ASEE TODAY

2013 ASEE National and Society Awards

ASEE FELLOWS NAMED

The following members received the Fellow grade of membership in recognition of outstanding contributions to engineering or engineering technology education. This distinction was conferred by ASEE's board of directors at the awards banquet held during the ASEE annual conference in Atlanta. Ga.



Stephanie G. Adams Department Head and Professor Engineering Education Virginia Tech





Theodore J. Branoff Associate Professor Science, Technology, Engineering, and Mathematics Education North Carolina State University

Jenna P. Carpenter

Administrations and

Strategic Initiatives

Associate Dean,

Louisiana Tech





Director. CRLT-Engineering University of Michigan





Associate Dean of Undergraduate Studies University of Texas, San Antonio

Susan Kemnitzer Deputy Division Director Electrical.

> Communication, and Cyber Systems National Science Foundation



University of San Diego







School of Engineering Education Purdue University, West Lafayette



BENJAMIN GARVER LAMME AWARD

The Benjamin Garver Lamme Award was established in 1928, and recognizes excellence in teaching, contributions to research and technical literature, and achievements that advance the profession of engineering college administration.



Nicholas A. Peppas is chair of the biomedical engineering department, director of the Center on Biomaterials, Drug Delivery

of biomedical engineering, chemical engineering, and pharmacy at the University of Texas, Austin. He received the Benjamin Garver Lamme Award in recognition of his profound educational contribution to biomedical systems, bionanotechnology, biomolecular sciences and engineering, and biomedical engineering education over the past 30 years. He also is honored for his insights into numerous engineering processes and applications leading to nanoscale analysis, design, and development of new biomaterials and medical devices. Peppas is a leading authority in biomaterials,

biopolymers, nanotechnology, and biomedical, chemical, and pharmaceutical engineering and is a world leader in the education of chemical and biomedical engineers. In 37 years he has designed and taught 23 new courses at Purdue and the University of Texas, where he also received 11 teaching awards and has supervised the research of 95 Ph.D.'s and about 180 postdoctoral and graduate students.

Over the course of his career he has won many awards, including five ASEE awards; in 2012 he received the National Academy of Engineering's Founders Award, the highest recognition of the Academy. In 2008, AIChE named him

as one of the One Hundred Chemical Engineers of the Modern Era. Peppas has held many positions in several different professional societies, such as president of the International Union of Societies of Biomaterials Science and Engineering, and chair-elect of the Engineering Section of the American Association for the Advancement of Science. Peppas hold a Dipl. Eng. from the National Technology University of Athens (1971), a Sc.D. from Massachusetts Institute of Technology (1973), and honorary doctorates from the Universities of Ghent, Parma, Athens, and Ljubljana.

FREDERICK J. BERGER AWARD

The Frederick J. Berger Award recognizes and encourages excellence in engineering technology education. It is presented to both an individual and a school or department for demonstrating outstanding leadership in curriculum, techniques, or administration in engineering technology education.



representative to her local campus;

publications, and, most recently, as

communication editor of the Journal

of Engineering Technology. Dyrud is a

professor of communications at Oregon

Institute of Technology, where she has

taught for her entire career. A member

of ASEE since 1983, she has served

in various capacities over the years

and currently chairs the Engineering

Ethics Division. She is a member at-

large on the Engineering Technology

25 years as bibliographer of ETD

is recognized for serving as a dedicated member of ASEE's Engineering Technology Division (ETD) for three decades. This includes 17 years as ASEE's

Timothy J. Anderson. engineering dean at the University of Massachusetts, Amherst, was recognized for his innovative workshops for

new and prospective engineering faculty development. He received his B.S. degree in chemical engineering from Iowa State University and his M.S. and Ph.D. degrees from the University of California, Berkeley. He joined the chemical engineering department at the University of Florida in 1978, serving as chair and as an associate dean. An ASEE fellow. Anderson has long been active in engineering education. He is editor of Chemical Engineering Education and has more than 80 publications and presentations in engineering education

and Bionanotechnology, and professor

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Division's Executive Committee, and is communications editor of the Journal of Engineering Technology. In addition to ASEE, she is active in the Association for Business Communication, serving as a regional vice-president, chair of the Teaching Committee, and a section editor for Business Communication Quarterly. She received ABC's Distinguished Member Award in 2006 and the Spirit of ABC Award in 2012. She is also active in the Association for Practical & Professional Ethics as an Ethics Bowl moderator, a presenter, and proceedings editor. Dyrud received her B.A. from the University of the Pacific and her M.A. and Ph.D. from Purdue University.

CHESTER F. CARLSON AWARD

The Chester F. Carlson Award is presented annually to an individual innovator in engineering education who, by motivation and ability to extend beyond the accepted tradition, has made a significant contribution to the profession.

research to his credit. Anderson, who is widely recognized for his research on advanced electronic and photonic materials, is a Fellow of the American Institute of Chemical Engineers.

ISADORE T. DAVIS AWARD

The Isadore T. Davis Award celebrates the spirit and leadership of individuals who make a mark in the collaborative efforts of engineering or engineering technology education with industry toward the improvement of partnerships or collaborations.



Ramulu Mamidala, an engineering professor and designer who developed manufacturing methods for the B-2 bomber

and other projects, was recognized for his leadership and outstanding record in promoting collaborative education and research with industry. Additionally, in collaboration with industry, he established and directed two interdisciplinary graduate educational programs in engineering and management and a certificate program in composites tooling and manufacturing. Mamidala received a B.E. in mechanical engineering with distinction from Osmania University, India; an M.Tech. in production engineering from the Indian Institute of Technology; and a Ph.D. from the University of Washington, where he has been a faculty member in mechanical engineering since 1982 and adjunct professor in industrial and systems engineering and materials science and engineering. His research interests reflect the multidisciplinary nature of materials, mechanics, and manufacturing engineering, with a primary focus on aircraft materials and structures. A

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fellow of ASM, ASME, SEM, and SME, Mamidala received the NSF Presidential Young Investigator Award and has published more than 300 technical papers in refereed journals and conference proceedings.

CLEMENT J. FREUND AWARD

The Clement J. Freund Award honors an individual in business, industry, government, or education who has made a significant positive impact on cooperative education programs in engineering and engineering technology.



Kenneth C. Porteous. associate dean of student and co-op services at the University of Alberta's engineering school, was recognized

for delivering a quality program in cooperative education for 25 years that responded to the needs of students and employers while meeting national accreditation standards. He proactively solicited and subsequently enhanced employer participation to provide students with opportunities to experience a co-op education, and expanded the co-op program from 150 students in 1985 to 1,400 students in 2012. Annual co-op placement rates frequently exceeded 95 percent. Porteous received his B.Eng. degree in chemical engineering with distinction from McGill University, and his master's and Ph.D. degrees, both in chemical engineering, from the University of Delaware. His professional experience includes serving as professor of chemical engineering at the University of Alberta, where he teaches engineering economy, manages the engineering co-op program, and conducts academic assessment of all undergraduate students.

JOHN L. IMHOFF AWARD

The John L. Imhoff Award recognizes an individual who has made outstanding contributions to the industrial engineering discipline, who exemplifies the highest standards of the professorate in industrial engineering, and has demonstrated global cooperation and understanding through leadership and other initiatives.



internationally known engineering educator with more than 220 refereed publications. At Texas Tech, he created M.S. and Ph.D. degree programs in systems and engineering management, successfully offering them both on campus and by distance. He also was instrumental in developing international dual M.S. and Ph.D. programs with the Instituto Tecnologico de Estudios Superiores de Monterrey and Universidad de las Americas. Beruvides received a Ph.D. in industrial and systems engineering from Virginia Tech and an M.S.I.E and B.S. in mechanical engineering from the University of Miami. A leader in distance education at Texas Tech, he serves as coordinator for the ASEM Annual Conference Student Best Paper Contest.

SHARON A. KEILLOR AWARD

The Sharon Keillor Award for Women in Engineering Education recognizes and honors outstanding women engineering educators.

assistant dean for engineering academic affairs, associate professor of petroleum engineering at Texas A&M University

Teri Reed.

and ASEE fellow, was recognized for her tireless service, dedication, and impact on engineering education as an educator, scholar, administrator, and colleague. She also is assistant vice chancellor of academic affairs and assistant agency director for workforce development at the Texas A&M Engineering Experiment Station. An advocate for research-informed approaches to engineering education, curricular reform, and policy as well as student recruitment and retention efforts, Reed has made significant contributions to the institutions where she has spent her academic career: Arizona State University; the University of Oklahoma; Purdue University; and Texas A&M University. Reed received her B.S. in petroleum engineering from the University of Oklahoma. She earned an M.B.A. while working in the oil industry and received her Ph.D. in industrial engineering from Arizona State University. Reed is co-chair of ASEE's Undergraduate Experience Council and serves on the Diversity Committee.

JAMES H. MCGRAW AWARD

The James H. McGraw Award is presented for outstanding contributions to engineering technology education.

Frank Hart, dean emeritus of the School for Engineering Technology and Computer Science at Bluefield State College, was recognized for his outstanding service and dedication to engineering technology education

through his remarkable 44year career as an engineer, professor of civil engineering, and administrator. An accomplished professional engineer and

surveyor, he is a member of ASEE,

of the 2003 ABET Fellow Award for

his visionary leadership and service

implementing performance-based

criteria for engineering technology

program evaluation. He currently

director for TAC-ABET. At Bluefield

State, Hart was known for practice-

oriented lectures and real laboratory

experiences in geotechnics, geomatics,

and surface movements. He served as

president of the International Society

for Mine Surveying, president of the

and chair of the ASEE Engineering

includes chairing the Engineering

WV Society of Professional Surveyors,

Technology Council. His involvement

in engineering technology accreditation

Technology Accreditation Commission

of ABET, where he currently is adjunct

accreditation director for engineering

technology programs.

serves as adjunct accreditation

ASCE, and ACSM as well as the recipient

design education; for inspiring students through real-world design projects, and for his tireless efforts to promote training in and application of advanced engineering design with an emphasis on system dynamics. Dankowicz earned his M.Sc. in engineering physics from KTH Royal Institute of Technology in Stockholm, Sweden, and his Ph.D. from Cornell University in theoretical and applied mechanics. After postdoctoral appointments at KTH, he joined Virginia Tech's engineering science and mechanics department, where he won a PECASE Award from the National Science Foundation and the university's W.S. "Pete" White Innovation in Engineering Education Award. He is co-creator of MAMBO, an educational computer simulation and animation tool for modeling and analysis of multibody system dynamics, and of a computational platform for investigating the parameter dependence of solutions to nonlinear differential equations. Together with a large number of undergraduate and graduate students, Dankowicz has contributed to the development of computer-aided hardware and software for characterizing spinal deformity in children with idiopathic scoliosis, as well as shaping the implants used in surgery, and to the design of self-calibrating massflow sensors for agricultural harvesters. A fellow of ASME, he was the founding co-chair of the first ASME Biennial International Conference on Dynamics

FRED MERRYFIELD DESIGN AWARD

The Fred Merryfield Design Award recognizes an engineering educator for excellence in teaching of engineering design and acknowledges other significant contributions related to engineering design teaching.

Harry Dankowicz, a professor in the department of mechanical science and engineering at the University of Illinois, Urbana-Champaign, was recognized for his authorship and innovative use of technology and software in engineering

NATIONAL OUTSTANDING **TEACHING AWARD**

for Design in 2012.

The National Outstanding Teaching Award recognizes an engineering or engineering technology educator for

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excellence in outstanding classroom performance, contributions to the scholarship of teaching, and participation in ASEE section meetings and local activities.



Yacob Astatke, assistant professor of electrical and computer engineering at Morgan State University, was recognized as an innovator in the

education of minority engineers. In the past 15 years, he has contributed to numerous curricular innovations in his classroom, such as active learning, project-based learning, and the use of technology to enhance student engagement. His innovations have led to the implementation of Maryland's first completely online undergraduate electrical and computer engineering program, and he continues to prepare students for future engineering challenges, both at the national and international levels. Astatke completed both his Ph.D. in engineering and B.S.E.E. degrees from Morgan State University (MSU) and his M.S.E.E. from Johns Hopkins University. He has been a fulltime faculty member in the electrical and computer engineering department at MSU since 1994 and currently serves as associate chair for undergraduate studies. (See article on page 51)

WILLIAM ELGIN WICKENDEN AWARD

Named for the author of the Society's monumental "Report of the Investigation of Engineering Education, 1923-1929." this award recognizes the author(s) of the best paper published in the Journal of Engineering Education (JEE), the scholarly research journal for ASEE.

Deborah A. Trytten, Anna Wong

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Lowe, and Susan E. Walden for

"Asians are good at math. What an awful stereotype: The model minority stereotype's impact on Asian American engineering students," published in the July 2012 issue of *JEE*.



Deborah A. Trytten, associate professor in the University of Oklahoma's School of Computer Science, received a B.A. degree in physics and

mathematics from Albion College, M.S. degrees in both applied mathematics and computer science, and a Ph.D. in computer science from Michigan State University. Her current research interests include using mixed methods to examine privilege and diversity in engineering education, and undergraduate education in computer science. Trytten, who enjoys teaching first-year students, has chaired the computer science school's undergraduate committee for 19 years. She also is co-founder of the Research Institute for STEM Education (RISE) and the Sooner Engineering Education Center (SEED), and has been an investigator on more than 30 federal and state grants and contracts. Trytten, the recipient of several superior teaching awards, is one of the general co-chairs for the Frontiers in Education conference to be held in Oklahoma City in 2013 and currently serves as a commissioner in the ABET Computing Accreditation Commission.



Anna Wong Lowe,

adjunct professor of communication arts at Oklahoma Baptist University, received her doctorate in intercultural communication

research interests include intercultural communication, language and social interaction, STEM education and race, and ethnography. She has authored book chapters and articles published in Value Frameworks at the Theoretical Crossroads of Culture; Interracial Communication: Contexts, Communities, and Choices; and the Journal of Engineering Education. Lowe has lectured and taught courses on communication theory and methods, interpersonal communication, intercultural and diversity issues in communication, and the machine and the

from the University of Oklahoma. Her



mind in philosophy. Susan E. Walden, research associate

professor in the University of Oklahoma's College of Engineering, is founding director of the Research Institute

for STEM Education (RISE) and founding associate director of the Sooner Engineering Education (SEED) Center. She recently was appointed coordinator for undergraduate research programs. Walden, who has more than 30 peer-reviewed publications, earned a B.S. in chemistry from Arkansas State University, Jonesboro; she was awarded the prestigious Centennial Graduate Fellowship to attend OU, where she earned M.S. and Ph.D. degrees in computational organic chemistry. A member of the American Chemical Society, WEPAN, and ASEE, she is active in the Engineering Research and Methods, Women in Engineering, Minorities in Engineering (MIND), and K-12 and Pre-college Engineering divisions.

ASEE Annual Conference **Best Paper** Awards (For papers that were presented at the

2012 ASEE Annual Conference)

This award recognizes high-quality papers that are presented at the ASEE Annual Conference. Papers awarded are from those that were presented at the Annual Conference the previous year. One outstanding conference paper is selected from the four ASEE zones. Six outstanding conference papers are selected: one from each of the five ASEE Professional Interest Councils (PICs), and one overall conference paper.

Best Zone Paper

Presented to William C. Farrow, Milwaukee School of Engineering, for "Project Cam-A-Rok, Engaging Mechanical Engineering Freshmen."

Best Paper- PIC I

Presented to Ted Eschenbach, University of Alaska, Anchorage; Neal A. Lewis, University of Bridgeport; and Yiran Zhang, University of Bridgeport, for "When to Start Collecting Social Security: Designing a Case Study."

Best Paper- PIC II

Presented to Tiffany Fisher, Wanda L. Worley, and Eugenia Fernandez, all of Indiana University-Purdue University, Indianapolis, for "Using Web 2.0 and Social Networking Technologies in the Classroom: A Comparison of Faculty and Student Perceptions."

Best Paper- PIC III

Presented to Teodora Rutar Shuman and **Gregory Mason** of Seattle University for "Novel Approach to Conducting Labs in an Introduction to Thermodynamics Course."

Best Paper-PIC IV

Presented to Michael Fosmire and David F. Radcliffe, Purdue University, West Lafayette, for "Knowledgeenabled Engineering Design: Toward an Integrated Model."

Best Paper-PIC V

Presented to Rachelle Reisberg, Northeastern University; Joseph A. Raelin, Northeastern University; Margaret B. Bailey, Rochester Institute of Technology; David L. Whitman, University of Wyoming; Jerry Carl Hamann, University of Wyoming; and Leslie K. Pendleton, Virginia Tech, for "The Effect of Cooperative Education on the Self-Efficacy of Students in Undergraduate Engineering."

Best Conference Paper

Presented to Rachelle Reisberg, Northeastern University; Joseph A. **Raelin**, Northeastern University; Margaret B. Bailey, Rochester Institute of Technology; David L. Whitman, University of Wyoming; Jerry Carl Hamann, University of Wyoming; and Leslie K. Pendleton, Virginia Tech, for "The Effect of Cooperative Education on the Self-Efficacy of Students in Undergraduate Engineering."