EMERGING LEADER

Jennifer Reich

HONEYWELL AEROSPACE

For extensive contributions in aerodynamic analysis; for exemplary leadership; and for encouraging the next generation of women to excel in engineering.

In her 15-year career with Honeywell, Jennifer Reich has established herself as a recognized technical expert and leader in the cutting-edge field of aerodynamic analysis using computational fluid dynamics (CFD) tools to solve complex problems in the design and development of valve and engine products on airplane, helicopter, tank, and missile platforms. Reich's work combines fluid mechanics, numerical analysis, and computer science to increase the speed to develop these intricate aerospace products with top quality for Honeywell, while greatly reducing the high costs associated with laboratory testing. Reich is a principal engineer in the Installation Aerodynamics & Acoustics group at Honeywell Aerospace.

Reich is currently the aerodynamics analysis lead for the M1 Abrams tank engine's recuperator durability improvement project. Her work on the recuperator has been highly recognized within Honeywell and by the Army. Reich developed a unique method for simulating the fluid flow and heat transfer through the recuperator while significantly reducing design time. She analyzed more than 20 designs in a matter of months and was a key member in the team's success in developing a conceptual design that will significantly improve the life of the engine, increase engine power and range, and save the Army a significant amount over the next 20 years. For her work on the tank engine recuperator project, she received high praise within Honeywell by receiving the 2015 Chief Engineer's Award, which recognizes outstanding performance within Honeywell Aerospace.

She is an inventor on multiple patents related to aircraft cabin pressurization valves and aircraft engine particle separators. In 2014, Reich was also a co-author for an American Society of Mechanical Engineers (ASME) Turbo Expo technical paper covering the transient aerodynamics surrounding an aircraft engine inlet door. Reich's technical leadership successes have not only been recognized within the company, but outside as well. In 2014, she was named Young Engineer of the Year by the Phoenix Engineers Week organization.

A member of SWE for 19 years, Reich joined as a first-year college student and has held various officer and chair positions. In her role as SWE Phoenix communications chair and newsletter editor for 12 years, Reich served as a link between the section's officers and members, revitalized the section's communication modes, and was a driving force in keeping the section running smoothly for many years. The section commended her efforts by presenting Reich with the SWE Phoenix Distinguished Service Award in 2008.

Devoted to recruiting and connecting women engineers, Reich is a founding leader of the Women in Honeywell Engineering Network (WHEN), which brings networking and professional development opportunities to women engineers within the company. Reich, a leader for Honeywell's SWE conference involvement since 2002, organizes the participation experience for the more than 90 employees who attend and influences the recruiting process, which went from hiring just two engineers in 2009 to 57 in 2016.

Reich earned both bachelor's and master's degrees in mechanical engineering, with an emphasis in fluid mechanics, from Arizona State University.

Married to a fellow engineer, Reich and her husband enjoy raising their two spunky children, also known as their future engineers. Her hobbies include dog agility with her spirited border collie and traveling with her family.

EMERGING LEADER

Moushumi Shome

THE BOEING COMPANY

For engineering innovation and leadership, whether helping a team reach technical breakthroughs, mentoring a young woman, or contributing to her community in a multitude of ways.

When growing up in Bangladesh, Moushumi Shome took great interest in her father's work as a civil engineer. Traveling with her parents throughout the country and abroad, she observed her father's design engineering activities and decided early on that she too wanted to pursue an engineering career.

Shome is the senior technical lead engineer on the 737 airframe at The Boeing Company in Renton, Washington, where she reviews 737 MAX and 737 Next Generation interior stress part drawings; applies classical and finite element method analyses to 737 airframe supplier analysis; and finalizes airframe strength-check notes in collaboration with airworthiness representatives, Boeing associate technical fellows, and subject matter experts. She developed microwave curing for composite repair, a manufacturing breakthrough that reduces the composite curing rate by 50 percent.

As part of this focus, in 2009 Shome led Structures Tech Talk — a monthly webcast for Boeing engineers to learn about the challenging and innovative work the Boeing structures community performs.

In addition, Shome served as principal investigator of product development's optimized variable camber, using smart materials concepts in the Edges Architecture project. The project aimed to reduce drag by varying the airfoil camber and thus to reduce aircraft fuel consumption.

Carrying out her assignment, Shome invented the trailing edge variable camber concept and matured this to technology readiness level 6. Her work created a new industry standard for defining the maturity level of a demonstrated prototype or concept and resulted in an impressive weight reduction of more than 100 pounds.

Because of her ability to execute complex shape memory alloy (SMA) technology analyses, Shome has become the prime expert on SMA — a prominent candidate in morphing technology that reduces weight and enables fuel efficiency — and its application at Boeing.

Shome has invented numerous SMA-related concepts that represent large milestones in this technology's development, including her invention of induction heating for SMA achieved rapid-rate actuation, meeting the aircraft flap moving rate.

She is a highly sought-after coach in the Boeing JumpStart Mentoring program. This program is an effort for accelerating engineers toward achieving membership in the prestigious Boeing Technical Fellowship. In addition to her mentoring current program members — including some members of the Society of Women Engineers — Shome makes time for former mentees who request her support. Furthermore, she has led a Boeing six-step group mentoring program, a project-based technical and business productivity program that competes to present topics to upper management. She is also currently a coach in the airframe mentoring program.

Shome holds a B.S. in civil engineering from the Bangladesh University of Engineering and Technology and an M.S. in mechanical engineering from the University of Wisconsin–Milwaukee.

Active in her community, Shome mentors women in her Hindu temple, encouraging them to pursue STEM careers. She is devoted to animal welfare and volunteers for the local shelter. Shome and her husband, Aloke, and young daughter enjoy traveling and playing outdoors with their dog, Winter.

EMERGING LEADER

Shannon Vittur

MEDTRONIC

For advancing innovative engineering designs and product development, becoming a trusted technical expert; and for inspiring and encouraging young women to enter STEM careers.

Shannon Vittur established herself as a leader dedicated to making a difference during her studies at the Georgia Institute of Technology, where she earned a bachelor's degree in mechanical engineering with highest honors, and a master's in mechanical engineering.

This led to her first eight years of work developing products for Medtronic Spine and DePuy Orthopaedics. Her accomplishments in product development ranged from obtaining U.S. patents, to product launches to manufacturing and process improvements. Her assignments at Medtronic typically involved products with new technologies that had no clear path to market. Projects with complex regulatory pathways require an engineer to be knowledgeable about design, biomechanics, and spinal movement, and Vittur excelled in these areas.

She had direct engineering responsibility for several product launches and clinical studies, including two products designed to enhance hip replacement patients' stability in revision hip surgeries, a large diameter acetabular shell with enhanced screw fixation options to revise a hip replacement, and an interspinous process device to address degenerative disc disease in the spine.

Her work also extends to technical achievements that created differentiation in the spine and orthopaedic markets. Her product development accomplishments have resulted in three issued U.S. patents, and key technologies supporting the design and manufacturing of the products she launched.

While at DePuy Orthopaedics, Vittur focused on products that addressed stability and bone loss in revision hip surgeries. Her design and development work introduced a new modular trial system that streamlined an instrument set to 11 components from the original 55.

Vittur spent 2007–2010 as the lead engineer on an interspinous process device, a novel alternative to spinal fusion. She became a trusted technical expert on the device's biomechanics, surgical technique, and clinical study and was often called to assist with intraoperative surgery support and surgeon training.

Her work led Vittur to serve as both an engineer and a project manager. Most recently, she has worked in a role in her business's Research and Development group, focusing on leading "Voice of Customer" for the organization. She also is a core team lead for a commercialization program focused on a novel pediatric scoliosis treatment. This team is leading the way in treating adolescent deformity by developing disruptive technology that may result in fewer surgeries for patients.

In addition, Vittur is involved with Medtronic's Women in Science and Engineering Initiative, which is focused on leveraging gender diversity to drive innovation. She leads the development team for the initiative and supports programs at her business.

A member of SWE, Vittur played an active role in setting up the recently chartered Memphis Section, where she is the current vice president. She served as professional development chair and was a key driver on the charter team that built the momentum to allow the new section to receive its charter in 2016.

Vittur stays active in promoting STEM education, serving as a mentor to aspiring and professional engineers, working to increase the number of women going into engineering and coaching girls in various robotic competitions.

She enjoys traveling with her significant other, photography, and supporting Georgia Tech sports. Her travels have taken her to 36 countries and counting.

EMERGING LEADER

Justyna Zander, Ph.D.

NVIDIA CORPORATION

For earning international recognition for breakthrough work in computer science and engineering; and for dedication to exploring the impact of computational technology advances on society.

Justyna Zander, Ph.D., is an elite expert in the field of computer science and engineering, having authored more than 60 peer-reviewed publications; 16 patent applications; three internationally recognized scientific books; and some 100 invited talks, plenary talks, panel discussions, conference presentations, and other engineering community contributions.

Her most recent accomplishments are an intricate part of her position as the senior automotive product manager at NVIDIA Corporation, where she focuses on self-driving cars, autonomous transportation, and functional safety for artificial intelligence. Dr. Zander's research and development involves designing system and platforms architecture for self-driving cars and advanced driving assistance systems. She works on systems on chip and the corresponding firmware for modern cars.

Prior to joining NVIDIA, Dr. Zander led projects at Intel Corporation, as well as five consulting projects on software and system functional safety for OEMs (manufacturer resellers) and suppliers such as BMW, Volvo, Audi, Jaguar Land Rover (UK), Daimler, Ford, Delphi, Bosch, Continental, FEV, Zollner, and Magneti Marelli.

One of her chief contributions was developing the first signal feature-oriented paradigm that enabled the abstract description of discrete and continuous signals and their properties. The result allowed for early detection and mitigation of failures for system behavior in self-driving cars and contributes to safe, self-organizing mobility services.

Earlier in her career, Dr. Zander led a team of nine organizations that built the Smart Emergency Response System within SmartAmerica Challenge, a White House initiative in 2013-14. SmartAmerica participants work to build cyberphysical systems as a glimpse of the future to save lives, create jobs, foster businesses, and improve the economy.

Dr. Zander also was one of the first to synthesize the material to highlight how computational progress helps society develop and extend advanced human skills, apply computational results, and use them to improve people's quality of life.

Another of Dr. Zander's breakthroughs involved extending the notion of computational time while performing a simulation interpretation. That allowed better and less-error-prone design methods for the systems of tomorrow so that self-driving cars, autonomous vehicles, and smart cities applications can be designed as correct by construction and any failure modes mitigated from the start.

Though Dr. Zander is an invited member of approximately 50 technical program and review committees for prestigious journals, she finds time to mentor younger women, supervise students' theses, and speak at lecture series at local universities.

Dr. Zander holds a B.S. in computer science and a B.S. in environmental protection from the Gdansk University of Technology, Poland. She earned her M.Sc. in electrical engineering and computer science and her Doctor of Engineering Science from the Technical University of Berlin, Germany. She did her postdoc at Harvard University, and was a Harvard Humanitarian Initiative Fellow in Cambridge, Massachusetts. She also graduated from Singularity University at NASA Ames, California, in a Global Solutions Program on exponentially growing technologies.

Her personal interests include dance fitness, ballroom dancing, and positive psychology. She lives in an intentional technical community in Cupertino, California, with her extended family and friends.

EMERGING LEADER

Kira Zdunek

CATERPILLAR INC.

For developing innovative solutions and process improvements across a variety of product lines, inspiring her teams to deliver key results; and for significant contributions to her community.

Kira Zdunek, a strategic supply chain and strategy manager at Caterpillar Inc., started her career as one of the company's top recruits in the Leadership and Technical Development Program. There, she demonstrated outstanding capabilities in her earliest assignments. For example, she led a study of a new process called hard chrome plating for hydraulic cylinders and struts. Her study led to the implementation for the first time in high-volume manufacturing of high-velocity oxygen fuel, which did away with the nonenvironmentally friendly hard chrome plating process. Zdunek also supervised the hydraulic excavator operations, where she optimized factory resources, re-engineered the line-scheduling process, and oversaw a production volume jump on excavators of 40 percent.

A separate stint as a large wheel loader (LWL) strategic logistics planner led Zdunek to engineer a new design and process for the LWL storage area, which improved record accuracy by 40 percent and created a visual management standard that became the facility's benchmark.

She gained a promotion to the material requirements supervisor's role in the Global Hydraulics and Hydraulics Systems division, where she led a team that managed 320 suppliers and more than $80 million in inventory. She implemented a "plan for every part" process that improved record accuracy, reduced lead times, and drove an inventory reduction. Zdunek also improved material availability to the assembly line from 87 percent to 95 percent by working with critical suppliers, identifying root cause analysis, and driving action plans.

While continuing to develop innovative solutions, Zdunek began attending evening classes, earning her MBA from Northern Illinois University in the spring of 2008. During that time, she earned a Six Sigma black belt position at Caterpillar's Global Hydraulics and Hydraulics Systems division.

She used her newfound knowledge to implement process improvements for inventory management, and then led a team of supplier performance engineers as the supply chain process and performance manager. After earning promotions to supply chain management head and a divisional leadership role in the Advanced Components and Systems division, Zdunek now is the strategic supply chain and strategy manager for the Surface Mining and Technology division. She leads an international team responsible for developing and implementing end-to-end supply chain strategy for six major product lines.

Outside of work, Zdunek has been a community leader. She is one of six founding members of the Plainfield (Illinois) Junior Women's Club; a mentor with Women in Science and Engineering, where she encourages girls at local elementary and high schools to consider science and engineering careers; and global board programming chair for Caterpillar's Women's Initiative Network.

Zdunek earned her B.S. in industrial and manufacturing systems engineering from Iowa State University. Her husband, Evan, is a design engineer at Caterpillar and the couple has two children. Zdunek enjoys traveling and immersing herself in different cultures and trying new things.

SWE DISTINGUISHED NEW ENGINEER

Maria Cecília de Castro Breda

JOHN DEERE

For expertise in hydraulics systems; for boundless energy in support of women engineers in Brazil and the United States; and for forging international connections among women in STEM.

Maria Cecília de Castro Breda is a supplier quality engineer at the John Deere Power Systems division in Waterloo, Iowa, where she is responsible for all low- and high-pressure fuel systems parts on engines. She is finishing an international assignment in the U.S. that began in 2015 when she accepted a role as a hydraulic design engineer in the tractors division.

A native of Brazil, Breda built the foundation of her business and engineering education early with the essential support of her parents to pursue her interests in math and science. While she was still in high school, she completed two technical certificates — one in quality management and one in surveying — both from the Universidade de Campinas (UNICAMP). She went on to earn a B.S. in chemical engineering from the Universidade Metodista de Piracicaba (UNIMEP), an M.S. in mechanical engineering from Southern Methodist University (SMU), and an MBA from Fundação Getulio Vargas (FGV). When she was an undergraduate, Breda noticed that many students abandoned the program because of difficulties with calculus. She became a teaching assistant in calculus, and many students have cited her help as the reason they stayed in engineering.

Breda joined John Deere in 2011 and went into the engineering rotation program in Moline, Illinois. Her initial assignment was in crop harvesting, where she worked on the company's first diesel electric power train for harvesting machines. Her contributions resulted in a 15 percent increase in machine productivity and a 4 percent reduction in fuel consumption. She received a John Deere Global Innovation Award for her work on this project.

In 2013, Breda went to Horizontina, Brazil, to work on the new S-series combine as a manufacturing engineer responsible for hydraulics. In this position, she developed a new sequence of events for all hydraulic components, led engineers in India and the United States, and trained assembly line operators. In 2014, after the successful implementation of the new combine, she moved to operations as a supervisor, one of only two women at the plant to hold this position. Thanks to her coaching and support, Breda's weld team increased productivity by approximately 50 percent.

Breda first learned about SWE in 2012 while working at John Deere in Illinois. She joined immediately and has been an active and enthusiastic member ever since. She is currently the alternate international senator, ambassador for Brazil, and part of the leadership coaching committee international task force. She was also a member of the governance task force who developed the plan to streamline the SWE governance structure that will be implemented soon.

When she moved to Brazil in 2013, Breda helped found SWE's first international affiliate in the country, Rio Grande do Sul – Oeste. She served as vice-president and president and helped two other groups seeking to establish in Brazil by advising them on the application process. Highly motivated to reach out to women engineers in Brazil and to expand the SWE presence there, Breda is working with SWE headquarters to establish a roundtable, to develop a partnership between SWE and SAE International with aspirations to hold a WE local in Brazil in the future.

In her free time, Breda enjoys traveling, biking, and spending time with her family.

SWE DISTINGUISHED NEW ENGINEER

Stephanie W. Chin

INTEL CORPORATION

For bold innovations in modeling and forecasting for environmental impact and compliance; and for caring and talented leadership in SWE on section, regional and Society levels.

Growing up in Hong Kong, a small island with a dense population, made Stephanie W. Chin keenly aware of resource conservation. She is now a senior environmental process engineer and technical lead at Intel Corporation in Hillsboro, Oregon. She has been with Intel since 2011, and is the gatekeeper of environmental regulatory compliance for the development and manufacturing of microprocessors. She develops predictive models crucial to the company's success and assesses permit compliance risks and environmental impacts for the chemicals used in the semiconductor manufacturing process.

In 2016, Chin used her statistical analysis and dataset processing skills to implement accurate tracking of chemical usages across global factories, thereby enabling the company to reduce costs by appropriately designing and timely implementing treatment systems. In 2014, Chin expanded a local modeling team to a global work group of 15 engineers and continues to lead this team to deliver technical solutions and build coalitions with agencies worldwide. From 2011 to 2013, she worked on removing heavy metals from wastewater, using electrowinning and ion exchange, a technique that reduces metal concentration to parts-per-billion. The recovered metal is recycled off-site and generates income that offsets the cost of wastewater treatment. In her first year at Intel, Chin worked on inserting corporate sustainability into the evaluation of capital equipment purchases and created a power consumption model that was featured in the company's 2012 corporate social responsibility report.

Chin first became involved with SWE as a collegiate member and, following graduation in 2011, joined the Columbia River Section. Since then, she has held an elected position every year, including section president, vice president, treasurer, and section representative. Under her leadership, the Columbia River Section has thrived. She streamlined the officer board structure, implemented standards for improved communications, strengthened financial governance, and congregated funds to endow a scholarship. Chin also revitalized the section's professional development program, bringing in new ideas, corporate sponsors, a Region Employee Resource Group Award in FY16, and a professional development grant.

At the regional and Society levels, Chin was the 2014 conference committee chair of tours and activities and participated in the Society bylaws and membership committees. She is currently a professional senator and a member of the region nominating committee. For her effective and consistent leadership, she received the 2016 Emerging Leader Award from her region.

Outside of SWE, Chin has held several leadership positions in professional technical organizations. She was a chapter vice president of the American Institute of Chemical Engineers and co-founded the Chem-E-Car team at the University of Southern California, her alma mater. In 2015, she led marketing and advertising for the Women@Intel Conference, advocating for the conference in person and participating in a company-wide diversity campaign. Her efforts resulted in the largest conference to date, with attendance triple that of the previous, record-setting year.

Chin holds a B.S. in chemical engineering and an M.S. in electrical engineering – green technologies, both from the University of Southern California, where she specialized in nanotechnologies and researched design and materials for organic solar cells. She is working toward her professional engineer's license, and in her leisure time, she enjoys traveling and sailing.

SWE DISTINGUISHED NEW ENGINEER

Stephanie DeCotiis, P.E.

H2M ARCHITECTS + ENGINEERS

For total professional commitment to public safety, health, and welfare — notably on restoration efforts in the wake of Hurricane Sandy — and for exemplary SWE leadership.

Stephanie DeCotiis, P.E., graduated with honors in mechanical engineering from The College of New Jersey in 2008, and began working at URS Corporation's power headquarters. She joined the design team for the Lagoon Creek Combined Cycle Power Plant, a 550-megawatt natural gas power plant in Brownsville, Tennessee, and designed pump and piping systems. After gaining experience in both fossil and nuclear power plants at URS, DeCotiis joined R3M Engineering in 2013. There, she had a leading role in the post-Hurricane Sandy rehabilitation of the Sayreville Pump Station, a critical element of wastewater infrastructure in Middlesex County, New Jersey.

In 2016 DeCotiis assumed her current role as senior project engineer for H2M architects + engineers. DeCotiis works from a new satellite office, managing three staff engineers, and $2 million in project services for water and wastewater projects throughout New Jersey. A sample of her current project portfolio includes an investigation and remediation of an elevated water tank failure; a new potable water well and treatment system for iron and manganese removal; and most recently, a 16 million gallons a day granular activated carbon treatment system.

DeCotiis joined SWE in 2004 as a student, later serving as president of her collegiate section. In 2008, she joined the New Jersey Section and served as vice president, president, and section representative. She was a professional senator for Region E and participated in the governance working groups in 2015, evaluating the structure and role of the senate.

In 2016, DeCotiis applied her work experience in small and large businesses as a member of SWE's strategic initiatives committee, co-authoring a white paper on how the Society could improve its support of members who work in small businesses. In addition, DeCotiis has focused on reinvigorating the New Jersey Section by recruiting, training, and mentoring a new executive board. In 2017, she was selected to serve on the governance task force, building on her previous work in the senate. She has played a key role in developing an implementation plan for SWE's new governance structure. For FY18, DeCotiis is serving as a special senator and as one of Region E's leadership coaches.

DeCotiis has also volunteered for her alma mater's alumni mentoring program since its inception in 2010. She advises third- and fourth-year students on making the transition from college to the workplace. Additionally, she works with the Central Jersey Blood Center, where she organizes blood drives and raises awareness about the crucial importance of donating blood. Furthermore, DeCotiis is an active member of the New Jersey Water Environment Association and the New Jersey section of the American Water Works Association. She serves on her company's safety committee and on the water division innovation committee, helping to improve productivity and employee experience.

Outside of work, she enjoys cooking and baking, especially focused on understanding the science of recipe development, and traveling with her husband.

SWE DISTINGUISHED NEW ENGINEER

Jenna Harpole

JOHN DEERE

For remarkable poise and expertise in technical leadership; for continuous improvement, quality, and project management; and for a decade of significant contributions to SWE.

Jenna Harpole is a project manager in the enterprise market research group at John Deere in Olathe, Kansas. She leads global cross-divisional teams delivering process improvements while managing complex, strategic initiatives.

Harpole has a B.S. in industrial engineering and an M.S. in engineering management, both from the University of Wisconsin–Platteville. She has studied abroad to deepen her understanding of Chinese business practices and culture and to increase her Spanish language proficiency.

She joined John Deere in 2010 as a quality engineer in the engineering development program and worked on a variety of manufacturing, new product development, and training projects. A year later, she transferred to agriculture and turf marketing and sales, joining the strategic planning and business improvement team as a Six Sigma practitioner.

A strong proponent of Six Sigma methodology, Harpole is an ASQ-certified Six Sigma black belt and a PMI-certified project management professional. She has applied this expertise to a variety of assignments in manufacturing, marketing, and sales. As tanks and sheet metal team lead for the backhoe product line, she facilitated the team's success in meeting stringent cost targets and tight timelines. She has also developed training curricula for new engineers, and created control plan training to train nearly 1,000 wage employees. She has tracked corrective actions for internal and external suppliers, facilitated daily production meetings to resolve line issues, and reported on process metrics.

Harpole has led more than 20 tactical and strategic projects for the U.S., Canada, Australia, and New Zealand, including development of a complex, large agriculture certified pre-owned program that involved a 170-point equipment inspection process, systems requirements, certification requirements and process, dealer training, company communication, and advertising campaigns. As a result of her performance on this project, Harpole was promoted to a continuous improvement program manager with responsibility for connecting more than 150 practitioners with skill-building workshops and for coaching Six Sigma orange and green belts.

Actively involved in SWE since her first year of college, Harpole has held many leadership positions, both as a collegiate and professional member, concentrating on professional development, networking, and outreach efforts. She helps collegiate sections develop new skills and train officers, and share best practices. In 2010, she spearheaded the chartering of a new SWE section in the Dubuque, Iowa, area, helping to build it to 30 members in less than one year.

Harpole served as Region *i* governor in FY16-17, with responsibility for 21 collegiate and 10 professional sections. Her focus has been developing a leadership team, creating rewards and recognition opportunities for region members, mentoring future leaders, and increasing engagement of K-12 students in SWENext.

She also volunteers for the American Society for Quality as programs co-chair, bringing in local and national experts to speak on a range of quality topics.

Harpole, her husband, Scott, and son live in Olathe, Kansas.

SWE DISTINGUISHED NEW ENGINEER

Kate Hull

SPIRE CONSULTING GROUP, LLC

For exceptional construction engineering accomplishments in an emerging field; and for devoting strategic talent, professional expertise, and countless hours to the future of SWE.

Kate Hull is a managing consultant for Spire Consulting Group, LLC, a global construction consulting firm. An expert in construction management, project controls, and dispute resolution, Hull has been with the 11-year-old firm since 2010 and has helped shape its direction and success. She guides clients — owners, contractors, and law firms — through all phases of complex, high-profile construction projects worldwide, creating plans that promote project success and stepping in when legal issues arise.

She has worked on more than 50 projects at Spire, ranging in value from $1 million to $1.2 billion for government entities, and in the educational, industrial, residential, and healthcare sectors. Hull's technical expertise and her talent for engaging people in every facet of the construction industry has earned her the trust of the principals at Spire and the respect of high-profile clients. On a project in her hometown of Austin, Texas, Hull worked with the client on a residential, mixed-use project, assisting with schedule oversight, helping with claims and litigation preparation, and saving the client approximately $1 million in damages. Equally effective in unfamiliar territory, Hull put a federal project in Southeast Asia back on track, revamping the construction schedule, training site staff, and preventing high damage costs.

Hull has served as president of the Central Texas section of AACE International (formerly the Association for the Advancement of Cost Engineering), garnering the section a Silver Award in 2011. She is involved with the AACE women in project controls committee, which helps new female members build professional networks. Hull was named one of the "Top 20 Under 40" by *Engineering News-Record*, nominated as a "Profile in Power" by the *Austin Business Journal*, and awarded a fellowship by the State Bar of Texas.

An active SWE member for more than a decade, Hull has been a leader in the Society on many levels, from section representative to her current role as speaker of the senate. In this position, she provides strategic guidance for SWE and spearheads measures centered on long-range organizational improvement. In her previous role as deputy speaker, she supported the speaker by developing training for members, conducting monthly calls, facilitating communication among senate members, and preparing for face-to-face senate meetings. She has participated in many other efforts, including the review and update of senate procedures. For her dedication to SWE, Hull was recently honored as an Emerging Leader for Region C.

Hull initiated Spire's philanthropy program and donates significant time and energy to other causes, such as Habitat for Humanity; the Central Texas Food Bank; and CapCityKids, a nonprofit that helps homeless children enrolled in the public schools. She also participates in The University of Texas at Austin's Introduce a Girl to Engineering Day, which brings 10,000 girls to campus each year to learn about engineering.

She earned a B.S. in architectural engineering and an M.S. in civil engineering, both from The University of Texas at Austin. Hull is a LEED green associate of the U.S. Green Building Council.

Hull enjoys adventuring outdoors with Brinkley, her 100-pound Goldendoodle; listening to live music with family and friends; and keeping up with the latest fashion trends.

SWE DISTINGUISHED NEW ENGINEER

Cassandra "Cassi" Janakos

HEALTHY HORIZONS

For pioneering entrepreneurial and technical contributions that have enabled women to remain in the workforce; and for steadfast SWE leadership at the section, region, and Society levels.

Three years ago, Cassi Janakos co-founded Healthy Horizons, where she is chief operating officer and chief engineer. Healthy Horizons is a Silicon Valley start-up that provides employers with lactation products and services that enable breastfeeding women to keep their jobs. Under Janakos' leadership, Healthy Horizons has grown from an idea to a company that operates in every major U.S. city and has an impressive customer list of Fortune 500 companies.

Before founding Healthy Horizons, Janakos was a systems engineer with Lockheed Martin, where she participated in the company's Engineering Leadership Development Program in Information Systems and Global Solutions, in San Jose, California. She was a technical point of contact for the site's largest customer and the lead design review facilitator on a critical design review. For her work on this project, Janakos received a Spot Award from Lockheed Martin. A year later, she received a Certificate of Innovation from Lockheed Martin. Other technical accomplishments include performing energy research at Sandia National Laboratories and conducting a preflight payload build and test for an International Space Station experiment.

A longtime advocate of women in the workplace, Janakos left Lockheed Martin in 2015 to start Healthy Horizons. This company provides mother's room set-up and maintenance; hospital-grade breast pumps; and breastfeeding, baby care, and back-to-work classes for businesses and families. Janakos has integrated her systems engineering skills into all phases of the venture — developing software tools, creating Health Insurance Portability and Accountability Act of 1996 (HIPAA)-compliant online education, and rolling out technical upgrades across the company. Through Healthy Horizons' Corporate Social Responsibility Program, Janakos has helped distribute 1,800 breast pumps to low-income mothers in the San Francisco Bay Area.

Also a staunch supporter of women in engineering, Janakos has held 30 elected and appointed SWE positions since 2006. In FY17, as chair of the leadership coaching committee, she was key in evolving the committee to support governance changes and section needs. A SWE leadership coach for eight years, Janakos has given workshops and talks at every Region A and Society conference since 2010. She served two terms as Region A lieutenant governor, has served on the SWE senate, and is an active leader in the Santa Clara Valley Section. She is currently the Region A governor.

For her dedication to SWE, Janakos has received the Region A Emerging Leader Award, Region A Service Award, and the Society-level Outstanding Collegiate Member Award. For her work in SWE and in the community, Janakos received the President's Volunteer Service Award.

She is a mentor for her university alumni societies and participates in StartX, a competitive start-up accelerator for top alumni founders from Stanford University. For her technical and philanthropic achievements, Janakos was named to the 2016 "40 Under 40" list by the *Silicon Valley Business Journal*.

Janakos holds two undergraduate degrees — one in mechanical engineering from the University of California, Berkeley and another in business management economics from the University of California, Santa Cruz. She earned an M.S. in management science and engineering from Stanford University in 2015.

In her leisure time, Janakos enjoys traveling to UNESCO World Heritage sites, reading, and hiking California's coastal trails.

SWE DISTINGUISHED NEW ENGINEER

Melissa Peskin, P.E.

DOMINION VOLTAGE INC.

For innovations in power engineering — especially software for energy conservation; for dedication to connecting young people with engineering; and for lasting contributions to the Society of Women Engineers.

Melissa Peskin, P.E., is a consulting engineer with Dominion Voltage Inc. She designs voltage optimization software for energy conservation and for greater solar penetration of the electric power grid. Peskin is the team lead for the company's product engineering team, which designs applications using smart meters as grid-edge sensors for enhanced control and analytics. Her product management work focuses on both new applications and enhancements to existing products.

She began her career in the distribution planning group at Dominion Energy Virginia, conducting modeling studies and coordinating protective devices to keep the lights on. She served as coordination team lead and was asked to contribute distribution engineering analyses to Dominion's new in-house voltage optimization program. Her innovations for that program led to a patent that became the basis of the energy distribution and grid efficiency (EDGE) software and the new Dominion Voltage Inc. (DVI) subsidiary.

In 2012, Peskin was one of four employees who founded DVI and commercialized Dominion's voltage optimization technology into the EDGE product suite. DVI now has 21 employees serving 12 utility customers across North America. Peskin holds five patents spanning three voltage optimization technologies and a patent pending. She recently teamed with DVI's systems architect to redesign the EDGE deployment process into a format that will shorten delivery time by at least 50 percent, enabling customers to begin saving energy as soon as possible.

Peskin began her involvement with SWE in 2013 as the Richmond Section webmaster and helped reinvigorate the section, which had been dormant for several years. In 2014, she chaired the section's scholarship committee, and in 2016 she co-chaired a successful campaign to endow the section's scholarship. She served as section president, FY15-17, and succeeded in boosting the officer team from four to seven and in expanding the section's programming to include monthly events in professional development, outreach, and networking. Peskin was involved in Region E conference planning the past two years, co-chairing the 2017 Region E Mid-Atlantic Conference in Syracuse.

In addition to SWE outreach activities, Peskin frequently visits schools and career fairs to introduce young people to engineering. Her leadership and dedication to educational outreach transformed Dominion's Engineering Exploring program for high school students from an office-based operation that reached about 30 students to a partnership with Virginia Commonwealth University, drawing more than 100 students for hands-on activities.

Peskin holds a B.S. in mechanical engineering from Virginia Commonwealth University and a B.A. in linguistics from the University of Virginia. She is a licensed professional engineer in electric power engineering.

She lives in Richmond, Virginia, with her dogs, Bear and Elmer. Peskin enjoys visiting national parks and recently hiked to the bottom of the Grand Canyon. She can often be found hiking or swimming in Richmond's James River Park System.

SWE DISTINGUISHED NEW ENGINEER

Sadaf Qazi

RAYTHEON COMPANY

For technical advances in national missile defense systems; and for being a compassionate and effective catalyst for STEM education, especially among girls and minorities.

Sadaf Qazi is a senior systems engineer II for Raytheon Integrated Defense Systems (IDS) in the surveillance radar systems department. Highly skilled in data and process analysis with domain expertise in digital signal processing, Qazi is responsible for the design and development of several cutting-edge advanced technology radar development programs, including the air and missile defense radar (AN/SPY-6) — the Navy's next generation missile defense system. She provides technical expertise for concept development, architectural design, and software requirements to advance search, tracking, and ballistic missile defense capabilities.

A 2011 graduate of Raytheon's selective Rotational Engineering Leadership Development Program, Qazi has held roles of increasing responsibility in different areas of the company where she has made significant technical and leadership contributions. Prior to her current role, she was a manufacturing manager in IDS, leading a team of manufacturing employees in a fast-paced production environment. She ensured that assembled hardware products met contractual, quality, and cost requirements for the Patriot air and missile defense system. Eager to expand her business acumen, she spent two years in the corporate internal audit department as a supervisor, performing both financial and operational audits. Leveraging her business and technical accomplishments, she has extended her contributions to a strategic level in the organization as a lead on a key businesswide initiative to stand up the S-band Product Line Engineering team.

An involved SWE member since she joined the collegiate section at Wentworth Institute of Technology as an undergraduate, Qazi has held numerous leadership positions within the Society. As section president, she organized numerous on-campus networking, technical, and social events to help foster a supportive environment for her fellow female engineers. These efforts not only helped her peers excel in male-dominated classes but also sparked her desire in advocacy and outreach.

More recently, Qazi has become active on the Society level as a member of the outreach committee. She jointly leads the SWENextED work group, developing the first *SWE Educator Newsletter* to support educator members. On "outreach day" at WE16, Qazi pioneered and participated on the educator panel, as part of the "Invent It. Build It." activities, enlightening educators about scholarships and engineering resources for K-12 students.

In 2014, Qazi took a yearlong sabbatical to teach science and technology full time in a Houston middle school through the nonprofit Knowledge Is Power Program (KIPP). To help underrepresented students improve math and reading skills, beyond the school day, she set up a weekend tutoring program, partnering with other individuals and organizations in the area. She also coached two KIPP-sponsored *FIRST* LEGO® League robotics teams, spending countless hours helping students prepare for the competition. As a result, both of the school's robotics teams qualified for the competition for the first time in the school's history.

Qazi earned her bachelor's degree in computer engineering from the Wentworth Institute of Technology, graduating *summa cum laude*. She received her master's degree in electrical engineering from Tufts University. In her free time, Qazi enjoys traveling with her husband, Omar, and spending time with her mother and sister, Rohi and Naira, all strong advocates for the advancement of women in STEM.

SWE DISTINGUISHED NEW ENGINEER

Erika D. Rodriguez, Ph.D.

JACOBS TECHNOLOGY AT NASA AMES RESEARCH CENTER

For groundbreaking research in mission-critical spaceflight materials; for advancing SWE's scholarship initiatives; and for inspiring young people — especially women and girls — to pursue engineering.

Erika D. Rodriguez, Ph.D., is a materials research and test engineering team lead for Jacobs Technology at NASA Ames Research Center's (ARC) thermophysics arc jet facility, which simulates planetary entry environments. She researches mission-critical hardware and materials for NASA's Orion Multi-Purpose Crew Vehicle and analyzes post-spaceflight materials and components.

Born in a small farming community in Fresno, California, Dr. Rodriguez obtained her bachelor's degree in engineering science from Smith College, the first all-women college in the country to have an engineering bachelor's degree program. In her sophomore year, Dr. Rodriguez led a team of five classmates to custom design an apparatus to test plant growth in microgravity environments, critical research for human habitation in space. Her team was selected for the highly competitive NASA Reduced Gravity Student Flight Opportunities Program and flew on the KC-135 aircraft, which simulates microgravity environments, to test their apparatus. The experience introduced Dr. Rodriguez to engineering design — a process that proved to be the keystone of her academic and professional career.

Dr. Rodriguez received her M.S. and Ph.D. in aerospace and mechanical engineering, with a specialty in materials science, from Syracuse University. Her graduate research focused on developing polymeric materials exhibiting a "shape memory assisted self-healing (SMASH)" response.

In 2012, she joined ERC Inc. at NASA ARC as a postdoc and was promoted to a full-time research scientist two years later. She was instrumental in designing and executing material extraction from the Orion heat shield for postflight analysis — the first time in NASA's history that such a large material extraction and analysis was performed on a flown heat shield. The only Hispanic female engineer to take on such a critical operation, Dr. Rodriguez attended the Orion EFT-1 launch at Kennedy Space Center to witness the successful launch of the capsule's heat shield. A week later she traveled to San Diego to witness the crew vehicle recovery.

In 2002, Dr. Rodriguez received a SWE/Bechtel scholarship from the SWE Golden Gate Section. This award set the course for her service to SWE. She joined the collegiate section at Smith, served as treasurer, and organized Introduce a Girl to Engineering Day. She was scholarship chair of the Hartford Section and set up its high school scholarship program. When she joined the Santa Clara Valley Section, Dr. Rodriguez again served as scholarship chair, this time pushing for and establishing need-based scholarships. In the past five years, Dr. Rodriguez has helped award $45,000 in scholarships. She is currently the vice president of career guidance for the Santa Clara Valley Section, responsible for professional development and scholarship programs.

Her humanitarian work includes volunteering at the Second Harvest Food Bank in San Jose, California; organizing the building of an accessible playhouse for an 8-year-old Hispanic girl with spina bifida; and raising $2,500 for Habitat for Humanity.

Dr. Rodriguez always finds time to mentor students and encourage them to pursue engineering. She created and spearheaded a new NASA ARC summer research program aimed at the Seven Sister Colleges to increase the number of female scientists and engineers at NASA.

A recent newlywed, Dr. Rodriguez married Dr. Richard Baker on Oct. 7, 2017, in Mexico. Dr. Rodriguez and Dr. Baker reside in the Bay Area.

SWE DISTINGUISHED NEW ENGINEER

Jennifer Tullai

GE TRANSPORTATION

For extraordinary accomplishments as an innovative engineer; and for demonstrated commitment, as a SWE leader, to the core values of the Society.

Jennifer Tullai is a senior on site service staff manager – Union Pacific north region for GE Transportation, a digital supplier to the rail, mining, marine, stationary power, and drilling industries. Working in the Global Services Organization, Tullai ensures that the North American railroads can reliably transport the materials and goods that are essential to economic growth. She has used her knowledge of probability distributions and failure forecasting to drive improved customer outcomes such as reduced locomotive downtime. Her modeling innovations have led to multimillion-dollar improvements to the operating profit for the company.

Tullai holds a B.S. in mechanical engineering from the University of Colorado at Boulder and an M.S. in mechanical engineering from Gannon University in Erie, Pennsylvania. Hired in 2008, immediately after completing her undergraduate degree, Tullai was accepted into GE Transportation's Edison Engineering Development Program. She spent two years on four, six-month rotations in various areas of the engineering organization. Her first assignment was in reliability engineering, where she drove design improvements and more consistent compliance with safety regulations for thousands of locomotives and many high-profile customers.

In 2010, she joined the newly formed durability engineering group, created to more accurately and consistently predict the lifetime expenses of locomotive components while under long-term service agreements. Over the next five years, Tullai progressed from individual contributor to team leader, then senior engineering manager. In this position, she helped develop more accurate, financially sensitive models — the first of their kind at GE — that streamlined operations and saved thousands of person-hours. She received the company's Simplification Hero Award for this work and was chosen for GE's highly competitive Accelerated Leadership Program.

Tullai's SWE service began when she was an undergraduate. After attending a leadership coaching summit, she realized the University of Colorado Collegiate Section needed a better public relations plan. Swinging into action, she volunteered to be public relations officer, created the section's first monthly newsletter, and generated an outreach and promotion plan that helped double membership. In addition to holding several leadership positions on the region level, Tullai has been active in the member at large (MAL) organization. She was elected MAL secretary in 2009, and then served as MAL representative in 2010 and 2011. She was SWE Region G representative to the Society nominating committee and Region G mentoring chair, helping to link professional engineers with university students and build a network of future SWE leaders. She now stays connected to the Society through her employer by promoting SWE and recruiting members at various conferences.

In her community, Tullai partners with a local university to host science, technology, engineering, and math (STEM) outreach events, such as GE Girls and Women in Engineering Day, for middle school and high school girls. She also mentored students at the inner-city Woodrow Wilson Middle School, walking them through hands-on activities and answering their questions about careers in science and engineering.

In her spare time, Tullai enjoys reading, eating, and traveling. She currently lives in North Platte, Nebraska, while her fellow GE engineer husband, Phil, and three dogs remain in Erie, Pennsylvania.

FELLOW GRADE

Cecilia (Ceal) D. Craig, Ph.D.

DRUAI EDUCATION RESEARCH

For exceptional dual careers in industry and educational research, and for inexhaustible energy spent helping young women find voice and purpose through SWE.

Cecilia (Ceal) D. Craig, Ph.D., is a retired technology and manufacturing executive with more than 35 years of experience in high-tech industries, ranging from space shuttle circuit boards to typewriters to personal computers, and from disk drives to Ethernet switches. Dr. Craig started her career in a printed circuit board fabrication plant as a manufacturing engineer. She was promoted to quality supervisor and immediately began working toward a master's degree in engineering. One of only a few women engineers at Rockwell International in the mid-1970s, she moved into her first management role at the age of 24.

Dr. Craig was the first technical woman in Xerox's Addison, Texas, manufacturing plant, leading teams from three continents to expand typewriter manufacturing. She was promoted often — reaching Xerox "confidential level" — all while traveling over a million miles worldwide for Xerox. Then, the most senior technical woman at Xerox's Fremont, California, plant, Dr. Craig negotiated with European, Japanese, and U.S. suppliers for annual purchases exceeding $10 million.

In the 1990s and mid 2000s, Dr. Craig held engineering positions with several companies in the heart of Silicon Valley, including Tandem, Siemens-Pyramid, and BLADE Network Technologies. For five years, in Johns Hopkins University, Center for Talented Youth summer program, she taught engineering and science to gifted fifth and sixth graders, which was the catalyst for her ultimate move to robotics education activities. In 2002, she began her now 15-year tenure with University of Phoenix Online, teaching math and project management courses.

An active SWE member since her days at The Ohio State University and in the Los Angeles, Texas, and Santa Clara Valley sections, Dr. Craig has held many officer, section representative, and committee chair positions. As deputy director for Region A in FY93-94 — during the early days of LGBTQ discussions within SWE — Dr. Craig actively pressed for including nondiscrimination for sexual orientation in the bylaws. She served as Achievement Award committee chair three times and has been co-chair of the Santa Clara Valley scholarship committee since 2015.

Currently working with Druai Education Research, Dr. Craig focuses on exploring the influences of experiential activities such as robotics and GetSET, a SWE Santa Clara Valley program since 1992, which concentrates on young women's career decisions. Her passion is researching and supporting activities that inspire young women to pursue science, technology, engineering, and math (STEM) careers. She is an active not-for-profit board member in two organizations: as president of the San Francisco Bay Wildlife Society and as treasurer of the Western Region Robotics Forum. She is a frequent volunteer for Playing at Learning's *FIRST*® LEGO® League and *FIRST*® Tech Challenge robotics events for grades four to 12.

Dr. Craig earned a B.S. in mechanical engineering from The Ohio State University, an M.S. in engineering from California State University at Fullerton, and, more recently, a Ph.D. in education from Walden University. She and her husband of 45 years, Tim, have five cats and a red-masked conure, who came down the chimney to join their family in 1992. They reside in San Jose, California, and enjoy the Home Brew Robotics Club, the Bay Area weather, and their technologically vibrant and diverse community.

FELLOW GRADE

Jude (Judith) Garzolini

BOISE STATE UNIVERSITY

For lifetime dedication to advancement of engineering as a profession; and for significant contributions to SWE as an advocate of diversity and a driver of change.

Jude (Judith) Garzolini is a chemical/materials engineer who managed projects and programs in the electronics industry and in academia. With more than 35 years of experience working in the electronics, aerospace, and automotive industries, she has held multiple research and development roles involving collaboration with multidisciplinary, multisite teams. She holds five patents related to laser printing on plastics and paper. During her career with Hewlett-Packard, Garzolini effectively promoted SWE as a partner in creating a more inclusive workplace environment.

Garzolini is a founding member of both the Sacramento Valley and Southwest Idaho SWE sections. She rapidly rose to leadership, serving at the collegiate, section, region, and Society levels, including the board of directors. Garzolini has represented SWE on the American Association of Engineering Societies awards committee and serves on the SWE ethics committee. She was SWE FY07 president.

On the Society level, Garzolini refined and implemented the Society's diversity and inclusion plan; created a voice for women in academia by establishing a special task force; and was one of the first presidents to represent SWE in Mexico, through participation in the 8th International Chemical Engineering Congress Technilogico. She was a key player in the passage of new bylaws, a major undertaking. In addition, her involvement, coaching, and caring about engineering as a profession has given access to many young women of color.

In her local section, Garzolini has proved an invaluable SWE resource, promoting and supporting women's career growth, and serving as faculty advisor and section counselor to the Boise State University's SWE student section.

Garzolini pursued a second path at Boise State by managing a National Science Foundation grant aimed at increasing STEM retention and graduates. She worked to standardize collection of student data used to support grant claims and drive change. She used her SWE network in academia with other successful women in engineering programs to increase enrollment of women in engineering disciplines.

Her educational research interests include recruitment and retention of women and minorities in STEM, with a special focus on engineering. She continues to connect women in technical fields by reaching out to the University of Virginia engineering program in Charlottesville, where she now resides. She is committed to encouraging women in all STEM fields to "bring their whole selves to work," to make a difference by solving the complex problems of society and mentoring the next generation.

Garzolini holds a B.S. in textiles and clothing from Indiana State University; a B.S. in chemical engineering from Wayne State University; and a Master of Administration in business administration from the University of California, Davis.

In addition, she is a Master Gardener and volunteers with the McIntire Botanical Garden, as well as the Live Arts Costume Guild in Charlottesville, Virginia.

FELLOW GRADE

Kim O'Rourke

THE BOEING COMPANY

For career-long dedication to the profession; for leadership that expands the horizons of others; and for passionate commitment to the advancement of women engineers.

Kim O'Rourke is a Boeing leader supporting the Environment, Health and Safety (EHS) organization for Boeing Global Services. Previously, she oversaw the quality management system and lean programs for The Boeing Company's Shared Services Group, Facilities organization, where she managed program compliance and was responsible for deploying standards, tools, and systems.

Following her keen interest in process improvement, O'Rourke joined General Dynamics right after college, first as a manufacturing engineer supporting missile programs, then as an environmental engineer. She also worked for the nonprofit Institute for Research and Technical Assistance in Los Angeles as a project manager, helping small- and medium-sized businesses comply with environmental and safety regulations.

O'Rourke joined Boeing as an environmental engineer, overseeing the air quality program for a rocket engine manufacturing and testing facility. She spent a decade in environmental, health, and safety (EHS) positions, including senior manager for EHS audits for Boeing operations worldwide. Prior to her current role, she managed the quality and lean programs for Boeing's Shared Services Group and Facilities organization. In her current role, she is back supporting EHS for Boeing Global Services.

A SWE life member, O'Rourke joined the Orange County Section (SWE-OC) when it had only 45 members. For the next decade, she supported SWE-OC in many capacities, including serving as recording secretary in FY04, vice president in FY05, and president in FY06. She then became a SWE-OC section representative and continued in that role for nine years. SWE-OC now has more than 300 members, and O'Rourke has been instrumental in its success, mentoring those who serve alongside her. In addition, O'Rourke volunteers at every SWE conference she attends. She also served Region B as secretary and as a two-term lieutenant governor before assuming her current role as governor of the region. In addition, she is co-coordinator for Boeing's Team Tech competition at the annual SWE conference.

O'Rourke has twice been voted SWE-OC's member of the year, and has been recognized by the National Association of Women Business Owners' Remarkable Women Awards. She has participated in many outreach events, including Girl Scout aerospace badge workshops and astronomy nights, and the University of California, Riverside's "Wow! That's Engineering!®" to name a few.

She has received several prestigious awards, including the NASA Space Flight Awareness award, the Engineering Merit Award from the National Engineers' Council, and the Rocketdyne President's Award.

She holds a B.S. in ceramic engineering from Rutgers University; an MBA from California State University, Fullerton; and is a Six Sigma black belt.

In her spare time, O'Rourke is a board member for Boeing Employee Community Fund–CA and Jewels of Nature, a hummingbird rescue organization. She lives by the famous quote of anthropologist Margaret Mead, Ph.D., "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it is the only thing that ever has."

O'Rourke resides in San Juan Capistrano, California, with her husband, Larry Kudray, and their three cats, Zoe, Squeek, and Ellie. She is a certified yoga instructor and enjoys glass fusing as a hobby.

DISTINGUISHED SERVICE AWARD

Susan Thomas Schlett

SIKORSKY AIRCRAFT/TRINITY COLLEGE

For being a devoted leader and fierce advocate for SWE's mission; for building a strong framework for membership growth and retention; and for continuous service at all organizational levels.

Susan Thomas Schlett, senior SWE life member, has spent the past 35 years making an impact on the local, regional, and Society levels of SWE. With her dedication to membership, she has vastly strengthened four professional sections in three regions, sharing what she learned from those efforts in her role as Society-level membership committee chair. Schlett's ongoing emphasis on building personal connections is part of her determination to realize her dream of seeing the population of women engineers increase as well as SWE's membership double in her lifetime.

After moving to eastern Wisconsin in 2004, Schlett served two terms as Wisconsin Section president and several terms as membership chair. Each year, she phones hundreds of members, getting to know them and sharing SWE membership opportunities and benefits. Her personal outreach made people feel included and helped nearly triple the section's size to more than 250 members, earning her the Region H Distinguished Service Award.

Wherever Schlett has gone, the SWE organization and framework has expanded and flourished. While an undergraduate engineering major at Trinity College, in Hartford, Connecticut, she helped SWE members prepare and present a winning charter package for the school. She also chartered the school's SWE section and served as its first president. Schlett was the only woman to graduate from Trinity College with an engineering degree in 1984.

From 1984-1999, while working as a mechanical test engineer for Sikorsky Aircraft, a division of United Technologies Corporation (UTC) at the time, Schlett arranged for several UTC teams to attend SWE annual career fairs. As the Hartford Section representative, she co-authored Region F bylaws that enabled its first executive council.

In 2006, Schlett joined the Society collegiate upgrade committee, where she helped develop a pilot program to ease collegiate members into professional member status, strengthening SWE's membership framework. Three years later, as SWE Charlotte-Metrolina Section membership chair, she helped it grow from small to medium size, for which she received the section's 2010 Service to SWE Award.

As the Society's membership committee chair, Schlett produced SWE's first membership webinars, in which she shared her member recruitment and retention philosophy, experience, and techniques. That information now resides in SWE's leadership coaching modules. Schlett encouraged committee members to work directly with professional sections to actively steward growth. She became a SWE life member in 1996.

Schlett left Sikorsky and engineering in 1999 to "engineer her family," splitting any free time between family and SWE endeavors. She lives in Wisconsin with her husband and three teenagers, one of whom plans to study engineering. A longtime officer on the local school parent booster committee, Schlett enjoys gardening and supporting her children's activities.

DISTINGUISHED SERVICE AWARD

Janet L. Williams, F.SWE

SANDIA NATIONAL LABORATORIES

For more than 30 years of continuous service to SWE; for establishing and implementing novel programs with lasting impact; and for being a mentor and friend to many.

Janet L. Williams, F.SWE, has enjoyed a long career at Sandia National Laboratories in Albuquerque, New Mexico, where she is currently a principal member of the systems research and analysis staff.

She has worked in many areas of the labs, including facilities design, construction project management, site planning, infrastructure investment planning, systems engineering support, and talent management. In addition, she had the privilege of serving a two-year assignment on loan to the Atomic Weapons Establishment in the United Kingdom, and a one-year assignment at the National Nuclear Security Administration in Washington, D.C.

Williams uses the same strengths that have made her a key contributor at Sandia — high-level thinking, strategic planning, systems integration, and communication skills — to bring added value to SWE as a leader on the local, regional, and Society levels.

For more than 30 years, Williams has contributed to the Society in many areas. She co-founded two sections, the University of Missouri-Kansas City Collegiate Section in 1985, and the Central New Mexico Section in 1988. She has served as local section president and section representative; co-chair of the 1997 national convention; and as member and chair of the editorial board, strategic planning committee, the government relations and public policy committee, and the now sunset strategic communications committee. Williams also served as a member of the national convention, convention planning, and awards and recognition committees.

She has consistently pursued recognition for other women engineers, successfully nominating nine women for recognition in seven SWE award categories. She has helped the Central New Mexico Section fund four higher-education scholarships for women engineers, has participated in local STEM outreach efforts, and has actively advised and mentored several male and female engineers whom she recruited to Sandia. She loves writing and has contributed many articles to *SWE Magazine* over the years.

SWE has recognized Williams' efforts by awarding her the Distinguished New Engineer Award in 1994 and naming her a Fellow of the Society in 2009.

Williams holds a B.S. in mechanical engineering from the University of Missouri-Kansas City. While working and raising a family, she earned an MSCE from The University of New Mexico in 1995.

In 1991, the University of Missouri-Kansas City awarded her an Alumni Achievement Award. She is a board member of a nonprofit organization that supports a school in Chetumal, Mexico, dedicated to providing quality education for our neighbors south of the border.

Williams and her husband have two grown sons. In her leisure time, she enjoys lap swimming, reading, and travel.

OUTSTANDING FACULTY ADVISOR

Diane L. Peters, Ph.D., P.E.

For her generous contribution of time, energy, and encouragement to two SWE sections; for her accessibility, dedication, and enthusiasm; and for her tireless advocacy on behalf of students.

Diane L. Peters, Ph.D., P.E., F.SWE, assistant professor of mechanical engineering at Kettering University in Flint, Michigan, has worked doubly hard to succeed as a SWE student section faculty advisor. She does this despite already being, in the words of her colleagues, "one of the most active and productive tenure-track faculty on campus."

Such a commitment is necessary because Kettering, a co-op learning institution, splits its students' time equally between classroom instruction and on-the-job training. Every 90 days, half its students rotate off campus. To accommodate this schedule, SWE operates two student sections (A and B), and Dr. Peters, who joined the faculty in 2013, chose to advise both.

Dr. Peters offered her support and deep SWE institutional knowledge to the students and is credited with a passion to propel the young women to reach their career and personal potential. Her depth of commitment and knowledge of the SWE opportunity for revitalizing the sections and for enriching their leaders' SWE, collegiate, and personal experiences has been highly effective.

Dr. Peters' degree of engagement and student accessibility has been exceptional. She regularly attends both sections' meetings and events, checks in at least once per term with each section's leaders to discuss operational issues, and maintains an open-door policy. Her constant presence at section events and her genuine interest in members' welfare has helped raise member retention rates.

A SWE life member and Fellow with 24 years of consistent engagement and leadership experience at all levels, Dr. Peters understands the benefits of increased SWE involvement. Before her involvement, only A Section members attended SWE's annual conference, and neither section attended the region conference. Now, attendance has increased across the board.

Her ability to get leaders to try new things has brought section awards and individual recognition. With her help, the B Section received a SWE program development grant for a new, daylong mother/daughter STEM education outreach event, called IF WE. The program earned the Society's 2015 Outreach Award for a small collegiate section; and, with her encouragement, its chief promoter, the section president applied for and received the Region H Collegiate Emerging Leader Award. She also mentored and encouraged a student member to present a paper at the Region H conference in 2017.

Dr. Peters' successful outreach to university departments has resulted in internal email marketing support, outside corporate sponsorships, and Kettering annual giving funds being earmarked for the sections.

Before entering academia, Dr. Peters worked 16 years as a mechanical engineer, and she is a licensed professional engineer in Illinois and Michigan. She earned a B.S. in mechanical engineering from the University of Notre Dame; an M.S. in mechanical engineering from the University of Illinois at Chicago; and a Ph.D., also in mechanical engineering, from the University of Michigan.

In her leisure time, Dr. Peters is an advocate for animal welfare, quilts, and studies Brazilian jiujitsu.

OUTSTANDING SWE COUNSELOR

Casey Waggy

BALL AEROSPACE AND TECHNOLOGIES CORPORATION

For providing the role model for a fully engaged, effective leader; for tirelessly advancing collegiate members' personal and professional interests; and for creating a culture of mutual appreciation and respect.

Since becoming counselor to the University of Colorado's SWE collegiate section (SWE-CU) in 2011, Casey Waggy has made building strong ties between SWE's local professional section and her collegiate members a priority. Waggy is an aerospace engineer with Ball Aerospace and Technologies Corporation and a leader in SWE's Rocky Mountain Section (RMS).

In 2014, she helped start an annual tea party social event at Boulder's Dushanbe Tea House. It was the area's first recurring networking opportunity for collegiate and professional members. The following year, she helped coordinate Coffee with Collegiates, a breakfast networking event at iCON15, Region *i*'s annual conference.

But the single most successful networking/bonding experience grew out of the student members' proposal in 2014 to bid for and co-host iCON16 with SWE RMS. One week before members approached Waggy with their idea, RMS members had voted against bidding for the conference. Yet Waggy, who was then president of SWE RMS, prevailed upon them to support the collegiate section's bid and to agree to serve as co-hosts. Ultimately, SWE-CU's bid to co-host the February 2016 conference was approved.

The two-year, joint-planning effort that followed created an excellent opportunity for the collegians to collaborate with and learn from the professional members. Waggy's ongoing support, engagement, and mentoring were credited for making the experience a success. The two sections continue to interact regularly, including an "Intern for a Day" pilot program in FY17 that connects professionals and collegiates and introduces students to local companies.

Her simultaneous, enthusiastic engagement as SWE counselor, SWE RMS president and outreach volunteer, and lead thermal engineer on the JPSS-1 spacecraft at Ball made Waggy an excellent role model for the collegiate section, demonstrating the value of SWE membership in career development and the diverse opportunities for involvement.

Waggy also focused on, and strengthened, the collegiate section's internal operations. She regularly attended monthly board meetings, and helped the section reestablish fairer, more open elections — in line with its bylaws. She encouraged the section to train its incoming officers sooner, facilitating smoother transitions. Waggy persuaded the section's governing board to expand its number of operating committees, providing more leadership opportunities. That improvement produced a surge in member involvement and earned SWE-CU Region *i*'s Highest Member Involvement Award, at iCON16.

She also has encouraged members to celebrate one another's accomplishments. In response, the section nominated several members for the SWE Future Leader (SWEFL) program, and a CU member was chosen as one of two SWEFLs from Region *i* in both FY16 and FY17.

Waggy earned a B.S.E. in aerospace engineering from the University of Michigan, Ann Arbor, and an M.S. in aerospace engineering from the University of Colorado Boulder.

When she isn't multitasking as a SWE and community volunteer, Waggy enjoys photography; traveling; hiking and skiing with her husband, Scott; and relaxing at home with the family cat and dog.

OUTSTANDING COLLEGIATE MEMBER

Erin Baumgartner

CALIFORNIA STATE UNIVERSITY, CHICO

For playing an integral role in reviving and expanding the California State University, Chico SWE section, and for facilitating the section's official attendance at its first region and Society conferences.

Erin Baumgartner joined SWE in 2012 when the small California State University, Chico (Chico State) Collegiate Section had just been revived after a leadership turnover had left the top posts vacant. She jumped into the void, serving as FY13-14 vice president, FY15 president, and FY16 section administrator. In the latter role, Baumgartner mentored the section president and new section officers and helped develop a strategic plan and sustainable practices.

Baumgartner, who in May earned a bachelor's in electrical engineering with minors in computer engineering and manufacturing, played key roles in enabling the section to host both long-term outreach programs and annual outreach events in the community. The section attended its first region and Society conferences as a section (since its revival) during her presidency, and has sent students to both conferences annually since.

The section also expanded its professional development portfolio by conducting resume workshops, panel sessions, and leadership modules from SWE headquarters. For its efforts, the section received awards at university, region, and Society levels.

Baumgartner, who also served as the FY17 Region A collegiate senator, remained active in her SWE section in myriad ways. She spent more than two years creating a project-planning guide for the section's annual, award-winning STEM outreach event, Imagineer Day. The event requires over 60 volunteers, more than 250 volunteer hours, a budget of about $5,000, and draws more than 220 K-8 children.

She mentored, sponsored, and sought recognition for SWE officers, submitting nominations and contributing letters of support for more than 25 award nominations for her colleagues the past two years.

From September 2013 to July 2014, Baumgartner helped spearhead the section's outreach program, "Small Satellites for Secondary Students (S4)," a NASA-funded program carried out in partnership with Chico Girl Scouts. And, during the 2014-15 academic year, she founded a SWENext club and mentorship program with Chico's Inspire School of Arts and Sciences (high school).

Outside of SWE activities, Baumgartner has helped with recruitment, planning, and contacting professionals to host technical workshops for Chico State's Institute of Electrical and Electronics Engineers (IEEE) student branch. She maintained a 3.0 GPA and was inducted into Chico State's Eta Kappa Nu chapter, an international electrical and computer engineering honor society of the IEEE, in October 2016.

She also worked as a volunteer teacher's aid for a manufacturing lab course, as an English language partner for international students, and as a peer mentor for first-year and transfer students.

For her contributions, Baumgartner has received many awards, including the Lieutenant Robert Merton Rawlins Merit Award; the Jackie Faris-Rees Student Leadership Award; the Outstanding Student Leader Award; the Outstanding Student Service Award; and the Outstanding Student Organization Leader Award.

In her spare time, Baumgartner can be found listening to podcasts on NPR and exercising the right side of her brain by painting and tackling "do-it-yourself" projects.

OUTSTANDING COLLEGIATE MEMBER

Paige Bowling

COLORADO SCHOOL OF MINES

For leading the SWE collegiate section at the Colorado School of Mines; and for expanding SWE's mission by helping others find mentors and STEM–related opportunities.

Paige Bowling, a chemical and biochemical engineering major with a double major in biochemistry at the Colorado School of Mines, joined her SWE collegiate section in her first year and has led critically important roles ever since.

As logistics director, Bowling handled the fine details of the school's 700-plus-member section. She also served as Region *i* region collegiate representative (RCR) in 2016 and as region collegiate senator in 2017 as part of the Region *i* collegiate leadership team. She ran opposed for her second term as region collegiate senator and continues to serve in that role in FY18.

As RCR, Bowling was in charge of coordinating events, meetings, and information distribution across 20 sections. She also represented SWE's collegiate members from Missouri to Colorado, a total of 21 collegiate sections, on the region council.

In her role as Region *i* collegiate senator, she is gaining experience with SWE governance, supporting motions, and making decisions for the future direction of the Society.

Bowling, who plans to pursue a Ph.D. in biochemistry and molecular physics, participated in the Collegiate Leadership Institute at WE15 in Nashville, Tennessee, and at WE16 in Philadelphia. She also attended the Region *i* leadership summit in 2016 and 2017, a fall training event focused on goal setting.

At school, Bowling performs research by completing computation energetic calculations in riboflavin derivatives and acts as a computing, communications, and information technologies student consultant with an expertise in customer service and answering technical questions about the IT department's on-campus services. Previously, she worked as a research assistant in silica and nanoparticle studies, specializing in imaging techniques and synthesis of MCM-151.

In the fall of 2016, Bowling became a founding member of Kappa Alpha Theta, where she serves as event director.

She is also involved in other on-campus organizations, including the American Institute of Chemical Engineers (AIChE), the American Chemical Society, and the Colorado BioScience Association, and is a co-advisor with Women in Science and Engineering (WiSE).

Within AIChE, Bowling serves as a mentor to first-year students and helps schedule tutoring, planning, and time organization. As the WiSE co-advisor, she helped write grant proposals and piloted a program at Delta High School to create alternatives for high school girls, mentorship, and education opportunities.

In her spare time, Bowling volunteers with the Global Down Syndrome Foundation and Children's Hospital Colorado. Each year, the foundation hosts a ball featuring hundreds of celebrities and volunteers who donate money and celebrate the breakthrough policies and research of the past year. Bowling has volunteered for the ball twice, as well as other events the foundation has hosted in the past three years.

OUTSTANDING COLLEGIATE MEMBER

Kelsey A. Harper

UNIVERSITY OF MINNESOTA TWIN CITIES

For dedication to reaching out to the community and to K–12 students; and for leadership of the SWE section at the University of Minnesota Twin Cities.

Kelsey A. Harper, senior at the University of Minnesota Twin Cities (UMN), majoring in mechanical engineering, has increased membership in her collegiate SWE section and demonstrated her unswerving dedication to K-12 outreach, education policy, campus community outreach, and diversity in STEM education.

Harper became involved with SWE her first year at UMN. She volunteered at outreach events for girls, including school visits and the College of Science and Engineering Expo (CSE). Her efforts led to Harper's serving as outreach director her sophomore year. She planned two major events: "Technically Speaking" in the fall and "See Yourself in CSE" during the spring, which brought more than 400 high school girls and their parents to campus to learn about opportunities in engineering.

Harper was elected regional collegiate membership coordinator for Region H her sophomore year. She was also a member of the underrepresented populations subcommittee for the Society committee on membership. During WE15 and WE16, she attended the Collegiate Leadership Institute.

During her junior year, Harper was elected vice president of the UMN section as well as the Region H collegiate representative (RCR). As vice president, she helped increase the university's section membership by more than 50 percent, to 280 paid members. She worked with the section president to start three new pilot programs, including an overnight stay with 70 high school seniors, a professor networking dinner, and a corporate networking event. As RCR, she led 54 collegiate sections in monthly best practice calls, generated collegiate reports, and ran meetings at WE16 and the Region H conference.

As a senior, Harper is serving as the FY18 president of the UMN section, working to increase membership with a strong recruiting plan for first-year students and fostering diversity in the College of Science and Engineering by reaching out to other members of the 50K Coalition to plan joint events. In addition, she is the collegiate senator for Region H and serves on the committee's strategic planning subteam in the senate.

She aims to expand the section's outreach with increased school visits and a pilot program with the College of Education and Human Development to work with their K-12 teachers on STEM education.

Harper has also demonstrated a passion for public policy. She attended SWE Capitol Hill Day in March 2017, and met with representatives from both Iowa and Missouri to discuss the importance of funding STEM education and supporting diversity. Harper is one of two students chosen to be on the university's mechanical engineering curriculum committee, and she serves on the Undergraduate Advisory Board at UMN.

In the summer of 2015, she worked in the Office of Vocational Rehabilitation for the state of Missouri, helping clients with disabilities fill out paperwork, apply for federal student aid, and complete housing forms. During an internship with GE, Harper volunteered to be an assistant teacher at the General Electric Girls Day Camp, where she helped the girls with circuit board and LEGO® Mindstorms® robotics code. This past summer, she worked for Xcel Energy on optimizing a preventive maintenance plan for two of its nuclear power plants.

In her spare time, Harper enjoys listening to podcasts, watching documentaries, and finding new places to eat ice cream.

OUTSTANDING COLLEGIATE MEMBER

Emily E. Hoffman, Ph.D.

NORTHWESTERN UNIVERSITY

For furthering an inclusive engineering community through leadership, conference organization, and academic accomplishments; and for being a noteworthy mentor and leader within the SWE community.

Emily E. Hoffman earned her Ph.D. in materials science and engineering from Northwestern University, graduating in 2017. Her doctoral thesis focused on using electron microscopy to understand the nanoscale wear and corrosion of biomedical materials. Dr. Hoffman is currently a consulting associate at Charles River Associates in the life science practice, where she works on multidisciplinary teams to guide pharmaceutical companies as they develop novel products.

Dr. Hoffman knew she wanted to join the Society of Women Engineers after attending a SWE engineering weekend at The Ohio State University as a high school student in 2005. Throughout undergraduate and graduate school, her dedication and leadership in SWE's outreach and mentoring efforts grew steadily.

She entered Case Western Reserve University in 2007 as an undergraduate, joining the SWE collegiate section. She graduated magna cum laude with a bachelor's degree in biomedical engineering.

Starting graduate school at Northwestern University in 2011, Dr. Hoffman was the only graduate student in the SWE section. Identifying opportunities for graduate-student involvement, in 2014 she co-founded a graduate subcommittee, NU GradSWE. Serving on the NU GradSWE leadership team for two years, she helped develop a simple, yet effective mentorship program: grad/undergrad coffee dates. Dr. Hoffman also mentored first-generation college students, helping them feel confident on their paths to graduate school. Today, an established GradSWE leadership team and 20 active graduate members are thriving.

Dr. Hoffman also served as a leader for Northwestern SWE's Summer Technology and Engineering Program (STEP), a weeklong STEM camp for middle-school girls, during the summers of 2014, 2015, and 2016. She developed an interactive biomedical engineering lesson, a sustainability lesson, and a materials science demonstration.

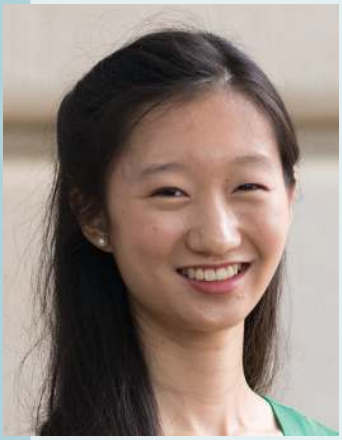
As part of the Society-level GradSWE committee, Dr. Hoffman served as the FY17 graduate programming coordinator, recruiting talented speakers and developing new ideas for the annual conference. Based on requests from participants at WE14 and WE15, Dr. Hoffman packaged her "Preparing Powerful Application Essays" talk so the women who saw it at the conference could share it with their local sections.

In graduate school, Dr. Hoffman served as president of the Materials Science Student Association, the social and community-building organization of her department. Supported by the competitive National Defense Science and Engineering Graduate Fellowship, her accomplishments also include multiple conference presentations and three first author publications. She completed an internship at the National Academy of Engineering through the Mirzayan Science and Technology Policy Graduate Fellowship.

After attending the national Communicating Science Convention (ComSciCon), Dr. Hoffman and nine other graduate students began planning the first ComSciCon-Chicago. For the inaugural ComSciCon-Chi in 2015, they raised $10,000 and put on a two-day conference for 100 graduate students from five Midwestern U.S. institutions.

Outside of SWE, Dr. Hoffman is involved in ASM International, the Microanalysis Society, the National Association of Corrosion Engineers, and Gordon Research Conferences.

Dr. Hoffman is an active Delta Gamma alumna, plays pick-up sports, and loves listening to podcasts.



OUTSTANDING COLLEGIATE MEMBER

Iris Jing

THE UNIVERSITY OF TEXAS AT AUSTIN

For demonstrating an innovative and courageous spirit that positively transforms those around her, by empowering members and encouraging fruitful collaborations across the campus.

Iris Jing leveraged her initiative and creativity to give members greater input and ownership of the SWE section at The University of Texas at Austin, boosting membership by 33 percent. Jing, who served as the SWE section president before graduating in May 2017 with a bachelor's degree in petroleum engineering, started several new, cutting-edge programs during her collegiate career with SWE.

As president, Jing reconfigured the SWE section's membership campaign to focus less on officer positions and more on what it means to be a SWE member. She initiated member-led interest groups and opened event-planning sessions to members for the first time, all of which led to a more active, devoted, and populous membership. The success earned the SWE section the Region C Outstanding Collegiate Section and Creative Membership Campaign awards.

Jing's SWE involvement began her first year at UT-Austin, when she served as publicity chair, managing social media presence and advertising for the section's events. Rather than using templates, she created her own eye-catching advertisements, and worked on targeting specific audiences.

She also distinguished herself as treasurer in 2015 by working with each officer from the start of planning events. That practice enabled Jing to map out expenses and payment methods, giving the other SWE officers greater insights into the section's finances.

She exhibited her financial smarts again when she boldly persuaded the SWE section to shut down its labor-intensive, low-profit-margin snack store and hold fundraisers instead. The switch doubled the section's cash flow.

As FY16 vice president-corporate, Jing oversaw the annual Networking Night for 150 students and 20 companies, cultivated relationships with more than 30 companies, and solicited $60,000 in income. She also revamped SWE's professional development program, creating casual, interactive sessions where students learned from one another. To do that, Jing started ECAC Workshop Chats and the signature EXPO101 event to improve knowledge sharing among members in more intimate settings.

Jing has also been an active member of the Cockrell School of Engineering Student Engineering Council; the Women in Engineering Program, where she was part of the WEP Leadership Collaborative; and the Society of Petroleum Engineers.

In these leadership roles, Jing revitalized the annual engineeringwide Halloween canned food drive to be a UT campuswide event by collaborating with students in four other schools, and helped establish partnerships between the Student Engineering Council and three local middle and high schools to continue paving the path for future STEM students. For her leadership, Jing was awarded one of six Student Leadership Awards by the Cockrell School.

Jing completed three oil and gas internships, where she performed hands-on fieldwork with operators and technical reservoir analysis alongside industry experts. Back in the classroom, Jing leveraged her experience to lead the reservoir simulation portions of both her senior design and reservoir class team projects.

She now works as an upstream engineer at ExxonMobil. In her free time, she enjoys spending time with friends and family, traveling, and cheering on the UT Longhorns.

OUTSTANDING COLLEGIATE MEMBER

Genevieve A. Kane

RENSSELAER POLYTECHNIC INSTITUTE

For strength as a dedicated graduate researcher and passionate SWE leader, increasing collaboration and connections among women in STEM, improving the graduate student experience, and creating leading–edge technology.

Genevieve A. Kane is a student at Rensselaer Polytechnic Institute (RPI) pursuing graduate studies devoted to materials science and engineering. Her research targets novel in-situ scanning electron microscope techniques, and aims to create methods for real-time control feedback for microstructure evolution in polycrystalline metals.

Prior to her studies at Rensselaer, Kane received an M.S. in nanoscale engineering from the College of Nanoscale Science and Engineering, the State University of New York at Albany (SUNY Albany), where she carried out leading-edge research in extreme ultraviolet lithography. Additionally, she earned three bachelor's degrees simultaneously from two institutions. She holds a B.S. in electrical engineering from the State University of New York at New Paltz and a B.S. in physics and music performance (violin) from SUNY Albany.

Kane joined SWE in 2008 when she began her electrical engineering curriculum. Though neither of her schools had a recognized SWE section, Kane maintained her SWE membership and actively pursued opportunities to bring programming for women in STEM to campus. As a result, SWE membership increased across her undergraduate institutions. As a graduate student at RPI, Kane became involved with SWE at the region level, serving as the FY16 region graduate representative for Region F, as well as the region outreach committee representative. There, she was able to increase awareness of graduate student needs in the region, planning and executing several graduate student focused sections at the region conferences that have since become a standard part of the conference schedule. In addition, Kane champions outreach throughout the region, making sure all sections have access to outreach resources, providing and developing toolkits to assist in starting parent/educator programs, SWENext clubs, and start-up outreach activities. She is also the advisor and sponsor of Region F's first SWENext club, which is in its third year of operation.

Kane served as the FY17 graduate member coordinator-elect. During FY17, she helped provide graduate programming to the inaugural WE Local conferences and assisted in developing infrastructure for the GradSWE committee to communicate with individual sections through intermediate representation. She also developed and implemented a new mentoring program for graduate students, pairing students with professionals in industry, academia, and government. Kane also is a member of the Women in Academia committee and advocates graduate student needs and collaboration at the Society level.

She served as the SUNY Albany Graduate Student Association vice president in 2012. She acted as a university leader, sitting on the faculty senate and senate councils for three years advocating transparency and student rights. She was on the University Auxiliary Services board of directors, providing direction in strategic planning for the university.

In her spare time, Kane works with students through Project Lead The Way and mentors them through high school engineering capstone projects. She was born and raised in Colonie, New York, and promotes STEM in her community.

OUTSTANDING COLLEGIATE MEMBER

Jeannie Marshall

THE UNIVERSITY OF ALABAMA

For leading the SWE collegiate section at The University of Alabama; and for initiating outreach programs for elementary and middle-school girls.

Jeannie Marshall, a chemical engineer who completed her MBA and is now working at The Dow Chemical Co., has already left a legacy at the SWE section of her undergraduate alma mater, The University of Alabama (UA).

While an undergrad, Marshall eagerly took on leadership positions in the section, rising to president and implementing programs such as SWEries, a biweekly series of 30-minute stress-relief get-togethers that gave members the opportunity to network with officers and committee chairs. As president, she led efforts that increased the section's membership by 20 percent, and led outreach programs for elementary and middle-school children that continue to thrive.

In addition to her role as president, Marshall served the SWE section as secretary, fundraising chair, vice president of membership, and vice president of outreach. She is credited with keeping communication open between the region and collegiate SWE sections in her service as Region D's collegiate representative.

As vice president of outreach, Marshall was one of the coordinators of innovative get-togethers such as a "Ghosts of Engineering Past" theme for a "Wow! That's Engineering!®" event, and two elementary-school programs — "Mommy, Me and SWE" and "Dads and Daughters Do Science." She also started a middle-school engineering club that met at a local school once a week, hosted by the university's SWE section.

In her first year at UA, Marshall also joined the American Institute of Chemical Engineers (AIChE), served on the 2016 Southern Regional Conference planning committee, and served as a chemical engineering peer mentor to other first-year members of AIChE.

She also was a mentor for UA's Honors College program and for the College of Engineering's Mentor Undergraduate Peer Partnering program, where she encouraged those she mentored to attend SWE meetings and introduced them to SWE leaders. As a result, the SWE collegiate section's past liaison and vice president of membership, and current secretary were mentored by Marshall.

Marshall's ambition was also evidenced by her being a founding member of The University of Alabama's chapter of Delta Epsilon Iota, a prestigious honors organization. She was elected president from 2012 through 2014.

In the workplace, Marshall's technical achievements include implementing new equipment to improve the quality of adhesive products, using data to verify that prices for products are accurate, and working on recycling waste to save the plant thousands of dollars each year.

Prior to her internships with Unilever and Dow Chemical, Marshall worked on absorbent polymers research at the university, where she made monomers and bulk polymers, and then tested the polymers' absorbency and permeability.

In her free time, Marshall enjoys traveling, reading, and playing volleyball with her co-workers.

OUTSTANDING COLLEGIATE MEMBER

Catherine Martsolf

TEMPLE UNIVERSITY

For her work to inspire future female scientists and engineers through K–12 outreach and supporting her peers throughout their collegiate careers.

Catherine Martsolf, a senior environmental engineering major at Temple University and past president of the Society of Women Engineers collegiate section (Temple SWE), proves her dedication to increasing the percentage of women in engineering through her tireless outreach efforts.

Last year as president, Martsolf led a section of 16 executive board members and 60 collegiate members. The SWE section's general body has jumped 20 percent during Martsolf's tenure, due partly to her ensuring that fellow students understand the resources available at the Society level and the benefits to joining SWE both as a collegian and a professional.

Martsolf, who hosted a workshop at the past Region E conference and attended the last three, as well as served as an "Invent It. Build It." Role Model at WE15 and WE16, led Temple SWE's efforts to win its first Outstanding Collegiate Section Award at WE16. She also helped in the SWE section's first section application and award for Media Communications, presented at the 2016 Region E conference.

She initiated the pilot HeForSWE campaign, in which HeForSWE ambassadors invite students to attend meetings and act as outspoken supporters of mentors in STEM. Martsolf and the director of HeForSWE worked together to recruit the Mayor of Philadelphia, the Temple University president, and the dean of the college to act as ambassadors for the cause on campus.

Through her work as president of Temple SWE, being a focus group leader for the strategic initiatives committee, Martsolf strives to serve others. As a committee member, she discusses strategies to help members support diversity in the workplace.

She also served as the intercollegiate liaison for the WE16 "Invent It. Build It." committee, to ensure young students in the Philadelphia area registered for the outreach event. Throughout her tenure in Temple SWE, Martsolf strengthened the relationship with the Cal Poly, Drexel University, UPenn, Villanova, and Penn State SWE sections. She also initiated the first collaboration with Drexel's Graduate Women in Science and Engineering at the 2015 Philadelphia Science Carnival, which continues in the section today.

As section secretary, Martsolf helped obtain 4 STARS organization status — the highest level of recognition at Temple; represented SWE in Temple student government and Student Professional Engineering Council (SPEC) meetings; and helped garner the section's first sponsors, such as Lockheed Martin and Pennoni. In her time as secretary, Martsolf also organized the section's first Annual Alumni Networking Dinner.

In her years at Temple, she was also heavily involved on campus, leading collaborations with She's The First, an organization that sponsors education for young girls in developing countries, and served as a student representative on the Temple Alumni Association board.

Martsolf has worked as an intern in the environmental engineering lab at Temple, in the Environmental Protection Agency's Brownfields program, and for Urban Engineers Inc. She has also become a licensed asbestos inspector in the tri-state area, and is certified in hazardous waste operations and emergency response.

In her spare time, Martsolf is a passionate environmental advocate, basketball player, and runs marathons.

OUTSTANDING COLLEGIATE MEMBER

Holly McTaggart

UNIVERSITY OF LOUISVILLE

For doubling her SWE collegiate section's activities, resulting in a significant increase in active membership, and extending the section's outreach to students and professionals.

Holly McTaggart wasted no time in propelling her SWE collegiate section into the instant-messaging and breaking-news milieu. While serving as diversity chair and secretary, McTaggart, a senior at the University of Louisville who is pursuing her bachelor's degree in industrial engineering, redesigned the SWE section's communications efforts by subscribing to a group messaging application that sends members relevant notifications on their phones.

McTaggart also designed a "Welcome to SWE" brochure to distribute to first-year students that explained SWE's benefits and created a weekly newsletter that kept members informed of section activities and news and worldwide issues pertinent to SWE. The newsletter was recognized with regional awards.

In the 2016-17 academic year, her third year in SWE, McTaggart transitioned to section president, spearheading a 13 percent increase in active membership through her continued commitment to constant communication and quality programming. One example is "Blended Diversity," a partnered program she initiated with the American Society of Engineers of Indian Origin. The initiative went beyond a smoothies-centered social event to become a learning experience about differing cultures and perspectives within engineering.

McTaggart is now working to become a leadership coaching committee coach so she can bring personal and professional development seminars to the collegiate section.

She also is pursuing a region collegiate representative role, in which she aims to support other collegiate sections in membership growth, programming, and leadership development. Her interest in developing others as leaders became apparent in her role as section president, as she mentored other young female students and encouraged SWE members to volunteer to better the university's J.B. Speed School of Engineering community.

Indeed, McTaggart is often in the Office of Student Success, helping the staff develop an idea, volunteering for a program, or simply checking in. Because she serves as an exceptional bridge for the students to the Speed School, SWE usually has the highest representation at any event the office puts on, or in volunteer roles that need to be filled.

McTaggart has served on multiple committees across student organizations, such as the diversity committee, which puts on a weeklong program of events representing and celebrating differing social identities on the Louisville campus.

As a member of the women's leadership conference committee, McTaggart encouraged an enthusiastic section member to serve as the SWE representative instead of assuming the role herself.

In addition to her studies, McTaggart gained professional experience throughout her collegiate career. She worked full time for Amazon, advancing from the warehouse floor to a management position. She also completed three semesters as a reliability engineering co-op at Beam Suntory (parent company of Jim Beam), and plans to complete a master's in engineering management, also at the University of Louisville. She also completed an internship as a project engineering intern with the Nifco America Corp.

McTaggart grew up in Southern California and is a nontraditional student. She attended three different higher education institutions before settling at the University of Louisville. During her time of study, on top of the required co-op experience, she has worked as both a bartender and a tutor.

OUTSTANDING COLLEGIATE MEMBER

Sarah Watzman

THE OHIO STATE UNIVERSITY

For academic achievement; and for thoughtful initiatives and leadership as SWE collegiate section president — easing officer transition and creating successful new programs that continue to grow.

Sarah Watzman, who served as the FY17 collegiate director on the SWE board of directors, has been actively involved in the Society since her first year at The Ohio State University (OSU), providing leadership and vital new services for members. Watzman graduated magna cum laude with a bachelor's degree in mechanical engineering in 2013.

As SWE section president in 2012, Watzman, now a Ph.D. candidate in mechanical engineering at OSU, managed 11 officers, a $30,000 budget, and an incredibly active calendar. She created and implemented the Big/Little SWEster Program, pairing first-year members with upperclass mentors, to increase involvement and retention of first-year students. The program has since grown and remains a large part of the collegiate section's programming. Watzman also organized an officer transition leadership retreat to encourage continuity and a smooth transition between leadership teams.

As outreach director the prior year, Watzman started the SWE at CAR (Center for Automotive Research) program to teach members essential car upkeep, and initiated the Eco-Engineering with Girl Scouts program, designed to teach young girls how engineering can be a profession to help the environment. For her efforts, Watzman received a Women in Engineering Leadership Award.

She also played key behind-the-scenes roles in planning SWE's Region G conference in 2014, hosted by The Ohio State University, and served as the only collegiate voting member on the region council in 2013. In the latter role, Watzman facilitated a leadership session at the Society's annual conference.

Besides her many SWE activities, Watzman is a member of the American Physical Society, the Materials Research Society, and the mechanical engineering honorary society Pi Tau Sigma, and has served as social director and vice president for OSU's chapter of Tau Beta Pi, a national engineering honorary society.

Watzman's conscientiousness extends to humanitarian causes, as evidenced by her work with the Mechanical and Aerospace Engineering Graduate Student Association and her study abroad experiences. She traveled three times to an orphanage in Honduras, where she worked to revitalize a biodigester and planned STEM-based activities for the children. She also traveled to South Africa, where she worked on sustainability and water sanitation projects with local universities.

In her role as a Fundamentals of Engineering for Honors Program teaching assistant, Watzman helped first-year students with classroom assignments and lab experiments, including a robot design project.

Her academic success has resulted in her earning recognition as a National Science Foundation Graduate Research Fellow, a FAST (Future Academic Scholar Training) Fellow, and a Graduate Fellow of The Ohio State University.

Watzman has been recognized as the first author on a peer-reviewed journal article detailing her experimental discovery of the dominant thermoelectric transport mechanism within transition metals.

She was invited to work as a visiting scientist at the Max Planck Institute for Chemical Physics of Solids in Dresden, Germany, where she conducted research from April to September of 2017.

Watzman is currently completing her Ph.D. at OSU and pursuing an academic career path. In her free time, she enjoys cooking, hiking, and hanging out with her friends and family.