

# **AWARD SELECTION COMMITTEE CHAIRS**

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## **Frontiers in Education Conference**

Benjamin J. Dasher Best Paper Award .....	Arnold Pears
Helen Plants Award .....	Cordelia M. Brown
Ronald J. Schmitz Award .....	Susan Lord

## **ASEE Electrical and Computer Engineering Division**

Hewlett-Packard Frederick Emmons Terman Award .....	Tony Givargis
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## **IEEE Education Society**

IEEE William E. Sayle Award for Achievement in Education .....	Lyle D. Feisel
IEEE Transactions on Education Best Paper Award .....	Charles B. Fledderman
Chapter Achievement Award .....	Trond Clausen
Distinguished Chapter Leadership Award .....	Edmundo Tovar
Distinguished Member Award.....	Ted Batchman
Edwin C. Jones, Jr. Meritorious Service Award .....	Edwin C. Jones, Jr.
Hewlett-Packard/Harriet B. Rigas Award .....	Joanne Bechta Dugan
Mac Van Valkenburg Early Career Teaching Award .....	Seyed Hossein Mousavinezhad
Student Leadership Award.....	Emmanuel A. Gonzalez



Ali Niknejad  
University of California,  
Berkeley

### Past Recipients

- '69 Michael Athans
- '70 Andrew P. Sage
- '71 Joseph W. Goodman
- '72 Taylor L. Booth
- '73 Sanjit Mitra
- '74 Leon Ong Chua
- '75 Michael L. Dertouzos
- '76 Stephen W. Director
- '77 J. Leon Shohet
- '78 Ronald A. Rohrer
- '79 Martha E. Sloan
- '80 V. Thomas Rhyne
- '81 Ben Garland Streetman
- '82 Toby Berger
- '83 Daniel P. Siewiorek
- '84 Mathukumalli  
Vidyasagar
- '85 Peter S. Maybeck
- '86 Lance A. Glasser
- '87 Kenneth L. Short
- '88 Adel S. Sedra
- '89 Frank L. Lewis
- '90 Jerry D. Gibson
- '91 Barry W. Johnson
- '92 H. Vincent Poor
- '93 Mark S. Lundstrom
- '94 Supriyo Datta
- '95 Perinkolam P.  
Vaidyanathan
- '96 Prithviraj Banerjee
- '97 Edward A. Lee
- '98 Edwin K. P. Chong
- '99 Randy H. Katz
- '00 Sergio Verdu
- '01 Zoya Popovic
- '02 Theodore S. Rappaport
- '03 Wayne Wolf
- '04 Keshab K. Parhi
- '05 Ali H. Sayed
- '06 Vijay K. Madiseti
- '07 Russel Jacob (Jake) Baker
- '08 Keith M. Chugg
- '09 David Tse
- '10 Bhaskar Krishnamachari
- '11 Tony Givargis

## ASEE ECE Division Hewlett-Packard Frederick Emmons Terman Award

*Presented by Martina Trucco*

**For an outstanding young electrical engineering educator in recognition of his contribution to the profession**

**Ali M. Niknejad** received the B.S.E.E. degree from the University of California, Los Angeles, in 1994, and his Master's and Ph.D. degrees in electrical engineering from the University of California, Berkeley, in 1997 and 2000. During his graduate studies, he authored *ASITIC*, a CAD tool that aids in the simulation and design of passive circuit elements such as inductors into silicon integrated circuits. After graduation from Berkeley he worked in industry focusing on the design and research of analog RF integrated circuits and devices for wireless communication applications. He is currently an associate professor in the EECS department at UC Berkeley and co-director of the Berkeley Wireless Research Center and the BSIM Research Group. He served as an associate editor of the IEEE JSSC and on the TPC for ISSCC/CICC. Prof. Niknejad was co-recipient of the Outstanding Technology Directions Paper at ISSCC 2004 for co-developing a modeling approach for devices up to 65 GHz. He is also co-recipient of the 2010 Jack Kilby Award for Outstanding Student Paper for his work on a 90 GHz pulser with 30 GHz of bandwidth for medical imaging. His students have also been awarded numerous best paper awards at RFIC. Prof. Niknejad is a co-founder of HMicro and inventor of the REACH<sup>(TM)</sup> technology, which has the potential to deliver robust wireless solutions to the healthcare industry. His research interests lie within the area of wireless and broadband communications and biomedical imaging (RF, mm-wave, and sub-THz), including the implementation of integrated communication systems in silicon using CMOS, SiGe, and BiCMOS processes. His focus areas of his research include analog, RF, mixed-signal, mm-wave circuits, device physics and compact modeling, and numerical techniques in electromagnetics. He is currently an IEEE Solid-State Circuits Society Distinguished Lecturer.

# **ASEE ECE Division Hewlett-Packard Frederick Emmons Terman Award (continued)**

## **About the Terman Award**

The Frederick Emmons Terman Award is presented annually to an outstanding young electrical engineering educator by the Electrical and Computer Engineering Division of the American Society for Engineering Education. The Terman Award, established in 1969 by the Hewlett-Packard Company, consists of \$5,000, an engraved gold-plated medal, a bronze replica of the medal mounted on a walnut plaque, and a parchment certificate.

The recipient must be an electrical engineering educator who is less than 45 years old on June 1 of the year in which the award is presented and must be the principal author of an electrical engineering textbook published before June 1 of the year of his/her 40th birthday. The book must have been judged by his/her peers to be an outstanding original contribution to the field of electrical engineering. The recipient must also have displayed outstanding achievements in teaching, research, guidance of students, and other related activities.



## **About Frederick Emmons Terman**

Frederick Emmons Terman received his A.B. degree in chemistry in 1920, the degree of engineer in electrical engineering in 1922 from Stanford University, and his Sc.D. degree in electrical engineering in 1924 from Massachusetts Institute of Technology. From 1925-1965, he served as instructor, then professor of electrical engineering, executive head of the Electrical Engineering Department, dean of the School of Engineering, provost, vice president, and finally, as acting president of Stanford University.

Among the many honors bestowed upon him were: the IEEE Medal of Honor; the first IEEE Education Medal; the ASEE's Lamme Medal; the 1970 Herbert Hoover Medal for Distinguished Service to Stanford University; an honorary doctor's degree by Harvard; a decoration by the British government; the Presidential Medal for merit as a result of his war work; and the 1976 National Medal of Science from President Ford at a White House ceremony.

Dr. Terman was a professor at Stanford University when William Hewlett and Dave Packard were engineering students there. It was under Dr. Terman's guidance in graduate work on radio engineering that Mr. Hewlett built the first tunable and automatically stabilized Weinbridge oscillator. Partially through Dr. Terman's urging, Hewlett and Packard set up their partnership in an old garage with \$538 and the oscillator as their principal assets.

Dr. Terman died in December 1982. It is in appreciation of his accomplishments and guidance that Hewlett-Packard is proud to sponsor the Frederick Emmons Terman Award.



Tanja Karp  
Texas Tech University

### Past Recipients

- '95 Denice D. Denton
- '96 Karan L. Watson
- '97 Patricia D. Daniels
- '98 Delores M. Etter
- '99 Sherra E. Kerns
- '00 Leah Jamieson
- '01 Valerie Taylor
- '02 Nan Marie Jokors
- '03 Joanne Bechta Dugan
- '04 Jennifer L. Welch
- '06 Eve A. Riskin
- '07 Bonnie Heck Ferri
- '08 Cheryl B. Schrader
- '09 Cynthia Furse
- '10 Mari Ostendorf
- '11 Karen Panetta

## IEEE Education Society Hewlett-Packard Harriet B. Rigas Award

*Presented by Martina Trucco*

*For her sustained work in creating a pipeline of robotics programs that effectively encourage young people to pursue careers in engineering*

**Dr. Tanja Karp** received her Dipl.-Ing. (M.S.) and Dr.-Ing. (Ph.D.) degrees in Electrical Engineering from the Technical University of Hamburg-Harburg, Germany, in 1993 and 1997, respectively. She is currently an Associate Professor of Electrical and Computer Engineering at Texas Tech University in Lubbock, Texas. Prior to joining the faculty at Texas Tech in 2000, Dr. Karp was a Senior Research and Teaching Associate at the Institute of Computer Engineering at Mannheim University, Germany. Her research interests include digital signal processing, multicarrier communications, and STEM education. She has published over 75 journal and conference articles in these areas.

Since 2005, Dr. Karp has been involved in K-12 engineering outreach geared at attracting more and better qualified students into engineering careers and increasing the retention of engineering undergraduate students. She has taken a leadership role in among her colleagues at the university in organizing high school student summer camps at Texas Tech University and has implemented a pipeline of engineering activities for K-12 students during the academic year. She annually organizes the Get Excited About Robotics (GEAR) competition in Lubbock. During this 8-week long competition students from elementary and middle schools design LEGO NXT robots to autonomously perform tasks described in the annually changing challenge. Participants are mentored by engineering freshmen enrolled in a Service Learning introductory engineering course which she regularly teaches. Since 2006 the Lubbock GEAR competition has grown from a single participating school to over 600 students from 50 schools and attracts a large percentage of female participants (>40%).

Dr. Karp is a senior member of IEEE and a member of the Society of Women Engineers (SWE). Since 2011 she has served as the faculty advisor of the Texas Tech student SWE section, which organized the SWE Region C conference in Lubbock in January 2012. She also serves as the Fulbright Program Adviser for Texas Tech University.

Dr. Karp has received several awards for her excellence and innovation in teaching including the Lockheed Martin Aeronautics Company Excellence in Engineering Teaching Award (2003 and 2009), the Spencer A. Wells Creativity in Teaching Award from the Texas Tech Parent Association (2006), the College of Engineering George T. & Gladys Abell Hanger Faculty Teaching Award (2006) and the Butler Distinguished Educator Award (2012). She was a Service Learning Fellow during the academic year 2009/2010 and served as a Mentor for TTU's Service Learning Program in 2010/2011.

## **IEEE Education Society Hewlett-Packard Harriet B. Rigas Award (continued)**

### **About the Rigas Award**

The Harriet B. Rigas Award is presented annually to recognize outstanding faculty women who have made significant contributions to electrical/computer engineering education. The award consists of an honorarium, plaque, certificate, and Frontiers in Education Conference registration.

The recipient must be a tenured or tenure track woman faculty member in an ABET-accredited engineering program in the United States, with teaching and/or research specialization in electrical/computer engineering.

### **About Harriett B. Rigas**

Dr. Harriett B. Rigas (1934-1989), an IEEE Fellow, was an electrical engineer with an international reputation for her hybrid computer and computer simulation research. At Washington State University between 1966 and 1984, she was eventually both full professor and chair of Electrical and Computing Engineering School. Later she chaired larger departments at the Navy's Postgraduate School in Monterey and, at the time of her death, Michigan State University.

Her achievements in engineering research, administration, and service were widely recognized. In 1975-76, Harriett was a Program Director at the National Science Foundation and, over the years, a member of numerous panels and advisory committees at both the NSF and the national Academy of Sciences.

Professor Rigas' success was achieved within a profession and within university administrative structures where there were very few women. Her character and courage were both evident in her strong advocacy of advancement for women. She was involved both locally and nationally in the Society of Women Engineers.



Kristi J. Shryock  
Texas A&M University



Arun R. Srinivasa  
Texas A&M University



Jeffrey E. Froyd  
Texas A&M University

### Past Recipients

- '73 Walter D. Story
- '74 Richard Hooper
- '75 John J. Alan III and  
J.J. Lagowski
- '76 John Hipwell and  
David Blaume
- '77 John W. Renner
- '78 Albert J. Morris

## Frontiers in Education Conference Benjamin J. Dasher Best Paper Award

*Presented by Arnold Pears*

***Developing Instruments to Assess First-year Calculus and Physics Mechanics Skills Needed for a Sophomore Statics and Dynamics Course***  
by **K. Shryock, A. R. Srinivasa, and J. E. Froyd**  
**FIE 2011, Session F1J**

**Kristi J. Shryock** received her B.S. and M.S. degrees in Aerospace Engineering at Texas A&M University in 1998 and 2000, respectively. She received her Ph.D. degree in Interdisciplinary Engineering at Texas A&M University in 2011 with a research focus on engineering education. She currently serves as the Assistant Department Head for Undergraduate Programs and Outreach in the Department of Aerospace Engineering at Texas A&M University. She is also a Senior Lecturer in the Department.

Her teaching and research focuses on improving the undergraduate engineering experience through evaluating preparation in mathematics and physics. In addition, she works to incorporate new technologies, experiential education, and multi-disciplinary design into the classroom. The work in the Dasher paper specifically evaluates the alignment of the mathematics and physics students learn in their freshman year with the knowledge needed in their sophomore year and beyond in engineering.

**Arun Srinivasa** obtained his bachelor's degree from the mechanical engineering department in IIT Madras in 1986. He received his PhD from the University of California at Berkeley in 1991 in Mechanical Engineering with minors in Materials Science and Mathematics. His PhD thesis was on dislocation dynamics. He subsequently joined the University of Pittsburgh faculty from 1993 to 1997 and then moved to Texas A&M University, where he is a professor of mechanical engineering. He was the holder of the Halliburton Professorship between 2010 and 2011 and is now William Kheeler Faculty fellow. He spent a year at Texas A&M Qatar from 2011 to 2012. He is the author of the book *Inelasticity of Materials, An Engineering Approach and a Practical Guide* (World Scientific Press) along with Dr. Sivakumar Srinivasan from IIT Madras.

His research interests include simulation of materials processing and other dissipative phenomena, design of "smart components" using shape memory alloys and polymers, cosserat continua and algorithms for fast virtual reality simulations for educational purposes. He is very much involved in the use of technology in education and in the use of DIY toys and manipulatives for educational purposes.

**Jeffrey E. Froyd** (Fellow, IEEE) received the B.S. degree in mathematics from Rose-Hulman Institute of Technology, Terre Haute, IN, in 1975 and the M.S. and Ph.D. degrees in electrical engineering from the University of Minnesota, Minneapolis, in 1976 and 1979, respectively.

He is a TEES Research Professor in the Engineering Student Services and Academic Programs at Texas A&M University, College Station. Prior to this, he was an Assistant Professor, Associate Professor, and Professor of Electrical and Computer Engineering at Rose-Hulman Institute of Technology. He served as

'79 Donald R. Woods,  
Cameron M. Crowe,  
Terrence W. Hoffman,  
and Joseph D. Wright

'80 Marilla D. Svinicki

'81 Martha Montgomery

'82 A.L. Riemenschneider  
and Lyle D. Feisel

'83 Davood Tashayyod,  
Banu Onaral, and  
James M. Trosino

'84 Bill V. Koen

'85 Bill V. Koen

'86 Richard S. Culver

'87 David A. Conner,  
David G. Green,  
Thomas C. Jannett,  
James R. Jones,  
M.G. Rekoff, Jr.,  
Dennis G. Smith, and  
Gregg L. Vaughn

'88 Richard M. Felder

'89 Richard C. Compton and  
Robert York

'90 Cindy A. Greenwood

'91 Robert Whelchel

'92 William LeBold and  
Dan D. Budny

'93 Daniel M Hull and  
Arthur H. Guenther

'94 Burks Oakley II and  
Roy E. Roper

'95 Curtis A. Carver, Jr. and  
Richard A. Howard

'96 Val D. Hawks

'97 Edwin Kashy,  
Michael Thoennesen,  
Yihjia Tsai,  
Nancy E. Davis, and  
Sheryl L. Wolfe

'98 A.B. Carlson,  
W.C. Jennings, and  
P.M. Schoch

'99 Wayne Burleson,  
Aura Ganz, and  
Ian Harris

'00 David W. Petr

'02 Zeynep Dilli,  
Neil Goldsman,  
Lee Harper,  
Steven I. Marcus,  
and Janet A. Schmidt

Project Director for the Foundation Coalition, a National Science Foundation (NSF) Engineering Education Coalition in which six institutions systematically renewed, assessed, and institutionalized their undergraduate engineering curricula, and extensively shared their results with the engineering education community. At Rose-Hulman, he co-created (with Brian Winkel) the Integrated, First-Year Curriculum in Science, Engineering and Mathematics, which was recognized in 1997 with a Hesburgh Award Certificate of Excellence. He has authored over 70 papers on faculty development, curricular change processes, curriculum redesign, and assessment.

Prof. Froyd is a Fellow of the American Society for Engineering Education, an Accreditation Board for Engineering and Technology (ABET) Program Evaluator, and a Senior Associate Editor for the Journal of Engineering Education. He has served as a program co-chair for the 2003, 2004, and 2011 Frontiers in Education Conferences and the general chair for the 2009 Frontiers in Education Conference.

'03 Glenn W. Ellis, Gail E. Scordilis, and Carla M. Cook

'04 Matthew W. Ohland, Guili Zhang, Brian Thorndyke, and Timothy J. Anderson

'05 Gregory A. Moses and Michael Litzkow

'07 Donna Riley and Gina-Louise Sciarra

'08 Eric Hamilton and Andrew Hurford

'09 Steve Krause, Robert Culbertson, Michael Oehrtman, Marilyn Carlson,  
Bill Leonard, C.V. Hollot, and William Gerace

'10 Glenda Stump, Jenefer Husman, Wen-Ting Chung and Aaron Done

'11 Jeffrey L. Newcomer

## **Frontiers in Education Conference Benjamin J. Dasher Best Paper Award (continued)**

### **About the Dasher Award**

The Benjamin Dasher Best Paper Award is given to the best paper presented at the annual Frontiers in Education Conference, as demonstrated by technical originality, technical importance and accuracy, quality of oral presentation, and quality of the written paper appearing in the Conference Proceedings. Papers are nominated for the award by reviewers.

A committee with representation from each of the organizing societies (ERM, IEEE Ed. Soc., IEEE Comp. Soc.) is formed to review nominated papers. During the FIE meeting, the committee attends presentations of the nominated papers. The committee then makes a final recommendation to the FIE Planning Committee for the Ben Dasher Award winner based on the overall quality of both the paper and the presentation.

### **About Benjamin J. Dasher**

Benjamin J. Dasher was born December 27, 1912 in Macon, Ga. He earned his bachelor's and master's degrees in electrical engineering in 1935 and 1945, respectively, and graduated with a doctorate in electrical engineering in 1952 from the Massachusetts Institute of Technology. At MIT, Dr. Dasher worked on the electronics of instrumentation of electromechanical transducers and analog-to-digital converters. He was the author of "Dasher's method" for synthesis of resistance-capacitance two-port networks, which is found in standard textbook treatments.

While at Georgia Tech, Dr. Dasher served as a graduate assistant in 1936, then as an instructor in 1940, and became an assistant professor in 1945. While earning his PhD at MIT, he was an instructor from 1948-51. Before finishing with his PhD, he became an associate professor at Georgia Tech in 1951, was promoted to professor in 1952, and became director of the School of Electrical Engineering in 1954, where he served in that capacity until 1969. In 1968, Dr. Dasher was appointed associate dean in the College of Engineering. At Georgia Tech, Dr. Dasher served as director of network synthesis projects and transistor oscillator projects. His fields of interest included advanced network theory, electronic theory, electronic circuits, electrical engineering education, machine translation, speech analysis, and pattern recognition. He was credited for bringing undergraduate engineering education to the forefront at Georgia Tech and for increasing interactions between undergraduates and industry.

Dr. Dasher was a member of Phi Kappa Phi, ASEE, Sigma Xi, and the American Association of University Professors; he was a Fellow of both the IEEE and the Institute of Radio Engineers. He served as a regional director for IEEE and as the chair for the Atlanta section of IEEE; he was on numerous committees for IRE, AIEE, and IEEE. He served as President of the IEEE Education Group in 1970-71.

Ben Dasher organized the first Frontiers in Education Conference; it was held in Atlanta in 1971, and attracted 100 participants. There were 34 papers in six technical sessions.

Dr. Dasher died of congestive heart failure on December 13, 1971 in Houston, Texas.





Şenay Purzer  
Purdue University



Jonathan C. Hilpert  
Georgia Southern  
University

### Past Recipients

- '80 Helen Plants
- '81 Jim Russell and  
John C. Lindenlaub
- '82 Karl A. Smith and  
Harold Goldstein
- '83 E. Dendy Sloan and  
Charles F. Yokomoto
- '84 David W. Johnson and  
Karl A. Smith
- '85 Billy V. Koen
- '86 Martha A. Nord and  
Patricia H. Whiting
- '87 John C. Lindenlaub
- '89 Karl A. Smith
- '91 Troy E. Kostek
- '92 Barbara M. Olds and  
Ronald L. Miller
- '93 John C. Lindenlaub and  
Alisha A. Waller
- '94 Billy V. Koen
- '95 Burks Oakley II and  
Mark Yoder

## Frontiers in Education Conference Helen Plants Award Best Nontraditional Session at FIE 2011

*Presented by Susan Lord*

### *Cognitive Processes Critical for Ill-Defined Problem Solving: Linking Theory, Research, and Classroom Implications*

**Şenay Purzer and Jonathan C. Hilpert, FIE 2011, Session T2A**

Şenay Purzer is an Assistant Professor in the School of Engineering Education and is the Director of Assessment Research for the Institute for P-12 Engineering Research and Learning (INSPIRE) at Purdue University. She received a B.S.E with distinction in Engineering at Arizona State University in 2009 and a B.S. degree in Physics Education in 1999. Her M.A. and Ph.D. degrees are in Science Education from Arizona State University earned in 2002 and 2008, respectively.

Dr. Purzer is a NAE/CASEE New Faculty Fellow. She is also the recipient of a 2012 NSF CAREER award, which examines how engineering students approach innovation. Her research focuses on assessment, engineering innovation, and mixed-methods research. She is currently leading projects funded by NSF, NASA, and corporate foundations. She has published over 70 peer-reviewed conference and journal papers on engineering and science education. Her research laboratory, Engineering Learning Observatory, houses projects on video and discourse analysis methods to examine engineering students' approaches to innovation, design thinking, and collaborative decision-making processes. She is a 2009 National Effective Teaching Institute (NETI) fellow and currently teaches courses on educational research methods and engineering design.

Dr. Purzer has been active in engineering education since 2005 as an author and paper reviewer. She has chaired the ASEE Educational Research and Methods Division (ERM) best paper award selection committee in 2012 and is currently a Director of ASEE-ERM division. She serves in the review boards of several journals including the Journal of Engineering Education (JEE) and Science Education and is an editorial board member for the Journal of Pre-College Engineering Education (JPEER).

**Jonathan C. Hilpert**, a professor of Educational Psychology at Georgia Southern University in the College of Education, received his bachelor's degree in education from Pepperdine University in 2000 and his masters and PhD from Arizona State University in 2008. His area of expertise is the content application and statistical specification of domain general learning models to engineering classrooms. The models he develops are grounded in information processing theory and focus primarily on the intersection of motivation, cognition, and instructional strategies at the post-secondary level. Some notable accomplishments include being named an FIE new faculty fellow in 2008 and being awarded an NSF RAPID grant in 2009 to study the impact of engineering professors' efforts to improve instruction on student motivation and knowledge building.

## **Helen Plants Award Past Recipients, Continued**

- '96 Alisha A. Waller, Edward R. Doering, and Mark A. Yoder
- '97 Karl A. Smith, James D. Jones and Elizabeth Eschenbach
- '98 Alice Agogino
- '99 Melinda Piket-May and Julie L. Chang
- '03 William C. Oakes
- '04 Susan M. Lord, Elizabeth A. Eschenbach, Alisha A. Waller, Eileen M. Cashman, and Monica J. Bruning
- '05 Ruth A. Streveler
- '06 Ruth A. Streveler, Karl A. Smith, and Ronald L. Miller
- '08 Maura Borrego, Lynita Newswander, and Lisa McNair
- '09 Lisa C. Benson, Sherrill B. Biggers, William F. Moss, Matthew Ohland, Marisa K. Orr, and Scott D. Schiff
- '10 Russell Korte and Karl A. Smith
- '11 Mark Somerville, Dave Goldberg, Sherra E. Kerns, and Russell Korte

## **About the Plants Award**

The Helen Plants Award is given for the best special (non-traditional) session at the FIE conference, as demonstrated by originality, session content and presentation including the use of written materials and visual aids, and participation of session attendees.

## **About Helen Margaret Lester Plants**

Helen Margaret Lester was born in Desloge, Missouri, in March 1925, the only child of Rollo Bertell and Margaret Stephens Lester.

She entered the University of Missouri as a journalism major, but soon switched to Civil Engineering. She received her BSCE in 1945. She joined West Virginia University in 1947 as a graduate student and Instructor in Mechanics, and received her MS in Civil Engineering in 1953. She was a Professor of Theoretical and Applied Mechanics and of Curriculum and Instruction in the Division of Education at WVU. She became Professor Emeritus, Mechanical and Aerospace Engineering in 1983. From 1985 to 1990 she served as Chair of Civil Engineering Technology at Indiana University-Purdue University - Fort Wayne.

Her husband Ken Plants had been a "bureaucrat" with the US Bureau of Mines in Morgantown - a chemical engineer with great expertise in cost estimation. Some of their "courting" evenings were spent manually checking the design calculations on the Star City, WV Bridge, designed by the Dean and State Bridge Engineer. While in Morgantown, Helen was active in Trinity Episcopal Church where she served as a Vestryman and Bishop's Man. For many years she was a Girl Scout leader. Helen died in Tulsa, Oklahoma in September 1999.

From the beginning of her academic career, she was a gifted teacher and a role model for the few women students at West Virginia University at that time. Later, she became an advocate of programmed and individualized instruction. She and Wally Venable wrote series of papers on these topics and several texts: *Introduction to Statics, a Programmed Text*, (1975), *A Programmed Introduction to Dynamics* (1967), and *Mechanics of Materials, A Programmed Textbook* (1974). She established the first doctoral program in Engineering Education at West Virginia University.

In 1975, the University of Missouri at Columbia recognized her with the Missouri Honor Award for Distinguished Service in Engineering. She became an ASEE Fellow in 1983 as a member of the first class of Fellows. She also received Distinguished Service Award, Western Electric Fund Award, and was an ASEE Vice-President (1974 – 1976).



Arnold Pears  
Uppsala University

### Past Recipients

- '84 Carol Schmitz
- '85 Lawrence P. Grayson
- '86 John C. Lindenlaub
- '87 George Burnett
- '88 James R. Rowland
- '89 Lyle D. Feisel
- '90 Edwin C. Jones, Jr.
- '92 Karl A. Smith
- '92 Victor K. Schutz
- '93 Bruce A. Einstein
- '94 David V. Kerns, Jr.
- '95 David R. Voltmer
- '96 William E. Sayle II
- '97 Richard S. Culver
- '98 Dan Budny
- '99 Robert J. Herrick
- '00 Larry J. Shuman
- '01 David L. Soldan
- '02 Goranka Bjedov
- '03 Larry G. Richards
- '04 James A. Roberts
- '05 Robert J. Hofinger
- '06 Jane Chu Prey
- '07 Joseph L. A. Hughes
- '08 Ted E. Batchman
- '09 Russ Meier
- '10 Dan Moore
- '11 Susan M. Lord

## Frontiers in Education Conference Ronald J. Schmitz Award

*Presented by Susan Lord*

*For outstanding service to the Frontiers in Education Conference*

**Arnold Pears** received his BSc(Hons) in 1986 and PhD in 1994, both from La Trobe University, Melbourne, Australia. He occupied positions as lecturer and senior lecturer at La Trobe University between 1991 and 1998. In 1999 he was appointed as senior lecturer at Uppsala University, Sweden. He was awarded the Uppsala University Pedagogy Prize in 2008, and appointed as Associate Professor of Computing Education Research in May 2011. Roles at Uppsala University include appointment to the University Academic Senate, Programme Director for the IT Engineering programme, member of the selection committee for the Uppsala University Pedagogy prize and as member of the educational advisory board of the Faculty of Technology and Natural Sciences.

He has a strong interest in teaching and learning research in computer science and engineering, and leads the UpCERG research group in computing and engineering education research at Uppsala University. He has published 25 articles in the area internationally, and is well known as a computing education researcher through his professional activities in the ACM, and IEEE. In the IEEE he serves as a member of the Board of Governors of the IEEE Computer Society, where he is active in the Education Activities Board, serving also on the steering committee of the Frontiers in Education Conference and as Chair of the newly established Special Technical Community (STC) for Education. In addition he is a Director of CeTUSS (The Swedish National Center for Pedagogical Development of Technology Education in a Societal and Student Oriented Context, [www.cetuss.se](http://www.cetuss.se)) and the IEEE Education Society Nordic Chapter.

He as a reviewer for a number of major journals and conferences, including the Computer Science Education Journal (Taylor and Francis), the ACM SIGCSE and ITiCSE and Koli Calling International Computer Science Education conferences.

Recent publications include "Does Quality Assurance Enhance the Quality of Computing Education?", in the Proceedings of the 12th Australasian Computer Science Education Conference, 2010, and models for research driven education in Computing, "Conveying Conceptions of Quality through Instruction", in the 7th International Conference on the Quality of Information and Communications Technology, 2010.

## **Frontiers in Education Conference Ronald J. Schmitz Award (continued)**

### **About the Schmitz Award**

The Ronald Schmitz Award is given to recognize outstanding and continued service to engineering education through contributions to the Frontiers in Education Conference.

### **About Ronald J. Schmitz**

Ronald J. Schmitz was born near Ionia, Iowa on April 25, 1934. He attended a one-room country school through the eighth grade and then, as was not uncommon at the time, decided to forgo high school and work on his father's farm. At age 18, he joined the United States Navy. He served as an Electricians Mate, spending much of his enlistment at sea and made a round-the-world cruise aboard the USS Saipan.

In the Navy, Ron found an interest in and an aptitude for technology and recognized the need for further education. He completed a GED program in the Navy and, when he was discharged, enrolled in electrical engineering at Iowa State University. He received all his degrees there, finishing his doctorate in 1967.

In the fall of 1967, he accepted appointment as Assistant Professor in the Department of Electrical Engineering at the South Dakota School of Mines and Technology in Rapid City. He was involved in various research activities and directed both masters and doctoral students, but his strongest interest was always in teaching. Ron was a consummate teacher, patient with students who were having difficulty but intolerant of sloth. He received the School of Mines Teaching Award in 1975 and the Western Electric Fund Award for Excellence in Teaching in 1981.

Dr. Schmitz was very active in the IEEE, especially the Education Society, and served as Secretary Treasurer of the Society. He was also active in ERM and attended, and contributed to, many Frontiers in Education Conferences. He served as general chair of FIE 1981 in Rapid City.

Ron was an avid hunter and fisherman, a devoted husband and father and a faithful friend. He served his church as Lector and Lay Minister and was active as a Boy Scout leader.

Ron contracted cancer in 1983 and died on July 19, 1984.



Theodore Rappaport  
New York University

### Past Recipients

- '79 Lawrence P. Grayson
- '80 Demetrius T. Paris
- '81 Lindon E. Saline
- '82 Anthony B. Giordana
- '83 Joseph Bordogna
- '84 John C. Lindenlaub
- '85 John D. Ryder
- '86 James R. Rowland
- '87 Bruce Eisenstein
- '88 Mac Van Valkenburg
- '89 Edward W. Ernst
- '90 Ernst Weber
- '91 J. David Irwin
- '92 Jerrier A. Haddad
- '93 Chalmers F. Sechrist
- '94 Eric A. Walker
- '95 Stephen W. Director
- '96 William H. Hayt, Jr.
- '97 Jerry R. Yeargan
- '98 Ted E. Batchman
- '99 Lyle D. Feisel
- '00 Irene C. Peden
- '01 Donald E. Kirk and  
Eli Fromm
- '02 Burks Oakley II
- '03 Frank Barnes and  
Delores Etter
- '04 William E. Sayle II
- '05 H. Vincent Poor
- '06 George D. Peterson
- '07 Sarah A. Rajala and  
Marwan A. Simaan
- '08 James A. Roberts
- '09 Jose B. Cruz, Jr.
- '10 Rob Reilly
- '11 Susan E. Conry

## IEEE Education Society William E. Sayle II Award for Achievement in Education

*Presented by Manuel Castro*

*For contributions to the theory and practice of education and educational technology through the creation of academic research centers, textbooks, software, and companies in the field of wireless communication engineering*

**Theodore (Ted) S. Rappaport** is the David Lee/Ernst Weber Professor of Electrical Engineering at the Polytechnic Institute of New York University (NYU-Poly) and is a professor of computer science at New York University's Courant Institute of Mathematical Sciences, and professor of radiology at the New York University School of Medicine. Rappaport is founding director of NYU WIRELESS, a new kind of academic research center that combines wireless communications engineering and computer science with the practice of medicine and health care. He also serves as Director of the National Science Foundation (NSF) Industrial/University Collaborative Research Center for Wireless Internet Communications and Advanced Technology (WICAT), a national research center headquartered at NYU-Poly that involves five major universities, including the two wireless programs he founded at The University of Texas (WNCG in 2002) and Virginia Tech (MPRG in 1990).

Rappaport is a pioneer in the fields of radio wave propagation for cellular and personal communications, wireless communication system design, and broadband wireless communications circuits and systems at millimeter wave frequencies. His research has influenced many products and international standards for cellular and local/personal area wireless networks, and he and his students invented software radio and position location technologies in the early 1990's, and site-specific radio frequency (RF) channel modeling and design technologies for wireless network deployment in the late 1990's – technologies now used routinely throughout the field of wireless communications. As a faculty member, Rappaport has advised approximately 100 students who continue to accomplish great things in the communications, electromagnetics, and circuit design fields throughout industry, academia, and government.

In 2006, Rappaport was elected to the Board of Governors of the IEEE Communications Society (ComSoc), and to the Board of Governors of the IEEE Vehicular Technology Society (VTS) in 2008 and again in 2011. He is a fellow of the IEEE, is a member of the board of the Marconi Society, and serves on the editorial boards of several academic and technical journals. He received the Marconi Young Scientist Award in 1990, an NSF Presidential Faculty Fellowship in 1992, the Sarnoff Citation from the Radio Club of America in 2000, the Fredrick E. Terman Outstanding Electrical Engineering Faculty Award from the American Society for Engineering Education in 2002, and the Stuart F. Meyer Award from the IEEE Vehicular Technology Society in 2005. In 2008, he received the Industry Leadership Award from the Austin Wireless Alliance and the IEEE Communications Society WTC Recognition Award for outstanding achievements and contributions in the area of wireless communications systems and networks. The IET honored Rappaport with the Sir Monty Finnieston medal in 2011 "for his outstanding academic and industrial contributions over almost three decades in the field of wireless communication." Rappaport has over 100 U.S. or international patents issued or pending and has authored, co-authored, and co-edited 18 books in the wireless field, including the best-selling textbook *Wireless Communications*

Principles & Practice (translated into 6 languages), Principles of Communication Systems Simulation with Wireless Applications, and Smart Antennas for Wireless Communications: IS-95 and Third Generation CDMA Applications. He has received three prize paper awards, including the 1999 Stephen O. Rice Prize Paper Award from the IEEE Communications Society for his work on site-specific propagation.

Rappaport has also been an entrepreneur, encouraging his students to create companies from their research. In 1989, he founded TSR Technologies, Inc., a cellular radio/PCS software radio manufacturer that he sold in 1993 to what is now Commscope, Inc. (taken private in 2011 by Carlyle Group). In 1995, he founded Wireless Valley Communications, Inc., a pioneering creator of site-specific radio propagation software for wireless network design and management that he sold in 2005 to Motorola. Rappaport has testified before the U.S. Congress, served as an international consultant for the International Telecommunication Union, consulted for more than 30 major telecommunications firms, and continues to work on many national committees pertaining to communications research and technology policy. He is a highly sought consultant and technical expert. He received BS, MS, and PhD degrees in electrical engineering from Purdue University in 1982, 1984, and 1987, respectively, and is an Outstanding Electrical Engineering Alumnus of his alma mater.

### **About the Sayle Award and William E. Sayle II**

The William E. Sayle II Award is presented to recognize a member of the IEEE Education Society who has made significant contributions over a period of years in a field of interest of the IEEE Education Society. The award consists of a plaque, a certificate, and paid registration to the Frontiers in Education Conference.

Dr. William (Bill) E. Sayle received his BSEE and MSEE degrees from the University of Texas at Austin and his Ph.D. from the University of Washington. He joined the faculty in electrical engineering at Georgia Institute of Technology in 1970, just as Georgia Tech was beginning the transition from an undergraduate institution to a research university. He was the ECE associate chair for undergraduate affairs from 1988-2003 and, following retirement in 2003, served as director of undergraduate programs at Georgia Tech-Lorraine in France until 2007. Bill was a tireless advocate for students, putting in countless late night and weekend hours in addressing student issues, assigning teaching assistants, and meeting with prospective students and parents.

Throughout his career, Bill touched the lives of many people in the worldwide academic community. He was a leader and a pioneer in many areas. In the 1970s, he was a founding member of the IEEE Power Electronics Society, where he served in many leadership roles over the years. He was a champion of diversity and in recruiting underrepresented minorities and women to engineering and science, long before it became a national issue. He visited many high schools on behalf of the Southeastern Consortium for Minorities in Engineering, a role where he made many friends for Georgia Tech among high school administrators and students in the southern part of Georgia.

In his 30-year career at Georgia Tech, Bill received the ECE outstanding teacher award twice, as well as the Georgia Tech outstanding teacher award and outstanding service award. Bill lent his voice and efforts to Georgia Tech faculty governance throughout his career, serving as an elected member of Institute-level committees, the Academic Senate, and the Executive Board.

Bill was a long-time member and active volunteer in the IEEE Education Society and the Electrical and Computer Engineering Division of ASEE. He was a Fellow of both IEEE and ASEE. He was the recipient of the Education Society's 2001 Meritorious Service Award and 2004 Achievement Award and of the ECE Division's 2001 Meritorious Service Award and 2006 ECE Distinguished Educator Award. Bill was the General Chair of the 1995 Frontiers in Education (FIE) Conference, which is still remembered for its all-vegetarian menu, and received the 1996 Ronald J. Schmitz Award for outstanding service to FIE.

Much of Bill's professional career was devoted to engineering accreditation, serving at various times as member and chair of the IEEE Committee on Engineering Accreditation Activities and the IEEE Accreditation Policy Council. He participated in more than 20 visits as a program evaluator, in addition to serving as a team chair and member of the Engineering Accreditation Commission of ABET for more than five years. Bill received the IEEE Educational Activities Board Meritorious Achievement Award in Accreditation Activities in 2004.

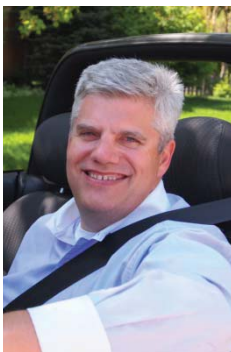
Dr. Sayle passed away on February 2, 2008.



Susan Lord  
University of San Diego



Richard Layton  
Rose-Hulman Institute of  
Technology



Matthew Ohland  
Purdue University

### Past Recipients

- '99 J.A. Buck, H. Owen,  
J.P. Uyemura, C.M. Verber,  
and D.J. Blumenthal
- '00 David J. Russomanno  
and Ronald D. Bonnell
- '01 Christopher W. Trueman
- '02 Mohan Krishnan  
and Mark J. Paulik

## IEEE *Transactions on Education* Best Paper Award

*Presented by Manuel Castro*

***Trajectories of Electrical Engineering and Computer Engineering Students by Race and Gender, S.M. Lord, R.A. Layton and M. W. Ohland, IEEE Transactions on Education Vol. 54, No. 4, November 2011, pp. 610-618***

**Susan M. Lord** is Professor and Coordinator of Electrical Engineering at the University of San Diego. She received a B. S. with distinction in Electrical Engineering and Materials Science and Engineering from Cornell University and the M.S. and Ph.D. in Electrical Engineering from Stanford University. From 1993-1997, Dr. Lord taught at Bucknell University. Author of over eighty publications, her teaching and research interests include electronics, optoelectronic materials and devices, service-learning, feminist pedagogy, lifelong learning, and engineering student persistence. Dr. Lord's industrial experience includes AT&T Bell Laboratories, General Motors Laboratories, NASA Goddard Space Flight Center, and SPAWAR Systems Center.

Dr. Lord's research in engineering education has been supported by several National Science Foundation (NSF) grants from programs including CAREER, instrumentation and laboratory improvement (ILI), scholarships for STEM (SSTEM), gender in science and engineering (GSE), and research in engineering education. These projects span a range of topics from engineering student persistence, to helping military veterans transition to engineering programs to optoelectronics experiments for first-year students. Since entering college, Dr. Lord has been committed to increasing diversity in engineering particularly supporting women and underrepresented minorities. In 1995, she was awarded the Eta Kappa Nu Outstanding Young Electrical Engineer Honorable Mention for "outstanding technical contributions to the field of optoelectronics and dedication to education and promoting the engineering profession for minorities and women." She and her colleagues received the 2005 Helen Plants Award for "Feminist Frontiers." She was named the 2010 Outstanding Engineering Educator by the San Diego County Engineering Council.

Dr. Lord has been active in the engineering education community since 1993. She is a senior member of the IEEE and Society of Women Engineers (SWE) and a member of ASEE and Tau Beta Pi. In addition to regularly presenting papers at the Frontiers in Education (FIE) and ASEE Conferences, she has held several leadership positions including FIE Steering Committee Member, General Co-Chair of FIE 2006, FIE 2005 Program Co-Chair, and elected member of administrative boards of the IEEE Education Society (EdSoc) and ASEE Education and Research Methods (ERM) Division. She served as the Vice President of EdSoc for 2007 and 2008 and the President for 2009 and 2010. She was the 2011 National Effective Teaching Institute (NETI) fellow.

Dr. Lord and her collaborators have been recognized for their longitudinal studies of engineering students with the William Elgin Wickenden Award for the Best Paper published in the Journal of Engineering Education in 2011. She was Guest Co-Editor of the 2010 Special Issue of the *International Journal of Engineering Education* (IJEE) on Applications of Engineering Education Research. Dr. Lord is an Associate Editor of the *IEEE Transactions on Education* and a member of the Editorial Board for IJEE.

'03 Tyson S. Hall,

James O. Hamblen, and  
 Kimberly E. Newman  
 '04 M. Brian Blake  
 '04 Russell L. Pimmel  
 '05 Antonio J. Lopez-Martin  
 '06 Euan Lindsay and  
 Malcolm C. Good  
 '07 Jason A. Day and  
 James D. Foley  
 '08 France Bélanger,  
 Tracy L. Lewis,  
 George M. Kasper,  
 Wanda J. Smith and  
 K. Vernard Harrington  
 '09 Kenneth Ricks,  
 Jeff Jackson, and  
 William A. Stapleton  
 '10 Keith Holbert and  
 George G. Karady  
 '11 Julie A. Rursch,  
 Andy Luse, and  
 Doug Jacobson

**Richard A. Layton** is an Associate Professor of Mechanical Engineering and past director of the Center for the Practice and Scholarship of Education at Rose-Hulman Institute of Technology. He received a B.S. from California State University, Northridge, and an M.S. and Ph.D. from the University of Washington. His professional work includes research in student teaming and student pathways (persistence, migration, and retention) and consulting in data visualization and graph design.

Dr. Layton's teaching practice includes formal and informal cooperative learning with a generous portion of learn-by-thinking-and-doing. For over a decade, he has worked to transform student labs from procedure-driven exercises (push this button, read that gauge, get the data and leave) to problem-based learning experiences. More recently, he and his colleagues have redesigned a first-year design course to incorporate substantive learning objectives in sustainability, communication, teaming, and professional ethics.

Dr. Layton is a founding member of the team that developed the CATME system, a web-based suite of tools for managing teams and winner of the 2009 Premier Award for Excellence in Engineering Education Courseware. He and his collaborators have been recognized for their longitudinal studies of engineering students with the William Elgin Wickenden Award for the Best Paper published in the Journal of Engineering Education in 2008 and 2011. Layton is a member of the Educational Research and Methods (ERM) Division of the American Society of Engineering Education (ASEE) and has served as Director, 2009 FIE Program Co-Chair, and 2012 ASEE-ERM Program Chair.

He is also a songwriter, singer, and guitar player who can occasionally be heard at an open-mic.

**Dr. Matthew Ohland** is a Professor of Engineering Education at Purdue University. He has a Ph.D. in Civil Engineering from the University of Florida in 1996. Previously, he earned an M.S. in Materials Engineering in 1992 and an M.S. in Mechanical Engineering in 1991 from Rensselaer Polytechnic Institute and a B.S. in Engineering and a B.A. in Religion from Swarthmore College. He has had previous appointments as Associate Professor of General Engineering at Clemson University, Assistant Director of the NSF-sponsored SUCCEED Engineering Education Coalition, and a National Science Foundation Postdoctoral Fellow for Science, Mathematics, Engineering, and Technology Education. His research on the longitudinal study of engineering student development, team formation, peer evaluation, and extending the use of active and cooperative learning methods has been supported by over \$11.8 million from the National Science Foundation and the Sloan Foundation.

Dr. Ohland serves the IEEE Education Society as a member of the Board of Governors (2007-2013) and as an Associate Editor of IEEE Transactions on Education. He was the Chair of the Steering Committee of IEEE Transactions on Learning Technologies (2007-2011). He has also served as an Expert in the IEEE Public Visibility program. He was elevated to Senior Member grade in 2009 and was previously recognized by IEEE with the Benjamin Dasher Award for the best paper/presentation in the 2004 Frontiers in Education conference and the Helen Plants Award for the best non-traditional session at the 2008 Frontiers in Education Conference.

Dr. Ohland is a Fellow of the American Society of Engineering Education and has served the Educational Research and Methods division as Chair (2009-2011), Director (2001-2003 and 2008-2009), and Vice-Chair for FIE Programs / Program Chair for FIE 2008. He also serves ASEE as an ABET Program Evaluator for



general engineering programs. Dr. Ohland was the 2002–2006 President of Tau Beta Pi, the national engineering honor society, and has delivered volunteer seminars reaching over 2000 students through the Association’s award-winning Engineering Futures program.

Dr. Ohland and his collaborators have been recognized for their longitudinal studies of engineering students with the William Elgin Wickenden Award for the Best Paper published in the Journal of Engineering Education in 2008 and 2011 and best paper awards at multiple conferences. The CATME and Team-Maker tools for managing teams developed under Dr. Ohland’s leadership received the 2009 Premier Award for Excellence in Engineering Education Courseware. Dr. Ohland was recognized by Clemson University in 2006 with the Byar’s Prize for Excellence in Teaching Engineering Fundamentals and by Purdue’s School of Engineering Education with the Best Teacher Award in 2007, 2008, and 2012.

## Hong Kong Chapter



Chair –  
Yuen-Yan Chan  
Chinese University  
of Hong Kong



Vice Chair –  
Kai-Pan Mark  
City University  
of Hong Kong



Honorary Secretary –  
Doris Ng

## IEEE Education Society Chapter Achievement Award

*Presented by Edmundo Tovar*

*In recognition of the Chapter's proven results in spreading IEEE Education Society's interests in China and Southeast Asia, thanks to outstanding leadership by its officers*

**Dr. Yuen-Yan Chan** (M'07–SM'08) received B.Eng., M.Phil. and Ph.D. degrees in information engineering and the M.Ed. degree in educational psychology from the Chinese University of Hong Kong, Hong Kong, in 1998, 2000, 2006, and 2009, respectively. She is the Founding Chair and the current Chair of the IEEE Education Society Hong Kong Chapter. She is with the Department of Information Engineering, Chinese University of Hong Kong, Shatin, Hong Kong.

**Dr. Kai-Pan Mark** is currently the vice-chair of the Chapters Committee, IEEE Education Society and also the vice-chair of IEEE Education Society Hong Kong Chapter. He received his Ph.D. in Information Systems from City University of Hong Kong, his Master of Science in Information Engineering from The Chinese University of Hong Kong and his Bachelor of Science and Associate of Science, both in Computer Studies from City University of Hong Kong. Dr. Mark's research interest is on the behavioral aspects of different stakeholders in e-Learning systems addressing issues on habitual behavior formation through personalization and IT artifact design. He is an active volunteer in an IEEE Teacher in Service Program project in Hong Kong to provide assistance and support to science and technology education in rural small schools. He was a recipient of IEEE Education Society Student Leadership award 2010, and was also a FIE New Faculty Fellow in 2010.

**Ms. Doris Ng** (M'2007-) supports the Hong Kong Chapter as the Honorary Secretary. She received her B.B.A. in China Business from The City University of Hong Kong and M.A. in Communication from Hong Kong Baptist University in 2001 and 2009, respectively. She is now the Regional Marketing Manager, Enterprise Business, South East Asia of Huawei Technology Investment Co., Ltd. Before joining Huawei, she served as the Marketing Manager at Hewlett-Packard Hong Kong S.A.R. Limited.



Honorary Treasurer –  
James Ho

**Mr. Yu-Ho Ho** serves as Honorary Treasurer of the Hong Kong Chapter of IEEE Education Society. He received his Postgraduate Dip. in Education and Bachelor of Engineering in Information Engineering from The Chinese University of Hong Kong, Hong Kong in 2008, and 2007, respectively. Mr. Ho's current research interest is on the anthroposophy educational philosophy, Waldorf education, a humanistic approach to pedagogy based on the educational philosophy. He is active in Developmental Kinesiology, Educational Kinesiology sectors in Hong Kong. He is a professional security consultant on IT systems in business sectors.

**Past Recipients**

- '06 Nordic Chapter
- '07 Spanish Chapter
- '08 Gulf Chapter
- '09 Santa Clara Valley  
Chapter and  
Portugal Chapter
- '10 Austria Chapter
- '11 Spain Chapter



German Cabuya  
University Francisco José de  
Caldas

#### **Past Recipients**

- '06 Michael E. Auer and  
Manuel Castro
- '07 Carlos Rueda  
Artunduaga and  
Oliver K. Ban
- '08 Bakr Hassan and  
Edmundo Tovar
- '09 Emmanuel A. Gonzalez
- '10 Martín Llamas-Nistal
- '11 Russ Meier

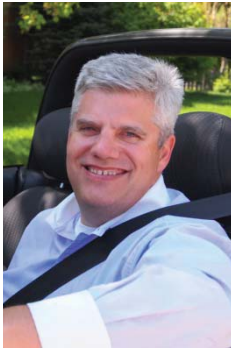
## **IEEE Education Society Distinguished Chapter Leadership Award**

*Presented by Edmundo Tovar*

*The Colombia chapter and the activity in the Andes Region has increased directly due to his efforts. Being well-aware of the situation of the Latin America region, he has dedicated himself to changing its standing in the world.*

**Dr. German Cabuya Parra** graduated as an electronic engineer from the Universidad Distrital "Francisco José de Caldas" in 1989 and completed a postgraduate specialist degree at Escuela Superior de Administración Pública (ESAP) in 2001. He is currently the Information and communications Technology Office Head of the Special Administrative Unit of Public Services of Bogota (UAESP). He also holds a position as professor and counselor at the University Francisco José de Caldas.

Dr. Cabuya is an IEEE senior member, a Nikkoryu-kai member, and a senior management specialist of the state. His interests include engineering, education, telecommunications, aerospace, robotics, recruitment, supervision, administration, ethics, and journalism.



Matthew Ohland  
Purdue University

### Past Recipients

- '05 Marion O. Hagler and  
Burks Oakley II
- '06 Ted Batchman and  
David A. Conner
- '08 David L. Soldan
- '10 Manuel Castro
- '11 Susan M. Lord

## IEEE Education Society Distinguished Member Award

*Presented by Manuel Castro*

*For outstanding contributions in support of teamwork in higher education and student retention through research, courseware, archival publications, and presentations*

**Dr. Matthew Ohland** is a Professor of Engineering Education at Purdue University. He has a Ph.D. in Civil Engineering from the University of Florida in 1996. Previously, he earned an M.S. in Materials Engineering in 1992 and an M.S. in Mechanical Engineering in 1991 from Rensselaer Polytechnic Institute and a B.S. in Engineering and a B.A. in Religion from Swarthmore College. He has had previous appointments as Associate Professor of General Engineering at Clemson University, Assistant Director of the NSF-sponsored SUCCEED Engineering Education Coalition, and a National Science Foundation Postdoctoral Fellow for Science, Mathematics, Engineering, and Technology Education. His research on the longitudinal study of engineering student development, team formation, peer evaluation, and extending the use of active and cooperative learning methods has been supported by over \$11.8 million from the National Science Foundation and the Sloan Foundation.

Dr. Ohland serves the IEEE Education Society as a member of the Board of Governors (2007-2013) and as an Associate Editor of IEEE Transactions on Education. He was the Chair of the Steering Committee of IEEE Transactions on Learning Technologies (2007-2011). He has also served as an Expert in the IEEE Public Visibility program. He was elevated to Senior Member grade in 2009 and was previously recognized by IEEE with the Benjamin Dasher Award for the best paper/presentation in the 2004 Frontiers in Education conference and the Helen Plants Award for the best non-traditional session at the 2008 Frontiers in Education Conference.

Dr. Ohland is a Fellow of the American Society of Engineering Education and has served the Educational Research and Methods division as Chair (2009-2011), Director (2001-2003 and 2008-2009), and Vice-Chair for FIE Programs / Program Chair for FIE 2008. He also serves ASEE as an ABET Program Evaluator for general engineering programs. Dr. Ohland was the 2002–2006 President of Tau Beta Pi, the national engineering honor society, and has delivered volunteer seminars reaching over 2000 students through the Association's award-winning Engineering Futures program.

Dr. Ohland and his collaborators have been recognized for their longitudinal studies of engineering students with the William Elgin Wickenden Award for the Best Paper published in the Journal of Engineering Education in 2008 and 2011 and best paper awards at multiple conferences. The CATME and Team-Maker tools for managing teams developed under Dr. Ohland's leadership received the 2009 Premier Award for Excellence in Engineering Education Courseware. Dr. Ohland was recognized by Clemson University in 2006 with the Byar's Prize for Excellence in Teaching Engineering Fundamentals and by Purdue's School of Engineering Education with the Best Teacher Award in 2007, 2008, and 2012.



Susan Lord  
University of San Diego

### Past Recipients

- '78 Warren B. Boast
- '79 Joseph M. Biedenbach
- '80 Edwin C. Jones, Jr.
- '81 Lyle D. Feisel
- '82 Roy H. Mattson
- '83 Robert F. Fontana
- '84 Gerald R. Peterson
- '85 Luke H. Noggle
- '86 James A. Mulligan  
Sidney S. Shamis
- '87 Thomas K. Gaylord
- '88 Robert F. Cotellessa
- '89 E. Ben Peterson
- '90 Darrell L. Vines
- '91 Victor K. Schutz
- '92 William K. LeBold
- '93 Frank S. Barnes
- '94 Patricia D. Daniels
- '95 Robert W. Ritchie
- '96 Marion O. Hagler  
Donald E. Kirk
- '97 Robert Sullivan
- '98 Burks Oakley II
- '99 Gerald L. Engel
- '00 Ted E. Batchman
- '01 William E. Sayle II
- '02 James Rowland
- '03 David A. Conner
- '04 Trond Clausen
- '05 J. David Irwin  
Rodney J. Soukup
- '06 Robert A. Reilly
- '07 David V. Kerns, Jr.
- '08 James J. Sluss, Jr.
- '09 Manuel Castro
- '10 Michael E. Auer
- '11 Russ Meier
- '11 Claudio da Rocha Brito  
and Melany M. Ciampi

## IEEE Education Society Edwin C. Jones, Jr. Meritorious Service Award

*Presented by Manuel Castro*

***For contributions to engineering education and the Education Society through service as President, Ad Com Member, General and Program Chairs for the Frontiers in Education Conference, Strategic Planning, Editorial Board Member, and the All Society Review Panel***

Susan M. Lord is Professor and Coordinator of Electrical Engineering at the University of San Diego. She received a B. S. with distinction in Electrical Engineering and Materials Science and Engineering from Cornell University and the M.S. and Ph.D. in Electrical Engineering from Stanford University. From 1993-1997, Dr. Lord taught at Bucknell University. Author of over eighty publications, her teaching and research interests include electronics, optoelectronic materials and devices, service-learning, feminist pedagogy, lifelong learning, and engineering student persistence. Dr. Lord's industrial experience includes AT&T Bell Laboratories, General Motors Laboratories, NASA Goddard Space Flight Center, and SPAWAR Systems Center.

Dr. Lord's research in engineering education has been supported by several National Science Foundation (NSF) grants from programs including CAREER, instrumentation and laboratory improvement (ILI), scholarships for STEM (SSTEM), gender in science and engineering (GSE), and research in engineering education. These projects span a range of topics from engineering student persistence, to helping military veterans transition to engineering programs to optoelectronics experiments for first-year students. Since entering college, Dr. Lord has been committed to increasing diversity in engineering particularly supporting women and underrepresented minorities. In 1995, she was awarded the Eta Kappa Nu Outstanding Young Electrical Engineer Honorable Mention for "outstanding technical contributions to the field of optoelectronics and dedication to education and promoting the engineering profession for minorities and women." She and her colleagues received the 2005 Helen Plants Award for "Feminist Frontiers." She was named the 2010 Outstanding Engineering Educator by the San Diego County Engineering Council.

Dr. Lord has been active in the engineering education community since 1993. She is a senior member of the IEEE and Society of Women Engineers (SWE) and a member of ASEE and Tau Beta Pi. In addition to regularly presenting papers at the Frontiers in Education (FIE) and ASEE Conferences, she has held several leadership positions including FIE Steering Committee Member, General Co-Chair of FIE 2006, FIE 2005 Program Co-Chair, and elected member of administrative boards of the IEEE Education Society (EdSoc) and ASEE Education and Research Methods (ERM) Division. She served as the Vice President of EdSoc for 2007 and 2008 and the President for 2009 and 2010. She was the 2011 National Effective Teaching Institute (NETI) fellow.

Dr. Lord and her collaborators have been recognized for their longitudinal studies of engineering students with the William Elgin Wickenden Award for the Best Paper published in the Journal of Engineering Education in 2011. She was Guest Co-Editor of the 2010 Special Issue of the *International Journal of Engineering Education* (IJEE) on Applications of Engineering Education Research. Dr. Lord is an Associate Editor of the *IEEE Transactions on Education* and a member of the Editorial Board for IJEE.

## **About the Edwin C. Jones Award**

The Edwin C. Jones Meritorious Service Award is presented to recognize a member of the IEEE Education Society who has made pioneering contributions to the administrative efforts of the IEEE Education Society over a period of years. The award consists of a plaque, a certificate, and registration to the Frontiers in Education Conference.

## **About Edwin C. Jones**

Professor Jones served as a Society officer from 1970 through 1976; this service included two years as president. He served as Editor-in-Chief of the *IEEE Transactions on Education* from 1982-84. Since he first became involved in the Society in the late 1960s, he has held virtually every office in the Education Society. He is still actively involved with the Education Society. Professor Jones also serves the IEEE as a member of the IEEE Committee on Engineering Accreditation Activities. Dr. Jones is University Professor and Associate Chair, emeritus, Department of Electrical and Computer Engineering, Iowa State University. Prior to joining Iowa State in 1966, he was an Assistant Professor at the University of Illinois from 1962-66. He received his PhD in 1962 from the University of Illinois; the DIC in 1956 from Imperial College of Science and Technology, University of London; and the BSEE in 1955 from West Virginia University. Dr. Jones' honors and awards include: Fellow, Institute of Electrical and Electronics Engineers; Fellow, American Society for Engineering Education; Fellow, American Association for Advancement of Science; Fellow, Accreditation Board for Engineering and Technology; IEEE Centennial Medal, 1984; ASEE Centennial Medal, 1993.



Babak Ayazifar  
University of California,  
Berkeley

#### Past Recipients

- '04 Parham Aarabi
- '05 John R. Buck
- '06 Lisa G. Huettel
- '07 Susan C. Hagness
- '08 Kathleen E. Wage
- '09 Min Wu
- '10 Craig Ziles
- '11 Jonathan Makela

## IEEE Education Society Mac Van Valkenburg Early Career Teaching Award

*Presented by Manuel Castro*

*For creative, lively, challenging, and caring teaching that has sparked broad excitement and engagement among his students, even in the largest core courses.*

**Babak Ayazifar** joined the EECS faculty at UC Berkeley in 2005, where he is now a Lecturer with Security of Employment (Lecturer SOE)—equivalent to an Associate Professor in Teaching with tenure. He earned his B.S. in EE from Caltech, and his S.M. and Ph.D. in EECS from MIT. In his doctoral research, he applied spectral graph theory to the study of the mutual influence of a network's topology and dynamics. This led to his dissertation, *Graph Spectra and Modal Dynamics of Oscillatory Networks*.

At MIT, Babak received the *Harold L. Hazen Award* for outstanding teaching. He advanced to the rank of *Instructor-G*, which conferred teaching assignments ordinarily reserved for faculty. He won the *Goodwin Medal*, MIT's most prestigious award for a graduate student whose teaching is "conspicuously effective over and above ordinary excellence." And, in spring 2002, he took leave from his graduate studies to take an appointment as a *Senior Lecturer* at MIT's School of Engineering, teaching a graduate course in digital signal processing.

Immediately prior to his faculty appointment at UC Berkeley, Babak was a Technical Specialist in the *Intellectual Property and Technology Group* of *Ropes & Gray, LLP*. His intellectual property experience spans patent prosecution and related activities over a wide range of technologies, such as mechanical devices, intravascular MRI, DNA Microarray data analysis, and encrypted communication using chaotic systems. Babak is a patent agent, registered to practice before the *United States Patent and Trademark Office* (Reg. No. 56793).

At UC Berkeley, he has focused on teaching; student learning; curriculum development and reform; mentoring graduate and undergraduate teaching assistants; and sharing the results of his pedagogical innovations and insight at international conferences and other forums. In spring 2008, Babak received the UC Berkeley EE Division's *Outstanding Teaching Award for Excellence in Teaching*.





Elio San Cristobal Ruiz  
Universidad Nacional de  
Educación a Distancia

#### **Past Recipients**

- '09 Seiji Isotani
- '10 Emmanuel Gonzalez and  
Kai-Pan Mark
- '11 Dario Schor

## **IEEE Education Society Student Leadership Award**

*Presented by Manuel Castro*

*For his outstanding contributions to the consolidation of the IEEE  
UNED (Spanish University for Distance Education) Student Branch*

**Elio San Cristobal Ruiz** has a Ph.D. degree in electrical and computer engineering from the Spanish University for Distance Education (UNED), Madrid, Spain, in 2010.

Currently he is working as an Assistant Professor with the Electrical and Computer Engineering Department, Industrial School of UNED. He is involved in several European projects and a NSF project in the field of education and the application of virtual and remote laboratories in distance learning.

He has been involved in IEEE activities since 2006, being chairman of the IEEE UNED student branch from 2009 to 2010. Currently he is a member of the Spanish Chapter of the IEEE Education Society.



Sergio Martin  
Universidad Nacional de  
Educación a Distancia

### **Past Recipients**

- '09 Seiji Isotani
- '10 Emmanuel Gonzalez and  
Kai-Pan Mark
- '11 Dario Schor

## **IEEE Education Society Student Leadership Award**

*Presented by Manuel Castro*

*For his outstanding contributions to the consolidation of the IEEE  
UNED (Spanish University for Distance Education) Student Branch*

**Sergio Martin** (M'06) was born in Madrid, Spain, in 1980. He received the Ph.D. degree in electrical and computer engineering from the Spanish University for Distance Education (UNED), Madrid, Spain, in 2010.

He has worked as an Assistant Professor with the Electrical and Computer Engineering Department, Industrial School of UNED, since 2007. Since 2002, he has participated in the department's national and international research projects. He has received two best thesis awards and four best paper awards.

Dr. Martin has been involved in IEEE activities since 2006, being chairman of the IEEE UNED student branch from 2007 to 2008. Currently he is an advisory board member of the Spanish Chapter of the IEEE Education Society and of the IEEE Technology Management Council of Spain.