

ACHIEVEMENT AWARD



FRANCES MAZZE HURWITZ, PH.D.

NASA GLENN RESEARCH CENTER

For pioneering work in the development of materials suited for space exploration, for exceptional team leadership across disciplines, and for opening the way to a more equitable work environment.

Frances Mazze Hurwitz, Ph.D., is senior materials research engineer at NASA Glenn Research Center in Cleveland, where she leads the development of high-temperature thermal materials. Over the course of her long career with NASA, Dr. Hurwitz has worked at the frontier of materials problems associated with aerospace technologies. Since 2007, she has spearheaded NASA's development of aerogels for use at temperatures above 700 degrees Celsius, establishing techniques for fabricating composites for entry, descent and landing, and space power systems. She is a recipient of the NASA Exceptional Achievement Medal for outstanding scientific and leadership contributions.

A prolific writer and frequent speaker, Dr. Hurwitz has shared her research on ceramic matrix composites, thermal protection systems, and lightweight aerogel materials in many presentations, workshops, journal articles, and technical seminars. Fluent in the science of both polymeric and ceramic materials, Dr. Hurwitz has a remarkable ability to move between disciplines. She has led the development of polymer-derived ceramics, served as chief of the Polymers

Branch in the Structures and Materials Division at NASA Glenn, and as the acting program manager, materials and structures, for the High-Speed Research Office at NASA Headquarters in Washington, D.C.

Highly skilled at managing research projects and collaborating with diverse scientists, technologists, and defense contractors, Dr. Hurwitz has been assigned to some of NASA's most critical projects. She was on the committee that studied the composite material failure that led to the 2003 Columbia shuttle disaster and has been a member of several Columbia Accident Investigation and Space Shuttle Return to Flight teams. She has also represented NASA on a number of Department of Defense technical program advisory committees and has been technical advisor on materials for several NASA programs, including the NASA Space Radiation Program.

Dr. Hurwitz graduated from Harpur College of the State University of New York at Binghamton in 1968 with a B.A. in chemistry. After working briefly as a chemist for a pharmaceutical company, she earned a master's in library science, then worked as a reference librarian in the nascent field of computerized infor-

mation retrieval at a pharmaceutical company and at a university. In 1979, she earned her Ph.D. in macromolecular science from Case Western Reserve University.

When she joined NASA Lewis Research Center (now NASA Glenn) in 1979 as a research engineer, Dr. Hurwitz was one of only seven women at the facility with a doctoral degree in science. She has been active in efforts to break down barriers to women in science, technology, engineering, and mathematics careers and was instrumental in establishing a more equal and open work environment for women at NASA.

Following the Feb. 1, 2003, loss of the space shuttle Columbia, Dr. Hurwitz testified before the Columbia Accident Investigation Board. Her participation was crucial to helping other investigators understand the effect of aging on reinforced, carbon-carbon integrity and ultimately resulted in NASA's replacing several defective wing leading edge panels and ensuring the safety of subsequent shuttle missions.

Dr. Hurwitz is married, with two adult children and four grandchildren.

SUZANNE JENNICHES UPWARD MOBILITY AWARD

ENDOWED BY NORTHROP GRUMMAN CORPORATION



JANEEN JUDAH
CHEVRON

For an exceptional career spanning multiple disciplines, often in pioneering roles, and for leveraging her influence into unceasing advocacy for women in engineering.

Janeen Judah is the general manager for Chevron Corp.'s Southern Africa Business Unit, overseeing more than 800 Houston-based employees and billions of dollars in development projects. Additionally, she represents Chevron for the Angola LNG project, the largest single project ever built in sub-Saharan Africa at over \$10 billion.

Over a career that spans more than 30 years, Judah has led technical groups across most subdisciplines in the oil industry. Fueled by enthusiasm for deciphering complex problems, often where there is no expertise or path to follow, her rise through the industry is dotted with "firsts." Her master's thesis, "An Evaluation of Risk Simulation Models for Reserve Estimates," was an early method of decision analysis modeling that is now routinely used for all economic decisions in the oil industry.

Judah began her career with ARCO in west Texas in 1983 as a principal engineer, working on drilling, completing, and producing wells, eventually transferring to Houston as an economics expert and reserves coordinator, all while earning an MBA and J.D. at night school.

After a brief period as a lawyer, then management consultant, Judah joined Texaco in 1998, and her career gained upward momentum. There, she negotiated multimillion-dollar rig construction and rental contracts, managed personnel and their careers, and gained international experience. A promotion to staff advisor for the president of worldwide production operations followed.

After Texaco's purchase by Chevron in 2001, Judah became technical manager for the Latin America Business Unit, supervising teams of engineers and geologists. In 2004, she moved to Chevron's Energy Technology Company, where she led the organization's support staff. With each transition, Judah found ways to elevate other women. In 2007, Judah was named the first female president of Chevron's Environmental Management Company, supervising an annual \$800 million budget and over 4 million staff hours of work. She joined Chevron's 60-member management committee and, as a frequent speaker on environmental stewardship and remediation, raised awareness among senior management. She pioneered mentoring circles to provide career guidance to as

many women engineers as possible.

In 2010, Judah was promoted to her current position. Aware of her high visibility, she actively mentors both early- and midcareer women engineers, always saying "yes" when asked.

Beyond work, Judah has been an active leader in the Society of Petroleum Engineers (SPE) since 1979 and was named a Distinguished Member in 2003. She received SPE's Distinguished Service Award in 2010. A frequent guest lecturer at Texas A&M University, she is a longtime member of the industry advisory board of the department of petroleum engineering and, in 2011, was the first woman named to its Academy of Distinguished Graduates. She is also a member of the College of Engineering advisory council, and has remained active in the Phi Mu fraternity for 30 years, reaching out to collegiate women whenever possible.

A native Houstonian and the daughter of an engineer, Judah holds B.S. and M.S. degrees in petroleum engineering from Texas A&M University, an MBA from the University of Texas at the Permian Basin, and a J.D. from the University of Houston Law Center.

RODNEY D. CHIPP MEMORIAL AWARD



NICHOLAS (NICK) C. BELL, PH.D. GENERAL MOTORS

For career-long mentoring of women engineering students and interns, and for enthusiastic engagement in programs that encourage professional development of women in engineering and technology.

Nick Bell, Ph.D., has been chief information officer, global product development at General Motors (GM) since December 2012. He is responsible for all IT applications and also for contributions to the company's global IT transformation. His previous IT leadership positions with GM include global chief information officer (CIO) for GM's Manufacturing and Labor group; and chief information officer for GM North America. Dr. Bell also worked for Volvo Car, where he was vice president and CIO, responsible for developing Volvo's global IT strategy and creating synergy with Ford. He began his career as a systems analyst at Ford in the United Kingdom.

Since joining GM North America in 2005 as process information officer for sales, service, and marketing systems, Dr. Bell has involved himself both personally and as a top executive in creating an environment that encourages full participation by women in engineering and technology. Every year, he joins more than 70 walkers on GM's "Making Strides Against Breast Cancer" team, which has raised over \$34,000. Since 2012, when GM began switching from outsourcing most of its services to hav-

ing more than 90 percent of services performed by GM employees, Dr. Bell has sought to hire talented women and to ensure that GM retains and promotes them.

Dr. Bell is GM's executive leader for the IT Women's Employee Resource Group (WERG-IT). This group enables women to network and to benefit from mentoring and educational, social, and community outreach forums. Dr. Bell cultivates a range of programs for WERG-IT, including new-employee welcome events, CIO leadership forums, and panel discussions, all focused on attracting, engaging, retaining, and developing women in IT. WERG-IT recently launched a cross-functional steering committee to promote professional development at GM and create community awareness of careers in IT for young girls and women.

As a GM executive champion, Dr. Bell's engagement with women in IT extends into the entire state through the Michigan Council of Women in Technology (MCWT). He advocates for GM's platinum sponsorship of MCWT and regularly volunteers to help with fundraising activities, such as the "Lunch with a CIO" auction. He has been the

keynote speaker at the organization's annual Signature Gala, where over \$250,000 was raised for science, technology, engineering, and mathematics (STEM)-related educational programs. Dr. Bell promoted the inaugural 2013 MCWT Executives in Technology Leadership professional development forum, which drew more than 500 people and featured panel discussions with CIOs from General Motors, Ford, and Chrysler.

Through GM's intern program, Dr. Bell works to include women in hiring for GM's four new IT innovation centers across the country. In addition, he stewards a \$250,000 Georgia Tech GM Foundation grant, which funds STEM advances in the automotive industry and is also intended to help organizations with a strong science and technology focus support women in STEM disciplines.

Dr. Bell holds a Ph.D. in engineering from the University of London, U.K. He earned both his bachelor's and master's degrees from the Imperial College of Science and Technology, University of London.

A native of the United Kingdom and now a U.S. citizen, Dr. Bell is married and has three children.

RODNEY D. CHIPP MEMORIAL AWARD



GENE FRASER

NORTHROP GRUMMAN CORPORATION

For lasting and significant contributions to the advancement of women in engineering through personal mentoring throughout his career, and the founding of the Women in Leadership Program.

Gene Fraser is vice president of programs, quality and engineering in the corporate office of Northrop Grumman Corporation. He directs engineering, and quality policy across the corporation and evaluates all major programs from bid to execution.

Fraser joined the U.S. Marines in 1973 after graduating from the University of Florida with a degree in chemical engineering. He was a jet pilot and squadron leader before entering NASA's astronaut training program, but the Challenger disaster derailed his plans to be an astronaut. His final active duty assignment was as commanding officer of the U.S. Navy's Test Wing Atlantic, the first Marine ever to lead this command. Fraser retired from the Marines in 2002 and that same year, joined Northrop Grumman as chief engineer of the B-2 Spirit stealth bomber program.

A life member of SWE since 2013, Fraser has long advocated mentoring, or what he terms "protégé relationships." He has always made himself available for mentoring — offering guidance and support as a student, a military officer, and a business executive. While Fraser was serving in the Marines, he observed that while more women were beginning to move through the ranks, they had

high-level technical expertise but lacked leadership skills. At Northrop Grumman, Fraser again observed that few women held leadership positions in the company, and that women aspiring to management lacked leadership skills, networks among senior management, and in some cases, confidence. So in 2012, along with Karen Tokashiki, the director of specialty engineering at Northrop Grumman, Fraser founded Women in Leadership (WiL) to help women at Northrop Grumman advance and succeed.

For two years Fraser was WiL's executive champion, and he continues to volunteer and attend workshops and other events. The WiL program is based on Fraser's goal of developing a leadership pipeline from the ranks of the company's most promising women first- or midlevel managers and mid-career engineers. Over the course of 10 months, participants meet monthly to develop leadership abilities, work with their mentors, and learn how to expand their professional networks. Activities include workshops, leadership panels, executive networking, and assigned reading. Specific workshop topics include presentation and public speaking skills, cultivating an executive presence,

and learning how to think strategically. More than 200 women are nominated for the WiL program each year.

Between 2012 and 2014, 50 women were accepted into the program, with an 84 percent completion rate. A survey of WiL graduates conducted in 2013 showed that participants had increased their responsibility and visibility on the job. Graduates considered the most valuable aspect of the program to be interaction with senior management and networking with peers. Graduates have formed an alumni association to maintain contact.

Fraser holds a B.S. in chemical engineering from the University of Florida and is a graduate of the California Institute of Technology Program for Strategic Marketing of Technology and the U.S. Naval Test Pilot School. He is a member of the Society of Experimental Test Pilots and served on the board of directors of the Association for Unmanned Vehicle Systems International. He is a highly experienced aviator with 6,000 flight hours on 81 models of fixed-wing aircraft and helicopters.

DISTINGUISHED ENGINEERING EDUCATOR



KAREN A. THOLE, PH.D.
THE PENNSYLVANIA STATE UNIVERSITY

For visionary leadership and far-reaching influence as a researcher, role model, teacher, and mentor who effectively inspires young women to pursue STEM careers.

Karen A. Thole, Ph.D., is a professor and head of the department of mechanical and nuclear engineering at The Pennsylvania State University. After earning her B.S. and M.S. in mechanical engineering from the University of Illinois and her Ph.D. from The University of Texas at Austin, she spent two years as a postdoctoral researcher at the Institute of Thermal Turbomachinery at the Karlsruhe Institute of Technology in Germany.

Dr. Thole's academic career began in 1994 as an assistant professor at the University of Wisconsin-Madison. In 1999, she accepted a position in the mechanical engineering department at the Virginia Polytechnic Institute and State University, where she was promoted to professor in 2003 and was recognized as the William S. Cross Professor of Mechanical Engineering in 2005. She also served as an AdvanceVT professor, funded by the National Science Foundation through the Advance grant as a co-principal investigator.

In 2006, Dr. Thole was appointed to her current role as department head at Penn State, where she administers two degree programs involving 50 faculty members; 1,000 juniors and seniors; and 280 graduate students. She has supervised more than 65 theses and dissertations with nearly all of her graduate

students having published in peer-reviewed conference and journal papers. An exemplary role model and tireless mentor, Dr. Thole fosters a respectful, dynamic, and supportive atmosphere among the students in her research labs.

One of her singular contributions has been as the founder and champion of the Engineering Ambassadors Program at Penn State, a program now replicated at numerous institutions across the United States. Engineering Ambassadors learn advanced communication skills, using the messages of the National Academy of Engineering's Changing the Conversation to spread the word about exciting careers in engineering to middle- and high-school students. In the Ambassadors' "It's All about M.E." collegiate program, juniors and seniors lead events to help first- and second-year students understand the opportunities mechanical engineering offers. Under Dr. Thole's leadership, the percentage of women entering mechanical engineering at Penn State has grown from 8 percent to 15 percent.

Dr. Thole has published more than 190 peer-reviewed journal and conference papers. To support her research and educational efforts, she has secured \$18 million in external funding. She has built two experimental research laboratories at Penn State: the Experimental and

Computational Convection Lab and the Steady Thermal Aero Research Turbine facility. Both are substantially funded by the Department of Energy, NASA, and Pratt & Whitney and have been named a Pratt & Whitney Center of Excellence for heat transfer.

She is an ASME fellow and is now leading ASME's Energy Conversion and Storage Segment within the Technical Events and Conferences Sector. She formerly served as the chair of the board of directors for ASME's International Gas Turbine Institute. She has also served as chair of the ASME-ME department head executive committee, as a member of the Vision 2030 committee, and as chair of ASME's committee on honors. She has been recognized as an outstanding alumnus at both The University of Texas and University of Illinois. Dr. Thole is a recipient of Penn State's Rosemary Schraer Mentoring Award and has been recognized as a White House "Champion of Change" for her recruitment efforts in STEM.

Dr. Thole grew up on a dairy farm in southern Illinois. She and her husband, Michael Alley, who also teaches at Penn State, reside in State College, Pennsylvania. They are both avid hikers who enjoy the hills of central Pennsylvania.

GLOBAL LEADERSHIP AWARD



RYTA BOWSER

WESTINGHOUSE ELECTRIC COMPANY

For advancing the world's nuclear safety culture, exceptional leadership in the aftermath of crisis, and dedication to developing the potential of aspiring engineers.

Rita C. Bowser is vice president of new plant project advancement for Westinghouse Electric Company, leading new projects to expand the application of Westinghouse's AP1000® plant technology to broader markets. She also leads a core team within Westinghouse to continually improve global nuclear safety culture.

Previously, Bowser supported the Americas Region and responded to nuclear utility needs in a post-Fukushima environment, bringing 30 years of experience that included her work during the Three Mile Island recovery and the aftermath of the Chernobyl disaster.

Bowser served for more than a decade in international Westinghouse postings, including regional vice president, South Africa, where she integrated the company's global nuclear network through a local delivery model.

She has been on the boards of Westinghouse Electric South Africa (WE-SA) and the American Chamber of Commerce. She is a founding member of the Nuclear Institute of South Africa and served on its board. In addition, she was a founder and executive sponsor of Women in Nuclear WE-SA. She also served on the West-

inghouse European and South African Leadership Council.

Prior to her assignment in South Africa, Bowser held the role of vice president, strategy, for the Westinghouse European Fuel Business and was the head of the advanced gas-cooled reactor and VVER fuel business in the United Kingdom. Prior to that, she was president and CEO of Westinghouse/British Nuclear Fuels Limited subsidiary, BNFL Fuel Solutions, a dry cask storage business for used nuclear fuel and nuclear plant decommissioning.

Before joining Westinghouse, Bowser worked on commercial nuclear and spent fuel and decommissioning programs across the globe. She also worked for more than a decade at the Rancho Seco Nuclear Generating Station in radiation protection and radiochemistry.

Throughout her career, Bowser has been a powerful promoter of science, technology, engineering, and mathematics (STEM) training and a role model and mentor for other women engineers and aspiring engineers. Her volunteer activities cross cultural and language barriers, developing future leaders and educating communities all over the world. Among many such efforts, Bowser served as an

advisor to the Mescalero Apache Tribe as the Rancho Seco Generating Station in California was being decommissioned, helping open a visitor center for outreach on the project and staffing it with promising students. In Ukraine, she established a successful, informal network of former Soviet women engineers to help them find careers beyond Chernobyl. In the U.S., Bowser currently provides STEM training for high school students through Westinghouse's outreach program, N-Vision, and has performed similar outreach and training on four continents.

Bowser received an M.S.M.E. in health physics from the Georgia Institute of Technology and a B.S. in mathematics from Clarion University. She currently serves on the board of the Pittsburgh section of the American Nuclear Society and the executive board of the Moraine Trails Boy Scout Council. She is a registered radiation protection technologist, a certified industrial safety instructor, a patron of the American Nuclear Society, a member of Women in Nuclear, and a past secretary of the Northern California Health Physics Society.

GLOBAL LEADERSHIP AWARD



ANNE COTÉ
KIMBERLY-CLARK CORPORATION

For lighting the path to global leadership roles for women across cultures and continents, and for deep, generational impact on present and future leaders.

Anne Coté is director, global device business quality for Kimberly-Clark Corporation's medical device business. She is responsible for all quality-related activities, including ensuring that all manufacturing locations are fully resourced, trained, and can consistently meet customer and regulatory expectations for product safety, quality, and performance. Overall, Coté and her team manage the quality of approximately \$1.5 billion in products and services.

Coté has held numerous global technical and managerial leadership positions throughout her 30-year career with three Fortune 100 multinational corporations: GE, The Dial Corp., and Kimberly-Clark. She obtained her B.S. in physics from Providence College and began her career as an electronic test equipment design engineer for GE during the Trident II program. Since then, her technical experiences have crossed a wide variety of disciplines, including electronic weapons systems, polymers, consumer products, cosmetics, textiles, over-the-counter and prescription drugs, and medical devices.

Although Coté has worked in other functions, most of her career has been

spent in quality leadership roles. She has led the quality operations for five major Kimberly-Clark businesses consisting of some 50 manufacturing sites in more than 15 countries, three major acquisitions, two facility closures, and two corporate spin-offs.

Coté's extraordinary networking skills and ease with cultural immersion have made her a successful leader. Her team includes members from Asia, Europe, Mexico, and the U.S., and exceeded 700 employees at its peak. A champion for developing women leaders across the globe, she has managed, coached, mentored, and developed countless women throughout her career. Many are now in senior management or director-level roles. Within the past three years in particular, three of Coté's prior direct reports have been promoted to executive-level director positions, and two of the three are women. Just last year, four of her direct reports received promotions to senior management roles with three of the four employees located outside the U.S. She is also a cherished "reverse mentor" for women in positions higher than her own.

Throughout her career, Coté has re-

mained active in her church, in local and national advocacy and service groups, and many charities. Within Kimberly-Clark, she has been an active member of employee diversity network groups, including the Women's Interactive Network and its LGBT support network, which helped shape the current policy of nondiscrimination seen across all company locations. Kimberly-Clark is now recognized as one of the best companies to work for in terms of workplace equality and has received a perfect score from the Human Rights Campaign.

Coté's legacy of developing strong, capable women destined for global leadership roles is stellar, but she is known for saying that her proudest achievement is her daughter, Sarah, whom she raised as a single parent. Today, Sarah is a graduate of the Georgia Institute of Technology and is now a research and development project leader for Kimberly-Clark's International Division.

Coté earned her B.S. in physics from Providence College. She currently resides in Georgia.

GLOBAL LEADERSHIP AWARD



SUZANNE R. DAVIDSON
THE BOEING COMPANY

For groundbreaking contributions to Ethernet and LAN technology; fostering authenticity and openness among diverse, global teams; and encouraging colleagues to fulfill their potential.

Suzanne Davidson is technical lead for the Joint Station Local Area Network (LAN) team for the International Space Station (ISS) and works for Boeing Defense, Space and Security in Houston. An expert on Ethernet architectures and protocols, she manages the International Space Station's Joint Station LAN team. Her expertise in systems engineering, computer network design, and systems integration has made significant contributions to the ISS mission during the past 11 years, including the station's Internet connectivity. Davidson was on hand when the networks she helped create carried the first tweets and emails from the ISS to Earth.

Davidson provides leadership for all U.S. international partner integration testing and requirements development for the Joint Station LAN; serves as project engineer on NASA space station change notices; and is project engineer for Boeing Independent Research and Development for new technologies, protocols, and science for expanding the ISS capabilities. Boeing's investments in Davidson's research projects have paid a return more than 10 times since 2011.

Davidson's achievements include integration of the NASA, Russian Federal

Space Agency, Japanese Aerospace Exploration Agency, and European Space Agency independent Ethernet networks; delivery of initial Ethernet capability to the space station; and development of a disruption/delay-tolerant networking (DTN) protocol project that will store and forward science and mission support data between on-orbit and ground despite loss-of-signal events across the satellite Ku-band system. The DTN system will be deployed to the ISS in early 2015.

Prior to joining The Boeing Company, Davidson worked at several companies, including Compaq as an Ethernet expert; IBM, where she developed device drivers for the U.S. Postal Service point-of-sale system; Aesbus Knowledge Solutions, where she conducted field tests for HP servers, workstations, and handheld devices; and Lockheed Martin, as a systems computer engineer designing the computer and network architecture for a prison command and control security system in Bridgend, Wales.

Davidson continuously works to improve not only her technical skills, but her leadership and communications skills, as well. Through her experience and determination, she consistently

empowers others to dream big, continuously stretch, and achieve extraordinary things. She often opens her home for team activities, and team members from all over the world maintain contact long after projects are finished.

Recognized for sustained outstanding performance, Davidson has received numerous awards, including the prestigious Team Rotary National Award for Space Achievement, two Johnson Space Center Group Achievement awards, and both NASA's GEM and ISS Space Flight Awareness (SFA) awards. She is a member of the Society of Women Engineers, IEEE, and the InterPlanetary Networking Special Interest Group.

Davidson earned her B.S. in computer system design from the University of Houston. She is a certified professional coach; an energy leadership index master practitioner; and certified in bird, large mammal, and habitat management through the Professional Forestry and Wildlife Conservancy. Davidson participates in numerous charities, through Boeing and individually, including annual beach cleanup for Texas Parks and Wildlife. She is also active in many food drives, natural disaster relief, and other volunteer activities.

SWE PRISM AWARD



CINDY HOOVER
SPIRIT AEROSYSTEMS INC.

For blazing a trail of technical and personal success for women engineers to follow, and for reaching out to women professionals across industries.

Cindy Hoover is vice president for the 737 MAX Program at Spirit AeroSystems. She is responsible for development and execution of the program and manages integration of the 737 MAX into existing operations. As a Spirit executive, Hoover communicates and drives company strategy.

She has more than 24 years of experience in engineering, project and operations management, and Six Sigma in the oil and gas, high-tech electronics, and aerospace industries. Hoover received her bachelor's degree in electrical engineering from Wichita State University. She earned an executive MBA from Friends University, and her Six Sigma Black Belt certification from Six Sigma Academy.

Prior to her current position, Hoover was program director for Spirit's 767 tanker program where she implemented program management best practices to successfully develop and execute program milestones. She also created a standardized process for new product introduction and led the change control board for the program. Hoover also served as director of fuselage engineering programs and lean operations at Spirit.

Hoover came to Spirit in 2007 from LSI Corporation, where she worked for 10 years and held several critical leadership positions. She began in the host software organization as a product manager. After a year, she was promoted to manager of the engineering program management group. Hoover then agreed to establish a Six Sigma program at the company. She did a two-year rotation as a Six Sigma Black Belt, driving projects in operations, customer service, engineering, marketing, and sales; cultivating relationships; and building a reputation for technical, managerial, and financial excellence.

Her next step up at LSI was to manager, then director of customer fulfillment. Using her engineering and Six Sigma skills, Hoover bridged the gap between operations and engineering on technical issues and between sales and operations, as well. Dubbed the "quarterback" of the operations team, she was diligent in her efforts to bring the needs of the customer and the goals of the company together.

Active in the Society of Women Engineers since she was an undergraduate, Hoover has filled many leadership positions, including membership chair, vice president, and president of the Wichita

Area Section; lieutenant governor and governor of Region i; and chair of the Society finance committee. She currently serves at the Society level as treasurer.

Hoover established Spirit AeroSystems as a SWE corporate member and is the creator and executive sponsor for SWEPT, an organization at Spirit targeting women in engineering and technical professions who meet for technical tours of the various facilities on campus, professional development workshops, and networking.

Also active in the Wichita community, Hoover serves on the board of advisors for Wichita State University's College of Engineering and the board of trustees for Wichita Area Technical College. She has also served on the boards of the Girl Scouts of Kansas Heartland, the Wichita Area Outlook Team, and the Wichita Chamber of Commerce. Hoover and her husband, Bryan, have three sons, Jeremy, Marcus, and Cameron. In her ever-elusive spare time, she enjoys watching her sons play soccer, the WSU Shockers basketball team, and reading a good book.

SWE PRISM AWARD



EMILY L. HOWARD, PH.D.
THE BOEING COMPANY

For modeling a groundbreaking career that applies a deep understanding of human behavior and cognition to technical advances in defense, aerospace, and security.

Emily L. Howard, Ph.D., a senior technical fellow at The Boeing Company, is currently serving as the user experience architect for the digital aviation initiative, responsible for the end-user experience of nearly 700 Boeing Commercial Aviation Services products. Over the course of her career with Boeing, Dr. Howard has applied her expertise in cognitive psychology, systems engineering, software architecture, human-in-the-loop test and evaluation, intelligent systems, and graphical user interface to develop many advanced products and technologies.

Concurrently she is chair of the Boeing Technical Fellowship, whose members share their expertise across Boeing via mentoring, consulting, and training. Dr. Howard is the first woman to lead this group in its 25-year history. In 1996, she became an associate technical fellow and was capture team leader, program manager, and principal investigator for Boeing's portion of the Defense Advanced Research Projects Agency's Command Post of the Future program. As a technical fellow, she was the human systems integration lead on a combat center for a U.S. Navy destroyer and a handheld, GPS-enabled search and rescue radio for the U.S. Air Force and special operations forces.

Dr. Howard graduated from Franklin and Marshall College with a bachelor's

degree in psychology. She earned her master's and Ph.D. in cognitive psychology from the University of California, Los Angeles. She holds two U.S. patents, with one other patent application currently pending. Participating in a mock infantry battle as part of a 1999 federal research project reinforced to Dr. Howard the crucial relationship between human and machine when life-or-death decisions are at stake.

Strategic about her career, Dr. Howard has risen steadily at The Boeing Company. Her positions have included director of technology and process for the B-1B network-centric operations; director of capability readiness in advanced systems engineering and technology; and chief engineer, advanced command, control, and communication networks, in Phantom Works.

She joined Rockwell International (which later became part of Boeing) in 1988 as a human factors specialist. She developed display formats for the X-31 Fighter Demonstrator and AC 130U Gunship and measured and analyzed human performance effectiveness with emerging cockpit technologies. Her early research focused on head-worn displays and virtual reality applications. Subsequently assigned to the Agile Warrior program, Dr. Howard applied her expertise to associate technology, a form of artificial intelligence, and established

herself as an expert in technologies that enhance decision-making. Her current focus is on advanced user interface frameworks for large-scale software applications, beginning with her role as the user interface architect on Future Combat Systems.

Dr. Howard is the executive sponsor of the Human Factors and Ergonomics Community of Excellence and of Boeing Women in Leadership – Huntington Beach chapter. She is a member of the Society of Women Engineers and the Amelia Earhart Society. Her human factors training makes her a strong advocate for gender diversity in engineering, which she contends confers an advantage in solving complex technical problems and boosts creativity. The only female senior technical fellow at Boeing for more than eight years, Dr. Howard leveraged this position to encourage other women to develop technical skills.

The mother of two grown daughters, Dr. Howard is also a competitive sailor. Through her church, she volunteers in youth programs and helps build and repair homes with various service organizations, such as Habitat for Humanity and Sierra Service Project. She speaks often on science, technology, engineering, and mathematics (STEM) topics; diversity; and women in engineering, and is passionate about being a role model and mentor to others.

SWE PRISM AWARD



CAROL J. WEBER
CATERPILLAR INC.

For engineering accomplishments in a wide range of cutting-edge technologies; for serving as a role model; and for mentoring, coaching, and guiding many young engineers and professionals.

Carol Weber is senior engineering project team leader in the Product Development and Global Technology Division of Caterpillar Inc. She manages technology readiness for research programs in machine automation, operator assistance, connected enterprise site solutions, advanced prognostics and analytics, and electronics and control systems. Over the course of her career with Caterpillar, Weber has applied her expertise to a wide range of company initiatives in machine design, manufacturing research, gas engine development, and strategy development. She is a certified Six Sigma Black Belt and Green Belt. She completed the Bradley University Management for the 21st Century program in May 2008.

Weber graduated from the University of Wisconsin–Platteville with a B.S. in electrical engineering and joined Caterpillar shortly after as a college graduate trainee. As a test engineer in the Measurement Systems Development Division, she played a key role in designing test systems that impacted quality and reliability of Caterpillar products worldwide. Weber developed software algorithms for Caterpillar's patented partial flow dilution technology, which

measures particulate matter in engine exhaust.

An intellectual property license agreement with Sierra Instruments included Weber's software and led to the development of the BG-1, BG-2, and BG-3 product line. In 2011, the U.S. Environmental Protection Agency approved the BG-3 system for light- and heavy-duty transient engine emission testing. Sierra has sold hundreds of BG systems to engine test labs around the world. Weber also played a key role in mobile and portable test equipment innovations, and led development of the APSDev — the first portable field test system to integrate electronic control module data with analog sensor data for testing of Caterpillar products.

A SWE member since college, Weber became a professional member when the Central Illinois Section (SWE-CI) was formed in 1993. She has served the section as vice president, treasurer, secretary, section representative, and fundraising chair. From 2008 to 2013, she was a volunteer mentor for SWE-CI's Adopt-a-School program and now advises the program's leadership team. Thanks in large part to Weber's advocacy, Caterpillar has participated

in every SWE career fair since 1996. Weber received her section's 2013 Distinguished Member Award.

Since 2004, Weber has been a member of the University of Wisconsin–Platteville women in engineering, math, and science advisory board. From this position, she encourages women engineering students and offers career guidance. Her participation has been a significant factor in a 53 percent increase (since 2010) in the number of women in the university's engineering school. In 2010, she received the University of Wisconsin's Outstanding Alumni Award. At Caterpillar, Weber mentors midcareer engineers new to the company who need support to acclimate and to develop professional networks.

Weber is married to Brian and has two children, Alyson and Matthew. Her favorite leisure activities are spending time with her family and friends — especially on their annual ski vacation — walking her two golden retrievers, playing cards, and fitness kickboxing.

EMERGING LEADER



ANGELA AHMAD
EXELON CORPORATION (BGE)

For technical skill and leadership; for a flexible, fearless approach to challenges while achieving stellar safety records; and for being a role model to youth from underserved communities.

Angela Ahmad is a utility integration manager for Exelon Utilities, and has spent most of her 23-year career supporting safe and reliable delivery operations for Exelon subsidiary PECO, serving more than 1.5 million electric and more than 600,000 gas customers in the Philadelphia service area.

Currently, Ahmad oversees the integration of key strategic projects and programs at Exelon's newest utility, Baltimore Gas and Electric. She is responsible for migrating 3,300 employees toward the use of human performance tools, which includes retirement of two legacy systems, changes to processes and procedures, and emphasis on critical thinking to hone systematic problem-solving and investigative techniques to prevent adverse events. Keen project management skills, system use knowledge, frontline operations experience, and respect for company culture have enabled Ahmad to complete project milestones on or ahead of schedule.

As PECO safety manager, she oversaw all field service operations, with a work force of nearly 2,000 operations employees in five counties. She led the safety culture and industrial hygiene programs, picking up a certification as a safety utility professional. Her inno-

vative approach to employee-engaged teams pushed the company to record performance in safety; outperforming industry peers and exceeding top decile performance.

Ahmad's responsibilities also include emergency response management for the Philadelphia region. In this role she manages more than 200 mechanics and support personnel serving 600,000 customers, ensuring safe and prompt aerial and underground service restorations from storms like Hurricane Sandy, and the ice storm of 2014, the second largest customer outage count in PECO's history.

Prior to managing safety, Ahmad served as new business manager, leading design and engineering teams for several multimillion-dollar projects, where innovative engineering solutions were needed to overcome river-related construction complexities and problems associated with downtown Philadelphia's aging underground infrastructure. Each project was successfully completed on time with no safety-related incidents, and Ahmad's proactive approach resulted in an overall regional safety record.

Among the wide spectrum of positions Ahmad has held, she was the first woman in the company to serve as aerial

distribution supervisor, relying on her own technical expertise, procedures, and work practices to ensure reliable construction standards were understood and followed to safeguard and maintain electrical grid infrastructure.

A recipient of the 2011 Philadelphia Tribune Women Achieving Award, Ahmad is a member of the American Association of Blacks in Energy and the American Society of Safety Engineers, board secretary for Girl Scouts of Eastern Pennsylvania, and active in the Urban League Leadership Program and Civic Advocacy Committee.

In her community, Ahmad has been chosen as judge of elections for her district, is involved in two school executive boards, volunteers as a Girl Scout troop leader, and organized PECO's Earth Day event, co-creating the patch girls now earn. She mentors inner-city girls, exposing them to technical fields and the positive impact utility operations can have on the environment.

Ahmad is a certified utility safety professional. She holds a B.S. in electrical engineering from Temple University and an MBA from Saint Joseph's University. She and her husband reside in Philadelphia with their four daughters and one son.

EMERGING LEADER



JENNIFER A. BROOKS CATERPILLAR INC.

For creative technical leadership that improves design, streamlines production, and reduces costs; and for enthusiastic outreach to young people and the community.

Jennifer A. Brooks is an undercarriage systems engineer for track-type machines with Caterpillar. She is a principal contributor on a design team for development of undercarriage systems for multiple worldwide products. Brooks is responsible for performing needs analysis and initiating ideas, evaluating new products, and performing product maintenance. She keeps up-to-date on and also develops new technologies; communicates that technology to customers, team members, and suppliers; and supports and advises engineers, managers, marketing personnel, customers, and suppliers.

Brooks joined Caterpillar's Specialized Technology group in 2000, performing finite element analysis for several product groups. She worked closely with the machine design team in Japan to gain support to improve roller and idler designs for heavy-duty field applications, entailing background research into the field problem, consultation with service engineers, development, analysis, and approval of designs. The resulting design improvements reduced failure rates to less than 1 percent.

She worked her way up from associate engineer to systems engineer, taking on greater responsibility and leadership opportunities with each position. After leading more than 10 additional

cost-reduction projects in three years, she received her Six Sigma Black Belt certification.

In 2010, Brooks was selected to lead a multidisciplinary, worldwide resourcing team for undercarriage idlers. Early in the project, she developed a communication plan for key stakeholders and receiving facilities to ensure that quick changes and key decisions in the project were communicated effectively. Her technical product knowledge, organization skills, and leadership avoided material shortages and maintained quality product to customers. After narrowing a list of cost-effective fabricators from around the world, she visited each one personally, and continued to visit the chosen supplier to ensure smooth design transitions. She managed the supplier exit, minimized scrap, and resourced 44 part numbers in just two years.

An active member of SWE since 1998, Brooks enjoys facilitating the advancement and achievement of women in their careers. As a member of the Central Illinois Section, she served on the professional development and work life integration committees, was secretary for two years, followed by president elect, and is currently serving as president. She continues to expand her technical and leadership capabilities and attended the SWE/Smith College program "From

Specialist to Strategist" in 2012.

She earned her B.S. in mechanical engineering from the University of Wisconsin-Platteville and an M.S. from Bradley University.

Brooks' community involvement also displays her interests in engineering and music. During college, she helped charter the Theta Iota chapter of Sigma Alpha Iota, a professional music fraternity for women. She sings in her church choir, coaches soccer and softball for her children, and has taught music during vacation Bible school. She has volunteered with an Engineering Explorer post for four years, a program that exposes high school students to multiple engineering disciplines through speakers and hands-on projects. Brooks has been a speaker to area high school students through an engineering exploration program sponsored by her division at Caterpillar for the past three years. She also engaged her daughter's second-grade classroom last year by facilitating monthly engineering activities.

Brooks is happily married to her husband, Chad, and they have two children: a daughter, Lana, and a son, Ethan. In her leisure time, Brooks enjoys activities with her children, reading, quilting, golfing, and playing the flute.

EMERGING LEADER



KRISTI CHRISTENSEN
DEERE & COMPANY

For passionate commitment to both the company's mission and her co-workers, for inspiring cross-functional teamwork, and for achieving outstanding process improvements on the factory floor.

Kristi Christensen is the global manager of program management for the application product line of John Deere. She and her organization are responsible for delivering new models of agricultural sprayers globally, with manufacturing locations on four continents. These sprayers feature engines that emit 80 percent fewer nitrous oxides (NOx) than prior models, meeting the more stringent Final Tier 4 emissions standards and contributing to a cleaner environment. Christensen manages a research and development budget and leads cross-functional teams of more than 200 people to understand customer requirements and develop premier customer solutions.

In this role, Christensen has developed a leadership organization and process focused on daily execution and accountability. She set an example through her own participation, ensured each individual made a difference daily, and created an atmosphere of clarity and alignment among team members. She also headed the product development council, which is responsible for delivering product line profitability.

Christensen has 15 years of cross-

functional leadership experience, with roles in manufacturing engineering, operations management, supply management, and quality engineering. These roles have allowed her to live out her passion for process improvement and talent development. With each position, she has both developed leaders and improved processes. She transformed the manufacturing landscape of John Deere Des Moines Works through the installation of a powder coat paint system and the combination of two assembly lines. The new system changed the hang methods for 10,000 unique parts and added a powder coat topcoat to an e-coat system, achieving 22.5 percent return on investment, and was delivered in nine months through Christensen's planning, direction, and daily support. In addition to Christensen and her team meeting these goals, three of her team leads earned promotional opportunities based on her recommendations.

She continues to influence the paths of future leaders, developing employees through inspiring and engaging leadership. Recognizing the importance of attracting and retaining talent, she has recruited on campus for John Deere

since her college graduation. In 2009, Christensen was asked to take on the lead engineering recruiting position for John Deere at her alma mater, Iowa State University. Since that time, she has streamlined the career fair selection process and significantly increased the diversity and balance of interview candidates.

In addition to her contributions of developing people, products, and processes, Christensen remains active in SWE at Iowa State University, serving as section corporate advisor. She is active on the John Deere SWE committee, including leading the awards effort. Additionally, she supports her church and has served as a religious instructor for the past eight years.

Christensen grew up on a family farm in northwest Iowa. She earned her B.S. in mechanical engineering from Iowa State University and her MBA from Drake University, both with highest honors. Christensen; her husband, Matt; and their three daughters enjoy the outdoors through boating, scuba diving, and four-wheeling.

EMERGING LEADER



DIANNA GENTON HUNTINGTON INGALLS INDUSTRIES

For applying exceptional technical and analytical skills to complex problems and for outstanding contributions to both ship and space launch vehicle design.

Dianna Genton has worked in the shipbuilding industry for the past 11 years, combining her enthusiasm for engineering with a love of the ocean. She joined the research and development group of Ingalls Shipbuilding Corporation (then Northrop Grumman) in 2003, working on the next-generation destroyer, DDG 1000 –DD(X) at the time. Tasked with designing and building two large-scale radar cross-section fixtures for testing large composite panel and antenna configurations, she soon found herself working on the integrated deckhouse test article design, a one-of-a-kind, carbon-fiber demonstrator for testing the destroyer’s critical stealth attributes. Genton assisted in coordinating supplies, vendors, and design information, quickly becoming a subject matter expert in composites. The program was a huge success and key contributor to Northrop Grumman’s winning the deckhouse contract.

Next, Genton participated in a Northrop Grumman Electronic Systems (NGES) study, investigating technical requirements for integrating NGES S-Band advanced radar onto a DDG1000 composite deckhouse with CG(X) cruiser mission capability. Traditional design methods made the radar

too heavy for the DDG 1000 hull form. Genton brought her experience with large composite structures to the task, and the team devised a design that used internal decks and bulkheads to support the radar, reducing both overall weight impact on the platform as well as labor costs. This new technology, later coined “aperstructures,” gave the company a unique advantage in a \$23 billion market. Subsequently, Genton was named design lead for two contracts that further developed the technology.

In 2009, Genton led the manufacturing team for the composite portions of NASA’s Max Launch Abort System (MLAS) composite demonstrator, in collaboration with the NASA Engineering and Safety Center, Northrop Grumman Aerospace Systems, and Northrop Grumman Ship Systems. The MLAS was designed to provide a quick escape from the Ares I launch vehicle in case of a launch emergency. Genton and her team devised new processes that offered a lower-cost solution to the fabrication and assembly, while meeting the precise specifications and strength requirements demanded by space launch vehicles. The MLAS was successfully tested at NASA’s Wallops Flight Facility in 2009.

Genton is currently program manager

for two research and development manufacturing technology projects involving process improvements for sonar dome fabrication and integrating 3-D metrology to streamline current processes across the shipyard.

She and her teams have received the President’s Award for Excellence, the Chairman’s Award for Excellence (the company’s highest honor), and NASA’s Engineering and Safety Center Group Achievement Award.

Genton is an active member of the Shipbuilder Women Engineers, Women in Shipbuilding Enterprise, the Ingalls Management Association, and Huntington Ingalls’ diversity and inclusion advisory committee. She has led numerous events encouraging local youth and co-workers to pursue secondary education and science, technology, engineering, and mathematics (STEM) careers. She has volunteered for Habitat for Humanity and coastal cleanup projects, and is active in numerous community charities.

A native of Fort Myers, Florida, Genton holds a B.S. in ocean engineering from the Florida Institute of Technology and an M.S. in logistics, trade, and transportation and an MBA from the University of Southern Mississippi.

EMERGING LEADER



ZOHRA HEMANI

NORTHROP GRUMMAN CORPORATION

For bridging engineering and business through technical skill and strategic thinking and for delivering industry-changing new technology in geospatial and big data processing and analysis.

Zohra Hemani is a senior technical manager for Northrop Grumman's Information Systems sector. She leads a multidisciplinary team of more than 40 engineers working on an enterprise flagship system serving thousands of users for the U.S. government. Hemani joined Northrop Grumman in 2002 as a software developer, quickly establishing herself as a natural leader. She was promoted to project manager at the age of 24.

At 14, Hemani came to the United States from Pakistan to pursue educational opportunities. She began working in high school to support her family and continued to work throughout college to finance her education. Her interest in courses that strengthened her analytical skills motivated her to pursue a career in software engineering.

Over the past 12 years, Hemani has successfully managed several multimillion-dollar projects at Northrop Grumman. One such project was for the Army, where she interacted closely with customers, managed budget and staffing needs, proactively mitigated risks, controlled project scope in the face of constantly changing requirements, and kept her team of 25 people motivated. This resulted in the successful migration

of Army geospatial information dissemination from traditional stovepipe applications toward a service-oriented architecture. During this time, Hemani identified an opportunity for increased camaraderie within her division and formed a committee to build morale and team spirit. She also led the growth opportunities task force in her organization, which provided recommendations to executive leadership regarding career-development opportunities for employees.

Hemani has also led multiple million-dollar projects for Northrop Grumman's Independent Research and Development (IRAD). She was the principal investigator for advancing geospatial analysis and visualization tools and Web services to solve customers' technical challenges. She has developed patent pending technologies, published six articles, and presented at various conferences. Hemani was asked to lead the productization of IRAD capabilities that solve "big-data" challenges facing the organization's intelligence community customers. Despite a tight schedule, she led a team of engineers, technologists, and managers to integrate several project capabilities as a single product offering. Another such initiative resulted in the

creation of a multi-intelligence "application store" that is now the foundation of an entirely new line of business.

An engaged leader, Hemani consistently mentors colleagues in their career growth. She is an active member of Northrop Grumman's diversity and inclusion advisory board and various employee resources groups. In 2007, Hemani received the Women of Color Rising Star award and has earned numerous awards for her technical leadership and dedication to customer satisfaction.

She is active in youth-development programs in her community, organizing summer camps, sports tournaments, and tutoring mathematics. She is on the senior design advisory board at the George Washington University and advises students about careers in software engineering.

Hemani earned her B.S. in computer science from the George Washington University, and an MBA from the University of Maryland. In her spare time she volunteers in her county, teaching classes in anger and domestic abuse prevention and treatment.

EMERGING LEADER



LAURA M. MAJOR

THE CHARLES STARK DRAPER LABORATORY INC.

For a contributive career in a breakthrough engineering discipline and for dedicated efforts to teach girls about science and engineering.

Recruited for her expertise in cognitive and human-factors engineering, Laura Major joined The Charles Stark Draper Laboratory in 2005 as a cognitive engineer in a software group. Advocating for human-centered engineering (HCE) to senior management, she eventually succeeded in establishing a thriving new business area at the laboratory. She is currently the business area lead for advanced analytics and human systems within Draper's special programs.

Major received her B.S. in industrial systems engineering from the Georgia Institute of Technology. She went on to earn an M.S. in aeronautics and astronautics, with a concentration in humans and automation from the Massachusetts Institute of Technology. Her thesis was an exploration of the impact of human-machine interfaces on oceanic air traffic control. Major has co-authored several papers on this subject.

Her first HCE-related leadership position with Draper was task lead for NASA's Precision Lunar Landing Technology Program. She made major contributions to the conceptual design of an autonomous flight manager, including identifying the astronaut's role and analyzing users' responses to the new system. Major's first program manager

lead assignment was for the Smart Actuation System, which she proposed and managed.

Major published six HCE-related papers in her first three years at Draper, while establishing HCE as an area of technical expertise at the lab. Beginning with a staff of just five, she landed enough contracts to hire 10 more people in four years. Understanding that HCE requires a collaborative approach, she hired experts in psychology, cognitive modeling, computer science, and aerospace systems engineering. She increased the revenue of the group, with six patents in process.

After four years, having recruited and trained her replacement in the HCE group, Major took a one-year assignment as strategy and marketing lead in science and technology development. Again taking up the challenge of defining a new business area, Major initiated discussions with sponsors at the Intelligence Advanced Research Projects Activity and at the Defense Advanced Research Projects Agency. She was then recruited to become the business area lead for advanced analytics and human systems. In this role she is responsible for developing programs that provide specialized software applications that increase automation for cross-platform

coordination and enterprise management for situation awareness, improved prediction of behavior, and early detection of intent.

Major is a member of the Human Factors and Ergonomics Society, of which she was president of the MIT chapter in 2004, and the American Institute of Aeronautics and Astronautics. She is also involved with the Science Club for Girls (SCFG), a Cambridge, Massachusetts-based nonprofit that introduces girls K-12 to science and engineering. As a mentor, she led girls in science experiments and shared her own experiences working with astronauts. Major wrote *Letter to My Younger Self* to help girls get past stereotypes about science, technology, engineering, and mathematics careers. Her leadership on the SCFG board has significantly benefited the organization. Major contributed to re-vamping the curriculum and arranged for field trips to Draper so girls could see engineers at work and talk to them about their careers. She also negotiated for Draper to contribute both funds and resources to SCFG.

Outside of work, Major is a devoted mother, and in her leisure time, she enjoys travel, hiking, and skiing.

EMERGING LEADER



JESSICA MCELMAN

NAVAL SURFACE WARFARE CENTER, CARDEROCK DIVISION

For strong, dependable leadership in both electrical engineering research and work-force development and for steadfast commitment to recruiting exceptional women engineers.

Jessica McElman has been an employee of the Naval Surface Warfare Center, Carderock Division for 12 years in the Underwater Electromagnetic Signatures and Technology Division. She has made significant contributions to the safety of the U.S. Naval fleet through her analysis and mitigation of corrosion-related static electric signatures. She developed mathematical models and signal processing techniques to quantify the electric fields of submarines. The techniques she developed are still the Navy's primary tools for determining submarine susceptibility to underwater mines. Currently a supervisory engineer, McElman oversees underwater electromagnetic (UEM) signatures and technology research, development, testing, and evaluation of more than 30 Navy and Department of Defense contractor engineers and scientists.

Joining the Naval Surface Warfare Center, Carderock Division (NSWCCD) in 2001, McElman quickly advanced to the electric signatures team lead and in 2012 was promoted to branch head of Code 75 Theory, Modeling, and Analysis (Code 751). She has successfully calibrated the ICCP systems on U.S. Navy submarines, and has published nearly 40 technical reports documenting her work for NSWCCD, as well as papers in the OCEANS 2005 and the ELEC-

TROCOR 2007 conference proceedings. Her products have included improved physical-scale, math, and numerical modeling tools, threat-based platform requirements, and countermeasure system specifications and designs for several classes of U.S. Navy vessels.

McElman received the 2003 Junior Technical Engineer of the Year Command Award. In 2004, with only three years of experience at NSWCCD, she was selected as the electric signatures team lead. As team leader, McElman managed the division's theory and modeling tasks, signature reduction system designs and hardware specifications, configuration and performance requirements of underwater electric field measurements arrays, and processing of output. She led a group of expert engineers and scientists, government employees, and contractors and managed their work in electric field theory, modeling, data analysis, proposals, statements of work, specification review, and technical guidance. She conducted and directed analyses of electric fields from boundary element models, to physical scale models and full-scale sea trials.

In 2007, when she had been a senior engineer for just one year, McElman was awarded the third quarter Code 70 Senior Engineer Award for her technical expertise, as well as the 2007 Teaming

Command Award for her contributions to the USS Virginia UEM signatures trial team. She is the eighth person to be certified as a Naval Sea Systems Command cathodic protection design specialist, and the only person to have earned this certification in Code 75.

McElman has a B.S. in electrical engineering from Marquette University, an M.S. in electrical engineering from North Carolina State University, and an M.S. in engineering management from Drexel University.

She has been a member of Alpha Omega Epsilon, an engineering and technical sciences sorority since 1994. McElman has volunteered at the international level of the sorority since 2002, serving on the history, expansion, and 25th anniversary committees. She was also elected international executive board treasurer for 2002 to 2004 and president from 2004 to 2008.

McElman currently serves as the director of finance on the Alpha Omega Epsilon National Foundation board of directors. She is thankful for her family's support, especially her husband's support, which allowed her to focus on her volunteer work, completing an engineering management degree, and traveling in the U.S. and abroad to serve the Navy's mission.

EMERGING LEADER



TARA L. ROSSMAN
CATERPILLAR INC.

For technical excellence and leading by example; for demonstrating a strong work ethic, perseverance, and treating others with respect in both professional life and community service.

Tara L. Rossman has been a technical information supervisor at Caterpillar in Peoria, Illinois, since 2011. She leads a team of 15, who deliver technical information to Caterpillar dealers and customers. Under her leadership, this team has increased customer outputs by over 150 percent, cut past-due work in half, and cut response time to customers in half.

Rossman graduated from the University of Iowa in 2001 with a B.S. in industrial engineering. She is also a 2007 graduate of the Penny Ferguson Personal Leadership program in London. She joined the company in 2001 through a management program that prepared employees to become marketing representatives for Caterpillar's independent dealers. After a three-month training class, she spent almost two years rotating through marketing divisions, learning about Caterpillar dealer service operations and best practices. In her final rotation, she helped to plan the North American Product Support Conference for 400 attendees.

A new position as service operations territory manager for five dealership territories in Montana, Colorado, New

Mexico, Texas, Nebraska, and Kansas took Rossman to Denver. Responsible for improving product support and business metrics, she learned to lead by influencing senior dealer decision makers. In 2006, Rossman relocated to England as a Six Sigma Black Belt. She achieved significant cost savings and led more than 20 projects that involved several business areas, including marketing, warranty, finance, accounting, and IT. Key projects included improving the Perkins parts pricing process, installing an expense system that affected all U.K. Caterpillar facilities, and standardizing some of the Perkins and Caterpillar warranty processes.

Two years later, Rossman returned to Peoria and took on a sales consultant position, responsible for increasing market share at each dealer. Through persuasive thought leadership and disciplined management of the implementation process, Rossman increased company profits significantly in a little over two years.

Rossman's top priority for advocacy at work is maximizing the collective and individual strengths of her team. She also co-led the planning and execution of Caterpillar's inaugural Women in

Leadership Conference in June 2014. The conference focused on senior female leaders and on dealers in North and South America. The agenda included Fortune's seventh and 28th most powerful women in business, as well as Caterpillar's chair and CEO.

Since 2010, Rossman has been a dedicated supporter of the Children's Hospital of Illinois. She is on the advisory board and co-chairs a group of young professionals who raise funds for the hospital. She mentors them on community leadership, involvement, and philanthropy. She is also leading a group of volunteers to plan and execute the second annual Fight to the Finish extreme race to raise funds for the hospital. Finally, Rossman spearheaded a development committee focused on engaging additional community partners. In less than three years, under her leadership the committee has raised more than \$50,000 for the hospital.

Rossman is married and has three children. She is a member of the SWE Central Illinois Section and has participated in STEM mentoring programs for young girls.

EMERGING LEADER



PATRICIA WALKER
MEDTRONIC INC.

For expertise and creative problem solving in biomedical engineering and for business and community leadership informed by integrity, commitment, and generosity.

Currently a principal supplier quality engineer in Medtronic's cardiovascular division, Patricia Walker joined Medtronic, the world's largest medical device company, as a senior supplier quality engineer in 2011. Quickly promoted because of her expertise in biomedical contract manufacturing, Walker works closely with suppliers, overseeing quality, medical standards, and regulatory compliance. She is accountable for one of the division's largest contract manufacturers, which produces more than 600 varieties of specialized cardiovascular products.

Walker received her B.S. in engineering science-biomedical engineering from Iowa State University in 2000. Two years later, she earned an M.S. in biomedical engineering from the University of Iowa, where she aided in setting up a cardiovascular abdominal aortic aneurysm research team.

Following graduate school, Walker's first job was with Catheter and Disposables Technology Inc. in Plymouth, Minnesota. As a product development engineer, she helped design medical devices used in the cardiovascular, respiratory, urinary, nervous, reproductive, and skeletal systems. In her first

two years there, she worked on 10 major programs and saw devices progress from development to manufacturing. She gained expertise in many manufacturing processes, including extrusion, plastic injection molding, catheter tipping, and thermal forming and fusing. She was also lead engineer on a device that aided in cancer therapies, a program she inherited from another engineer, for which she provided a solution and test method. Walker soon began managing projects, and in 2004 was promoted to engineering supervisor.

In 2006, Walker joined Accellent Inc. and applied her education and work experience to catheter design and medical device manufacturing. Her novel approach to design and manufacturing reduced development cycle time and enabled prompt delivery of high-quality, innovative products. Walker was acting program manager and then engineering manager for the new product development group.

Involved in SWE on all levels, Walker was program chair for the Chattanooga Area Section in 2009 and section representative for the Heart of Iowa Section from 2010 to 2011. In the Minnesota Section, she has served as vice president,

awards chair, section representative, and professional development co-chair. Under her leadership, the professional development committee received two successive, Society-level program awards. In 2013, Walker received the SWE-Minnesota Bravest Volunteer of the Year Award, which recognizes a member who has tackled new tasks in unfamiliar territory for the betterment of her section. In 2013, she received the Minnesota Federation of Engineering, Science, and Technology Societies Young Engineer of the Year Award.

On the region and Society levels, Walker has chaired the Region H awards and procedures committees and led the strategic awards assessment task force. In 2009, she was honored as a SWE Distinguished New Engineer. Also active in her community, Walker helps raise funds for the American Diabetes Association, the American Cancer Society, and the Multiple Sclerosis Society. She volunteers for a number of ministries at her church. In her free time, she enjoys spending time with her family and friends, the arts, and travel.

EMERGING LEADER



ERIKA WILLIAMS
JOHN DEERE

For demonstrated technical and managerial successes in process management, and for maintaining a thoughtful, balanced perspective in her profession and as a dedicated community volunteer.

Erika Williams is the business improvement manager for the John Deere Des Moines Works factory in Ankeny, Iowa. She is responsible for the overall factory strategies for continuous improvement, 5S, and total productive manufacturing for the factory's four business units and for 1,000 production and maintenance employees.

Williams began as a cooperative education student with John Deere at the Des Moines Works in 2001, completing rotations in product marketing, design, and test and reliability. During this time, she gathered data from customers in the company's dealer network to determine how to revise factory assembly of tillage products. Williams' project resulted in increasing parts being installed at the factory, streamlining shipping and cutting setup time for the dealers.

In 2003, Williams joined John Deere full time as a test/performance engineer, responsible for planning and execution of product test activities and reliability improvement plans. In her next role as a design engineer, she led a cross-functional, cross-unit team to identify and execute improvements for parts

and processes that had been previously transferred to John Deere facilities in Mexico. Williams' team worked through process trials and capability studies to ensure that parts met customer requirements. This involved changes to heat treat, hot forming and paint processes, and measurement systems.

As Six Sigma Master Black Belt for the factory from 2008 to 2011, Williams was part of a three-person team that developed a Design for Six Sigma curriculum that was used for one of the major company divisions and later adopted across the company. Promoted in 2011 to quality and production systems manager, Williams led the Des Moines Works in standardization of processes, measures, and metrics. She collaborated with a team of 100 experts at the factory to train more than 1,000 employees to improve key processes, including five major process lanes, 40 subprocesses, and 180 individual criteria. In recognition of the facility's improved metrics, and as a result of Williams' success in engaging the whole organization in the effort, the Des Moines facility earned a bronze-level of performance certifica-

tion. The improved metrics also helped the facility recertify to ISO 9001:2008 that same year.

Williams holds a B.S. in agricultural and biosystems engineering from North Dakota State University and an executive MBA from the Kellogg School of Management at Northwestern University. She has been a member of the Society of Women Engineers since 2013 and currently serves on the nominating committee and bylaws review committee for the Heart of Iowa Section.

She is a member of the American Society of Agricultural and Biological Engineers and of the American Society for Quality. At John Deere, she is part of the Women in Operations Employee Resource Group and the Des Moines Area WomenREACH. She is a member of the professional agricultural sorority Sigma Alpha, which helps young women in agricultural careers.

Williams devotes much of her energy and spare time to her church. She lives in Ankeny, Iowa, with her husband and two sons, ages 1 month and 4.

SWE DISTINGUISHED NEW ENGINEER



CARRIE BALLESTER

LOCKHEED MARTIN CORPORATION

For outstanding technical ability and leadership contributing to the success of critical defense programs, and for enthusiasm and dedication in support of SWE.

Carrie Ballester is an F-35 sustainment program manager at Lockheed Martin for the Mission Systems and Training Division in Fort Worth, Texas. Her background includes mechanical, structural, and thermal design and analysis, control account management, and program management. She has extensive experience guiding diverse teams through cost-constrained and technically challenging programs. Ballester has been active in SWE for 14 years and currently serves as outreach chair for the Fort Worth Section.

Ballester earned a B.S. in mechanical engineering from The College of New Jersey and an M.S. in mechanical engineering with a specialization in biomechanics from the University of Pennsylvania. She completed an M.S. in program management from the Stevens Institute of Technology, is a certified Six Sigma Black Belt, and recently became a certified program management professional (PMP).

She started at Lockheed Martin as a responsible design engineer on several U.S. and international programs. Selected for Lockheed's highly competitive Advanced Technical Leadership rotational program, Ballester accelerated her professional and technical development

through workshops, mentoring, and a variety of special assignments throughout the company. Her experiences included a rotation as the engineering lead on the President Obama-mandated Aegis Ashore program and a manufacturing project manager position. In both roles she led diverse teams in meeting deadlines in a high-pressure environment, earning accolades with her government customer. In June 2013, Ballester assumed her current position with the Joint Strike Fighter program, where she manages several hundred million in sustainment contracts.

Ballester's SWE career is most noteworthy for her ability to inspire others — SWE members, community members, and co-workers alike — and enlist their help in a common cause. In 2000 she joined SWE as a first-year college student serving as secretary, vice president, and president. After graduate school, she became very active in the SWE New Jersey Section, joining forces with a small group of members determined to revive the section. Together they planned outreach, social, and professional development events, large-scale Girl Scout events, career fairs, and a regional SWE conference at NJIT. Ballester has been a judge for SWE scholarship applications, participated

in five annual conferences, and served two years each as vice president, president, and section representative in New Jersey. In 2009, she received the SWE New Faces of Engineering Award. After moving to Texas in 2013, she joined and became outreach chair for the SWE Fort Worth Section.

Ballester has worked diligently for Lockheed-Martin SWE, managing the company's Women in Engineering Day for eight years, co-coordinating the annual DiscoverE: Engineers Week, and mentoring many junior employees. She also organized several "Survived and Thrived" presentations, which showcase successful Lockheed women executives, sharing their accomplishments and approach to work/life balance. During Women in Engineering Day alone, she reached nearly 1,000 high school girls.

She is an active alumni participating in mentoring programs and has also been a *FIRST*® Robotics volunteer. She supports many charities, including the American Cancer Society, the Diabetes Association, and Susan G. Komen®. During her time in New Jersey, she donated all funds raised by the annual Lockheed Martin volleyball tournament, which she initiated, to the Prostate Cancer Foundation in memory of her father.

SWE DISTINGUISHED NEW ENGINEER



CYBIL BOSS, P.E.
URS CORPORATION

For expertise in environmental engineering, and for consistently delivering results above expectations, both professionally and at all levels of the Society.

Cybil Boss, P.E., is an environmental engineer with the URS Corporation in Omaha, Nebraska. She has been with the company since 2004 and has experience in all aspects of environmental engineering work — from strategy development and proposal preparation to project planning and execution, as well as remedial design, fieldwork management, data analysis and report writing, and regulatory negotiation. She is also responsible for supervising and mentoring junior staff at URS.

From 2004 to 2005, Boss worked on projects in several states, including the design of a 500-gallon-per-minute groundwater treatment facility in Nebraska for treating chlorinated solvents contamination in groundwater using air-stripping technology. The project involved installation of two groundwater extraction wells; 3,000 feet of underground piping; and a new treatment facility. As part of the design team, Boss was responsible for collecting groundwater samples and surveying proposed construction locations. She prepared the preliminary system design — including engineering drawings and calculations

— for review by the senior project engineer.

In 2006, Boss was selected for the proposal team for one of the largest fixed-priced projects the Omaha office of URS had ever pursued. She was part of the technical team that devised the strategy for nine of the sites in the proposal and developed the cost estimate. URS was awarded the contract, in part based on Boss' technical and business contributions. Since 2006, Boss has managed a large, performance-based contract at a military installation in Nevada. She is involved in all aspects of the project, including remedial system design and implementation, long-term environmental management, project team supervision and training, and achievement of project objectives.

Boss joined SWE in 2007 and has been active at all levels of the Society. She was president of the Eastern Nebraska Section from 2011 to 2012. She co-chaired iCON13, the 2013 Region *i* conference, which drew more than 150 attendees, including the FY13 SWE president, attracted 27 company sponsors, and generated significant revenue and profit. Her team coined the name,

iCON13, which was used again in 2014.

She has worked on the section's past three "Wow! That's Engineering!®" events, all of which sold out. She currently serves as the membership chair for the Eastern Nebraska Section, where membership has almost doubled during her term. Her commitment to personal communications with members and her efforts to recruit new members have resulted in an average 89 percent retention and 30 percent growth over the past two years. She has served on the Society membership committee for two years, and is active in advancing SWE member awareness of the K-12 Educator Membership Type.

Boss earned her bachelor's degree in chemical engineering in 2003 from the University of Nebraska–Lincoln. She is a registered professional engineer in Nebraska and South Carolina and an active member of the Society of American Military Engineers. Boss lives with her husband and two children in Omaha. She enjoys travel, playing the piano, bowling, and playing volleyball and softball.

SWE DISTINGUISHED NEW ENGINEER



BRITTA JOST
CATERPILLAR INC.

For inspiring others and leading by example, and for an ability to bring people together on the job, in SWE, and in the community.

Britta Jost planned on a career in mathematics, but a college internship at Caterpillar changed her mind. She earned a bachelor's degree in mathematics and a master's in mechanical engineering, both from Michigan Technological University. As an undergraduate, she completed a summer research program at MIT Lincoln Laboratory, where she used software to detect military targets in hyperspectral images. In 2005, after interning for three summers, Jost joined Caterpillar full-time through the Engineering Rotational Development Program. She is now a senior engineer in large structures design engineering, responsible for design of the D6 track-type tractor chassis components. The components under Jost's design control are produced in four Caterpillar factories around the world.

Jost's first position with Caterpillar was in the simulation group for track-type tractors. She worked on the project that first used simulations to predict the structural durability of tractors without building prototypes and testing. It was through this project that she became a certified Six Sigma Green Belt. In 2008, Jost worked as

a test engineer at Caterpillar's Peoria Proving Ground, where she designed tests and collected operator comments that validated the computer models she once built. In 2010, she coordinated and implemented all D7E track-type tractor product improvements on machines for the waste industry. This work resulted in Jost being named co-inventor on two patents that have been granted, and one additional application under review by USPTO.

A dedicated SWE member, Jost has focused her energy on membership and member recognition, serving the SWE Central Illinois (SWE-CI) Section as a two-time membership chair, president elect, president, and section representative. She served two years as regional membership coordinator and is currently the Society's membership committee chair.

As section membership chair, Jost wrote the first student transition program policy and had it approved by the executive council. Under her leadership, the section grew to more than 100 members and won all three regional statistical awards for membership: Outstanding Membership Retention, Outstanding Membership Growth, and

Outstanding Membership Net Increase. The next year, the section earned the Membership Retention Award and an honorable mention for Membership Growth. Jost received her section's Distinguished Member Award in 2012. She most recently served as SWE-CI work life integration chair and organized a dinner-workshop event that brought Jo Miller, a SWE conference speaker and professional women's leadership coach, to Peoria.

Also deeply committed to member recognition, Jost has been involved in her section's award nomination process since 2007. Since she began coordinating SWE-CI's award submissions, the section has received 15 regional and eight Society-level awards.

A trained court-appointed special advocate for children, Jost advocates for abused and neglected children through CASA of Peoria County. Over the past six years, she has advocated for two sets of siblings and logged over 500 hours of volunteer casework. She is married to fellow engineer Jeff Jost and has a daughter, Liesl, and a son, Warner.

SWE DISTINGUISHED NEW ENGINEER



STACY LUENEBURG

CONTINENTAL AUTOMOTIVE SYSTEMS

For expertise in mechanical engineering, for working effectively across cultures, and for contributions to the Society of Women Engineers and the community.

Stacy Lueneburg is currently a senior staff mechanical engineer at Continental Automotive Systems. She graduated from Kettering University in December 2006 with a B.S. in mechanical engineering with a concentration in plastic product design. She earned an MBA from Kettering University in December 2011.

Lueneburg joined Siemens VDO (later acquired by Continental Automotive Systems) in 2006 as a design engineer in instrumentation and displays. This group focused on innovation, designing dashboard instrument clusters that displayed safety information, such as speed, fuel level, revolutions per minute, and warning symbols. Although Lueneburg is the youngest engineer in her group, she has received three promotions in just seven years.

Charged with bringing awareness of new technology into the department, Lueneburg created the mechanical design package for the group's first 12-inch thin film transistor (TFT) display and designed the company's first "Triple TFT Instrument Cluster." This task had high visibility and a tight deadline; Lueneburg was given just one month to complete a

new cluster design and have it ready to demonstrate at the 2008 Consumer Electronics Show. She was responsible for mechanical packaging of the displays, coordinating with hardware to complete the electronics, and working with the software engineer to program dummy graphic displays for the show. She finished the assignment successfully and met the deadline.

Other assignments at Continental have included mechanical engineer on the company's Chevrolet Volt program and senior mechanical engineer for the fluid quality group, where she worked on the next-generation flex fuel sensor. Having demonstrated her ability to work effectively in Japan, China, and England as mechanical lead on a global Nissan project, Lueneburg was assigned to an Australia-based program and collaborated with team members in the United States, Mexico, Australia, and China. She overcame several obstacles, including communication across time zones, to execute the project successfully.

Lueneburg joined SWE in 2002 when she was in college. In 2007 she became involved with the Detroit Section and has held several leadership positions ranging

from member involvement chair, college relations chair, section treasurer, section representative, Region H alternate senator, and most recently, president of the Detroit Section for the last two years. Lueneburg has also been involved with the Society awards committee, and has judged scholarship applications for junior and senior students.

Actively involved in the Alpha Sigma Alpha sorority since 2003, Lueneburg is currently recruitment advisor. She answers many questions about co-op job, careers, and course work and encourages her sorority sisters to join SWE on their campus. Lueneburg has supported the sorority's philanthropy missions by making bracelets for Girls on the Run and decorating bags for the Special Olympics. She also participates in events such as Easter Seals Walk with Me Detroit, Relay For Life of Clarkston, Walk MS Troy, and The Engineering Society of Detroit. In her spare time, Lueneburg enjoys travel and spending time with her husband, and their three rescue cats.

SWE DISTINGUISHED NEW ENGINEER



LISA M. RIMPF

THE BABCOCK & WILCOX COMPANY

For accomplishments in chemical engineering and SWE leadership, especially at the region level, and for tireless efforts to engage young women in engineering.

Lisa M. Rimpf is the environmental technology research team leader at Babcock & Wilcox Power Generation Group Inc. in Barberton, Ohio. As a research and development engineer, she evaluates advanced process concepts for technical merit and commercial readiness, applying engineering principles, market study analysis, and business alignment strategy.

Rimpf fosters collaboration among a 10-person team that develops flue gas air pollution control technologies for clean electricity generation. She works with her team to identify higher efficiency and lower emission improvements for steam generating systems. She is also actively engaged with environmental, health, and safety compliance and quality assurance performance throughout the company's research facilities.

Rimpf was integral to the development of a \$12 million, 7-ton-CO₂-per-day pilot plant, which was approved for installation at the company's combustion and emissions control test facility in 2008. She provided front-end engineering design specifications, participated in the design review process with the contracting firm, and commissioned equipment and unit operation components. She also

served as the facility's first operator and trained additional crew members. Rimpf established data analysis protocols and wrote technical reports about the results. The most promising design to emerge from the three-year program was successfully demonstrated at a slip-stream utility site.

Rimpf has been a dedicated and active SWE member since she attended her first meeting as a University of Toledo undergraduate. She has been a life member since 2006. After serving as both vice president and president of The University of Toledo Collegiate Section, she led the fundraising, planning, and coordination for the 2005 Region G conference. In her first year as a member of the Northeast Ohio Section, Rimpf was elected vice president and has held many offices in the section since. She has reinvigorated the section, helping to increase membership to its current level of more than 100 women strong.

Long active at the region level, Rimpf is the current Ohio Valley Region G governor. Among her initiatives are streamlining open communications and enhancing one-on-one interactions among leaders including bridging the gap between collegiate and professional

members, providing resources for marketing and publicity, and updating Region G's travel policy. Rimpf has also served as the SWE counselor for The University of Akron Collegiate Section for six years and provided guidance and support to the section's conference committee when it hosted the Region G conference in 2009. She also annually evaluates applications for the Society scholarship committee.

In her community, Rimpf judges science fairs and leads hands-on activities for the local Kids' Career Day outreach event. She also supports efforts to eradicate cancer, especially breast cancer, by leading a team for the American Cancer Society's Relay For Life® and walking 60 miles in the Susan G. Komen 3-Day®. Rimpf's German heritage is very important to her, and she has been involved in the Donauschwaben's German-American Cultural Center since she was a member of the children's dance group. Rimpf earned a bachelor's degree in 2003 and a master's degree in 2005, both in chemical engineering and from The University of Toledo.

SWE DISTINGUISHED NEW ENGINEER



STEPHANIE R. SALAS-SNYDER

INTEL CORPORATION

For problem-solving abilities and expertise in human factors and biomedical engineering, and for contributions to SWE and the next generation of women engineers.

Stephanie R. Salas-Snyder is a human factors engineer for Intel Corporation, focusing on improving user experience and solving problems that arise when humans and machines interact. She focuses on interactions with a variety of personal computing devices, including laptops and 2-in-1 devices. She will explore new technology and methods to ensure users are getting the most out of their devices and to enrich every aspect of their lives.

While working for Booz Allen Hamilton, Salas-Snyder worked on projects for the Air Force Human Systems Integration Office, the U.S. Army Medical Research and Materiel Command, and the Department of Homeland Security Science and Technology Directorate. She became an IEEE Certified Biometrics Professional® in 2011, one of only 400 in the United States. A 2006 graduate of Wright State University, Salas-Snyder holds a bachelor's degree in biomedical engineering and a master's in human factors engineering.

For the Air Force, Salas-Snyder worked with a team of human factors experts to address the lack of human element considerations in the design

of weapon systems. She helped identify areas overlooking the human element and recommended modifications for existing and future systems.

Salas-Snyder led the Army's Lower Extremity Gait System project to understand current technology for lower extremity prosthetics and orthotics. Applying her expertise in human factors and biomedical engineering, she developed a technology road map based on research and discussions with nearly 100 of the world's leading experts in prosthetic design, osseointegration, socket development, neuroscience and neuroengineering, gait analysis, and materials science. Her work helped identify research gaps and find ways for amputee soldiers to reintegrate into military and/or civilian life. Salas-Snyder's research is incorporated in two forthcoming books: *Full Stride: The Past, Present and Future of Lower Extremity Prosthetics* and *Full Stride: Next Steps*.

A SWE member for nearly 10 years, Salas-Snyder was active in the South Ohio Section from 2009-2014. She held the roles of secretary, vice president, and section representative locally, while also being active at the region and Society

levels. She was the Region G awards co-chair and spearheaded the SWE Region G Judy Simmons Memorial Scholarship. She is the chair-elect for the Society-level curriculum committee and is the awards coordinator for the New Faces of Engineering, Collegiate Edition and a section award. Salas-Snyder served as the University of Dayton collegiate counselor for four years. She joined the Columbia River Section in 2014 and looks forward to bringing new ideas and energy to Region J.

Salas-Snyder tutored reading and math at the Dayton Leadership Academies (DLA), and her efforts have resulted in better self-esteem and higher test scores for students. She initiated the "What is Engineering" event at DLA for girls in the sixth through the eighth grades, introducing them to engineering as a career path. She participates in several charity events, including Special Olympics, Rebuilding Together, and fundraisers for the American Cancer Society.

In her free time, Salas-Snyder plays various sports and helps her husband make short films. She is also an avid scrapbooker and card maker.

SWE DISTINGUISHED NEW ENGINEER



JESSICA TEACHWORTH
LOCKHEED MARTIN CORPORATION

For technical and programmatic excellence in her profession, for being a role model, and for mentoring SWE's future leaders.

Jessica Teachworth always has been fascinated with rockets and space exploration. She essentially “grew up” at the San Diego Air & Space Museum and interned during high school on the Near-Earth Asteroid Project at the University of California, San Diego. She graduated from the University of California, Berkeley in 2004, with a B.S. in mechanical engineering. In 2005, after completing internships with NASA and UPS, Teachworth joined Lockheed Martin Corporation as an engineer on the Fleet Ballistic Missile program. In 2009, pursuing her interest in the intersection of technology and business, she earned an M.S. in systems engineering and an MBA from San Jose State University.

Teachworth is currently a technical assistant to the chief engineer for the Lockheed Martin Strategic and Missile Defense Systems line of business. She supports executive leadership forums in areas of strategic planning, proposal evaluation, technical interchanges, and critical skills management. Her involvement with the Silicon Valley Alliance (SVA) allows companies to partner with Lockheed Martin to design and produce the next-generation systems for government customers. This partnership

promotes cross-industry discussions of technologies for innovative usage. The SVA partnerships range from small start-ups to Fortune 500 companies. Teachworth champions initiatives such as additive manufacturing, common system architectures, and engineering best practices.

As a member of Lockheed's strategic missile technologies team, Teachworth researched and evaluated advanced technologies for use in solid rocket motors. She contributed to the preparation and execution of multimillion-dollar contracts that included full-scale test demonstrations. As a Six Sigma Green Belt, Teachworth initiated and implemented a continuous improvement program that resulted in millions of dollars in savings. She has led many studies to evaluate the merits of technical capabilities in the context of customer requirements and cost constraints.

Teachworth's involvement in the Society of Women Engineers began when she joined the University of California, Berkeley Collegiate Section as an undergraduate and held many leadership positions, including section president and collegiate chair of the 2004 Region A conference. After graduation, she

joined the Santa Clara Valley Section and served as section representative. A mentor at heart, Teachworth then became the SWE counselor for both the San Jose State University and Santa Clara University collegiate sections.

She was recognized by the Region A council with the 2013 Emerging Leader Award for her dedication to the mentoring and development of future SWE leaders. She has volunteered in the Santa Clara Valley Section's GetSET (Get Science, Engineering, and Technology) summer outreach program for high school girls. She supports the Santa Clara Valley Science and Engineering Fair and the *FIRST*[®] Robotics Silicon Valley Regional events.

The mother of two girls, Teachworth volunteers at her daughter's preschool and encourages the children to ask “why” and to discover “how.” She is a member of Tau Beta Pi, Beta Gamma Sigma, the National Management Association, and Toastmasters International.

SWE DISTINGUISHED NEW ENGINEER



ERIN M. WAKEFIELD
INTEL CORPORATION

For successfully meeting new challenges in computer engineering and for sharing her technical, management, and people skills with SWE and in the community.

Erin M. Wakefield is a senior component design engineer, validation technical lead, and second level manager at Intel in Hillsboro, Oregon. She provides crucial, pre and post silicon strategic and tactical technical leadership for the next generation system on chip products planned for Intel tablets and phones.

Wakefield joined Intel in 2005 as a component design engineer after graduating from the University of Michigan in Ann Arbor with a bachelor's degree in computer engineering. She later earned her master's in engineering and technology management from Portland State University while working full time. Her first position with Intel was in hardware validation of computer processors for desktops and servers. She drove validation of features such as system management mode, machine check architecture, and a new security hardware technology for the Intel® Pentium® 4, Xeon®, Core™ 2 Duo, and Core™ i7 processors.

After two years, Wakefield moved into a start-up group within Intel, doing presilicon validation of the Xeon

Phi™ supercomputer processor. She provided solutions to unprecedented validation problems, and after one year, became leader of the Xeon Phi fullchip validation team, responsible for the work of 17 engineers. Team members were spread across many Intel sites, including Hillsboro, Oregon; Santa Clara, California; Folsom, California; and Penang, Malaysia, requiring Wakefield to travel often and use virtual management tools to guide the project. The Xeon Phi now powers seven of the top 500 supercomputers in the world.

In 2010, Wakefield transitioned from super computers to a system on a chip validation team, playing both a technical manager and project management role for Intel's Consumer Electronics Division. After three years, she transitioned into her current role, where she is again simultaneously leading in both a technical and people management capacity.

Wakefield has been active in SWE since college and has held numerous leadership roles both as a collegian and as a professional. She is currently on the executive board of the Columbia River Section and has served as section

president since July 2013. She attended all but one annual conference between 2006 and 2014, and helped plan the 2008 and 2014 Region J conferences, which her section hosted.

Also active in other women's affinity groups, Wakefield serves in three different leadership positions with Intel's Women at Intel Network and has been active in recruiting new engineers into Intel. She has served as an official spokesperson for women engineers at Intel and is the subject of one of Intel's "Day in the Life" videos, which has been shown on many college campuses and to new Intel employees.

Wakefield serves in leadership roles on the boards of both the Washington County Fair and the Washington County Fair Educational Fund. In her spare time, she enjoys being outdoors and spending time with friends. Wakefield has run three marathons and completed her first triathlon in 2012.

SWE DISTINGUISHED NEW ENGINEER



ABIGAIL WENDT, P.E.

MAGELLAN MIDSTREAM PARTNERS, L.P.

For outstanding technical skills and commitment to the development of women engineers through inspired mentoring in the workplace and within SWE, locally and regionally.

Abigail Wendt, P.E., is senior project engineer in the Major Construction group at Magellan Midstream Partners, L.P. Her current assignment is a primary project manager of the BridgeTex project, a \$1.1 billion joint venture of Magellan and Occidental Petroleum Corp. that involves building 450 miles of pipeline across the state of Texas, five pumping stations, and two storage and pumping facilities. Wendt is responsible for 95 miles of pipeline construction and is directly involved with securing the route; developing, bidding, and contracting the work; and ensuring safety and regulatory compliance. She is responsible for the schedule and budget of her portion of the project, which employed more than 500 inspectors and contractors to complete the work.

Just a few days after graduating with an engineering degree from Oral Roberts University in 2004, Wendt started working as an engineering intern at Syntroleum Corp.'s gas to liquids demonstration facility. In less than a year, she was promoted to the position of process engineer, then moved on to a

project management opportunity with Magellan.

Wendt has managed more than 60 projects at Magellan and has established herself as an expert on additive, butane, and rail loading rack systems. She takes the initiative to teach other project managers the most effective project management models and has been part of several teams at Magellan charged with refining the system integrity plan. Despite her relatively short history with the company, Wendt actively participates in this effort, challenging accepted practices, interjecting new ideas, and focusing on how to produce the best possible product.

She joined the SWE Tulsa-Northeast Oklahoma Section in 2005, just three years after it was chartered. An integral part of the section's growth and improved retention rate, Wendt has served as president, representative, and vice president of professional development. She leads the SWE-Girl Scout outreach program "Journey Day," and recently created opportunities for girls to learn about air by visiting a scaled-down

refinery, observing the operation of an electric car, and making cotton candy. Alert to the real needs of section members, she organizes events on relevant topics, such as work/life balance, which drew a record number of attendees; middle and upper management; and finance.

A firm believer in the importance of mentoring, Wendt guides new members as they plan and execute events, encouraging them to step up to leadership positions. This year, as regional mentorship committee chair, she rolled out Region 7's first formal mentorship program starting with 32 mentoring pairs. On the Society level, Wendt is serving this year as a leadership committee coach.

Wendt is active in Habitat for Humanity, Rotary International, and United Way. She stays connected with Oral Roberts University by serving on the alumni board of the engineering department. She received her professional engineering license in 2011.

SWE DISTINGUISHED NEW ENGINEER



LAUREN WOLF
THE BOEING COMPANY

For accomplishments in human factors and industrial engineering; for tireless support of SWE's mentoring mission, especially among university students; and for outreach to youth.

Lauren Wolf is a supplier program manager on the B-1B modification program for Boeing Defense, Space and Security in Oklahoma City. She is responsible for the build-to-print parts as The Boeing Company modernizes the front and aft cockpits. Wolf works closely with suppliers, providing technical and business support and helping them meet performance targets.

Wolf earned her bachelor's degree in industrial engineering and management from Oklahoma State University and a master's degree in human factors and systems from Embry-Riddle Aeronautical University. She also holds a certificate in lean manufacturing from the Oklahoma Alliance for Manufacturing Excellence and a master's certificate in project management from Stevens Institute of Technology.

Following graduation, Wolf accepted a position with Lockheed Martin as a quality engineer. She contributed her engineering expertise to two missile programs, doing material strength tests and statistical analysis. She also worked with suppliers on a helicopter program to ensure that fire control systems met regulatory requirements.

In 2008, Wolf joined The Boeing Company to work on 747 and 767 airplanes in the Seal, Test, Paint, and Decal group in Everett, Washington, improving

ergonomic conditions for mechanics. She also supported multiple defense programs as an industrial engineer in the lean operations group for the modification and mission integration center at Boeing Field. Upon opening the new 787 Final Assembly and Delivery Center in Charleston, South Carolina, Wolf accepted an assignment as an industrial engineer, where she co-led a cross-functional engineering team that generated sitewide metrics in safety, quality, performance-to-plan, schedule, and cost. A key member of the industrial engineering team, she merged traditional bar chart scheduling and work assignment tools with advanced, constraint-based electronic tools. Wolf's skills helped the team achieve several significant firsts, including successfully seeing the first three aircraft through the production line. After her success in industrial engineering, Wolf became a tool design engineer for the 787 Dreamliner midbody facilities at Boeing South Carolina. She was responsible for designing and modifying manufacturing tools to incorporate safety, ergonomics, and regulatory requirements for three, novel parallel production lines for the 787-8 and the new 787-9 airplanes.

Wolf became active in the Society of Women Engineers as a collegian, serving the Oklahoma State University Colle-

giate Section as secretary, vice president, and president, boosting attendance and membership by 500 percent. As a professional, Wolf was a member of the Central Florida Section before moving to the Lowcountry Section in South Carolina, where she was section representative and president for two terms.

Serving as Region D lieutenant governor in FY13, Wolf focused on supporting collegiate sections, helping delinquent sections regain good standing, and on setting a new Region D mentorship program in motion. Program participants took online surveys that match mentors with mentees, completed a mentor/mentee contract, and had a face-to-face meeting at the regional conference.

Active in several professional, technical, and community organizations, Wolf is a member of the Institute of Industrial Engineers and the American Indian Science and Engineering Society. She serves on the national advisory board for the National Association of Engineering Student Councils, as well as on Boeing's REACH leadership team and Boeing's Volunteer Council. Wolf also was a founding member of the Women in Aviation chapter in Charleston, South Carolina. Wolf's contributions to programs that encourage girls to explore science and engineering have helped to reach more than 1,000 Girl Scouts.

FELLOW GRADE



ALMA MARTINEZ FALLON

NEWPORT NEWS SHIPBUILDING, A DIVISION OF HUNTINGTON INGALLS INDUSTRIES

For excellent engineering leadership, for opening the way for SWE to have a stronger voice in public policy, and for honoring the lives and careers of women and minorities.

As director of supply chain procurement at Newport News Shipbuilding, a Division of Huntington Ingalls Industries, Alma Martinez Fallon is responsible for the material acquisition, subcontracting, and service requirements for submarines, aircraft carriers, fleet support, and in-service carriers at Newport News Shipbuilding and for joint procurement with General Dynamics Electric Boat. This includes oversight management of more than 4,000 suppliers.

In 1985, Fallon was a co-op student at Newport News before joining the company full time in 1988 as an engineer in the Seawolf submarine engineering division. She progressed to senior engineer, engineering supervisor, working on many auxiliary piping and machinery systems design projects in the commercial ship and aircraft carrier programs. She also managed planning and manufacturing engineering for the Structural Fabrication and Assembly Division. She was responsible for the planning for the USS George H.W. Bush aircraft carrier, the Gerald R. Ford aircraft carrier, the Virginia class construction programs, and SAP/ERP3 for steel fabrication and assembly. Prior to her current appointment, Fallon was hull structure construction superintendent

and led the advanced planning, project management, design/build, and steel construction and assembly for the Ford class.

Named a SWE Distinguished New Engineer in 1997, Fallon, now a senior life member of the Society, has more than fulfilled the promise of that honor. As 2004 SWE president, she engaged ASME as a partner to help implement a new public policy strategy that paved the way for SWE to enter the public policy arena. As vice president, she established SWE's Corporate Partnership Council and supported development of SWE's diversity leadership statements. From 1997 to 1998, she was deputy director of Region E and helped develop region strategic plans and conducted leadership development training. Bringing her strategic planning expertise to her section, Fallon created a five-year plan and developed section training modules.

Highly visible in the engineering profession, Fallon is an ASME Fellow. She was a governor on the ASME board of governors, the first Hispanic so elected in ASME's history. She is currently a member of the ASME committee on finance and investment.

A longtime, active member of the American Association of University Women, Fallon conceived, developed,

and chaired Bridges to Tomorrow (BTT), a math and science conference that offers girls in sixth through 12th grades a chance to meet professional women in science, technology, engineering, and mathematics fields. Since it was first held in 1990, the BTT conference attendance has grown from 55 to 230 participants and is a model for other programs in Virginia.

The recipient of many honors and awards, Fallon received the 1999 Peninsula Engineers Council Doug Ensor Award for Young Engineer of the Year. In 2002, she was selected for the ASME Dedicated Service Award, and was named one of America's leading minority women in technology by Hispanic Engineer and Information Technology magazine. Fallon also was the recipient of the Society of Hispanic Professional Engineers 2004 Junipero Serra Award. In 2012, she received the Inside Business Women in Business Achievement Award.

Fallon earned a B.S. in mechanical engineering from Old Dominion University and an M.S. in engineering management from The George Washington University. She lives in Gloucester County, Virginia, with her husband, Bob Fallon. She loves gardening, wellness activities, and boating.

FELLOW GRADE



BETTY IRISH

COMFORT SYSTEMS USA SOUTHWEST

For an exemplary and versatile technical career, for significant contributions to the mission and goals of SWE, and for increasing public awareness of engineering.

An active member of the Society of Women Engineers since 1983, Betty Irish has vigorously supported SWE's mission in her professional and personal lives. Over the course of 30 years, she has taken on many projects and leadership positions in SWE and made important contributions as member and chair of various committees and councils. In two technical careers — engineering and construction — and through SWE, Irish has tirelessly promoted diversity and inclusion of women in science and engineering.

She has served as an officer, leader, and committee member in the Arizona State University Collegiate Section and the Phoenix Section, for Region B, and on the Society level. She served on the Council of Section Representatives (CSR) and the Council of Representatives (COR) and was a member of the CSR-COR transition team during a critical period of reorganization for the Society.

Irish was a key member of the annual convention planning committee in 1991, and worked closely with members of the

Phoenix Section to host the 1999 annual convention, which netted substantial scholarship and operational funds for the section. The convention, held in the downtown Phoenix convention center, showcased SWE and women engineers in a highly visible public venue. She also served on the strategic planning committee and the Society nominating committee. Irish is currently chair of the government relations and public policy committee, where she promotes SWE policy objectives in science, technology, engineering, and mathematics education; Title IX; and affirmative action to the public and to Arizona congressional representatives.

She has 27 years of professional mechanical design, management, and leadership experience. More often than not, Irish was the only technical woman in her company or department, but skills learned and honed in SWE helped her advance. She began in the aerospace industry, then moved to facility design, and now works in the construction industry. She spent most of her career as a mechanical-design engineer working on design and construction of industrial

manufacturing facilities.

Since 2007, Irish has been project manager, in-plant services for Comfort Systems USA Southwest, a provider of HVAC piping, plumbing, process piping, and medical gas construction services. She works with colleagues, contractors, and customers in health care, aerospace, energy research, and avionics. She is responsible for all facets of construction, including scope, report writing, procurement, field personnel supervision, and finances.

She volunteers for two construction-related professional organizations: the National Association for Women in Construction and Advancing Women in Construction at Arizona State University. She also participates in her local downtown redevelopment commission and has volunteered for Rep. Matt Salmon's reelection campaign.

Irish holds two bachelor's degrees: one in mechanical engineering from Arizona State University and one in history from Indiana University. She is an avid scuba diver, seasoned world traveler, and enjoys spending time with her husband and her two cats.

FELLOW GRADE



DIANA LYN JOCH

NORTHROP GRUMMAN CORPORATION

For high-impact contributions to SWE, and for sharing her outstanding work ethic, team-building skills, and IT expertise with her profession and her community.

Diana Joch has been a member of the Society of Women Engineers since 1991, when she joined the Boston University Collegiate Section as an undergraduate. An expert in Society bylaws, procedures, membership, and finance, Joch has played a key role in building SWE's organizational framework, particularly with her work on the Council of Representatives transition team that led to the formation of the SWE senate.

A member of the Baltimore-Washington Section since 1992, Joch has served the section in many capacities, including programs chair, vice president for continuing development, and president. In 2003, she created a community relations/outreach program with funding from Raytheon and rolled out novel ways to boost SWE's visibility, such as encouraging members to volunteer for a televised PBS fund drive. She created a member recruitment program with "bring a friend" campaigns and post-event follow-ups for nonmembers. The Baltimore-Washington Section remains the largest in SWE, thanks in large part to Joch's leadership and commitment to

membership initiatives.

Joch was Region E treasurer from 2011 to 2012 and served several times on the region's financial assessment committee. Her accounting skills have been a great asset to SWE, and she often helps other sections in the region with finance and bylaw questions. She was a member of SWE's board of directors in 2008-2009, and in 2013 was elected to the board of trustees, becoming the trustee's treasurer in FY15.

For many years, Joch worked in IT, designing, building, and maintaining distributed systems for various divisions and agencies of the Department of Defense, including the Defense Intelligence Agency, the U.S. Air Force, and the U.S. Navy. She understands the intelligence community and has broad experience in system architecture, software development, requirements, and business process reengineering. In 2004, she joined Northrop Grumman Information Systems Division in Chantilly, Virginia. She is currently a senior systems engineer, managing major software interoperability and certification testing for the Modernized

Integrated Database (MIDB) program. She works in the government program office and is the program liaison to more than 160 agencies and organizations that use the MIDB system. Her work as release manager has resulted in the only program at the Defense Intelligence Agency with a 100 percent, first-time success rate through system certification testing. The system documentation Joch developed is being used as a template by other programs.

Joch is a member of IEEE, IEEE Women in Engineering, and the IEEE Computer Society. Active in the District of Columbia Council of Engineering and Architectural Societies (DCCEAS), a consortium of organizations, of which SWE is a member, Joch takes part in DiscoverE: Engineers Week outreach events, and in 2006 was named DCCEAS Young Engineer of the Year.

She holds a B.S. in computer engineering from Boston University and an M.S. in information systems from American University. Joch makes her home in Centreville, Virginia, with her husband, Charles, and their three children.

FELLOW GRADE



SILVIA KARLSSON, P.E. GENERAL MOTORS

For career-long dedication to SWE, for technical leadership that promotes diversity and inclusion, and for reaching out to the next generation of women engineers.

Silvia Karlsson, P.E., has been an active member of the Society of Women Engineers since she was an undergraduate at California State University, Northridge. Her history of service to SWE comprises spirited involvement in outreach, professional development, diversity and inclusion, corporate partnership, and finance work at all levels of the Society. Karlsson has a B.S. in mechanical engineering from California State University; an M.S. in mechanical/aerospace engineering from the University of California, Los Angeles; and an M.S. in management of technology from Rensselaer Polytechnic Institute.

Shortly after receiving her undergraduate degree, Karlsson joined the SWE Los Angeles Section, leading a number of outreach initiatives. In 1994, she relocated to Detroit, where she co-founded the Coalition of Minority Professional Engineering Societies and shared her global experiences via newsletter articles and conference programming. While maintaining active involvement, Karlsson completed her master's degree in management of technology and earned professional engineering license certifications for California and Michigan. Her contributions to SWE on the region and Society levels include a term on the Society board of directors

as Region H director and most recently, conference programming board chair. Since 2006, she has been a member of the Corporate Partnership Council and leads the SWE-GM recruiting team.

Expertise in fluid dynamics and heat transfer are the common threads that run through Karlsson's diverse work assignments. Over the course of her career, she has gained experience in the aerospace and automotive industries, as well as in business and management areas including quality and warranty reduction. Her engineering career began at Rocketdyne (now a division of United Technologies), first as a co-op student, then as a full-time member of the technical staff, working on the space shuttle main engine in the system dynamics group.

Joining General Motors (GM) as a computational fluid dynamics analyst, Karlsson advanced steadily. One challenging assignment found her facilitating a global agreement on thermal, HVAC, and powertrain issues; developing training; and mentoring GM of Mexico engineers. As the engineering business manager for the Global Thermal Engineering Organization and GM's Technical Regional Engineering Center in Toluca, Mexico, she provided executive and functional support in day-to-day business operations, for more

than 1,000 engineers across the world. She has recently moved into a new assignment as a lead advanced thermal engineer for airflow where she provides leadership and project direction for front compartment airflow management for a physics based airflow and heat exchange strategy.

Karlsson has taught college-level physics and often volunteers at local schools to help teachers with science curricula. She is a life member of the Society of Hispanic Professional Engineers and an active member of HIT — GM's Hispanic Initiative Team — concentrating on recruitment and retention for both organizations. She mentors Hispanic students and new professionals at GM in the United States and in Mexico. Karlsson is also active in Girl Scouts of the USA and SAE International's "A World in Motion®" program, she co-leads the parent teacher organization (PTO) at her daughter's school, and is a leader in the adult faith committee at her church.

Holding dual, U.S.-Mexican citizenship, Karlsson speaks English and Spanish. She lives in Troy, Michigan, with her husband, Ronny, and their daughter, Diana. Karlsson enjoys cooking, travel, and always learning new things.

FELLOW GRADE



HELEN O. PATRICIA
KENNAMETAL INC.

For enduring service to SWE, for applying sound engineering principles to manufacturing and quality operations, and for being an outstanding role model for women in STEM professions.

Helen O. Patricia excels at leading manufacturing operations and bringing technology-based improvements into mature, well-established processes. Her talent for coordinating manufacturing goals with engineering and her acute understanding of customer needs has earned her the respect of professional colleagues and SWE associates alike.

Patricia's first engineering job was with Firestone Tire and Rubber Co. as an ordnance engineer in the steel products division. She played a key role in the development of a shaped-charge warhead and did planning, testing, and data analysis. Patricia joined Kennametal Inc. in Latrobe, Pennsylvania, in 1982 as an ordnance engineer in the defense products group, but soon after became involved in tungsten powder manufacturing. She is currently manager of quality assurance for the Americas region. Responsible for improvements in quality performance and customer satisfaction for more than 25 U.S. manufacturing facilities, she directs plant quality leadership, drives Six-Sigma and problem-solving teams, and interacts

with customers. Patricia has extensive experience managing plant quality leadership across multiple sites in North and South America and has led many global teams throughout the supply chain. Her inclusive and collaborative leadership style has resulted in double-digit reduction of customer returns and improved customer satisfaction.

In SWE, Patricia has applied this collaborative leadership style, as well as her business acumen, to the many positions she has held at the section, region, and Society levels. She has been a member of the Pittsburgh Section for more than 20 years, devoting much of her energy to membership, fundraising, and fostering camaraderie. During her tenure as section president (1993-1994), the last time host sections were primarily responsible for planning the SWE annual conference, Patricia was the Pittsburgh conference committee secretary and volunteer coordinator, reporting on committee meetings (without Internet or email), coordinating volunteers, tracking tasks, and working with the new professional conference management team, all while keeping the

section running with monthly meetings and outreach events.

Patricia is currently Region G nominating chair. In this role, she has successfully integrated the collegiate election process into the region committee responsibilities and has folded the SWE competency model into the application process. She bridged one of SWE's major organizational transitions, serving as Region G director in 2003-2004, then as governor in 2004-2005. Her Society-level service has included being the first deputy speaker of the senate, followed by a term as speaker of the senate. As a member of the board of directors, Patricia led many initiatives supporting SWE's goals of promoting women for their achievements and recognizing the value of diversity.

Community is important to Patricia; she serves on the executive committee of the women's leadership council for United Way in Westmoreland County, which supports Faith in Action programs that help senior citizens. A graduate of Carnegie Mellon University, Patricia holds a B.S. degree in chemical engineering.

FELLOW GRADE



CATHERINE PIERONEK

UNIVERSITY OF NOTRE DAME

For dedication to the SWE mission, for a lasting and positive impact on engineering education, and for illuminating public discourse on gender equity in STEM fields.

Catherine Pieronek is associate dean in the College of Engineering at the University of Notre Dame and director of the women's engineering program there. She has established a successful career in aerospace engineering and law and has consistently contributed her talents and expertise to help women in the science, technology, engineering, and mathematics (STEM) fields. She has improved the experience of women engineers at the University of Notre Dame and, through her speaking, writing, and public policy work on retention and Title IX, she has created greater awareness of these issues and contributed to the national discourse.

Pieronek graduated from the University of Notre Dame in 1984 with a bachelor's degree in aerospace engineering. She began her career at TRW, in the space and defense sector, soon advancing to senior staff engineer in the spacecraft systems engineering division. While working full time, she earned her M.S. in aerospace engineering, with a concentration in applied dynamic systems control, from the University of California, Los Angeles. Pieronek was the sole systems engineer responsible for system-level design verification, development, and analysis for the communications subsystem of NASA's Compton Gamma

Ray Observatory spacecraft. Pieronek's professional accomplishments while in the aerospace industry garnered her the Gamma Ray Observatory Technical Achievement Award in 1986, the TRW Women of Achievement Award in 1989, and the NASA Program of Excellence Award in 1991.

Many would consider the successful design, development, and launch of a spacecraft to be a career pinnacle, but for Pieronek, it was just the beginning. In 1992, she returned to the University of Notre Dame to study law. She graduated magna cum laude in 1995 and then worked at the law school in a variety of external and alumni relations positions from 1996 to 2002.

Her next move was back to the College of Engineering to direct the Women's Engineering Program. Under Pieronek's leadership, the percentage of female engineering graduates rose from 21 percent in 2002 to 33 percent in 2014. She played a key role in implementing programs to recruit and retain women in engineering, including an active SWE section and peer mentoring, and has successfully changed the culture of the engineering program at Notre Dame to enable all students to enjoy academic success. Her work there earned her the University's inaugural award for advising excellence in 2008.

Pieronek's dedication to SWE has not wavered since she joined the Notre Dame Collegiate Section in 1982. She was president and treasurer at Notre Dame, and then served as the committee chair of the 1990 Florida Women in Engineering and Sciences Conference for the Space Coast Section. Her Society-level service has included membership on the government relations and public policy committee and strategic planning committee, and current service on the senate.

She has been a senior member since 2003, and since 2002 has served as faculty advisor and section counselor for the Notre Dame section. In 2007, she was honored with the SWE Outstanding Faculty Advisor Award.

A tireless advocate for the advancement of women in engineering, Pieronek has written many articles about Title IX as it applies to gender equity in STEM fields, and also about engineering education, student recruitment and retention, and women in engineering.

She lives in South Bend, Indiana, with her husband, Charles R. Shedlak, and their two bunnies, Hopper and Minnie. In her spare time, Pieronek enjoys putting her engineering skills to work creating custom needlecrafts.

DISTINGUISHED SERVICE AWARD



NAOMI BRILL, F.SWE

For dedicated service to SWE over time, for a deep commitment to encouraging women to be engineers, and for ensuring that women in the profession excel and are recognized.

Naomi Brill, F.SWE, traces her involvement with the Society of Women Engineers back to her high school days, some 40 years ago, when she helped her mother, Yvonne Brill, send out the New Jersey Section newsletter. Over the years, Brill has consistently established outreach, scholarship, and award programs; worked at the section, regional, and Society levels of SWE; and championed women in science, technology, engineering, and mathematics (STEM) careers.

Brill formally joined SWE as a collegiate member at the University of Minnesota, where she served as a section officer and career fair chair. Following graduation, she became a member of the Minnesota Section, serving in many roles, including section president from 1991-1993. She institutionalized strategic planning and operational excellence, created section leadership awards, and fostered creation of the annual professional development seminar. She launched and remains the driving force behind her section's scholarship program, and she implemented a statewide certificate of merit program. Brill is the founding counselor for two outstanding new collegiate sections.

She became involved in Region H in FY01 and served as region director from FY03-04, strengthening region operations and creating region-level leadership awards. Brill joined the Society board during FY05-06, serving as the inaugural director of regions. Following her term, she has served on numerous committees and task forces, including SWE's leadership pipeline and leadership election task forces. She has also served as nominating committee representative and chair, and has judged and coordinated the Distinguished New Engineer and Entrepreneur awards. She established the Region Programming Excellence Award. Brill is also a charter member of the ethics committee, where she currently serves.

Two themes dominate Brill's SWE career: outreach to students to ensure their entry into engineering careers; and promoting awards and recognition for women who are advancing through their technical careers. She takes great pride in having influenced countless young women pursuing STEM careers, and the section and region leadership awards she has created have brought recognition to many aspiring SWE leaders. Through these efforts, plus her work with the

Minnesota Center for Engineering and Manufacturing Excellence and Project Lead the Way, Brill has brought recognition of SWE's mission and her local section to all corners of Minnesota.

She holds a B.A. from Carleton College, and a BME and MBA from the University of Minnesota. Her career in the instrumentation and medical device industries spanned more than 25 years. Her second career in engineering and technology education directly influenced the lives of Minnesota's future technical work force. Brill is an active member of both the Minneapolis and St. Paul chapters of SME (Society of Manufacturing Engineers). Her hobbies include assisting with production and operation of her husband's woodworking business, gardening, landscaping, and hand weaving.

Brill has left an indelible legacy as a role model who leads by example. She has influenced innumerable young women over decades of service to SWE through the programs she founded and the inaugural programs she implemented, all the while steadfastly promoting recognition of leadership and scholarship in others.

DISTINGUISHED SERVICE AWARD



STACEY BRIGHT CULVER

THE BABCOCK & WILCOX COMPANY

For living her commitment to women engineers through countless volunteer activities and for contributions to SWE that have become an indelible part of its framework.

Stacey Bright Culver is a 37-year, life member of the Society of Women Engineers and has held a variety of positions at the section, region, and Society levels. She served on the board of directors for four years, as a member of the Council of Section Representatives for eight years, chaired four Society-level committees, and was a section president. She has focused her efforts on student engagement, broadening the appeal of engineering as a profession, member recognition, and improving the processes and procedures used to manage the Society. She continues her active participation in and support of SWE by serving as the audit committee chair and as a Region C senator for a second term.

During her tenure as Region C director, Culver identified geographical challenges and implemented section vitality coaching as a means for intraregional networking, sharing best practices, and strengthening overall participation. In addition, she led initiatives to increase the region's visibility by bringing board of directors meetings to the region and increasing participation

at conferences. Culver also recognized the need for standardizing SWE's processes and procedures. The results of her work brought clarity, consistency, and continuity to Society operations, providing a stronger framework that is still in use today.

As a career coach and STEM (science, technology, engineering, and mathematics) mentor, Culver has mentored young women from her extended family, graduating collegians entering the workforce, and co-workers in various stages of their careers. She also introduced and continues to refine many of SWE's programs in the classroom environment for use as teaching aids to guide students toward STEM careers.

She secured annual corporate funding from 1984 to 2005 for the Greater New Orleans Section's "Day in the Life" program, which put teams of young women together to prepare bid proposals for building a bridge. Culver has also co-authored and presented countless seminars on the collegiate level, and talks for high school math students — all designed to encourage consideration

of engineering as a career. In keeping with her strong belief that women engineers should be recognized for their accomplishments, in a single year she nominated six Babcock & Wilcox female employees for both SWE and other national awards.

Culver earned her B.S. degree in civil engineering from Texas A&M University, her B.A. in mathematics and physics from Baylor University, and her MBA in finance from Southern Methodist University. Currently, she is corporate manager of group insurance for the Babcock & Wilcox Company, where she manages vendor relations, billing, and system and program design for the company's health, life, personal accident, and disability benefit programs. She is an active member of her community, especially as a religious leader, where she has served in positions guiding students and young adults, and in positions driving the operations of the church, as well as organizations supporting the underserved.

OUTSTANDING FACULTY ADVISOR



KRISTINE K. CRAVEN, PH.D.
TENNESSEE TECHNOLOGICAL UNIVERSITY

For cultivating young engineers from grade school through university, raising the profile of SWE on campus and off, and modeling the meaning of community service.

Kristine K. Craven, Ph.D., is the interim director of the basic engineering department and a tenured assistant professor at Tennessee Technological University (TTU). Employed by TTU since 2000, she serves on committees, maintains the curriculum, and manages budgets, as well as supervises faculty, staff, and student workers. She also teaches junior-level courses for the mechanical engineering department. In addition to SWE, she is a member of ASME, Sigma Xi, Pi Tau Sigma, and the American Society for Engineering Education, where she has served as a paper reviewer, session moderator, secretary/treasurer, program chair, division chair, and division past chair for the first-year programs division. One of her passions is teaching and working with first-year engineering students.

She is equally dedicated to outreach activities. Dr. Craven began her outreach work while still a graduate student at West Virginia University. There, she helped to run a summer program that led female high school students through hands-on engineering activities. Upon

arrival at TTU, Dr. Craven became involved with the Science Bowl and local science and engineering events, among them the Cumberland Plateau Regional Science and Engineering Fair. In 2003, she worked with a dedicated group of faculty and local engineers to organize and host the first Engineering a Future outreach event at TTU. From this experience, she helped charter the Upper Cumberland Section of SWE. At that time, Dr. Craven was one of the founding members and the only member to have joined SWE prior to the formation of the section. The section has since received a program development grant and an outreach award for this program.

The Engineering a Future program continues to this day and has been expanded to include a summer edition. The main program is a one-day activity for up to 120 fifth- and sixth-grade girls. Originally, it included seventh- and eighth-graders, but when the event grew too large for local volunteers, it was split to allow older participants to attend a four-day summer camp on the TTU campus. Dr. Craven continues to serve

as one of the event organizers.

Dr. Craven is currently involved in a number of outreach activities with several other organizations. She serves as the Tennessee East partner and tournament co-director for the *FIRST*[®] LEGO League Tennessee State Championship Tournament, having worked her way up from a position as a local coach. She also serves as the registrar for the TTU Merit Badge University, a Boy Scouts of America program where scouts come to campus and spend a day earning a merit badge. Dr. Craven also served as volunteer coordinator for the Baja SAE[®] Collegiate Design Series Competition that was held at TTU in 2013. The university is scheduled to host the competition again in April 2016.

At home, Dr. Craven recently celebrated her 25th wedding anniversary and is the proud mother of two sons, both of whom are enrolled at TTU. She enjoys watching football and lacrosse, going to the movies with her family, and crocheting afghans and baby blankets for family and friends.

OUTSTANDING SWE COUNSELOR



JENNIFER MAY VILBIG

VILBIG & ASSOCIATES

For outstanding performance as a SWE counselor, raising her section's profile with multiple awards, and for going the extra mile to interest young women in STEM.

Jennifer May Vilbig is the SWE counselor for the Southern Methodist University Collegiate Section in Dallas. She has been an invaluable resource to the students since 2008, guiding her section to be recognized with the Outstanding Collegiate Section Award, Silver Level, for the past two years.

Vilbig graduated from the Georgia Institute of Technology in 2007 with a B.S. in civil engineering. As an active member and officer of the Georgia Tech SWE section, she was recognized for her volunteer efforts with the Georgette P. Burdell Award. In addition to working with the students at SMU, Vilbig has served in leadership positions for the Dallas Section over the last six years. She is completing her second term as president and was recognized with the FY13 Dallas SWE Emerging Leader Award.

She actively mentors students, sharing best practices from Georgia Tech SWE in membership recruitment, corporate sponsor solicitation, fundraising, and outreach. She has increased student

awareness of SWE and promoted involvement at the region level. Two SMU SWE members have been selected as Future Leaders. One has served as the region collegiate senator alternate, and the other as region collegiate communications editor. Last year, an SMU student was recognized with the Outstanding Collegiate Member Award.

With Vilbig's guidance in planning and logistics, SMU SWE hosted the 2013 Region C conference in Dallas, coordinating 300 professionals and students and 20 corporate sponsors. Vilbig connected students to local resources for tours and recruited professionals for the program committee that developed sessions for the professional track. She managed all aspects of the Design Your World – STEM Career Conference, which hosted 50 high school girls during the region conference. The event was recognized with the Outstanding Event/ Series Award for a large section.

Currently a design engineer with Vilbig & Associates in Dallas, Vilbig's professional design resume includes

projects in Qatar, Guam, and throughout the U.S. She is currently an engineer in training (EIT) working toward her professional engineer license. Her experience includes the design of horizontal directional drills, site development for retail, multifamily and federal projects, gas well drilling permit applications, piping and instrumentation diagrams, and stream assessments.

Vilbig founded both the Jacobs Activities Group and the Jacobs Professional Women's Collaborative in the Fort Worth office of Jacobs Engineering, while employed there. She was also selected to attend the Jacobs Future Weekend, a training program for young professionals, where she met senior leadership and networked with employees from across the globe. She is active in the American Society of Civil Engineers, North Texas Georgia Tech Alumni Association, and the Dallas County Pioneer Association, and is a lifetime member of the Girl Scouts.

OUTSTANDING COLLEGIATE MEMBER



KAITLYN J. BUNKER, PH.D.
MICHIGAN TECHNOLOGICAL UNIVERSITY

For superior academic achievement while advancing SWE's mission with forward-thinking leadership and enthusiastic engagement.

Kaitlyn J. Bunker, Ph.D., is an associate with the Rocky Mountain Institute. She received a B.S., M.S., and, in 2014, her Ph.D. in electrical engineering from Michigan Technological University. Her work focuses on microgrids, and how renewable energy technologies can be applied in alternative energy system structures.

As an undergraduate, Dr. Bunker received the electrical engineering department's Power Engineering Undergraduate Research Fellowship in 2009, and was named department scholar that same year. In 2010, she was recognized as a Michigan Tech Woman of Promise, received the university's Carl Schjonberg Outstanding ECE Undergraduate Student award, and was granted a National Science Foundation Graduate Research Fellowship. In 2013, she was awarded the ASEE/NSF Engineering Innovations Fellowship, which enabled her to spend the summer as a researcher in a corporate setting.

Dr. Bunker has published and presented eight peer-reviewed conference papers. She was a finalist in the SWE Technical Poster Competition at WE12

and WE13 and presented a poster at the SWE "Women Engineers Leading Global Innovation" symposium in Bangalore, India. She has also been a guest speaker for the Iowa State Program for Women in Science and Engineering (PWSE) Leadership Conference and the Michigan Tech Women's Leadership Institute.

After joining the Society of Women Engineers in 2006 as an undergraduate, Dr. Bunker held many roles within the Michigan Tech section, including webmaster, communications director, Evening with Industry chair, and section president in FY10 and FY11, seeing its membership triple in just a few years. She has also been a member of the collegiate leadership coaching committee, providing coaching and support for collegiate SWE sections.

In FY13, Dr. Bunker served the Society as collegiate director, working closely with the region collegiate team task force as the liaison to SWE's board of directors and helping write SWE's new strategic plan. She was the FY14 chair of the curriculum committee, leading an analysis of SWE's professional excellence portfolio and prioritizing gaps in content

and methods, directly impacting the Society's strategic goals. Dr. Bunker also served as the corporate relations chair for the 2014 Region H conference, which was hosted by Michigan Tech. In this role, she worked to build partnerships between SWE and the conference's 49 corporate sponsors. She is currently an active member of the curriculum committee and the government relations and public policy committee.

In addition to SWE, Dr. Bunker was involved with the IEEE Power and Energy Society and the Full Throttle Motorcycle Club at Michigan Tech, and has served as treasurer for both organizations.

After eight years of collegiate membership, Dr. Bunker is excited to continue her SWE involvement as a professional member starting in FY15. She recently relocated with her husband, Kris, and their dog, Winston, to Boulder, Colorado, home of her new employer, the Rocky Mountain Institute. In her spare time, Dr. Bunker enjoys being active in the outdoors during all seasons and playing the piano at church.

OUTSTANDING COLLEGIATE MEMBER



SAMANTHA KNOLL

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

For outstanding contributions to the growth of GradSWE and excellence in building networks between graduate and undergraduate women.

Samantha Knoll is a graduate student and Linda Su-Nan Chang Sah Doctoral Fellow in the mechanical science and engineering (MechSE) department at the University of Illinois at Urbana-Champaign (UIUC). Having earned her B.S. in engineering mechanics there, Knoll joined a cellular biomechanics research group led by Taher Saif, Ph.D., in 2011. She completed her M.S. in 2013, and is currently pursuing her Ph.D. Knoll was a National Science Foundation Cellular and Molecular Mechanics and Bionanotechnology IGERT fellow from 2011-2013.

Upon entering graduate school, Knoll observed an absence of community among graduate students in science, technology, engineering, and mathematics (STEM) programs, and devoted herself to developing graduate support networks. She co-founded Graduate Students in MechSE, a departmental graduate student organization at UIUC. In 2012-2013, Knoll served as president of MechSE Graduate Women.

Knoll has been an active member of SWE since her first year at UIUC. She served as chairperson for the Girl Scout Workshop and “Take Your Kids to Work Day,” and was active in a number of out-

reach programs, such as “For Kids Only,” the development of SWE exhibits for Engineering Open House, and a mathematics tutoring program for special needs children.

As a graduate student, Knoll became increasingly active in SWE and led outreach initiatives to mentor undergraduates. She has spoken on panels such as “How to Find an Undergraduate Research Position,” “Undergraduate Decision Making,” and “Why Grad School?” She also led graduate involvement in the graduate-undergraduate SWE mentor program in 2011-2012. She has attended three SWE annual conferences, and has presented at sessions: “International Opportunities in Research” and “Rapid Fire Research.”

In 2012, Knoll co-founded GradSWE at Illinois, an official SWE committee and registered student organization at UIUC. As a member, Knoll served as speaker coordinator for the inaugural Women Empowered in STEM (weSTEM) Conference at UIUC in 2013. She identified and invited women from diverse backgrounds with advanced degrees in STEM to share their personal career paths.

Knoll served as the director of Grad-

SWE at Illinois in 2013-2014, during which time she aimed to grow and diversify its membership base. Knoll’s committee expanded GradSWE membership to more than 250 members — a 25 percent increase since the start of the 2013-2014 academic year. Knoll also led the coordination of the 2014 weSTEM conference at Illinois, and doubled its size since the 2013 event, opening attendance to all SWE members.

As an undergraduate, Knoll was a member of the Hoeft Technology and Management Program, through which she led a team at an international business competition in London. As a graduate student, Knoll was invited to serve as a member of the provost’s tuition policy advisory committee.

Originally from the Chicago area and a fervent advocate for community outreach, Knoll regularly participates in charity fun runs and various Chicago Cares Serve-a-thon events. At home, she enjoys spending time with friends and family, endurance running, and playing piano.

OUTSTANDING COLLEGIATE MEMBER



RITU RAMAN

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

For early, innovative contributions to her field and for exemplifying resourcefulness and entrepreneurship for the next generation of women engineers.

Ritu Raman is a graduate student and National Science Foundation Graduate Research Fellow (2014-2017) and National Science Foundation IGERT Fellow (2012-2014) in the mechanical science and engineering department at the University of Illinois at Urbana-Champaign (UIUC). She graduated magna cum laude from Cornell University in May 2012 with a B.S. in mechanical engineering and a minor in biomedical engineering. She completed her M.S. in mechanical engineering in December 2013 and is continuing her Ph.D. research in high-resolution 3-D printing and bio-integrated robotics, where she has already developed multiple specific designs of miniature biomimetic biological machines that mimic the locomotive behavior of inchworms and spiders.

As an undergraduate at Cornell, Raman served as section professional development chair and corporate relations liaison, coordinating academic/professional development and recruitment events targeted at enhancing the success of female undergraduate engineering students. At UIUC, she focused on building a supportive community for women pursuing graduate degrees in engineering. As professional development chair for GradSWE 2012-2013, she developed events targeted at the needs and

interests of graduate students, such as how to write a curriculum vitae, finding and receiving graduate research fellowships, applying for an academic faculty job, and finding sponsored corporate and entrepreneurial research internships during graduate school.

As publicity chair for GradSWE 2013-2015, Raman supervises a committee of women graduate students involved in creating an organization Web presence, social media marketing and branding, and enhancing member recruitment and retention.

Raman's commitment to expanding graduate SWE membership built a community of more than 300 students from a diverse array of engineering and science, technology, engineering, and mathematics (STEM) disciplines. She helped found and launch Women Empowered in STEM, the inaugural conference for GradSWE, providing a forum in which women engineers and scientists with advanced degrees share insights and career paths with current graduate students at UIUC and universities across the U.S. Raman has spoken at one SWE conference about her bionanotechnology research.

As an undergraduate, Raman also helped found the Society of Asian Scientists and Engineers at Cornell, wrote for the Cornell ASME newsletter, and volunteered as a peer tutor through Tau

Beta Pi, the engineering honor society, and the Cornell Engineering Learning Initiatives program. She served as a teaching assistant for three core mechanical engineering courses at Cornell. At UIUC, Raman is president of the Mechanical Engineering Graduate Women organization and an elected member of two National Science Foundation Student Leadership Councils: CMMB IGERT (Integrative Graduate Education and Research Traineeship on Cellular and Molecular Mechanics and BioNanotechnology) and EBICS STC (Emergent Behaviors of Integrated Cellular Systems Science and Technology Center).

Raman's early years were spent in more than 10 schools in Asia, Africa, and America, and her diverse life experiences motivated her to promote engineering education at all levels. Keenly sympathetic to young people interested in STEM, Raman helped found the nanoSTRUCT outreach organization at UIUC, serving as activity coordinator for engineering girls camps at Cornell — the CURIE Academy — and GAMES Camp at UIUC.

Raman is currently writing a children's book on 3-D printing and bionanotechnology. In her free time, she enjoys reading, writing, playing the piano and violin, and attending concerts and theatrical events with friends and family.

OUTSTANDING COLLEGIATE MEMBER



TABITHA VOYTEK
CARNEGIE MELLON UNIVERSITY

For being a role model for women in science and engineering and inspiring graduate student involvement in SWE through creative new initiatives.

Tabitha Voytek is a Ph.D. candidate in physics at Carnegie Mellon University (CMU), with an emphasis in observational 21-cm cosmology using radio telescopes. Currently, her research involves studying the early history and large-scale structure of the universe through the neutral hydrogen (21-cm) signal. An article she co-authored on the subject was published this year in *The Astrophysical Journal Letters*.

Voytek has been active in the Society of Women Engineers since 2004. As an undergraduate in the University of the Pacific Collegiate Section, she served as section president/vice president and began working with the collegiate leadership coaching committee (CLCC). In addition, Voytek competed in the Boeing Team Tech program, a competition that requires teams representing at least three engineering disciplines to work with an industry sponsor on a project for one year. Voytek was a team member in 2005 and team leader in 2006. Both years, the Pacific team placed third. She graduated *summa cum laude* in 2009 with a B.S. in engineering physics.

At Carnegie Mellon University (CMU), where she received her M.S. in physics in 2011, Voytek became involved with the SWE graduate community. She currently serves on the CMU Grad Greets committee, where she helps plan graduate-specific events. Voytek was also on the planning committee for the 2013 Region G conference, hosted at CMU. Her role on the committee was sessions and workshops chair, working with a team to plan a slate of workshops for the event. She currently serves on the region collegiate team for Region G, both as collegiate leadership coach and region graduate representative. At the Society level, Voytek continues her work with the CLCC, serving as regional team lead in Region G. She has also helped plan sessions in the academia track at the annual conference. In FY13, Voytek served as the graduate member coordinator, brainstorming and launching programs that inspired graduate students to remain involved in SWE. She organized the first graduate-student-g geared webinar to discuss ways in which graduate student sections could be implemented

in different universities. She carried her efforts to each of the regions, where she organized the pilot program for the first unified graduate student professional development session at each conference. Throughout, she remained active in the graduate student community, posting regularly in the SWE graduate student blog and the SWE *All Together* newsletter. Highly regarded for her accessibility to undergraduate and graduate students alike, Voytek enjoys bridging the previously separate groups and feels amply rewarded by the friendships and connections she fosters.

Voytek is an inductee of the engineering honors society Tau Beta Pi, and an active member of the American Astronomical Society. In her community, Voytek volunteers at a local observatory and other public outreach programs, including a viewing of Venus' 2012 transit of the sun. She is producing an outreach project titled "The Hydrogen Sky," designing a planetarium show that will educate people about radio astronomy and observations using neutral hydrogen gas.

OUTSTANDING COLLEGIATE MEMBER



GRACE GUIN

THE UNIVERSITY OF ALABAMA

For stellar academic performance, for dedicated service that ensures the Society of Women Engineers' future growth, and for community volunteerism.

Grace Guin is a graduate of The University of Alabama with a degree in chemical engineering and a minor in computer-based sciences. As an undergraduate student, she was a member of the Computer-Based Honors Program and participated in research ranging from psychiatric recovery communities to the application of isotope probing in the Cahaba River — a way of exploring her twin interests, water quality, and community health. Another of Guin's research projects involved chemometric analysis of the fluorescence of stream-dissolved organic matter, studying the way carbon moves through cave ecosystems in northern Alabama.

Guin has been actively involved in the Society of Women Engineers since she entered college. She served the collegiate section at The University of Alabama as secretary, vice president of outreach, vice president of membership, and president. While she has been passionate about all of her positions, vice president of outreach best met her desire to serve others and the community. In that role,

she led a “Wow! That's Engineering!®” event that brought more than 160 middle-school girls and their parents and teachers, primarily from rural Alabama, to spend a day at the university. For this event, Guin enlisted and coordinated 50 volunteers at the section level. In 2014, she helped develop a young officer corps, ensuring that the section will continue to strengthen in the coming years. She also actively participated in regional and Society-level conferences throughout her undergraduate career.

Under Guin's leadership, the UA SWE section flourished, maintaining 10 percent growth while holding major events for the community and the region.

Guin has completed co-op assignments in the pharmaceutical industry, working on validation protocols, including installation, operation, and performance qualifications for manufacturing equipment and processes for Evonik Industries. In addition to her industrial work, Guin has done research projects related to water quality and the environment, as well as for the College of Community Health Sciences.

She is a member of several honor societies, including Tau Beta Pi, Cardinal Key, and Golden Key. Guin has also been recognized as one of the 31 most influential women on the University of Alabama campus. She has received numerous section awards, including the Regional Diamond Award. Throughout her undergraduate career, she maintained academic excellence, consistently ranking in the top eighth percentile of her class.

Her passion for serving those in need goes beyond the field of engineering. Guin is always eager to provide math tutoring or to help with an after-school literacy program. She spent the summer of 2012 in Cape Town, South Africa, working with AIDS patients, as well as working in a soup kitchen. At home, she is a mentor with Big Brothers Big Sisters of West Alabama.

Originally from Dallas, Guin graduated in May 2014 with a B.S. in chemical engineering. She plans to settle in the Southeast.

OUTSTANDING COLLEGIATE MEMBER



MARY ASHLEY LIU

THE UNIVERSITY OF TEXAS AT AUSTIN

For consistent academic excellence in engineering and premedical studies and actively nurturing the potential of students, youth, and the community.

While pursuing her B.S. in electrical engineering at The University of Texas at Austin, Mary Ashley Liu balanced academics with first-year leadership positions in student organizations. Each year, she used her creativity and interpersonal skills to positively influence others in SWE, engineering, and the community. By her senior year, Liu had grown tremendously as a leader. While she continuously strived to excel, she also helped others develop their leadership skills, making her an invaluable part of SWE and the UT community.

As an engineering student pursuing a medical career, Liu simultaneously tackled challenging engineering and premedical courses, maintaining honors status and a high GPA throughout. She led her senior design group in producing exemplary technical papers and ensuring delivery of a vehicle damage detection prototype. As a summer 2013 Citigroup technology intern, she consolidated 6,000+ business schedules for Citi's clients, thus helping increase efficiency of the company's data centers.

From 2009-2012, Liu was entrusted

with leadership of three research projects at the MD Anderson Cancer Center. Contributing by executing projects, analyzing data, and drafting papers, she was listed as an author on three publications and four conference presentations. Her technical achievements culminated in her acceptance to medical school for fall 2014 matriculation. While Liu aspires to be a physician, she aims to use her engineering background to also become a creator of medical technology.

In addition to providing service through the university's Kinsolving Residence Hall Council, where she created programs for residents to help them adjust to college, and Best Buddies, where she offered support to community members with disabilities, Liu volunteered weekly at St. David's Medical Center, providing wheelchair assistance to patients. She proposed and implemented new ideas at St. David's, including greeting patients at hospital entrances, which have improved how volunteers serve the hospital and patients.

Liu was consistently involved in the SWE section at UT, serving as FY11 social

and leadership chair, FY12 vice president external, FY13 vice president corporate, and FY14 president. She helped members bond and develop teamwork and leadership skills by leading officers in creating new social and leadership activities and initiating professional development events for members. Liu was also engaged in SWE outreach, from introducing young girls to engineering to helping start an outreach committee. To facilitate students' abilities to break boundaries and seize opportunities, she restructured the leadership team, incorporated a mentorship program, and encouraged members to visit the SWE office to build relationships with officers and one another.

She has been a role model to her peers in SWE and beyond by demonstrating that being a leader means helping others succeed. Liu strives to make SWE and other organizations welcoming environments for students, and she continues to empower SWE members and others to achieve full potential in their academic and professional pursuits.

OUTSTANDING COLLEGIATE MEMBER



ALEXANDRA ROMINE

THE UNIVERSITY OF ALABAMA

For maturity, integrity, and leadership that forge successful initiatives and for exemplifying a well-rounded approach to life that benefits others.

Alexandra “Lexi” Romine graduated in August with a B.S. in chemical engineering from the University of Alabama in Tuscaloosa. She is a recipient of the university’s Presidential Scholarship and is now working at Georgia-Pacific LLC in Pennington, Alabama, as a process engineer. As an undergraduate student, she maintained a record of academic excellence, and served in 2012 as a teaching assistant for an introductory chemical engineering class. This year, she was awarded the distinction of serving as ambassador for the College of Engineering and was inducted into The XXXI, an all-women campus honorary at the University of Alabama.

Active in the Society of Women Engineers since 2009, Romine has been acknowledged as a section leader since her sophomore year. She is particularly interested in serving other people and found SWE outreach to be a great way to bring engineering to a variety of women. In addition to serving as vice president of outreach, she has also enthusiastically served her collegiate section in a number

of roles, first as treasurer and then as materials coordinator for Alabama’s 2012 “Wow! That’s Engineering!” event, which hosted more than 200 girls with activities spread throughout three buildings. Most recently, she served Region D as chair of the host committee for its 2014 conference, which drew some 200 collegiate and professional SWE members to a weekend full of professional development workshops, regional meetings, sightseeing, and informal time for networking over meals. She has actively participated in regional and Society conferences for several years.

As ambassador for UA’s College of Engineering, Romine meets with prospective students and their parents, gives tours, and works with alumni at recruiting events. Within the University of Alabama section of SWE, she has been awarded Distinguished Member, Outstanding Sophomore, and Outstanding Junior honors.

Romine sought and gained a high level of industry experience throughout her collegiate career. As a co-op student for three semesters with Evonik

Birmingham Laboratories, she managed the procurement of more than 200 pieces of equipment and systemized a 15,000-square-foot pilot plant used for scaling up batch and semibatch pharmaceutical production lines. Last summer was spent at Genentech, where she designed and performed a study of dividers in bulk vial shipping systems and a method for determining the opening force of cartons to characterize their tamper-evident features.

In addition to her engineering experience, Romine seeks out opportunities to benefit the lives of others. A resident of Collierville, Tennessee, she has spent summers working at the theme park Dollywood and participated in the Mountain Tennessee Outreach Project, coordinating aid to people in Appalachia. In 2011, she trained 150 volunteers who assisted poor families in the region with home repairs. While in school, she was actively involved in the Navigators Ministry Group and served for two years as a tutor for Literacy is the Edge, a program for adults pursuing a G.E.D.

OUTSTANDING COLLEGIATE MEMBER



SAMANTHA SCHARLES

MILWAUKEE SCHOOL OF ENGINEERING

For increased member engagement and exponential growth in section membership, and for consistent, inspired outreach to young people through STEM initiatives.

Samantha Scharles is a senior at the Milwaukee School of Engineering (MSOE), pursuing a B.S. in electrical engineering. She is a member and officer of the Eta Kappa Nu IEEE Honors Society and a member of Tau Beta Pi.

Scharles has been an active member of SWE since 2011. During her junior year, 2013-2014, she served as president of the collegiate section. She has played a leadership role in organizing many events, such as the section's professional dinner, for which she researched, secured, and scheduled speakers during her sophomore year. Under her leadership, the section consistently conducts successful events and initiatives. Younger members are actively involved and engaged, ensuring strong leadership for the section's future. Membership in the section has increased from fewer than 30 members to more than 50. This accomplishment was recognized with Collegiate Membership Growth and Net Growth awards at WE13.

After hearing about SWE through MSOE and *FIRST*[®] promotions, Scharles sought out a local collegiate section

during her first year of college. She immediately joined, participating in events such as Hands On Future and helping plan and coordinate the 2012 MSOE SWE professional dinner. In spring 2012, Scharles was elected section secretary. In 2013, she led the committee responsible for organizing the 2013 dinner, involving members from the SWE Wisconsin Section.

In the 2013-14 academic year, Scharles served as section president. Over the summer, she spent her free time sending out postcards and letters to incoming MSOE female students to promote SWE. This strategy played a large role in the increase of section membership from fewer than 10 members her first year to more than 50 members at the beginning of her year as president. In March 2014, she helped organize section members to compete in a campuswide St. Patrick's Day competition. For the first time in its history, the MSOE SWE section won the competition, which includes a host of engineering-related contests.

In addition to SWE, Scharles is involved in various other organizations

and honor societies and in service to her community. Since 2012, she has been both a peer tutor and a peer assistant and is currently the event coordinator for Campus Volunteer Services. Scharles' favorite contribution has been working with the *FIRST*[®] Robotics Competition, where she has been involved for 11 years, and acting as a mentor for the past three years. At local *FIRST* LEGO[®] League competitions, she can be spotted in roles ranging from volunteer and judge to referee.

Scharles has maintained a consistent record of academic excellence throughout her collegiate career and has been named to the dean's list seven times since 2011. At WE13, she was awarded the Cisco's Futures Scholarship. In 2014, she was given the honor of presenting her undergraduate research at the 2014 National Conference on Undergraduate Research. Scharles will graduate in 2015. In her free time, she enjoys photography, yoga, dogs, and spending time with her friends and family.

OUTSTANDING COLLEGIATE MEMBER



ERIN WESTERBY
BRADLEY UNIVERSITY

For modeling the core values of a civil engineer, and for extraordinary leadership in her SWE section, on her campus, and in the community.

Erin Westerby graduated with a B.S. in civil engineering from Bradley University in Peoria, Illinois. She has been a member of the Society of Women Engineers for more than five years and is currently serving as vice president for the Western Michigan Section. Previously she served as president, vice president, and secretary of the Bradley University Collegiate Section and regional collegiate representative for Region H.

Westerby joined SWE after finding herself surrounded by male colleagues, finding that participation in SWE helped her connect with other women in engineering and develop her leadership skills. During her year as section president, she quickly launched programs and outreach efforts that grew membership by 40 percent. She instituted bimonthly activities to further the professional development of students as well as to provide fun social opportunities. One of her priorities as president was to raise the organization's profile by searching out and submitting applications for section awards. As a result, the section received four awards at WE13, including the Outstanding Collegiate Section Silver Award, the Outreach Event/Series

Award, The Boeing Company Multicultural Award, and the Professional Development Program Award.

In addition to her SWE activities, Westerby has traveled internationally, once volunteering a summer to teach English in Lima, Peru. She also reactivated the Bradley chapter of Engineers Without Borders and has visited Guatemala to collect data for a potable water project. After returning, she helped raise funds for that project by soliciting grants from local businesses and the university.

Westerby is a recipient of the Presidential and Provost-Garrett scholarships and a member of Tau Beta Pi. She was also actively engaged in research at the university on the diffusivity of heavy metals suspended in concrete. She earned third place in the Caterpillar and Bradley Case Competition, which included Six Sigma training and, for her senior design project, Westerby worked with a local business to improve its composting processes.

As an intern at Case New Holland, Westerby optimized an industrial wastewater treatment system; assisted with an internal OSHA audit; and identified high-energy processes within the facility. She also completed two internships

at UTC Aerospace Systems, where she worked on a variety of environmental health and safety and electrical engineering projects, including using AutoCAD® software to create a reflective ceiling plan for the lighting in a 750,000-square-foot building.

Westerby is passionate about working in civil engineering because of the opportunity to improve a company's environmental footprint and ensure that all employees are able to do their jobs safely. In this way, she plans to have a positive impact on both people's daily lives and the overall impact of businesses on the community.

She has begun her career at Eaton Corp. as an environmental, health, and safety engineer. After completing Eaton's leadership program, she will be placed in a management position at one of the company's many locations.

Westerby currently lives in Grand Rapids, Michigan, and looks forward to lots of snow. She enjoys cooking, traveling, and doing crossfit during her free time.

OUTSTANDING COLLEGIATE MEMBER



NICOLE WOON

THE UNIVERSITY OF PENNSYLVANIA

For launching vibrant initiatives with lasting impact on both her alma mater and her city, and for devoted mentoring of girls and young women through SWE.

Nicole Woon is a student at The University of Pennsylvania enrolled in the School of Engineering and Applied Science (SEAS) and The Wharton School. She earned a B.S.E. in bioengineering and a B.S.E. in management (entrepreneurship and innovation) in May 2014, and will receive an M.S.E. in mechanical engineering and applied mechanics in December 2014.

A member of SWE since 2010, Woon is currently the FY15 collegiate director on the Society's board of directors. She serves as a liaison between collegiate stakeholders and the board, contributing collegiate knowledge and interests to shape the strategic direction of the Society.

She was recently the 2013-2014 president of the Penn SWE section, where she led the organization to break multiple section records. Penn SWE competed against 35 colleges in Schlumberger's annual Stilettoes to Steel Toes essay competition, submitting 102 essays — a 24 percent increase from the previous year — earning \$10,200 and placing fourth overall. The section hosted its 17th Annual Corporate Dinner during DiscoverE: Engineers Week, securing sponsorships from nine companies. The section also hosted hundreds of

K-12 girls through outreach programs, including High School Shadowing Day, GUTS (Girls Understanding Technology and Science), and GEARS (Girls in Engineering and Related Sciences). Previously, Woon served as vice president of development and as activities and communications co-chair. Her contributions included pioneering a summer mentoring program for incoming first-year students and partnering with Bloomberg and the National Center for Women and Information Technology for the "Sit With Me" red chair campaign. In recognition of the section's achievements, Penn SWE earned accolades including Region E's first place award for Outstanding Collegiate Section and Penn Engineering Club of the Year.

At the regional level, Woon was the FY14 collegiate communications editor and the FY13 collegiate representative for Region E. In both roles, she coordinated and shared best practices with 58 collegiate sections, the highest number of any region. She was an integral part of the FY14 regional team that created the Collegiate Welcome Packet, sharing valuable resources with collegiate presidents to improve section leadership. She also helped to increase readership in the Region E blog.

In 2013, Woon founded PennSustains,

Penn's first sustainability solution competition intended to use engineering to create a more sustainable campus and make Philadelphia a more sustainable city. As lead director, she formed a planning committee composed of members from Penn SWE, Engineers Without Borders, SEAS Green, and the Penn International Sustainability Association, launching the competition in only six months. PennSustains' first year saw 29 participants across nine teams submit business plans and present pitches. The planning committee raised over \$7,000 to help winning teams further their ventures.

Woon completed a technology internship at Goldman Sachs in summer 2014, a career opportunity made possible at WE13. She previously interned at Barclays and S&P Capital IQ.

Passionate about mentoring, Woon is a SEAS orientation peer advisor, Wharton peer advising fellow, and mentor for the SWE/AWE and Biomedical Engineering Society mentoring programs. She also enjoys exercising her creative side as an editor for *Penn Appétit* and *Stamped*, Penn's food and travel magazines. She is an Elks National Foundation scholar and recipient of two SWE Philadelphia scholarships. Woon was born and raised in Santa Monica, California.