

2009 Frontiers in Education Conference

Awards Presentations

Monday, October 19 Terman/Rigas Awards Luncheon

11:45 a.m.-1:15 p.m.

ASEE ECE Division Hewlett-Packard Frederick Emmons Terman Award
IEEE Education Society Hewlett-Packard/Harriet B. Rigas Award

Tuesday, October 20 Plenary Address and Awards Presentations

8:00 a.m.-9:30 a.m.

Frontiers in Education (FIE) Conference Awards

FIE 2008 Benjamin J. Dasher Best Paper Award
FIE 2008 Helen Plants Award
FIE Ronald J. Schmitz Award

Tuesday, October 20 Awards Banquet

6:30 p.m.-9:30 p.m.

ASEE Educational Research and Methods Division

Distinguished Service Award

IEEE Education Society

Achievement Award
Best *Transactions* Paper Award
Chapter Achievement Award
Distinguished Chapter Leadership Award
Edwin C. Jones, Jr. Meritorious Service Award
Mac Van Valkenburg Early Career Teaching Award

Award Selection Committee Chairs

Frontiers in Education Conference

Benjamin J. Dasher Best Paper Award	Arnold Pears
Helen Plants Award	Shane Brown
Ronald J. Schmitz Award	Ted Batchman

ASEE Educational Research and Methods Division

Distinguished Service Award	Matt Ohland
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ASEE Electrical and Computer Engineering Division

Hewlett-Packard Frederick Emmons Terman Award	Keith Chugg
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IEEE Education Society

Achievement Award	Lyle Feisel
Best <i>Transactions</i> Paper Award	Chuck Fledderman
Chapter Achievement Award	Manuel Castro
Distinguished Chapter Leadership Award	Trond Clausen
Edwin C. Jones, Jr. Meritorious Service Award	Edwin C. Jones, Jr.
Hewlett-Packard/Harriet B. Rigas Award	Patricia Daniels
Mac Van Valkenburg Early Career Teaching Award	Hossein Mousavinezhad



Steve Krause
Professor
School of Mechanical, Aerospace,
Chemical and Materials
Engineering
Arizona State University



Robert Culbertson
Associate Professor
Department of Physics and
Astronomy
Arizona State University

Frontiers in Education Conference Benjamin J. Dasher Best Paper Award

Presented by: Patricia Daniels

***“High School Teacher Change, Strategies, and Actions
in a Professional Development Project Connecting
Mathematics, Science, and Engineering” FIE 2008,
Session T3D***

Steve Krause is Professor in the School of Mechanical, Aerospace, Chemical and Materials Engineering in the Fulton School of Engineering at Arizona State University. In work related to the Dasher Award paper, he helped develop, deliver and analyze results of two courses in an NSF funded Math Science Partnership, Project Pathways; Connecting Mathematics with Physics and Chemistry and Connecting Mathematics and Science with Engineering. He found high school teachers' better mathematicized their science, better contextualized mathematics, and linked these subjects to real world applications. He also teaches in materials science, polymers, and design and has created a Materials Concept Inventory to reveal and repair student misconceptions' about structure of materials. Currently, he is principal Investigator on an NSF IEECI project studying student learning trajectories in conceptual development in materials science courses. He is using the findings in an NSF CCLI project to create modules that improve the effectiveness of learning of undergraduate engineering students.

Robert Culbertson is Associate Professor in the Department of Physics and Astronomy and a member of the Leadership Team in the Math-Science Partnership project related to the Dasher Award paper. He led the team that developed course, Connecting Physics, Chemistry, and Mathematics which helped high school math and science teachers better connect their subject matter and increase their students' interest in mathematics and science. Currently he is leading a team of faculty from physics, math, engineering, and music in developing and teaching an NSF funded CCLI course, Frets, Flutes and Physics. It is an integrated 11-hour freshman course that teaches students math, science and English through designing and building musical instruments. He also teaches introductory physics for majors and other courses in physics. His overall research interests include Physics Education Research (PER) as well as fundamental experimental research in materials physics, specializing in ion beam analysis of surfaces and thin films.



Mike Oehrtman
Associate Professor
Department of Mathematics and
Statistics
Arizona State University



Marilyn Carlson
Professor
Department of Mathematics and
Statistics
Arizona State University

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

Michael Oehrtman is Associate Professor of Mathematics in the Department of Mathematics and Statistics at Arizona State University. In work related to the Dasher Award paper, he has been Researcher Team Leader for a Math-Science Partnership, Project Pathways. He has overseen the longitudinal design for the professional development of participating secondary mathematics and science teachers. His research in undergraduate mathematics education focuses on teaching and learning in calculus-based courses, including precalculus and differential equations, where he examines development of students' understanding of limit, function, and rate of change concepts and use in modeling in scientific applications. He is currently developing a new calculus and differential equations course sequence at ASU's polytechnic campus. Most recently, he has drawn upon his extensive experience in learning of mathematics to integrate it with science and English in an NSF funded CCLI course, Frets, Flutes and Physics, an integrated 11-hour freshman learning community course.

Marilyn Carlson is Professor in the Mathematics Department at Arizona State University. In her work related to the Dasher Award paper, she is currently the principal investigator of the NSF supported Math Science Partnership, Project Pathways: Opening Routes to Math & Science Success for All Students. The project is in its sixth year and is producing tools and knowledge that are guiding secondary mathematics and science teachers in promoting their conceptual learning and STEM behaviors that the literature deems essential for continued STEM learning and course-taking. It has transformed their teaching and has been the catalyst for local school districts instituting ongoing in-service development with ongoing professional learning communities. Her teaching responsibilities are in the areas of mathematics education. Her overall research interests are in knowing and learning concepts of precalculus and beginning calculus, problem solving, secondary teacher knowledge, and teacher change.



William J. Leonard
Associate Professor
Department of Physics &
Astronomy
University of North Carolina at
Greensboro



Christopher V. Hollot
Professor and Department Head
Department of Electrical and
Computer Engineering
University of Massachusetts
Amherst

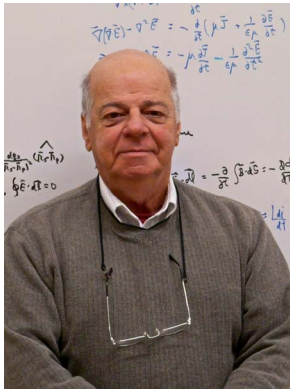
Frontiers in Education Conference Benjamin J. Dasher Best Paper Award

Presented by: Patricia Daniels

“Mastering Circuit Analysis: An Innovative Approach to a Foundational Sequence” FIE 2008, Session F2H

Bill Leonard earned a Ph.D. in theoretical nuclear physics in 1988 from the University of Massachusetts Amherst. Since 1989, he has worked in physics education on a variety of projects, such as curriculum development and implementation of high school physics, alternative assessments, the use of representations in problem solving, studying the role of analysis and reasoning activities in instruction, and research on formative assessment and classroom response technology in college, high school, and middle school settings. His current interests include developing rate-of-learning models and using the Mastery learning approach as a laboratory for studying how people learn. Bill taught Engineering Circuit Analysis in the Department of Electrical and Computer Engineering at UMass Amherst for five years before moving this past July to the Department of Physics & Astronomy of the University of North Carolina at Greensboro.

C.V. Hollot received his Ph.D. in Electrical Engineering from the University of Rochester in 1984. He joined the Department of Electrical and Computer Engineering at the University of Massachusetts, Amherst in 1984, receiving the NSF PYI in 1988 and becoming a Fellow of the IEEE in 2004. His research interests are in the theory and application of feedback control.



William J. Gerace
 Helena Gabriel Houston
 Distinguished Professor for Science
 Education
 Department of Physics &
 Astronomy
 University of North Carolina at
 Greensboro

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

William Gerace has been involved in education research for more than 25 years. He earned his bachelor's degree from Massachusetts Institute of Technology in 1963 and his doctorate in theoretical nuclear physics from Princeton University in 1967. In 1969, he joined the Department of Physics at the University of Massachusetts Amherst. He served as the director of the Scientific Reasoning Research Institute from 1991 until 2008. In 2008, Professor Gerace was appointed the Helena Gabriel Houston Distinguished Professor for Science Education at the University of North Carolina at Greensboro

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
- '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 Thoennessen, Yihjia Tsai, Nancy E. Davis, and Sheryl L. Wolfe
- '98 A.B. Carlson, W.C. Jennings, and P.M. Schoch
- '99 Wayne Burtleson, Aura Ganz, and Ian Harris
- '00 David W. Petr
- '02 Zeynep Dilli, Neil Goldsman, Lee Harper, Steven I. Marcus, and Janet A. Schmidt
- '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



Lisa C. Benson
Assistant Professor
Department of Engineering and
Science Education
Clemson University



Sherrill B. Biggers
Professor, Mechanical
Engineering
Clemson University



William F. Moss
Professor
Mathematical Sciences
Clemson University

Frontiers in Education Conference Helen Plants Award

Presented by: Shane Brown

**Best Nontraditional Session at FIE 2008:
“Enhancing Student Learning Using the SCALE_UP
Format” Session T2J**

Lisa C. Benson is an Assistant Professor in the Department of Engineering and Science Education at Clemson University, with a joint appointment in the Department of Bioengineering. Dr. Benson teaches first year engineering, undergraduate research methods, and graduate engineering education courses. Her research interests include student-centered active learning in undergraduate engineering, assessment of motivation, and how motivation affects student learning. She is also involved in projects that utilize Tablet PCs to enhance student learning. Her education includes a B.S. in Bioengineering from the University of Vermont, and M.S. and Ph.D. degrees in Bioengineering from Clemson University.

Sherrill B. Biggers is Professor of Mechanical Engineering at Clemson University. He has over 28 years of experience in teaching engineering mechanics, including statics, dynamics, and strength of materials at two universities and is the recipient of numerous teaching awards. His research is in the computational mechanics and optimal design of advanced composite structures. He has been active in curriculum and course development over the past 20 years. Recently he has developed a new integrated Statics and Dynamics course for sophomore Mechanical Engineering majors and has written the text and supporting learning exercises for this course. He received his BS in Civil Engineering from NC State University and his MS and Ph.D. in Civil Engineering from Duke University.

William F. Moss is a mathematical sciences professor who has more recently been engaged in mathematics education research. Dr. Moss helped establish a pilot laptop program at Clemson University, and was a co-PI for the NSF SUCCEED Coalition. He has taught faculty development workshops on effective teaching with technology and active learning environments. He has developed SCALE-UP learning activities for use in Calculus III and Differential Equations. His SCALE-UP classes use Maple tutorials, exercises, projects, and hybrid exams.

Matthew Ohland is Associate Professor of Engineering Education at Purdue University. His research on the longitudinal study of engineering students, team assignment, peer evaluation, and active and collaborative teaching methods has been supported by over \$9 million from the National Science Foundation and the Sloan Foundation and his team received the William Elgin Wickenden Award for the Best Paper in the Journal of Engineering Education in 2008 and multiple conference Best Paper awards. Dr. Ohland is Chair of ASEE's Educational Research and Methods division and an At-Large member the Administrative Committee of the IEEE Education Society. He was the 2002-2006 President of Tau Beta Pi.



Matt Ohland
Associate Professor
Engineering Education
Purdue University



Marisa K. Orr
Doctoral Candidate
Clemson University



Scott D. Schiff
Professor
Civil Engineering
Clemson University

Frontiers in Education Conference Helen Plants Award (continued)

Marisa K. Orr is a doctoral candidate at Clemson University. She received her B.S. in Mechanical Engineering from Clemson in 2005. She has been an Endowed Teaching Fellow and is currently chair of the Mechanical Engineering Graduate Student Advisory Committee. In her research, she is studying the numerical modeling of traction on sand and the preparedness, persistence, and pathways of mechanical engineering students as they progress through their degree program.

Scott D. Schiff is a civil engineering professor at Clemson University with teaching and research interests in the structures area. He also serves as the Director of the Wind and Structural Engineering Research Facility. He has taught the complete sequence of undergraduate Civil Engineering courses beginning with statics through advanced structural analysis. To improve student understanding of fundamental concepts covered in statics, he uses an active learning environment to just-in-time assessment of student understanding. His education includes an undergraduate degree in architectural engineering from the University of Cincinnati and graduate degrees in civil engineering (structures) from the University of Illinois at Urbana-Champaign.

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 A. Yoder
- '96 Alisha A. Waller, Edward R. Doering, and Mark A. Yoder
- '97 Karl A. Smith, James D. Jones and Elizabeth A. 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



Russ Meier

Associate Professor of Electrical Engineering and Computer Science
Milwaukee School of Engineering

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

Frontiers in Education Conference

Ronald J. Schmitz Award

Presented By: Ted Batchman

For outstanding service to the Frontiers in Education Conference

Dr. Russ Meier is an Associate Professor of Electrical Engineering and Computer Science at the Milwaukee School of Engineering. He received his B.S., M.S., and Ph.D. degrees in Computer Engineering from Iowa State University. His teaching and research interests include embedded systems, evolvable hardware, the use of complex adaptive systems in digital architectures, and computer architecture. His teaching skills have been recognized with an Iowa State University Teaching Excellence Award and the Warren B. Boast Award for Undergraduate Teaching Excellence.

Dr. Meier maintains professional memberships in IEEE, the IEEE Computer Society, the IEEE Education Society, the American Society for Engineering Education (ASEE), and the ASEE Educational Research and Methods division (ERM).

Dr. Meier serves the engineering education community in a number of ways. As IEEE Education Society Meetings Chair, he works with colleagues from around the world to establish, plan, and maintain engineering education conferences and workshops. He serves on the Steering Committees of the ASEE/IEEE Frontiers in Education Conference (FIE) and the IEEE Engineering Education Conference (EDUCON). He is a voting member on the IEEE Education Society Administrative Committee and the Strategic Planning sub-committee. He is the IEEE Education Society Milwaukee Chapter Chair. He was the FIE2007 General Chair and served eight years as the FIE Faculty Fellows Chair.



Dr. Richard M. Felder
Hoechst Celanese Professor
Emeritus of Chemical
Engineering
North Carolina State University

Past Recipients

'95 Wallace S. Venable
'96 James E. Stice
'98 Billy V. Koen
 Alisha A. Waller
'99 John C. Lindenlaub
'00 Richard S. Culver
'01 Charles F. Yokomoto
'02 Karl A. Smith
'03 Michael J. Pavelich
'04 Larry G. Richards
'05 Daniel D. Budny
'06 Eric P. Soulsby
'07 Daniel J. Moore
'08 Teri Reed-Rhoads

ASEE ERM Division Distinguished Service Award

*For contributions to the education of future engineers
and their educators, through outstanding service to the
ASEE Educational Research and Methods Division*

Richard M. Felder is Hoechst Celanese Professor Emeritus of Chemical Engineering at North Carolina State University. He is coauthor of *Elementary Principles of Chemical Processes* (3rd Edition, John Wiley & Sons, 2005), which has been used as the text for the introductory chemical engineering course by most American chemical engineering departments and at many international institutions for over three decades. He has authored or coauthored over 300 papers on chemical process engineering and engineering education and presented hundreds of seminars, workshops, and short courses in both categories to industrial and research institutions and universities throughout the United States and abroad. Since 1991 he has co-directed the National Effective Teaching Institute under the auspices of the American Society for Engineering Education (ASEE).

Dr. Felder received the B.Ch.E. degree from the City College of New York in 1962 and the Ph.D. in chemical engineering from Princeton University in 1966. He worked for the Atomic Energy Research Establishment (Harwell, England) and Brookhaven National Laboratory before joining the North Carolina State faculty in 1969, and has spent sabbatical semesters at the University of Colorado, Georgia Tech, Smith College, and the Carnegie Foundation for the Advancement of Teaching. His honors include the R.J. Reynolds Award for Excellence in Teaching, Research, and Extension, the AT&T Foundation Award for Excellence in Engineering Education, the Chemical Manufacturers Association National Catalyst Award, the ASEE Chester F. Carlson Award for innovation in engineering education, the AIChE Warren K. Lewis Award for contributions to Chemical Engineering Education, the ASEE Chemical Engineering Division Lifetime Achievement Award for Pedagogical Scholarship, and a number of national and regional awards for his publications on engineering education. Many of his publications can be found at http://www.ncsu.edu/effective_teaching.



David Tse
 Professor
 Electrical Engineering and
 Computer Sciences
 University of California Berkeley

ASEE ECE Division Hewlett-Packard Frederick Emmons Terman Award

Presented by: Robert Bouzon

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

David Tse received the B.A.Sc. degree in systems design engineering from University of Waterloo, Canada in 1989, and the M.S. and Ph.D. degrees in electrical engineering from Massachusetts Institute of Technology in 1991 and 1994 respectively. From 1994 to 1995, he was a postdoctoral member of technical staff at A.T.&T. Bell Laboratories. Since 1995, he has been at the Department of Electrical Engineering and Computer Sciences in the University of California at Berkeley, where he is currently a professor.

He received a 1967 NSERC 4-year graduate fellowship from the government of Canada in 1989, a NSF CAREER award in 1998, the Best Paper Awards at the Infocom 1998 and infocom 2001 conferences, the Erlang Prize in 2000 from the INFORMS Applied Probability Society, the IEEE Communications and Information Theory Society Joint Paper Award in 2001, the Information Theory Society Paper Award in 2003, and the 2009 Frederick Emmons Terman Award from the American Society for Engineering Education. He has given plenary talks at international conferences such as ICASSP in 2006, Mobicom in 2007, CISS in 2008, and ISIT in 2009. He was the Technical Program co-chair of the International Symposium on Information Theory in 2004, and was an Associate Editor of the IEEE Transactions on Information Theory from 2001 to 2003. He is a coauthor, with Pramod Viswanath, of the text "Fundamentals of Wireless Communication", which has been used in over 60 institutions around the world.

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 Shoht
- '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. Madisetti
- '07 Russel Jacob (Jake) Baker
- '08 Keith M. Chugg

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.



Jose B. Cruz, Jr.
Distinguished Professor of
Engineering and Professor of
Electrical and Computer
Engineering
The Ohio State University

IEEE Education Society Achievement Award

Presented by: Susan Lord

***For long-term contribution and sustained dedication to
the furtherance of engineering education***

Jose B. Cruz, Jr. is a Distinguished Professor of Engineering and Professor of Electrical and Computer Engineering at the Ohio State University, where he was Dean of Engineering. He had been a Professor at the University of California, Irvine, and at the University of Illinois, Urbana-Champaign. He received his BS degree from the University of the Philippines, MS degree from the Massachusetts Institute of Technology, and PhD degree from the University of Illinois, Urbana-Champaign.

He was President of the IEEE Control Systems Society, Editor of the *IEEE Transactions on Automatic Control*, and IEEE Vice President for Technical Activities and later for Publication Activities.

He is a Life Fellow of IEEE, a Fellow of the American Association for the Advancement of Science, the American Society for Engineering Education, and the International Federation on Automatic Control. He has received several awards including the American Automatic Control Council Richard E. Bellman Control Heritage Award; the IEEE James H. Mulligan, Jr. Education Medal; and the Curtis W. McGraw Research Award from the American Society for Engineering Education. He is a Member of the National Academy of Engineering, and a Corresponding Member of the National Academy of Science and Technology (of the Philippines).

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



Kenneth Ricks
Associate Professor
Department of Electrical and
Computer Engineering
University of Alabama



Jeff Jackson
Professor and Department Head
Electrical and Computer
Engineering
The University of Alabama

IEEE Education Society Best *Transactions* Paper Award

Presented by: Susan Lord

*"An embedded Systems Curriculum Based on the
IEEE/ACM Model Curriculum" Vol 51, Number 2,
May 2008, pages 262-270*

Kenneth Ricks received his B.S. degree in electrical engineering from the University of Alabama, Tuscaloosa in 1989 and his M.S. and Ph.D. degrees from the University of Alabama, Huntsville in 1997 and 2002, respectively. From 1989-2002 he worked for the National Aeronautics and Space Administration (NASA) at the Marshall Space Flight Center. During part of this time he also served as an Adjunct Professor in the Department of Electrical and Computer Engineering at the University of Alabama, Huntsville. He joined the faculty at the University of Alabama, Tuscaloosa in 2002 as an Assistant Professor in the Department of Electrical and Computer Engineering and was promoted to Associate Professor in 2008. Dr. Ricks' research interests include embedded systems; real-time computation; parallel and distributed computing; autonomous guidance, navigation and control; robotics; and engineering education. He currently has approximately 40 refereed publications in various journals, conferences, and workshop proceedings. Dr. Ricks' service activities include Undergraduate Program Director within his department, Associate Editor for the International Journal of Computers and Their Application, and co-organizer of the Workshop on Embedded Systems Education. Dr. Ricks is a senior member of IEEE and is a member of the IEEE Computer Society and the International Society of Computers and Their Application.

Dr. Jackson received his B.S. in Physics (1984) and M.S. in Electrical Engineering (1986) from Auburn University. He received his Ph.D. in Electrical Engineering (1990) at The University of Alabama. He is currently a Professor and Department Head of Electrical and Computer Engineering at The University of Alabama. Dr. Jackson's research interests currently focus on efficient hardware implementations of fundamental and application-driven algorithms for real-time image processing applications. He currently has nearly 100 publications in refereed journals, conferences and workshop proceedings and has acted as editor for a number of refereed volumes. Dr. Jackson's undergraduate teaching experience includes twenty-five years of course and laboratory material covering logic design, microcomputer software and hardware, programming, computer engineering, computer networking, and computer architecture. His graduate teaching experience includes advanced computer architecture, digital systems design, digital image processing, and programmable logic technologies. Dr. Jackson has organized many workshops and conference special sessions including the first five workshops on embedded systems education, organized as a part of Embedded Systems Week. Dr. Jackson currently acts as the Editor-in-Chief of the International Journal of Computers and Their Application. Dr. Jackson is a member of ASEE, and a senior member of ISCA and IEEE.



William A. Stapleton
Ingram School of Engineering,
Texas State University - San
Marcos

IEEE Education Society Best *Transactions* Paper Award (continued)

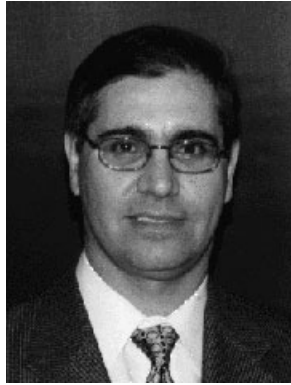
Dr. Stapleton is a member of the IEEE, ASEE, ACM, and ISCA and received his Ph.D. in Electrical Engineering at The University of Alabama in 1997. His research interests include parallel and distributed computing, embedded computing, sensors and sensor networks, reconfigurable computing, image processing, and physical systems modeling. Dr. Stapleton began his teaching career at the University of South Alabama where he was one half of the Computer Engineering faculty and was successful in helping the program achieve its first ABET accreditation. Dr. Stapleton then moved to The University of Alabama where he, along with the other authors of this paper, successfully brought that Computer Engineering program to its initial ABET accreditation. Dr. Stapleton is currently the first and founding faculty member for the Electrical Engineering program at Texas State University - San Marcos which offered its first classes in the fall semester of 2008.

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
- '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

Santa Clara Valley Chapter

Chair – Ali A. Iranmanesh
Vice-Chair – Kevin Khosrow Kashkari
Secretary – John Swan
Treasurer – David Craven
Activities Program Chair – Lili He



Ali A. Iranmanesh
Founder and Chairman
International Society for Quality
Electronic Design
Sunnyvale, CA

IEEE Education Society Chapter Achievement Award

Presented by: Manuel Castro

The Santa Clara Valley Chapter has provided exemplary technical activities, membership services and societal activities.

Dr. Ali Iranmanesh received his MS and Ph.D. in Electrical Engineering and Physics from Stanford University in 1983, and Master in Business administration from San Jose State University in 1995. During the past 3 decades he has been actively involved with many leading Silicon Valley companies such as Advanced Micro Devices, Fairchild, National Semiconductor, and Synopsys. He is a semiconductor industry veteran, responsible for development of many generations of advanced semiconductor technologies, and design methodologies that has resulted in advancement in the field and has earned him over 50 US and international patents. In 1999 he founded the International Society for Quality Electronic Design (ISQED), a multidisciplinary international organization devoted to the advancement of design for quality and manufacturing. The ISQED conference, which is now in its 10th year, has been a leading design and design automation conference with worldwide reputation and participation. In 2000 he joined the founding team of Tavanza Inc. a wireless communication startup that was successfully acquired by Anadigics Inc.

Dr. Iranmanesh is the founder and Chairman of Silicon Valley Technical Institute (SVTI) where he is now serving as the president and CEO. He is the Senior IEEE member, senior member of the American Society for Quality, and the Chair of the IEEE Education Society for the Santa Clara Valley.

Portugal Chapter

Co-chair – José António da Costa
Salvado
Co-Chair – José Carlos Meireles
Monteiro Metrôlho



José António da Costa Salvado
Polytechnic Institute of Castelo
Branco, Portugal



**José Carlos Meireles Monteiro
Metrôlho**
Polytechnic Institute of Castelo
Branco, Portugal

Past Recipients

'06 Nordic Chapter
'07 Spanish Chapter
'08 Gulf Chapter

IEEE Education Society Chapter Achievement Award

Presented by: Manuel Castro

The Portugal Chapter has provided exemplary technical activities, membership services and societal activities.

José Salvado is an adjunct professor of the Electrical Engineering Department of the Polytechnic Institute of Castelo Branco, Portugal, since 2005. He holds an MSc in Electrical and Computers Engineering (2003) from Instituto Superior Tecnico, Technical University of Lisbon. Currently is a PhD student, also in Electrical and Computers Engineering. After graduation he worked for six year in industry before joining the Polytechnic Institute of Castelo Branco (IPCB) in 1996. He was co-founder of the Education Society – Portugal Section Chapter (2005) and one of the first co-chairs, co-founder of the IEEE Student Branch at IPCB and member of the General Assembly of the IEEE Portugal Section since June 2008. He supported the foundations of the IEEE Student Branch at IPCB. He published several papers in since 1997. His current research interests are Industrial Electronics, Instrumentation, Signal Processing Systems, and Educational and Pedagogical issues.

José Carlos Metrôlho is an assistant professor of the Informatics Engineering Department of the Polytechnic Institute of Castelo Branco, Portugal, since 2003. José Carlos holds an MSc (1999) in Automation and a Ph.D. (2008) in Industrial Informatics from University of Minho. He is member of the Executive Committee of the IEEE Portugal Section as Secretary-Treasurer since June 2008. He was founder and is the Counselor of the IEEE Student Branch at IPCB. He published several papers in International conferences since 1997. His current research interests center around Embedded Systems, Software Development and Pedagogical issues.



IEEE Education Society Distinguished Chapter Leadership Award

For exceptional contributions to the Society over a sustained period of time

Emmanuel A. Gonzalez
Assistant Professorial Lecturer
Department of Computer
Technology, College of
Computer Studies
De La Salle University Manila

Emmanuel A. Gonzalez (S'01-GS'07) is a registered and licensed electronics and communications engineer and received his B.S. and M.S. degree in electronics and communications engineering from De La Salle University Manila, Philippines in 2003 and 2006, respectively. He is currently pursuing his Ph.D. in electronics and communications engineering also at the same university, working on energy systems modeling, control, and simulation.

Past Recipients

'06 Michael E. Auer and Manuel Castro
'07 Carlos Rueda Artunduaga and
Oliver K. Ban
'08 Bakr Hassan and Edmundo Tovar

In 2004, he began his career in De La Salle University as Assistant Lecturer and eventually became Assistant Professor in 2007, where he became part of the first Philippine solar-powered race car project that competed at the 2007 World Solar Challenge in Australia. In 2008 he joined Jardine Schindler Elevator Corporation where he worked as the Technical Training Supervisor. In the same year, he also joined as Lecturer at the School of EE-ECE-COE in Mapua Institute of Technology, and Assistant Professorial Lecturer at the Department of Computer Technology, College of Computer Studies, De La Salle University Manila, focusing on undergraduate and graduate courses in advanced engineering mathematics, control systems engineering, and mobile robotics.

Mr. Gonzalez was the founding Vice-Chair of the IEEE Education Society Student Activities Committee (EdSoc SAC) in 2006 and has been the Chair of the SAC since 2008. He is also the founding Editor-in-Chief of the IEEE Multidisciplinary Engineering Education Magazine (MEEM) which is the current official magazine of the SAC.



Manuel Castro

Professor and Director
Electrical and Computer
Engineering Department
Spanish University for Distance
Education (UNED)

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.

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

Presented by: Susan Lord

***For contributions to the Education Society in program
development and financial management***

Manuel Castro has an industrial engineering degree from the ETSII (Industrial Engineering School) of the Madrid Polytechnic University (UPM) and a doctoral engineering degree from the same university. He works as researcher, coordinator and director in different projects, ranging from systems applications of simulation techniques, solar system and advanced microprocessor system simulation to telematics and distance learning applications and systems, as well as computer-aided electrical engineering (CAEE), acting now as senior technical director.

He is now with the UNED (Spanish University for Distance Education) as Professor of Electronics Technology inside the Electrical and Computer Engineering Department as well as the Director of the Department. He was previously UNED's New Technologies Vice-Rector, UNED's Information Services Center Director and Research and Doctorate Vice-director and Academic Affairs Vice-director of the Engineering School at UNED. He worked for 5 years at Digital Equipment Corporation as senior system engineer. He has published technical, research and teaching books and articles for journals and conferences (national and international) as well as multimedia materials and radio and TV programs.

He belongs to the organizing committee of IEEE EDUCON, IEEE FIE (International and Europe Chair, 2000-2006), ISES, TAEE and SAAEI conferences as well as program and planning committees' member and reviewer and chairman of several committees. He is co-chair of EDUCON 2010, TAEE 2010 and ICECE 2005. He is co-editor of IEEE-RITA and of the Electronic Journal of Spanish Chapter of the IEEE Education Society.

He is Fellow member of IEEE and a member of the Administration Committee (AdCOM) (2005--2010) of the IEEE Education Society serving in the chapter, awards, nominating and meetings committees and is Founder and Past-Chairman of the Spanish Chapter of the IEEE Education Society, and Vice-Chair of the IEEE Spain Section. He is Vice-President of the Board of the Spanish International Solar Energy Society (ISES).

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

Presented by: Robert Bouzon



Cynthia Furse

Associate Vice President for
Research & Professor of
Electrical and Computer
Engineering
University of Utah

Outstanding woman engineering educator in recognition of her contributions to the profession

Dr. Cynthia Furse is the Associate Vice President for Research at the University of Utah and a Professor of Electrical and Computer Engineering. Dr. Furse received her B.S. in electrical engineering with a mathematics minor in 1985, an M.S. degree in electrical engineering in 1988, and her Ph.D. in electrical engineering from the University of Utah in 1994. Dr. Furse has taught electromagnetics, wireless communication, computational electromagnetics, microwave engineering, antenna design, and introductory electrical engineering. Dr. Furse works to interest young students, particularly women and minorities, in engineering and routinely volunteers in Utah's K-12 schools as an engineering mentor and science educator. She spearheaded a department-level curriculum reform project in ECE and is currently leading a college-wide outreach program. Dr. Furse was the 2008 University of Utah College of Engineering Distinguished Professor, Distinguished Young Alumni of the Department of Electrical and Computer Engineering at the University of Utah, the 2000 Professor of the Year in the College of Engineering at Utah State University, and the 2002 Faculty Employee of the Year. Dr. Furse's research focuses on sensors and antennas for biology and remote sensing, including sensors for location of faults on aging aircraft wiring and telemetry systems in the human body. Dr. Furse has directed the Utah "Smart Wiring" program, sponsored by NAVAIR and USAF, since 1998. She is Chief Scientist for LiveWire Test Labs, Inc., a spin-off company commercializing devices to locate intermittent faults on live wires. Dr. Furse is a Fellow of the IEEE. She is a past AdCom member for the IEEE AP society and past chair of the IEEE AP Education Committee.

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 Jokers
'03 Joanne Bechta Dugan
'04 Jennifer L. Welch
'06 Eve A. Riskin
'07 Bonnie Heck Ferri
'08 Cheryl B. Schrader



Min Wu
Associate Professor
Department of Electrical and
Computer Engineering
Institute of Advanced Computer
Studies
University of Maryland, College
Park

Past Recipients

'04 Parham Aarabi
'05 John R. Buck
'06 Lisa G. Huettel
'07 Susan C. Hagness
'08 Kathleen E. Wage

IEEE Education Society Mac Van Valkenburg Early Career Teaching Award

Presented by: Susan Lord

For inspiring classroom instruction and influential leadership in signal processing education research

Min Wu (S'95 -- M'01 -- SM'06) received a B.E. degree in electrical engineering and a B.A. degree in economics (both with the highest honors) from Tsinghua University, Beijing, China, in 1996, and her Ph.D. degree in electrical engineering from Princeton University in 2001.

Since 2001, she has been with the faculty of the Department of Electrical and Computer Engineering and the Institute of Advanced Computer Studies, University of Maryland at College Park, where she is currently an Associate Professor. She was a Visiting Associate Professor at Stanford University in 2007-2008. She holds five U.S. patents and has coauthored two books and over 110 journal and conference publications in the areas of information security and forensics and multimedia signal processing. She received a U.S. National Science Foundation CAREER Award in 2002, a MIT Technology Review's TR100 Young Innovator Award in 2004, a U.S. Office of Naval Research Young Investigator Award in 2005, and a Computer World "40 under 40" IT Innovator Award in 2007. She was a co-recipient of the 2004 EURASIP Best Paper Award and a 2005 IEEE Signal Processing Society Best Paper Award.

Dr. Wu received the George Corcoran Faculty Award in 2003 from University of Maryland for outstanding contribution to electrical engineering education and teaching. Her innovative curriculum development and course material have been incorporated by other colleagues worldwide into their teaching.

She has served as research advisor for 17 undergraduate students and a high school student, and half of her advisees are female or underrepresented minority students. Graduate and undergraduate students whom she has mentored have won various research awards and prestigious fellowships.

Dr. Wu edits the "Inside Signal Processing E-Newsletter", and is an Associate Editor of IEEE Transactions on Information Forensics and Security and IEEE Transactions on Image Processing. She has been elected as Vice President—Finance of the IEEE Signal Processing Society (2010-2012).