

2009 IEEE Education Society Awards and Frontiers in Education Conference Awards

Tony L. Mitchell, 2009 Vice President and Awards Committee Chair

IEEE Education Society

EACH year at the Frontiers in Education (FIE) Conference, awards are presented to recognize the contributions of many engineering educators. In addition to awards for contributions to the conference, awards are presented by the three FIE co-sponsors: the Educational Research and Methods (ERM) Division of the American Society for Engineering Education (ASEE), the IEEE Computer Society, and the IEEE Education Society.

This paper lists the award recipients recognized at FIE 2009, San Antonio, TX, October 18–21, along with their award citations and brief biographical sketches. Similar information was published previously for the 2008 recipients [1], 2007 recipients [2], 2006 recipients [3], 2005 recipients [4], and for the 2004 and 2003 recipients along with a listing of the names of earlier recipients [5].

The 2010 awards will be presented at the Frontiers in Education Conference, Arlington, VA, October 27–30. Additional information about the IEEE Education Society awards is available on the Society's Web site (<http://www.ewh.ieee.org/soc/es/>).

I. IEEE EDUCATION SOCIETY ACHIEVEMENT AWARD

The 2009 IEEE Education Society Achievement Award was presented to *Jose B. Cruz, Jr.* "for outstanding contributions to engineering education through creative leadership and inspirational teaching."



Jose B. Cruz, Jr. (LF'09) received the B.S. degree from the University of the Philippines, Quezon City, Philippines; the M.S. degree from the Massachusetts Institute of Technology, Cambridge; and Ph.D. degree from the University of Illinois, Urbana-Champaign.

He is a Distinguished Professor of Engineering and Professor of Electrical and Computer Engineering with the Ohio State University, Columbus, where he was Dean of Engineering. He was a Professor with the University of California, Irvine,

and the University of Illinois, Urbana-Champaign.

Dr. Cruz is a Fellow of the American Association for the Advancement of Science, the American Society for Engineering Education (ASEE), and the International Federation on Automatic Control. 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. 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 ASEE. 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.

II. IEEE EDUCATION SOCIETY BEST TRANSACTIONS PAPER AWARD

The 2009 IEEE Education Society Best TRANSACTIONS Paper Award was presented to *Kenneth Ricks, Jeff Jackson, and William A. Stapleton* for their paper "An Embedded Systems Curriculum Based on the IEEE/ACM Model Curriculum," *IEEE Trans. Education*, Vol. 51, No. 2, May 2008, pp. 262–270.



Kenneth Ricks (SM'06) received the B.S. degree in electrical engineering from the University of Alabama, Tuscaloosa, and the M.S. and Ph.D. degrees from the University of Alabama, Huntsville.

He is Associate Professor of Electrical and Computer Engineering with the University of Alabama, Tuscaloosa. He has approximately 40 refereed publications. His research interests include embedded systems, real-time computation, parallel and distributed computing, robotics, and engineering education.

Dr. Ricks is a Member of the IEEE Computer Society and the International Society of Computers and Their Application. He is Associate Editor for the *International Journal of Computers and Their Application*.



Jeff Jackson (SM'06) received the B.S. degree in physics and the M.S. degree in electrical engineering from Auburn University, Auburn, AL, and the Ph.D. degree in electrical engineering from the University of Alabama, Tuscaloosa.

He is Professor and Head of Electrical and Computer Engineering at the University of Alabama. He has nearly 100 publications in refereed journals, conferences and workshop proceedings. His research interests focus on efficient hardware implementations of fundamental and application-driven algorithms for

real-time image processing applications.

Dr. Jackson is a Member of the ASEE and a senior member of the ISCA. He currently is acting Editor-in-Chief of the *International Journal of Computers and Their Application*.



William A. Stapleton (M'95) received the Ph.D. degree in electrical engineering from the University of Alabama, Tuscaloosa.

He is currently the first and founding faculty member for the Electrical Engineering program in the Ingram School of Engineering at Texas State University–San Marcos. He began his teaching career at the University of South Alabama, Mobile, where he was half of the Computer Engineering faculty and was successful in helping the program achieve initial ABET accreditation. His research

interests include parallel and distributed computing, embedded computing, sensors and sensor networks, and physical systems modeling.

Dr. Stapleton is a Member of the ASEE, ACM, and ISCA.

III. IEEE EDUCATION SOCIETY CHAPTER ACHIEVEMENT AWARD

Two outstanding chapters were honored this year.

1) The 2009 IEEE Education Society Chapter Achievement Award was presented to the Santa Clara Valley Chapter for providing “exemplary technical activities, membership services, and societal activities.”

The Santa Clara Valley Chapter officers recognized individually were *Ali A. Iranmanesh*, Founder and Chairman, *Kevin Khosrow Kashkari*, Vice Chairman, *John Swan*, Secretary, *David Craven*, Treasurer, and *Lili He*, Activities Program Chair.



Ali A. Iranmanesh (SM'10) received the M.S. and Ph.D. degrees in electrical engineering and physics from Stanford University, Stanford, CA, and the Master's degree in Business Administration from San Jose State University, San Jose, CA.

He is the founder and Chairman of Silicon Valley Technical Institute (SVTI), San Jose, CA, where he is now serving as the President and CEO. During the past three decades, he has been actively involved with many leading Silicon Valley companies such as Advanced Micro Devices, Fairchild, National Semiconductor, and Synopsys. 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.

Dr. Iranmanesh is a Senior Member of the American Society for Quality.

Kevin Khosrow Kashkari, photograph and biography not available at the time of publication.

John Swan, photograph and biography not available at the time of publication.

David Craven, photograph and biography not available at the time of publication.

Lili He, photograph and biography not available at the time of publication.

2) The 2009 IEEE Education Society Chapter Achievement Award was presented to the Portugal Chapter for providing “exemplary technical activities, membership services and societal activities.”

The Portugal Chapter officers recognized individually at a FIE-sponsored European conference were *José Antonio da Costa Salvado*, Co-Chair, and *José Carlos Meireles Monteiro Metrôlho*, Co-Chair.



José Antonio da Costa Salvado (SM'08) received the M.Sc. in electrical and computer engineering from Instituto Superior Tecnico, Technical University of Lisbon, Lisbon, Portugal.

He is Co-Chair of the Portugal Chapter and Adjunct Professor with the Electrical Engineering Department of the Polytechnic Institute of Castelo Branco, Castelo Branco, Portugal. He worked for six years in industry before joining the Polytechnic Institute of Castelo Branco in 1996. In addition to being co-founder of the IEEE Education Society–Portugal Section Chapter, he is also co-founder of the IEEE Student Branch at the Polytechnic Institute of Castelo Branco. His research interests include industrial electronics, instrumentation, signal processing systems, and pedagogical issues.

His research interests include industrial electronics, instrumentation, signal processing systems, and pedagogical issues.



José Carlos Meireles Monteiro Metrôlho (SM'09) received the M.Sc. degree in automation and the Ph.D. degree in industrial informatics from the University of Minho, Braga, Portugal.

He is Co-Chair of the Portugal Chapter and Assistant Professor with the Informatics Engineering Department of the Polytechnic Institute of Castelo Branco, Castelo Branco, Portugal. In addition to Chapter Co-Chair, he has served the IEEE Portugal Section as Secretary-Treasurer since June 2008. He was the founder and is the Counselor of the IEEE

Student Branch at Polytechnic Institute of Castelo Branco. He published several papers in international conference proceedings since 1997. His research interests center around embedded systems, software development, and pedagogical issues.

IV. IEEE EDUCATION SOCIETY DISTINGUISHED CHAPTER LEADERSHIP AWARD

The 2009 IEEE Education Society Distinguished Chapter Leadership Award was presented to *Emmanuel A. Gonzalez* “for exceptional contributions to the Society over a sustained period of time which have manifested themselves in the Philippines Chapter.”



Emmanuel A. Gonzalez (M'09) received the B.S. and M.S. degrees in electronics and communications engineering from De La Salle University–Manila, Philippines. He is currently pursuing his Ph.D. in electronics and communications engineering at the same university, working on energy systems modeling, control, and simulation.

He is an Assistant Professorial Lecturer with the Department of Computer Technology, College of Computer Studies, De La Salle University–Manila.

In 2004, he began his career at De La Salle University as an Assistant Lecturer and eventually became Assistant Professor, 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, Makati City, Philippines, where he worked as the Technical Training Supervisor. In that same year, he also joined the School of EE-ECE-COE in Mapua Institute of Technology, Manila, Philippines, as a Lecturer, and the Department of Computer Technology, College of Computer Studies, De La Salle University Manila, as an Assistant Professorial Lecturer, focusing on undergraduate and graduate courses in advanced engineering mathematics, control systems engineering, and mobile robotics.

Mr. Gonzalez is a registered and licensed electronics and communications engineer. He was the founding Vice-Chair of the IEEE Education Society Student Activities Committee in 2006 and has been the Chair of that committee 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 Student Activities Committee.

V. IEEE EDUCATION SOCIETY EDWIN C. JONES, JR. MERITORIOUS SERVICE AWARD

The 2009 IEEE Education Society Edwin C. Jones, Jr. Meritorious Service Award was presented to *Manuel Castro* “for contributions to the Education Society in leadership, program development, and financial management.”



Manuel Castro (M'87–SM'93–F'08) received the industrial engineering degree and the Ph.D. degree in engineering from the ETSII/Madrid Polytechnic University, Madrid, Spain.

He is a Professor and Director of the Electrical and Computer Engineering Department, Spanish University for Distance Education (UNED), Madrid, Spain. 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). 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 five years at Digital Equipment Corporation as a Senior System Engineer. He has published different technical, research, and teaching books and articles for journals and conferences (national and international), as well as multimedia materials and radio and TV programs.

Dr. Castro is a member of the Administration Committee of the IEEE Education Society and has served on the chapter, awards, nominating, and meetings committees. He is founder and Past Chairman of the Spanish Chapter of the IEEE Education Society. He also is Vice President of the Board of the Spanish International Solar Energy Society (ISES). He belongs to the organizing committee of IEEE EDUCON, IEEE FIE (International and Europe Chair, 2000-2006), ISES, TAAE, and SAAEI conferences and is also a program and planning committees member and reviewer. He is Co-Chair of the conference EDUCON 2010, TAAE 2010, and ICECE 2005. He is Co-Editor of IEEE-RITA and of the *Electronic Journal* of the IEEE Education Society Spanish Chapter.

VI. IEEE EDUCATION SOCIETY HEWLETT-PACKARD/ HARRIET B. RIGAS AWARD

The Education Society, with the sponsorship of the Hewlett-Packard Company, presents the Harriet B. Rigas Award to an outstanding woman engineering educator in recognition of her contributions to the profession. The 2009 IEEE Education Society Hewlett-Packard/Harriet B. Rigas Award was presented to *Cynthia Furse*.



Cynthia Furse (F'08) received the B.S. degree in electrical engineering with a mathematics minor and the M.S. and Ph.D. degrees in electrical engineering from the University of Utah, Salt Lake City.

She is the Associate Vice President for Research and a Professor of Electrical and Computer Engineering with the University of Utah. She has taught electromagnetics, wireless communication, computational electromagnetics, microwave engineering, antenna design, and introductory electrical engineering. She 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. She has directed the Utah "Smart Wiring" program, sponsored by NAVAIR and USAF, since 1998. She is Chief Scientist for LiveWire Test Labs, Inc., Salt Lake City, UT, a spin-off company commercializing devices to locate intermittent faults on live wires. Her 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 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. She is a past AdCom member for the IEEE Antennas and Propagation (AP) Society and past chair of the IEEE AP Education Committee.

VII. IEEE EDUCATION SOCIETY MAC VAN VALKENBURG EARLY CAREER TEACHING AWARD

The 2009 IEEE Education Society Mac Van Valkenburg Early Career Teaching Award was presented to *Min Wu* "for outstanding contributions to undergraduate and graduate education in electrical and computer engineering, including innovative curricular development and influential mentoring."



Min Wu (SM'06) received the B.E. degree in electrical engineering and the B.A. degree in economics (both with the highest honors) from Tsinghua University, Beijing, China, in 1996, and the Ph.D. degree in electrical engineering from Princeton University, Princeton, NJ, 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 with Stanford University, Stanford, CA, from 2007 to 2008. 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. She holds five US 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.

Dr. Wu is a Member of the IEEE Education, Signal Processing, and Circuit and System societies. She received a US National Science Foundation CAREER Award in 2002, an MIT Technology Review's TR100 Young Innovator Award in 2004, a US 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. She received the George Corcoran Faculty Award in 2003 from the University of Maryland for outstanding contribution to electrical engineering education and teaching. Her innovative curriculum development and course material have been incorporated into their teaching by other colleagues worldwide. She edits the *Inside Signal Processing E-Newsletter* and is an Associate Editor of the IEEE TRANSACTIONS ON INFORMATION FORENSICS AND SECURITY and IEEE TRANSACTIONS ON IMAGE PROCESSING. She has been elected Vice President-Finance of the IEEE Signal Processing Society for 2010-2012.

VIII. FRONTIERS IN EDUCATION CONFERENCE BENJAMIN J. DASHER BEST PAPER AWARD

Two best papers were selected this year.

1) The Frontiers in Education Conference Benjamin J. Dasher Best Paper Award was presented to *Steve Krause*, *Robert Culbertson*, *Mike Oehrtman*, and *Marilyn Carlson* for their paper "High School Teacher Change, Strategies, and Actions in a Professional Development Project Connecting Mathematics, Science, and Engineering," presented at FIE 2008, Saratoga Springs, NY, Session T3D.



Steve Krause received the B.S. degree in materials science and engineering from Northwestern University, Evanston, IL, in 1969; the M.S. degree in metallurgical engineering from the Illinois Institute of Technology, Chicago, in 1973; and the Ph.D. degree in materials engineering from the University of Michigan, Ann Arbor, in 1981.

He is a Professor with the School of Mechanical, Aerospace, Chemical, and Materials Engineering in the Fulton School of Engineering, Arizona State University, Tempe. In work related to the Dasher Award paper, he helped develop, deliver, and analyze results of two courses in a 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 mathematized 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 a NSF IEECI project studying student learning trajectories in conceptual development in materials science courses. He is using the findings in a NSF CCLI project to create modules that improve the effectiveness of learning of undergraduate engineering students.



Robert Culbertson received the B.S. degree in physics from Kent State University, Kent, OH, in 1975, and the Ph.D. degree in physics from Pennsylvania State University, University Park, in 1979.

He is an Associate Professor with the Department of Physics and Astronomy, Arizona State University, Tempe, 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 the 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 a NSF-funded CCLI course, "Frets, Flutes, and Physics." It is an integrated 11-h 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.



Michael Oehrtman is an Associate Professor of mathematics in the Department of Mathematics and Statistics, Arizona State University (ASU), Tempe. 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 a NSF-funded CCLI course, "Frets, Flutes and Physics," an integrated 11-h freshman learning community course.



Marilyn Carlson is a Professor with the Mathematics Department, Arizona State University, Tempe. 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.

2) The 2008 Frontiers in Education Conference Benjamin J. Dasher Best Paper Award was presented to *William J. Leonard*, *Christopher V. Hollot*, and *William J. Gerace* for their paper "Mastering Circuit Analysis: An Innovative Approach to a Foundational Sequence," presented at FIE 2008, Saratoga Springs, NY, Session F2H.



William J. Leonard received the Ph.D. degree in theoretical nuclear physics from the University of Massachusetts, Amherst, in 1988.

He is an Associate Professor with the Department of Physics and Astronomy, University of North Carolina at Greensboro. 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,

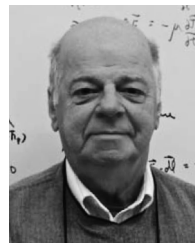
and research on formative assessment and classroom response technology in college, high school, and middle school settings. His current interests include developing rate-of-learning models and using the Mastery learning approach as a laboratory for studying how people learn. He taught Engineering Circuit Analysis in the Department of Electrical and Computer Engineering at the University of Massachusetts for five years before moving this past July to the Department of Physics and Astronomy of the University of North Carolina at Greensboro.



Christopher V. Hollot (F'04) received the Ph.D. degree in electrical engineering from the University of Rochester, Rochester, NY, in 1984.

He is a Professor and the Department Head of the Department of Electrical and Computer Engineering, University of Massachusetts, Amherst, which he joined in 1984. His research interests are in the theory and application of feedback control.

Prof. Hollot received the NSF PYI in 1988.



William J. Gerace received the Bachelor's degree from the Massachusetts Institute of Technology, Cambridge, in 1963, and the doctorate degree in theoretical nuclear physics from Princeton University, Princeton, NJ, in 1967.

He is the Helena Gabriel Houston Distinguished Professor for Science Education in the Department of Physics and Astronomy, University of North Carolina at Greensboro, which he was appointed to in 2008. He has been involved in education research for more than 25 years. 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.

IX. FRONTIERS IN EDUCATION CONFERENCE HELEN PLANTS AWARD

The Frontiers in Education Conference Helen Plants Award was presented to *Lisa C. Benson*, *Sherrill B. Biggers*, *William F. Moss*, *Matthew W. Ohland*, *Marisa K. Orr* and *Scott D. Schiff* for organizing and presenting the Best Non-Traditional 2008 Frontiers in Education Conference session "Enhancing Student Learning Using the SCALE-UP Format," Session T2J.



Lisa C. Benson received the B.S. degree in bioengineering from the University of Vermont, Burlington, and the M.S. and Ph.D. degrees in bioengineering from Clemson University, Clemson, SC.

She is an Assistant Professor with the Department of Engineering and Science Education, Clemson University, with a joint appointment in the Department of Bioengineering. She teaches first-year engineering, undergraduate research methods, and graduate engineering education courses. Her research interests include student-centered active learning in undergrad-

uate engineering, assessment of motivation, and how motivation affects student learning. She is also involved in projects that utilize Tablet PCs to enhance student learning.



Sherrill B. Biggers received the B.S. degree in civil engineering from North Carolina State University, Raleigh, in 1966, and the M.S. and Ph.D. degrees in civil engineering from Duke University, Durham, NC, in 1970 and 1971, respectively.

He is a Professor of mechanical engineering with Clemson University, Clemson, SC. 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. 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. His research is in the computational mechanics and optimal design of advanced composite structures.



William F. Moss received the Ph.D. degree from the University of Delaware, Newark, in 1974.

He is a mathematical sciences Professor who has more recently been engaged in mathematics education research. He helped establish a pilot laptop program at Clemson University, Clemson, SC, and was a co-principal investigator 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 received the Ph.D. in civil engineering with a graduate minor in education from the University of Florida, Gainesville, in 1996.

He is an Associate Professor of engineering education with Purdue University, West Lafayette, IN. 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.

Dr. Ohland's 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. He is Chair of the 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.



Marissa K. Orr received the B.S. in mechanical engineering in 2005 from Clemson University, Clemson, SC, where she is currently a doctoral candidate.

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 received the undergraduate degree in architectural engineering from the University of Cincinnati, Cincinnati, OH, and graduate degrees in civil engineering (structures) from the University of Illinois at Urbana-Champaign.

He is a civil engineering Professor with Clemson University, Clemson, SC, 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.

X. FRONTIERS IN EDUCATION CONFERENCE RONALD J. SCHMITZ AWARD

The 2009 Frontiers in Education Conference Ronald J. Schmitz Award was presented to *Russ Meier* "for outstanding service to the Frontiers in Education Conference."



Russ Meier (SM'09) received the B.S., M.S., and Ph.D. degrees in computer engineering from Iowa State University, Ames.

He is an Associate Professor of electrical engineering and computer science with the Milwaukee School of Engineering, Milwaukee, WI. His teaching and research interests include embedded systems, evolvable hardware, the use of complex adaptive systems in digital architectures, and computer architecture.

Dr. Meier maintains professional memberships in the IEEE Computer Society, the IEEE Education Society, the American Society for Engineering Education (ASEE), and the ASEE Educational Research and Methods division (ERM). His teaching skills have been recognized with an Iowa State University Teaching Excellence Award and the Warren B. Boast Award for Undergraduate Teaching Excellence. He 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 subcommittee. He is the IEEE Education Society Milwaukee Chapter Chair. He was the FIE 2007 General Chair and served eight years as the FIE Faculty Fellows Chair.

XI. ASEE ERM DIVISION DISTINGUISHED SERVICE AWARD

The 2009 ASEE ERM Division Distinguished Service Award was presented to *Richard M. Felder* "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 received the B.Ch.E. degree from the City College of New York, New York, in 1962, and the Ph.D. in chemical engineering from Princeton University, Princeton, NJ, in 1966.

He is Hoechst Celanese Professor Emeritus of Chemical Engineering, North Carolina State University, Raleigh. He is a coauthor of the book *Elementary Principles of Chemical Processes* (3rd ed., New York: Wiley, 2000), which has been used as the introductory chemical engineering text by most 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. He worked for the Atomic Energy Research Establishment, Harwell, England, and Brookhaven National Laboratory, Upton, NY, before joining the North Carolina State faculty in 1969. He has spent sabbatical semesters with the University of Colorado, Boulder; Georgia Tech, Atlanta; Smith College, Northampton, MA; and the Carnegie Foundation for the Advancement of Teaching, Stanford, CA.

Dr. Felder's 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 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.

XII. ASEE ECE DIVISION FREDERICK EMMONS TERMAN AWARD

The Electrical and Computer Engineering Division of the American Society for Engineering Education, with the sponsorship of the Hewlett-Packard Company, annually presents the Frederick Emmons Terman Award to an outstanding young electrical engineering educator who is the principal author of a textbook. The 2009 Terman Award was presented to *David Tse* "for an outstanding young electrical engineering educator in recognition of his contribution to the profession."



David Tse (F'09) received the B.A.Sc. degree in systems design engineering from the University of Waterloo, Waterloo, ON, Canada, in 1989, and the M.S. and Ph.D. degrees in electrical engineering from the Massachusetts Institute of Technology, Cambridge, in 1991 and 1994, respectively.

From 1994 to 1995, he was a Post-Doctoral Member of the Technical Staff at AT&T Bell Laboratories. Since 1995, he has been with the Department of Electrical Engineering and Computer Science, University of California, Berkeley, where

he is currently a Professor. He is a coauthor, with Pramod Viswanath, of the textbook *Fundamentals of Wireless Communications*, which has been used in over 60 institutions around the world.

Tony L. Mitchell (M'85–SM'89) Lieutenant Colonel USAF retired, earned the B.S. degree in mathematics from North Carolina Agricultural and Technical State University, Greensboro, in 1970, the M.S. degree in information and computer science from Georgia Tech, Atlanta, in 1975, and the Ph.D. degree in electrical and computer engineering from North Carolina State University, Raleigh, in 1987.

Currently, he is Assistant Dean for Student Services, Director of Minority Engineering Programs, and Associate Professor of electrical and computer engineering at North Carolina State University. Previous educational assignments include Professor and Chairman of Electrical Engineering at North Carolina Agricultural and Technical State University and Associate Professor and Assistant Department Head of Mathematics at the United States Air Force Academy, Colorado Springs, CO. In 1994 and 1995, he worked as a Program Director on educational sabbatical with the National Science Foundation, where his responsibilities included managing research programs and awards to minority institutions. He has over 50 refereed journal and conference proceedings publications. His teaching, mentoring, and research interests include recruitment, mentoring and professional success of underrepresented minorities and women in engineering, telecommunications, Internet routing and flow control, and high-speed voice and data networks.

Dr. Mitchell is a Senior Member of the Computer and Education societies of the Institute for Electrical and Electronics Engineers (IEEE) and a Member of Sigma Xi Research Honor Society and the American Society for Engineering Education (ASEE). He is a current and former member of the Accreditation Board for Engineering and Technology (1990–1995; 2003–present), the Board of Directors of the National Electrical Engineering Department Heads Association (NEEDHA: 1993–1994), and the ASEE Minorities in Engineering Awards Committee (1998–2001). In 2004, Dr. Mitchell was appointed by the Governor of North Carolina to a seven-year term as the University member of the North Carolina State Board of Examiners of Electrical Contractors. He currently serves as Vice President of the IEEE Education Society. His professional awards include the 2000 Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring.

Dr. Tse received a NSERC four-year graduate fellowship from the government of Canada, a NSF CAREER Award, the Best Paper Award at the 1998 and 2001 IEEE INFOCOM conferences, the 2000 Erlang Prize from the INFORMS Applied Probability Society, the 2001 IEEE Communications and Information Theory Society joint Paper Award, and the 2003 Information Theory Society Paper Award. 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.

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