foundation
IEEE Geoscience and Remote Sensing Society
IEEE Industry Applications Society
IEEE Industrial Electronics Society
IEEE Information Theory Society
IEEE Life Members Committee
IEEE Microwave Theory and Techniques Society
IEEE Nuclear and Plasma Sciences Society
IEEE Photonics Society
IEEE Power Electronics Society
IEEE Power & Energy Society
IEEE Robotics and Automation Society
IEEE Signal Processing Society
IEEE Solid-State Circuits Society
IEEE Standards Association
IEEE Technical Activities Board
IEEE Vehicular Technology Society

IEEE William E. Newell Power Electronics Award
Technical Field Award

The William E. Newell Power Electronics Award has been presented annually since 1977 for outstanding achievement in power electronics. Beginning in 2005, the Award was elevated to an IEEE Technical Field Award, sponsored by the Power Electronics Society. It is dedicated to the memory of Dr. William E. Newell of the Westinghouse Research and Development Center in Pittsburgh, Pennsylvania. The awardee has been judged to be outstanding in the multidisciplinary field of power electronics, which crosses the technical boundaries of a number of Societies of the IEEE. The recipient receives a bronze medal, certificate and honorarium. Achievements by which an individual is judged to have made outstanding contributions encompass a broad range of activities and include teaching, innovative research, consulting endeavors, professional seminars, major project or program management, and the general communication and advocacy of power electronics technology to the technical community as a whole. The technical disciplines that encompass the field of power electronics include the analysis, design, development, simulation and application of electronic devices, magnetics, controls and power circuits for inverters, converters and motor drives ranging in power level from fractions of a watt to megawatts.

Past Recipients:

2012— Leo Lorenz
2011— Praveen Jain
2010— Akio Nakagawa
2009— Tadashi Fukao
2008— István Nagy
2007— Dushan Boroyevich
2006— Deepakraj M. Divan
2005— Bimal K. Bose
2004— M. Azizur Rahman
2003— Philip T. Krein
2002— Emanuel E. Landsman
2001— Hirofumi Akagi
2000— Luigi F. Malesani
1999— Thomas M. Jahns
1998— Joachim Holtz
1997— Pierre A. Thollot
1996— Akira Nabae
1995— J. Daan van Wyk
1994— Laszlo Gyugyi
1993— Robert L. Steigerwald
1992— Werner Leonhard
1991— B. Jayant Baliga
1990— Thomas A. Lipo
1989— Fred C. Lee
1988— Koosuke Harada
1987— John G. Kassakian
1986— Philip L. Hower
1985— Klemens Heumann
1984— Loren F. Stringer
1983— Francisc C. Schwarz
1982— R. David Middlebrook
1981— Thomas G. Wilson Sr.
1980— Alexander Kusko
1979— Sashi B. Dewan
1978— William McMurray
1977— Richard G. Hoft

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IEEE International Future Energy Challenge

Topic (B) Low power off-line light-emitting diode (LED) driver with long lifetime:

Grand Prize Best Efficiency Award
Zhejiang University
Dr. Xinke Wu

Best Engineering Achievement Award
Best Innovative Design Award
National Cheng-Kung University
Prof Tsorng-Juu (Peter) Liang

Best Engineering Design Award
North China University of Technology
Advisor: Prof Weiping Zhang

Best Control Implementation
Nanjing University of Aeronautics and Astronautics
Advisor: Prof Xinbo Ruan

Best Educational Impact Award
Bangladesh University of Engineering and Technology
Prof. Md. Ziaur Rahman Khan

Best Educational Impact Award
National Institute of Technology Karnataka, Surathkal
Dr. Ramesh Kini M

IEEE International Future Energy Challenge

Sponsored by:
IEEE Power Electronics Society
IEEE Industry Applications Society
IEEE Industrial Electronics Society
IEEE Power & Energy Society
Power Sources Manufacturers Association (PSMA)

Topic (A) Highly efficient microinverter for photovoltaic panels:

Grand Prize and Best Efficiency
National Taiwan University of Science and Technology
Advisor: Prof. Chiu

Best Engineering Achievement
Nanjing University of Aeronautics and Astronautics
Advisor: Haibing Hu

Best Innovative Design
University of Kassel
Advisor: Christian Felgemacher

Best Control Implementation
Cologne University of Applied Sciences
Advisor: Christian Dick

Best Presentation
Beijing Jiaotong University
Advisor: Prof. Yan Li

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IEEE William E. Newell Power Electronics Award Recipient Rik De Doncker

"For contributions to the development of new components, topologies and controls in power electronic systems"

Rik W. De Doncker is a power electronics expert whose contributions to energy-efficient conversion and drive technologies have impacted applications ranging from electric vehicles to space stations to advancing development of the electronically controlled power grid. Dr. De Doncker's innovations have propelled advancements in power electronics and electric drives, resulting in improved energy efficiency and reliability. With more than 40 patents, he has earned worldwide recognition for his converter devices and topologies, which are being applied in electric vehicles and direct-current medium-voltage systems for transportation, industrial applications and renewable energy systems such as offshore wind farms. At KULeuven, Belgium, he was one of the first to implement digital signal processors and fast gate arrays in dynamic adjustable speed drives and inverter controls, which is a standard concept in today's inverter drives. He also co-developed at Silicon Power Corporation, Malvern, PA, the first medium-voltage static transfer switch, which has been deployed in the United States to help keep electricity flowing during power grid sags. An IEEE Fellow, Past-president of the IEEE Power Electronics Society and Founding Chair of the IEEE German Joint IAS-PELS-IES Chapter, Dr. De Doncker is a professor and head of the Institute for Power Electronics and Electrical Drives and director of the E. ON Energy Research Center at RWTH Aachen University, Germany, and an Honorary Doctor and professor of the Faculty for Electrical Engineering and Information Technology at Riga Technical University, Latvia.

IEEE Richard Harold Kaufmann Technical Field Award

The IEEE Richard Harold Kaufmann Award was established by the IEEE Board of Directors in 1986 for outstanding contributions in industrial systems engineering. The Award is named in honor of Richard Harold Kaufmann in memory of his many important contributions to industrial systems engineering and his dedicated service to the IEEE Industry Applications Society.

Sponsored by the IEEE Industry Applications Society, the award consists of a bronze medal, certificate and honorarium.

Past Recipients:

2012 - John P. Nelson
2011 - David D. Shipp
2010 - Gerald T. Heydt
2009 - Ronald G. Harley
2008 - Hirofumi Akagi
2007 - Md. Azizur Rahman
2006 - George Younkin
2005 — A.P. Meliopoulos
2004 — Richard L. Nailen
2003 — Edward LaVerne Owen
2002 — H. Landis Floyd, II
2001 — Louie J. Powell
2000 — Alton Dewitt Patton
1999 — Baldwin Bridger, Jr.
1998 — James A. Oliver
1997 — Thomas E. Sparling
1996 — Marcus O. Durham
1995 — M. Shan Griffith
1994 — Daniel J. Love
1993 — George W. Walsh
1992 — Kao Chen
1991 — John R. Dunki-Jacobs
1990 — Ren Castenschiold
1989 — Bernard W. Whittington
1988 — Walter C. Huening, Jr.

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IEEE IAS Industrial Power Conversion Systems Department Prize Paper Awards (continued)

Transportation Systems Committee

First Prize
"A Hybrid Switch Based Soft-Switching Inverter for Ultrahigh Efficiency Traction Motor Drives"
Authors: Jih-Sheng Lai[1], Wensong Yu[1], Pengwei Sun[1], Scott Leslie[2], Beat Arnett[3], Chris Smith[3], Art Cogan[3]
(1) Virginia Polytechnic Institute and State University, Blacksburg, VA, 24061-0356, USA
(2) Powerex, Youngwood, PA 15697, USA
(3) Azure Dynamics, Woburn, MA 01890, USA
Corresponding Author: Jih-Sheng Lai

Second Prize
"Design and Performance of Electrical Propulsion System of Extended Range Electric Vehicle (EREV) Chevrolet Voltec"
Authors: Khwaja Rahman, Sinisa Jurkovic, Constantin Stancu, John Morgante, Peter Savagian
General Motors Global Electrification, Pontiac, MI, USA
Corresponding Author: Khwaja Rahman

Third Prize
"Development and Experimental Characterization of a Multiple Isolated Flux Path Reluctance Machine"
Authors: Tim Burress, Curt Ayers
Oak Ridge National Laboratory, Oak Ridge, TN
Corresponding Author: Tim Burress

IEEE IAS Industrial Power Conversion Systems Department Prize Paper Awards (continued)

Renewable and Sustainable Energy Conversion Systems Committee

First Prize
"Current-Based Diagnosis for Gear Tooth Breaks in Wind Turbine Gearboxes"
Authors: Dingguo Lu, Xiang Gong, and Wei Qiao, University of Nebraska – Lincoln, USA

Second Prize
"Design and Implementation of Grid Connection Photovoltaic Micro Inverter"
Authors: Wei-Fu Lai, Shih-Ming Chen, Tsorng-Juu Liang, Kuan-Wen Lee, and Adrian Ioinovici National Cheng-Kung University, Taiwan and Sun Yat-sen University, China

Third Prize
"DC Distribution System Architecture and Controls for Wind Power Applications"
Authors: Yogesh Patel and Adel Nasiri, University of Wisconsin – Milwaukee, USA

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IEEE Richard Harold Kaufmann Award Recipient
Kaushik Rajashekara

"For contributions to the advancement of electrical systems in transportation for higher efficiency and lower emissions"

Kaushik Rajashekara is an engineer whose contributions to the electrification of transportation have improved fuel efficiency and reduced emissions for automobiles, aircraft and marine vessels. He is internationally known for his power conversion innovations in electric, hybrid electric and fuel cell vehicle propulsion systems for improved fuel efficiency and reduced emissions in automobiles, electric engine/aircraft systems and marine systems. Credited with many firsts in the field, he has worked extensively on the innovative strategies, architectures and implementation techniques for on-board electric power generation in airplanes, including solid oxide fuel cell /gas turbine hybrid systems, to reduce fuel consumption and thus increase overall efficiency and lower emissions. Dr. Rajashekara also established strategies for controlling the proton exchange membrane fuel cell stack power and relating the stack current and the hydrogen input in fuel cell vehicles, for which he was awarded several patents. An IEEE Fellow and member of the U.S. National Academy of Engineering, Dr. Rajashekara is a Distinguished Professor of Electrical Engineering and Endowed Chair with the University of Texas at Dallas Erik Jonsson School of Engineering & Computer Science.

IEEE Fellows Elevated as of January 2013

IEEE Fellow is the highest grade of Institute membership, conferred only by election by the Board of Directors. Candidates must be senior members with at least five years of IEEE membership. The nominator is responsible for preparation of the formal nomination form; identification of five to eight IEEE Fellows, capable of assessing the candidate's contributions, who agree to serve as references; identification of an IEEE Society or Council whose evaluating committee will assess the candidate's technical qualifications and contributions. All material is sent to the Fellow Committee, which must review all nominations and assessments, and prepare a ranked list. The total number of Fellow recommendations each year cannot exceed 0.1% of IEEE membership, exclusive of Students and Associates.

Accepted at APEC 2013
Fellows Elevated by PELS 2013

Cian Mathuna
Tyndall National Institute
University College Cork

for leadership in the development of power supply using micromagnetics on silicon

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IEEE IAS Industrial Power Conversion Systems Department Prize Paper Awards

Industrial Drives Committee

First Prize
"Model Predictive Pulse Pattern Control for the Five-Level Active Neutral Point Clamped Inverter"
Authors: Nikolaos Oikonomou, Christof Gutscher, Petros Karamanakos, Frederick D. Kieferndorf, Tobias Geyer

Second Prize
"Sensorless control of doubly-fed induction generators based on rotor high frequency signal injection"
Authors: Diaz David Reigosa, Fernando Briz, Charro Cristian Blanco, Antonio Di Gioia, Pablo Garcia-Fernandez, Juan M. Guerrero

Third Prize
"Control Method of Calculating Optimum DC Bus Voltage to Improve Drive System Efficiency in Variable DC Bus Drive System"
Authors: Chen-Yen Yu, Jun Tamura, Robert Lorenz

Industrial Power Converter Committee

First Prize: 2012-IPCC-459
"Startup and Low-Speed Operation of an Electric Motor Driven by a Modular Multilevel Cascade Inverter (MMCI)"
Authors: M. Hagiwara, I. Hasegawa, and H. Akagi

Second Prize: 2012-IPCC-506
"Design and Performance of an All-SiC Three-Phase Buck Rectifier for High Efficiency Data Center Power Supplies"
Authors: F. Xu, B. Guo, L. M. Tolbert, F. Wang, and B. J. Blalock

Third Prize: 2012-IPCC-463
"Regions of Active Damping Control for LCL Filters"
Authors: S. G. Parker, B. P. McGrath, and D. G. Holmes

IEEE IAS Industrial Power Conversion Systems Department Prize Paper Awards

Electric Machines Committee

First Prize
"Optimum Design and Technology Evaluation of Slip Permanent Magnet Generators for Wind Energy Applications"
Authors: Johannes Potgieter and Maarten Kamper, Stellenbosch University - South Africa.

Second Prize
"Design of Fractional-Slot Low Torque Ripple Interior Permanent Magnet Motor"
Authors: Massimo Barcaro, Luigi Alberti and Nicola Bianchi, University of Padova – Italy.

Third Prize
"Calculation of Magnet Losses in Concentrated-Winding Permanent Magnet Synchronous Machines Using a Computationally Efficient - Finite Element Method"
Authors: Peng Zhang, Gennadi Sizov, Jinagbiao He, Dan Ionel and Nabeel Demerdash, Marquette University – USA.

Transactions Paper Award Nomination

"Detection and Classification of Rotor Demagnetization and Eccentricity Faults for PM Synchronous Motors"
IEEE Transactions on Industry Applications, Volume: 48 , Issue: 3, 2012 , Page(s): 923 – 932.
Authors: Jongman Hong; Sanguk Park; Doosoo Hyun; Tae-june Kang; Sang Bin Lee; Kral, C.; Haumer, A.

"Advanced Maintenance of Rail Traction Motors Using a Magnetic Leakage Flux Technique"
IEEE Transactions on Industry Applications, Volume: 48 , Issue: 3, 2012 , Page(s): 942 – 951.
Authors: Sancho, C.; Gomez-Parra, M.; Munoz-Condes, P.; San Andres, M.A.G.; Gonzalez-Fernandez, F.J.; Carpio, J.; Guirado, R

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Accepting at ECCE 2013
Fellows Elevated by PELS 2013

Ali Emadi
McMaster University

for contributions to electric power conversion and control for electric and hybrid vehicles

David Perreault
Massachusetts Institute of Technology

for contributions to design and application of very high frequency power electronic converters

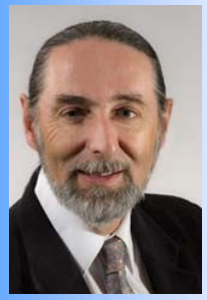
Dehong Xu
Zhejiang University
College of Electrical Engineering

for contributions to power electronic applications to renewable energy systems

Accepting at ECCE 2013
Fellows Elevated by PELS 2013 *(continued)*

Yan-Fei Liu
Queens University

for contributions to digital control techniques of power electronics converters



Donald Grahame Holmes
Royal Melbourne Institute of Technology Univ. MIT University

for contributions to the modulation and control of solid-state power electronic conversion equipment

Leon Tolbert
The University of Tennessee

for contributions to multilevel power electronic converter technology

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2013 PELS Best Chapter Award

The Power Electronics Society Best Chapter Award was established in 2001 to recognize excellent service by a PELS Chapter to its members and to the power electronics community. The award consists of a certificate that includes the names of the Chapter chair, secretary and treasurer, and a monetary award of $1,500. The Chapter may use the monetary award to support its activities, including expenses for a Chapter representative to attend the Awards Ceremony.

IEEE PELS Chapter Development Chair
Vladimir Katic

This year the Best Chapter Award goes to:
Delhi Section (India)
Joint Chapter PELS/IES

Chair: Dr. Prerna Gaur, NSIT-Delhi

Best Chapter Award Past Recipients

2012 — Argentina Section Joint Chapter
2011 — Joint Delhi Section Chapter PEL/ IE
2010 — University of Illinois at Urbana-Champaign
2009 — Denmark Chapter
2008 — Germany Joint IAS/PELS/IES Chapter, Munich, Germany
2007 — Denver Chapter, Denver Colorado, USA
2006 — Not Awarded
2005 — United Kingdom-Republic of Ireland PELS Chapter
2004 — Brazil North-East, Bahia Section, Joint PELS/IAS/PES Chapter
2003 — Hong Kong Joint PELS/PES/IES/IAS Chapter, Hong Kong
2002 — German Joint IAS/IES/PELS Chapter, Munich, Germany
2001 — Russian Joint PELS/IES/PES Chapter, Moscow, Russia
2000 — Morelos Section PELS Chapter, Cuernavaca, Mexico

IEEE Power Electronics Society Prize Letter Award

Beginning in 2007, the Letters Editor and Associate Editors of the IEEE Transactions on Power Electronics recognize one paper deemed best among those published in the Transactions during the preceding calendar year. The established Transactions review criteria is used as the basis for the Prize Letter selection. Specific emphasis is placed on originality; contribution to the field; extent to which the paper is supported by analysis and experimental evidence; and the quality of presentation, including the effective use of illustrations. A particular emphasis is placed on contributions with high value for rapid publication. In addition to a certificate presented to each author, an award of $300 is shared equally among the paper's authors.

Power Electronics Society
Prize Letter Award Recipients

Multilevel-clamped multilevel converters (MCL^2)

vol. 27, no. 3, pp. 1055-1060, March 2012

Rodriguez, P; Bellar, M. D.; Munoz-Aguilar R. S.; Busquets-Monge, S; Blaabjerg, F;

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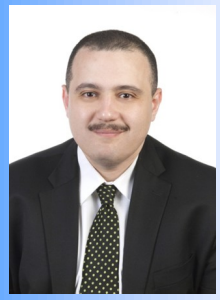
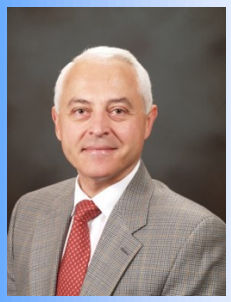
Accepting at ECCE 2013
Fellows Elevated by IAS 2013



Ayman El-Refaie
GE Global Research Center

for contributions to high-speed permanent magnet machines for transportation and aerospace systems



Dan Ionel
Vestas Wind Turbines R&D

for contributions to the analysis, design and manufacturing of high efficiency electric machines

IAS 2013 Fellows Accepting at Other Venues

Ahmed Elantably

for contributions to AC machinery for electrical traction

Sreenivasa Murthy

for contributions to self-excited induction generators and renewable energy applications

IEEE PELS R. David Middlebrook Achievement Award

The IEEE PELS R. David Middlebrook Achievement Award was established in 2011 to honor innovators in the field of power electronics.

This award is dedicated to the memory of Dr. R. David Middlebrook, Emeritus Professor, California Institute of Technology, Pasadena, California, He is regarded as one of the founders of the field of power electronics. He developed the averaged-switch method of analysis and other tools crucial to modern power electronics design. He was highly regarded both as a researcher and a teacher. He founded the Power Electronics Group at Caltech. Dr. Middlebrook was a Life Fellow of the IEEE, and a Fellow of the IEE (UK)

The award is presented to an individual who has given outstanding contributions to the technical field of power electronics, within one or more subfields such as modeling and control, design-oriented analysis, development, simulation and application of electronic devices, passive components, analog sensing, and power circuits for inverters, converters and motor drives in all power levels.

The prize consists of a bronze medal, a certificate, an honorarium of $5,000 and complimentary registration to attend the conference to accept the award. The award may recognize a single significant contribution such as a seminal paper or analysis method, or a series of accomplishments that together represent outstanding technical contribution.

Past Recipients

2012— Prasad Enjeti

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IEEE Transactions on Power Electronics Second Prize Paper Award Recipients

A Stationary Reference Frame Grid Synchronization System for Three-Phase Grid-Connected Power Converters Under Adverse Grid Conditions
vol.27,no.1, pp.99-112, Jan. 2012
Rodríguez, P.; Luna, A.; Muñoz-Aguilar, R.; Etxeberria-Otadui, I.; Teodorescu, R.; Blaabjerg, F.

Closed Form Solution for Minimum Conduction Loss Modulation of DAB Converters
vol.27, no.1, pp.174-188, Jan. 2012
Krismer, F.; Kolar, J.W.

High-Frequency Resonant SEPIC Converter With Wide Input and Output Voltage Ranges
vol.27, no.1, pp.189-200, Jan. 2012
Hu, J.; Sagneri, A. D.; Rivas, J. M.; Han, Y.; Davis, S. M.; Perreault, D. J.

Single-Stage, Universal-Input AC/DC LED Driver With Current-Controlled Variable PFC Boost Inductor
vol.27, no.3, pp.1579-1588, March 2012
Yuequan Hu; Huber, L.; Jovanovic, M.M.

Unified Three-Terminal Switch Model for Current Mode Controls
vol.27, no.9, pp.4060-4070, Sep. 2012
Yan, Y.; Lee, F.C.; Mattavelli, P.

IEEE Power Electronics Society Transactions Prize Paper Award

Each year, the Editor and Associate Editors of the IEEE Transactions on Power Electronics recognize the three papers deemed best among those published in the Transactions during the preceding calendar year. The established Transactions review criteria are used as the basis for the Prize Paper selection. Specific emphasis is placed on originality; contribution to the field; extent to which the paper is supported by analysis and experimental evidence; and quality of presentation, including the effective use of illustrations. In addition to a certificate presented to each author, an award of $500 or $300 is shared equally among the first or second prize papers' authors respectively. Three Papers have won this prestigious award this year.

IEEE Transactions on Power Electronics
First Paper Award Recipients

Evaluation of Magnetic Materials for Very High Frequency Power Applications
vol.27, no.1, pp.425-435, Jan. 2012
Han, Y.; Cheung, G.; Li, A.; Sullivan, C.R.; Perrault, D.J.
.

Towards a 99% Efficient Three-Phase Buck-Type PFC Rectifier for 400-V DC Distribution Systems
Vol.27, no.4, pp.1732-1744, April 2012
Stupar, A.; Friedli, T.; Minibock, J.; Kolar, J.W.

Active-Power Control of Individual Converter Cells for a Battery Energy Storage System Based on a Multilevel Cascade PWM Converter
vol.27, no.3, pp.1099-1107, March 2012
Maharjan, L.; Yamagishi, T.; Akagi, H.

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IEEE PELS R. David Middlebrook Achievement Award Recipient William Gerard Hurley

William Gerard Hurley (M'77-SM'90-F'07) received the B.E. degree in Electrical Engineering from University College, Cork in 1974, the M.S. degree in Electrical Engineering from the Massachusetts Institute of Technology, Cambridge MA, in 1976 and the PhD degree at the National University of Ireland, Galway in 1988. He was awarded the D.ENG degree for his published work by the National University of Ireland in 2011. He worked for Honeywell Controls in Canada from 1977 to 1979. He worked for Ontario Hydro from 1979 to 1983. He lectured in electronic engineering at the University of Limerick, Ireland from 1983 to 1991 and is currently professor of Electrical Engineering at the National University of Ireland, Galway. He is the Director of the Power Electronics Research Centre there. He served on the faculty at the Massachusetts Institute of Technology as a Visiting Professor of Electrical Engineering in 1997/1998. Prof. Hurley has given keynote speeches and invited presentations on high frequency magnetics in Mexico, Japan, Singapore, Spain, Czech Republic, Hong Kong, China, Australia and the U.S.A. Research interests include high frequency magnetics and renewable energy systems. He received a Best Paper Prize for the IEEE Transactions on Power Electronics in 2000. Prof. Hurley is a Fellow of the IEEE. He has served as a member of the Administrative Committee of the Power Electronics Society of the IEEE and was General Chair of the Power Electronics Specialists Conference in 2000. Professor Hurley is a co-author of "Transformers and Inductors for Power Electronics, Theory, Design and Applications".

IEEE PELS Harry A. Owen, Jr. Distinguished Service Award

The Distinguished Service Award was established in 1996 to honor long and distinguished service to the welfare of the Power Electronics Society at an exceptional level of dedication and achievement. The prize consists of an engraved plaque and a cash award of $3,500.

All members of the Power Electronics Society are eligible. Achievements by which an individual is judged to have made outstanding contributions to the Power Electronics Society encompass a broad range of activities over a substantial time period including, but not limited to, creative and invigorating leadership of the Society; exceptional administrative and managerial accomplishments on behalf of the Society; identification of new technologies within the scope of the Society, and nurturing activities to support these emerging technologies; initiation of innovative programs to encourage wider participation in the full spectrum of Society activities; and the general communication and advocacy of power electronics technology to the technical community as a whole.

Past Recipients:

2012—Thomas Habetler
2011— No Award
2010— John M. Miller
2009— Frede Blaabjerg
2008— Phillip T. Krein
2007— Thomas M. Jahns
2006— Jacobus Daniel van Wyk
2005— Christopher O. Riddleberger
2004— Arthur W. Kelley
2003— Koosuke Harada
2002— Robert V. White
2001— William M. Portnoy
2000— Richard G. Hoft
1999— Thomas G. Wilson, Sr.
1998— John G. Kassakin
1997— Harry A. Owen, Jr.

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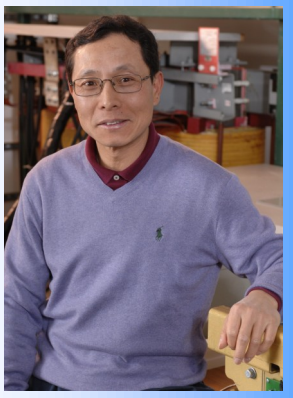
IEEE IAS Industrial Power Conversion Systems Department Gerald Kliman Innovator Award Recipient Fang Z. Peng



"For contributions to multilevel converter/ inverter topologies and innovative enabling technology to flexible AC transmission systems (FACTS)"

Fang Z. Peng published the very first paper on multilevel inverters for static synchronous compensator (STATCOM) in Japan in 1992. In 1994, he filed very first patent on a STATCOM or static var generator (SVG) using Y- and Delta-connected cascade multilevel inverters (CMIs) and published the very first paper applying both CMIs to flexible ac transmission system (FACTS) in 1996. For this innovative technology (STATCOM based on Y- and Delta-connected CMIs), a U.S. patent (# 5,642,275) was issued to Dr. Peng. Currently, many CMI-based STATCOMs have been installed around the world. In China alone, there are more than 500 CMI-based STATCOM installations ranging from ±10 Mvar to ±200 Mvar. The total installation of CMIs has exceeded 20 GVA (or 20,000 MVA). Moreover, Dr. Peng has provided substantial technical support/leadership for the initial development/commercialization of this technology in China. More recently, Dr. Peng has invented a transformer-less unified power flow controller (UPFC) based on CMIs. For the first time, transformer-less FACTS devices (such as STATCOM, power line conditioner, and UPFC) could be implemented by inverters without using any transformers to reach utility-scale voltage levels and power ratings. Dr. Peng holds 15 patents and 3 pending. He has published over 350 papers. His citation record is among the top in the field with Google Scholar H-index 59, i10-index 179 and total citations 17,355 as of May 2013. Dr. Peng has the following profile in the ranking Microsoft Academic: Hirsch Factor: 37; 355 papers; 7,275 citations; ranked N° 20 out of 2,569,776 engineering authors.

IEEE IAS Industrial Power Conversion Systems Department Gerald Kliman Innovator Award

The IEEE IAS Industrial Power Conversion Systems Department Gerald Kliman Innovator Award was established in 2005 to honor innovators who contributed to the technical areas of this department. The award may be presented annually to an individual for meritorious contributions to the advancement of power conversion technologies through innovations and their application to industry. The technical field for this award includes, but is not limited to Electrical Machines, Electrical Drives, Power Electronic Systems and Power Electronic Devices. This Award is named in honor of Dr. Gerald Kliman, in memory of his many contributions and innovations to these technical areas.

Past Recipients:

2012 — Thomas Habetler

2011 — Leo Lorenz

2010 — William A. Peterson

2009 — John Miller

2008 — Ira J. Pitel

2007 — Bruno Lequesne

2006 — Kaushik Rajashekara

2005 — Russel J. Kerkman

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IEEE PELS Harry A. Owen, Jr. Distinguished Service Award Recipient Ralph Kennel

(presented at EPE'13 ECCE Europe)

"For dedicated services to IEEE PELS conferences, workshops and chapter activities around the globe"

Ralph M. Kennel was born in 1955 at Kaiserslautern (Germany). In 1979 he got his diploma degree and in 1984 his Dr.-Ing. (Ph.D.) degree from the University of Kaiserslautern. From 1983 to 1999 he worked on several positions with Robert BOSCH GmbH (Germany). Until 1997 he was responsible for the development of servo drives. Dr. Kennel was one of the main supporters of VECON and SERCOS interface, two multi-company development projects for a microcontroller and a digital interface especially dedicated to servo drives. Furthermore he took actively part in the definition and release of new standards with respect to CE marking for servo drives. Between 1997 and 1999 Dr. Kennel was responsible for "Advanced and Product Development of Fractional Horsepower Motors" in automotive applications. His main activity was preparing the introduction of brushless drive concepts to the automotive market. From 1994 to 1999 Dr. Kennel was appointed Visiting Professor at the University of Newcastle-upon-Tyne (England, UK). From 1999 - 2008 he was Professor for Electrical Machines and Drives at Wuppertal University (Germany). Since 2008 he is Professor for Electrical Drive systems and Power Electronics at Technische Universitaet Muenchen (Germany). His main interests today are: Sensorless control of AC drives, predictive control of power electronics and Hardware-in-the-Loop systems.

Richard M. Bass Outstanding Young Power Electronics Engineer Award

The Richard M. Bass Outstanding Young Power Electronics Engineer Award recognizes outstanding achievement in the field of power electronics by an engineer less that 35 years of age. Since 1999, it is dedicated to the memory of Richard M. Bass of the Georgia Institute of Technology in Atlanta, GA, USA. The prize consists of a certificate, a cash award of $1,500, and reimbursement for transportation expenses up to $500 to attend the annual PELS Awards Ceremony. All IEEE members of any grade, active in the field of power electronics and less than 35 years of age on January 1 of the year of the award, are eligible. Candidates are judged for outstanding contributions encompassing a broad range of technical activities including research, innovative product design and application, teaching, and project leadership. The technical disciplines in the field of power electronics include the analysis, design, development, simulation and practical application of electronic devices, magnetics, controls and power circuits for inverters, converters and motor drives ranging in power level from fractions of a watt to megawatts.

Past Recipients:

2012—Samir Kouro
2011— Jin Wang
2010— Maryam Saeedifard
2009— Rangarajan Tallam
2008— Regan Zane
2007— Christian Klumpner
2006— Patrick Chapman
2005— Ali Emadi
2003— Babak Fahimi
2002— Pallab Midya
2001— David J. Perreault
2000— José A. Cobos
1999— Steven B. Leeb
1998— Frede Blaabjerg
1997— Vlatko Vlatkovic

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Richard M. Bass Outstanding Young Power Electronics Engineer Award Recipient Yunwei (Ryan) Li

"For contributions to control of power electronics in renewable energy systems, microgrids and electric drives."

Yunwei (Ryan) Li received his B.Sc. in Engineering degree from Tianjin University, China, in 2002, and the Ph.D. degree from Nanyang Technological University, Singapore, in 2006. .

In 2005, Dr. Li was a Visiting Scholar with Aalborg University, Denmark. From 2006 to 2007, he was a Postdoctoral Research Fellow at Ryerson University, Canada. In 2007, he worked at Rockwell Automation Canada on the high power motor drive projects and later joined the Department of Electrical and Computer Engineering, University of Alberta, Canada in the same year. Dr. Li is currently an Associate Professor at University of Alberta. His research interests include integration of renewable energy, microgrid, high power converters and electric motor drives. Dr. Li holds one US patent and published around 100 peer-reviewed papers including 45 IEEE Transactions papers as of 2013. Dr. Li is a Professional Engineer with Alberta Canada. He serves as an Associate Editor for IEEE Transactions on Industrial Electronics (TIE) and a Guest Editor for the IEEE TIE Special Session on Distributed Generation and Microgrids.