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PELS And IAS Recognize Contributions To Their Fields At ECCE 2023 Awards Ceremony

by David G. Morrison, Editor, How2Power.com

Every year at the IEEE Energy Conversion Congress and Expo (ECCE), the IEEE Power Electronics Society (PELS) and IEEE Industrial Application Society (IAS) host an awards luncheon in which they recognize the technical, educational and service contributions of many lifelong contributors to their fields as well as those of young professionals with significant achievements. In addition to giving out the major annual awards at this ceremony, the ceremony recognizes IEEE Fellows recently elevated by PELS and IAS. This article lists the honorees from the Awards Ceremony held on November 2, 2023 in Nashville.

Among the notable award winners in power electronics this year were Dragan Maksimovic, winner of the IEEE William E. Newell Power Electronics Award; Marco Liserre, who received the IEEE PELS R. David Middlebrook Achievement Award; Alan Mantooth, the IEEE PELS Harry A. Owen, Jr. Distinguished Service Award Recipient; Shinzo Tamai, winner of the IEEE McMurray Award for Industry Achievements in Power Electronics; Jacobus D. VanWyk, recipient of the IEEE PELS Award for Achievements in Power Electronics Education; Minjie Chen, the IEEE PELS Richard M. Bass Outstanding Young Power Electronics Engineer Award Recipient; and Harish Sarma Krishnamoorthy, winner of the IEEE PELS Young Professional Exceptional Service Award.

Additionally, among the many impressive award winners recognized by the IAS, one that stood out to me was Daleep Mohla, who received the IEEE IAS Distinguished Service Award for his many years of work in the area of electrical safety.

The following is a list of the award recipients and newly elevated IEEE Fellows. In most cases these include short descriptions of the honorees' contributions. In the case of the PELS awards and some IAS awards, I have included excerpts from the program that provide additional information on the honorees. This year's awards ceremony was chaired by Fang Luo and Mahima Gupta.

IEEE Richard Kaufmann Award (Sponsored by IAS)

Ewald F. Fuchs

"For contributions to power quality in power system operation, electric machines, renewable energy, and drives."

IEEE Richard Harold Kaufmann Award

Sponsored by the IEEE Industry Applications Society



Ewald F. Fuchs

For contributions to power quality in power system operation, electric machines, renewable energy, and drives.

The fundamental contributions made by Ewald Fuchs to power systems are enjoyed today by people around the world. Three and half decades ago, a considerable amount of power electronics-based loads began emerging in power systems, which caused power-quality issues that the industry could not fully understand. Fuchs and his team's groundbreaking work enabled utilities to solve it. Early on, Fuchs also investigated the automatic paralleling of two power systems. The approaches he developed are now required for the combined or separate operation of main and microgrids to ensure reliable power operation especially when snow, ice storms, or floods paralyze the power system.

An IEEE Life Fellow, Fuchs is a professor emeritus of electrical, computer, and energy engineering, at the University of Colorado at Boulder, Boulder, Colorado, USA.

IEEE Willam E. Newell Power Electronics Award (Sponsored by PELS)

Dragan Maksimovic

“For contributions to digital control, modeling, and topologies of switched-mode power supplies.”

**IEEE William E. Newell
Power Electronics Award**

Sponsored by the IEEE Power Electronics Society



Dragan Maksimovic

For contributions to digital control, modeling, and topologies of switched-mode power supplies.

Dragan Maksimovic has made numerous fundamental contributions to power electronics, particularly in the practical implementation of digital control for switched-mode power supplies. His work on mixed-signal power ICs laid the foundation for a new paradigm in power supply control and enabled many new applications. The technologies he developed brought digital control into the mainstream of the switched-mode power supply industry and, today, his developments have influenced mobile devices and data centers. His work in the converter topologies and control area includes the synthesis of new DC-DC and AC-DC converter topologies, nonlinear carrier control of PFC rectifiers, and small-signal modeling of the discontinuous conduction mode.

An IEEE Fellow, Maksimovic is the Charles V. Schelke Endowed Professor in the Department of Electrical, Computer, and Energy Engineering, University of Colorado, Boulder, Colorado, USA.

IEEE Fellows Elevated as of January 2023

IEEE Fellows Elevated of IAS & PELS

Bilal Akin

““For contributions to control, diagnosis and condition monitoring of AC Drives”

Ali Davoudi

“For contributions to power-electronic dominant microgrid control”

Fei Gao

“For contributions to real-time simulation and control techniques for fuel cells and power converters”

Marko Hinkkanen

“For contributions to sensorless control of industrial motor drives”

Zhigang Liu

"For contributions to fault detection and protection in high-speed railway power systems"

Chengxiong Mao

"For leadership in active control of power systems and its industrial applications"

Kashem Muttaqi

"For contributions to modeling and control of renewable and distributed energy resources"

Munaf Rahimo

"For contributions to high-voltage insulated gate bipolar transistors for grid applications"

Jean-Luc Schanen

"For contributions to Electromagnetic Compatibility in Power Electronics"

Yilmaz Sozer

"For contributions to the design and control of electric machine drives"

Xiongfei Wang

"For contributions to power-electronic-based power systems"

Chenghui Zhang

"For contributions to control of renewable energy systems"

IEEE Fellows Elevated of PELS

Stanley Atcitty

"For leadership in advancing power conversion systems for grid energy storage applications"

Hassan Bevrani

"For contributions to microgrid control"

Yong Kang

"For contributions to digital control of inverters and renewable power conversion systems"

Ashraf Lotfi

"For pioneer contributions in developing and commercializing high-density 3-dimensional integrated power electronics modules"

Marta Molinas

"For contributions to modeling and stability of power electronics"

Tomonobu Senjyu

"For contributions to wind-power generator automation and control"

Dmitri Vinnikov

"For contributions to impedance-source converter design"

IEEE Fellows Elevated of IAS

Masaaki Okubo

“For contributions to non-thermal plasma applications for pollution control”

Mingzhou Xu

“For contributions to power systems of all-electric aircraft”

IEEE IAS Outstanding Achievement Award Recipient

Shesha H. Jayaram

“Jayaram has made significant contributions to the applications of high voltage engineering and the integrity of electrical insulation in power grids.”

IEEE PELS R. David Middlebrook Achievement Award

Marco Liserre

“For modeling and control of power converters in reliability and stability studies.”

IEEE PELS R. David Middlebrook Achievement Award Recipient



Marco Liserre

***For modelling and control of power converters
in reliability and stability studies.***

Marco Liserre (S'00-M'02-SM'07-F'13) received the MSc and PhD degree in Electrical Engineering from the Bari Technical University, respectively in 1998 and 2002. He has been Associate Professor at Bari Technical University and from 2012 a Professor in reliable power electronics at Aalborg University (Denmark). From 2013 he is Full Professor and he holds the Chair of Power Electronics at Kiel University (Germany). He got offered and declined professorships at several universities. He has published more than 700 technical papers (1/3 of them in international peer-reviewed journals), a book and 5 granted Patents. These works have received more than 50.000 citations. Marco Liserre is listed in ISI Thomson report “The world’s most influential scientific minds” from 2014. In 2023 he joined part-time Fraunhofer ISIT as Deputy Director and Director of a new Center for “Electronic Energy Systems” funded for 5 Million Euro.

He is a member of IAS, PELS, PES and IES. He has been serving all these societies in different capacities. In PELS he was AdCom member, Co-Editor of the IEEE Open Access Journal in Power Electronics, Associate Editor of TPEL and JESTPE, Guest Editor of Several Special Issues of JESTPE, Technical Committee Chairman of the Committee on Electronic Power Grid Systems and Member of the IEEE Digital Committee, IES-Liaison responsible, eGrid 2021 Workshop Co-chairman and PEDG 2022/PEDG 2023 Co-chairman the first organized in Kiel. He has received 5 IEEE Awards, including the prestigious including the 2018 IEEE-IES Mittelmann Achievement Award and 6 journal awards.

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

Alan Mantooth

“For two decades of distinguished service and leadership in technical operations, standards, publications, mentorship activities, and as society president.”

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



Alan Mantooth

For two decades of distinguished service and leadership in technical operations, standards, publications, mentorship activities, and as society president.

Dr. Mantooth (S'83 - M'90 - SM'97 - F'09) received the B.S. (summa cum laude) and M. S. degrees in electrical engineering from the University of Arkansas in 1985 and 1986, respectively, and the Ph.D. degree from the Georgia Institute of Technology in 1990. He joined Analogy in 1990 where he focused on semiconductor device modeling and the research and development of HDL-based modeling tools and techniques. Besides modeling, his interests include analog and mixed-signal IC design and power electronics. In 1996, Dr. Mantooth was named Distinguished Member of Technical Staff at Analogy (now owned by Synopsys).

In 1998, he joined the faculty of the Department of Electrical Engineering at the University of Arkansas, Fayetteville, as an Associate Professor. He has received numerous teaching, service, and research awards since returning to the UA. He was also selected to the Georgia Tech Council of Outstanding Young Engineering Alumni in 2002, and the Arkansas Academy of Electrical Engineers in 2006. Dr. Mantooth was promoted to his present rank of Distinguished Professor in the Electrical Engineering Department in 2011. He has co-founded two companies, Lynguent and Ozark Integrated Circuits.

Dr. Mantooth helped establish the National Center for Reliable Electric Power Transmission (NCREPT) at the UA in 2005, for which he serves as director. In 2006, he was selected as the inaugural holder of the 21st Century Endowed Chair in Mixed-Signal IC Design and CAD. He currently holds the 21st Century Leadership Chair in Engineering. Dr. Mantooth has published over 350 refereed articles on modeling and IC design. He holds patents on software architecture and algorithms for modeling tools and has others pending. He is co-author of three books and has served on several technical program committees for IEEE conferences.

He is currently serving the profession as Immediate Past-President of the IEEE Power Electronics Society until 2021. Dr. Mantooth is a Fellow of the IEEE, a member of Tau Beta Pi and Eta Kappa Nu, and registered professional engineer in Arkansas. Professor Mantooth serves as the Executive Director for NCREPT, GRAPES (the NSF I/UCRC for GRid-connected Advanced Power Electronic Systems), and SEEDS (DoE Center for Secure, Evolvable Energy Delivery Systems). He also serves as the Deputy Director of the NSF Engineering Research Center for Power Optimization of Electro-Thermal Systems (POETS).

IEEE IAS Distinguished Service Award Recipient

Daleep Mohla

"Daleep Mohla has practiced Electrical Engineering for over 47 years. While working for a petroleum chemical company, Daleep promoted the 'electrical safety by design' concepts to reduce electrical hazards by design instead of relying on administrative controls. He convinced US equipment manufacturers to offer arc resistant switchgear to protect workers from arc flash hazards. He promoted the use of finger safe terminal blocks to reduce shock hazards. Realizing that these concepts and practices can be shared and promoted by creation or modification of recognized standards, Daleep became active in the standards field, working extensively with both IEEE and other recognized bodies, such as National Fire Protection Association."

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Daleep has been an enthusiastic leader in electrical standards. He is a member of the IEEE Standards Association since 1998 and IEEE IAS Standards Department Chair from 2017-2022

Daleep was elevated to IEEE Fellow in 2006 for contributions to electrical safety design concepts to reduce workplace hazards.

In 2012, he was the recipient of the IEEE Charles Proteus Steinmetz award for exceptional contributions to development and advancement of safety standards.

Daleep recognized that several IAS worthy Fellow nominees who were active in IEEE Standards development were not elevated. He was an important member of an IEEE Board appointed Fellows Ad Hoc Committee to review the IEEE Fellow elevation process. This committee recommendation to add a new IEEE Fellows category "Standards" was implemented in the 2023 IEEE Fellows nominating cycle, opening a new opportunity for IEEE volunteer leaders involved in standards to be recognized.

IEEE McMurray Award for Industry Achievements in Power Electronics

Shinzo Tamai

"For contributions to high-power applications of three-level neutral-point clamped converters in industry and utilities"

IEEE McMurray Award for Industry Achievements in Power Electronics

The IEEE McMurray Award for Industry Achievements in Power Electronics recognizes the work of engineers working in the field of power electronics, which has shown or is likely to show a major impact on industry, and the resulting products possibly on society.



Shinzo Tamai

For contributions to high-power applications of three-level neutral-point clamped converters in industry and utilities.

Dr. Shinzo Tamai (M'96-SM'18-F'21) is currently Senior Fellow, one of the highest positions as research engineers, in the Power Electronics Systems Division at Toshiba Mitsubishi-Electric Industrial Systems Corporation (TMEIC).

He received his B. S., M. E., and Ph. D. degrees in electrical engineering from the Tokyo Institute of Technology in 1981, 1983, and 2004, respectively. He joined Mitsubishi-Electric Corporation in 1983, where he achieved research and development in the so-called "vector control" or "field-oriented control" of adjustable-speed induction motor drives. Then, he led development projects of large-capacity three-level neutral-point-clamped (NPC) converters and their applications to ac motor drives, static synchronous compensators (STATCOMs) and back-to-back (BTB) transmission systems. In 2003, he moved to Toshiba Mitsubishi-Electric Industrial Systems Corporation (TMEIC), where he has held several leadership positions in power electronics projects.

From 2003 to 2019, He was a board member of the Industry Applications Society (IAS) in the Institute of Electrical Engineers of Japan (IEEJ). He served as the president of the IEEJ/IAS from 2010 to 2012. He was a chair of the ECCE-Asia Coordinating Committee from 2018 to 2019. He contributed to promoting technical exchanges among Japan, South Korea and China. He was the General Chair of the Organizing Committee in the International Power Electronics Conference (IPEC-Himeji 2022) that is one of the IEEE PELS ECCE-Asia conferences. He was, and has been, a Member-At-Large of the Administrative Committee of the PELS from 2015 to 2017, and since 2019. He is a Fellow of the IEEE..

IEEE IAS Educator/Mentor Award

Germano Lambert-Torres

"For 30 years, he was a Professor at UNIFEI, where he also was the Prorector of Research and Graduate Studies. He also served as a member of two high committees in Brazil, one for Education: Member of the National Final Exam for undergraduate electrical engineers...and the other for Research: Member of the National Council for Research...He has completed more than 120 M.Sc. and Ph.D. thesis supervisions and published more than 600 journal and technical conference papers."

IEEE PELS Award for Achievements in Power Electronics Education

Jacobus D. VanWyk

"For pioneering contributions to power electronics education of power electronics experts across the world over five decades."

IEEE PELS Award for Achievements in Power Electronics Education

The IEEE PELS Award for Achievements in Power Electronics Education is established to recognize the work of engineers who have shown a major impact on education in the area of power electronics, or which is groundbreaking for education in the area of power electronics.



Jacobus D. VanWyk

For pioneering contributions to power electronics education of power electronics experts across the world over five decades.

Jacobus Daniel (Daan) Van Wyk, South Africa (1939). M.Sc.Eng., Univ. of Pretoria, South Africa, 1966, Doctor of Technical Science (cum laude), Technical Univ., Netherlands 1969, D.Sc. (Eng) (honoris causa) Univ. of Natal, South Africa, 1996, D. Eng (honoris causa), Univ. of Pretoria, South Africa, 2008, D. Ing (honoris causa), Univ. of Johannesburg, South Africa, 2013. Worked in industry, Univ. of Pretoria, technical and scientific staff of the Univ.

in Eindhoven between 1961 - 1971. Chaired Prof. of Electrical and Electronic Engineering at the Rand Afrikaans Univ. (later the Univ. of Johannesburg), 1971 - 2004. Founded the Industrial Electronics Technology Research Group, 1977. Served as the Director of this internationally renowned Research Group from its inception in 1977-1999 and July 1995-2004, Special Univ. Research Chair in Industrial Electronics at the Rand Afrikaans Univ. Extraordinary Prof., Univ. of Pretoria 2005. Visiting Research Prof. in the Dept. of Electrical and Electronic Engineering Science at the Univ. of Johannesburg, 2006-2019. Visiting Prof., 1976-1996 at the Institute for Power Electronics and Electrical Drives of the Univ. of Technology, Germany. Member of the Graduate Faculty and Adjunct Prof. at Texas Tech Univ., USA, 1989-1994. Visiting Prof. at the Bradley Dept. of Electrical and Computer Engineering, Virginia Polytechnic Institute and State Univ., USA (1999). Working in the National Science Foundation Engineering Research Center for Power Electronics Systems (CPES). J. Byron Maupin Prof. of Engineering at VPISU, 2000 - 2005. Faculty member in CPES and led the research into High Density Integration for Power Electronics Systems at CPES, July 2006. Research Prof., 2006 - 2008, worked and published with his graduate students recently in integrated electronic energy processors and before that in the fields of semiconductor devices, microelectronics, electrical materials, electromechanical energy conversion, electric drives, power electronics, industrial electronics, control, alternative energy systems, electric vehicles and many diverse applications in industry, mining, transport and electrical energy supply systems. Has worked with more than 150 research students in these fields internationally, leading to more than 650 publications with his students, receiving 24 prize paper awards - including 15 IEEE awards. IEEE Life Fellow, Fellow of the South African Institute of Electrical Engineers, Fellow of the S.A. Academy of Engineering, received the IEEE William E. Newell Power Electronics Award (1995) and President's Award of the South African Institute of Electrical Engineers (1995).

IAS Outstanding Young Member Service Award

Sidra Malik

"In recognition of her outstanding contribution as a Young Member of the IEEE Industry Applications Society."

IAS Andrew W. Smith Outstanding Young Member Service Award

Satarupa Bal

"In recognition of her outstanding contribution as a Young Member of the IEEE Industry Applications Society."

IEEE IAS Industrial Power Conversion Systems Department Gerald Kliman Innovator Award

Noriko Kawakami

"For contributions to large-capacity grid-tied power converters used in demanding industrial and utility applications."

IEEE PELS Richard M. Bass Outstanding Young Power Electronics Engineer Award Recipient

Minjie Chen

"For contributions to the modeling, design and application of high-performance power electronic systems."

(See excerpt from program below.)

IEEE PELS Young Professional Exceptional Service Award

Harish Sarma Krishnamoorthy

"For exceptional service to the IEEE Power Electronics Society through outstanding contributions to chapters, committees, conferences, and TPEL editorial board."

(See excerpt from program below.)

IEEE PELS Richard M. Bass Outstanding Young Power Electronics Engineer Award Recipient



Minjie Chen

For contributions to the modeling, design and application of high-performance power electronic systems.

Minjie Chen is an Assistant Professor of Electrical and Computer Engineering and the Andlinger Center for Energy and the Environment at Princeton University. He received his S.M., E.E., and Ph.D. degrees in Electrical Engineering and Computer Science from MIT in 2015 and his B.S. in Electrical Engineering from Tsinghua University in 2009. His research interests include high-frequency power electronics, power architecture, power magnetics, advanced packaging, data-driven methods, design automation, and design methods of high-performance power electronics for emerging and important applications.

Prof. Chen is a recipient of the IEEE PELS Richard M. Bass Outstanding Young Power Electronics Engineer Award, the Princeton SEAS E. Lawrence Keyes, Jr./Emerson Electric Co. Junior Faculty Award, the NSF CAREER Award, five IEEE Transactions on Power Electronics Prize Paper Awards, a COMPEL Best Paper Award, an ICRA Best Poster Award, three ECCE Best Demo Awards, a 3D-PEIM Rao R. Tummala Best Paper Award, an OCP Best Paper Award, a Siebel research award, a C3.ai research award, a First Place Award of Princeton Keller Center Innovation Forum, and the MIT EECS D. N. Chorafas Ph.D. Thesis Award. He was listed on the Princeton Engineering Commendation List for Outstanding Teaching multiple times. Dr. Chen is an IEEE senior member, the Vice Chair of PELS TC10 Design Methodologies, and the TPC member of a few flagship PELS conferences including APEC, ECCE, COMPEL, and ICDCM. His research team developed the MagNet database, built the MagNet-AI platform, launched the MagNet Challenge, and is leading the open-source MagNet community.

IEEE PELS Young Professional Exceptional Service Award

This award recognizes exceptional service to the IEEE Power Electronics Society (PELS) by members who have graduated with their first professional degree within the past 15 years. The contributions can be from involvement in any PELS-oriented activities such as chapters, committees, conferences, transactions, and others.



Harish Sarma Krishnamoorthy

For exceptional service to the IEEE Power Electronics Society through outstanding contributions to chapters, committees, conferences, and TPEL editorial board.

Dr. Harish S. Krishnamoorthy (Senior Member, IEEE) received his Bachelor of Technology (B. Tech.) degree from the Department of Electrical and Electronics Engineering (EEE), National Institute of Technology (NIT) Tiruchirappalli, India, and his Doctor of Philosophy (Ph. D.) degree from the Department of Electrical and Computer Engineering (ECE), Texas A&M University, College Station, USA, in 2008 and 2015, respectively. From Jun. 2008 to Jul. 2010, he worked at GE Energy, Hyderabad, India, and received the Lean 6-Sigma Green Belt certification. From Apr. 2015 to July 2017, he was with Schlumberger, TX, USA. He also briefly worked at Ford and Google. Since August 2017, Dr. Krishnamoorthy has been a faculty in the ECE department of the University of Houston (UH), where he currently holds the rank of an Associate Professor. He has over 95 conference/journal papers in refereed publications, one granted U.S. patent, and three U.S. patent applications. He has further contributed to a book chapter for the IET. He is an Associate Editor of the IEEE Transactions on Power Electronics (TPEL) and the Standards Liaison for the IEEE PELS TC7. He is also on the organizing committees of IEEE APEC-2023, ECCE-2023, INTELEC-2024, etc. He received the UH College of Engineering's Research Excellence Award in 2022 and Teaching Excellence Award in 2021. He was named an 'OTC Emerging Leader' by the Offshore Technology Conference in 2022, and an Early Career Research Fellow (ECRF) by the Gulf Research Program of the US National Academies. In 2023, Dr. Krishnamoorthy received the NSF CAREER Award and the IEEE PELS Young Professional Exceptional Service Award.