Carol Malnati is vice president, research and development for Medtronic’s Cardiac Rhythm and Heart Failure business. In this role, she leads the activities of the 1,200-person organization and is responsible for directing and delivering all R&D work associated with sustaining and growing the business’ multi-billion-dollar annual revenue. She manages the engineering disciplines of software, firmware, electrical, mechanical, systems, cybersecurity, materials science, program management office, research, and technology. She is the first woman in Medtronic’s history to hold a position that oversees five levels of engineering leadership.

For more than 25 years, Malnati has been innovating product development of lifesaving implantable medical devices. She began her career at Medtronic by contributing to the creation of the company’s first implantable defibrillator, a small device that regulates heart rhythms. As a device engineer, Malnati provided key expertise in the power and grounding system design for high-voltage delivery that became the basis for generations of products. She is credited as a transformational leader who helped take the tachyarrhythmia defibrillator business from startup to a cornerstone business of Medtronic’s global portfolio.

An enthusiastic leader, Malnati creates and brings to market key innovations to cardiac devices that regulate and restore heart rhythms. One example is the downsizing of the original defibrillator, once the size larger than a hockey puck, to today’s state-of-the-art model that is 85% smaller and barely noticeable once implanted.

Malnati’s career is punctuated with significant innovations, such as the market’s first pectoral implant, which fundamentally changed the implant procedure by inserting leads via the venous system, avoiding more invasive surgery. She also led the team that created the world’s smallest battery for the world’s smallest pacemaker, the Micra™. She recently directed strategic efforts to further advance cybersecurity diligence in implantable medical devices and related external instrumentation.

Regarded as an inspirational and collaborative partner, Malnati is a two-time recipient of the Medtronic Star of Excellence Award and has been honored with Technical Leader of the Year, Medtronic Women’s Network STEM Career Gender Diversity, and SWEnet STEM Technical Leader awards. She serves on the advisory board for the University of Minnesota College of Science and Engineering, her alma mater, and is a dedicated supporter of the university’s and Medtronic’s Women in Science and Engineering (WISE) programs, aimed at advancing women in science and engineering. Known for her commitment to diversity, she remains keenly focused on developing leaders who support employee engagement and inclusion, and she frequently speaks at national innovation and diversity conferences.

A graduate of the University of Minnesota, Malnati holds a B.S. in electrical engineering. She and her husband live in New Brighton, Minnesota, with their four children. An avid hockey player, she volunteers as a coach for the Mounds View Girls’ Hockey Association.
Scott A. Ashford, Ph.D., P.E. (California), is the Kearney Dean of Engineering at Oregon State University (OSU), where he provides oversight of the 10th largest engineering program in the U.S., with more than 9,000 students, and 445 faculty and staff. He oversees a budget of more than $150 million, including OSU Foundation funds and research expenditures.

Through his broad and deep engineering experience, Dr. Ashford has witnessed firsthand the hurdles women in engineering must overcome. His passion for addressing such issues stems from viewing the inequities women around the globe face in every aspect of engineering.

Dr. Ashford has used his leadership to level the playing field and create an inclusive environment in which women are accepted and empowered to succeed in engineering. Realizing that as an institution of higher education, the College of Engineering educates the future workforce of Oregon and beyond, he implements changes in the school that not only impact the university, but also initiate a ripple effect, shaping the future engineering workforce.

While developing the college’s strategic plan in 2014, Dr. Ashford ensured one of the four strategic goals addressed equity and inclusivity. With this goal, the college aspired “to become a recognized model as an inclusive and collaborative community, [which will] purposefully and thoughtfully recruit and retain a more broadly diverse community.”

In support of that goal, Dr. Ashford transformed the recruitment, hiring, faculty advancement, and promotion and tenure practices in the College of Engineering by adopting innovative approaches to cultural transformation. This led to unprecedented progress in the representation of and support for a broadly diverse faculty and, specifically, for women. Since 2014, the College of Engineering has doubled the number of female faculty hired. With more than 50 women engineering faculty members, Oregon State now ranks among the top three public Carnegie Foundation R1 universities for the greatest percentage of women engineering faculty. The School of Civil and Construction Engineering was recognized in 2017 by BUILD magazine with the Women in BUILD Award.

Dr. Ashford firmly believes that more women teaching and leading by example will encourage and inspire more female students. This strategy has seen a positive shift in the student body. In 2014, 17.9% of students were women. Four years later, that number rose to 20.6%.

In 2006, Dr. Ashford earned the rank of professor at the University of California, San Diego. He became head of the School of Civil and Construction Engineering at OSU in 2007 and has served as dean of the College of Engineering since 2014. He holds a B.S. in civil engineering from OSU and an M.S. and Ph.D. in geotechnical engineering from the University of California, Berkeley.

Dr. Ashford and his wife, Meleah, a water resource engineer, relish time with their sons Dusty and Jake and the extended family. Much of their free time is spent enjoying the outdoors farming, camping, and canoeing.

For transformative policies that expand possibilities and opportunities for female students of engineering; and for influencing the future of his institution and the STEM workforce as a whole.

Scott A. Ashford, Ph.D., P.E. (CA)
OREGON STATE UNIVERSITY

RODNEY D. CHIPP MEMORIAL AWARD
Cummins Inc. designs, manufactures, distributes, and services a broad portfolio of power solutions, ranging from diesel and natural gas engines to hybrid and electric platforms, as well as related technologies. Three of the 12 members on its board of directors are women, and of the 17-member Cummins Leadership Team, six are women. Each member of the Leadership Team has created a five-year diversity and inclusion plan designed to increase representation of women in leadership positions around the world.

Organizationally, Cummins employs a variety of programs, policies, and trainings to create an environment where women can advance. Its paid parental leave policy now allows paid leave for birth, adoption, or foster care for up to 12 weeks in the United States. The company provides high-quality child care at Cummins sites or nearby, and invests in early childhood education in local communities, freeing women to pursue education and employment.

Cummins participates in hiring programs designed to onboard women into the workforce. One program, RePower, is a partnership with SWE and iRelaunch, and offers a six-month paid “returnship” for women who have left STEM careers, or the workforce altogether, for a period of two or more years.

The company has training, development, mentoring, and coaching programs that pair women with career resources. A global network of employee resource groups (ERGs) fosters a diverse, inclusive workplace aligned with the Cummins mission. Cummins has more than 100 ERG chapters around the world, with nearly 50 chapters of the Women’s ERG.

Examples of Cummins’ commitment to a diverse and inclusive workplace are seen across the globe. In India, Cummins has grown its engineering organization from 500 engineers in 2011 to more than 1,700 in 2017, while improving gender diversity from 22% to 36% overall, the best level of female representation in the entire company.

Women identified by Cummins’ Accelerated Growth project in China have become key technical leaders across the engineering organization. Additionally, the Peer Mentoring program connects women to other women where there may not be any in their immediate locations.

The Retention Through Creative Challenges program in Latin America exposes participants to new career challenges and encourages development. Cummins employees also host community events highlighting technical topics and promoting opportunities in STEM. The number of women in the Cummins technical workforce has tripled since this work began.

In the U.S., the Technical Women’s Circle was launched in 2012 to focus on professional development opportunities and challenging work, respecting the voices of female engineers (removing bias in the workplace, what later became the inclusion dialogues referenced in the global examples), and improving the network of female engineers.

Headquartered in Columbus, Indiana, since its founding in 1919, Cummins employs approximately 62,600 people committed to powering a more prosperous world through three global corporate responsibility priorities critical to healthy communities: education, environment, and equality of opportunity.

**RODNEY D. CHIPP MEMORIAL AWARD**

Cummins Inc. for prioritizing diversity and inclusion at all organizational levels in the company; and for instituting groundbreaking policies that address the challenges women face at all career stages.

Jennifer Rumsey, President, Cummins’ Components Business
Greg L. Hyslop, D.Sc., is the chief technology officer of The Boeing Company and senior vice president of Boeing Engineering, Test and Technology. Dr. Hyslop leads Boeing’s engineering function of more than 56,000 engineers worldwide and oversees Boeing’s technology vision, strategy, and investments.

A strong advocate for women on Boeing’s engineering teams, Dr. Hyslop is dedicated to their professional and personal development, and advancement. He has appointed numerous women to his leadership team and ensures that women take lead roles at his annual senior leadership meeting. Dr. Hyslop also supports recruitment and development of early-career women engineers. Some 36% of recruits in a Boeing program that hires candidates from engineering schools are women, and 51% of participants in a two-year rotational program for high-potential early-career engineers are women.

In 2016, Dr. Hyslop launched a one-year rotation program for high-potential engineers, where teammates shadow him on an extensive travel and meeting schedule in order to understand the importance of driving collaboration and integration at an enterprise as expansive as Boeing. The first two engineers selected to these rotations were women.

Among Dr. Hyslop’s team initiatives is the external technical affiliations (ETA) team, which drives alignment between the company’s global diversity and inclusion objectives and its mission to build the best team in engineering and technology. The ETA oversees Boeing’s engagement with numerous engineering and professional organizations, including the Society of Women Engineers. Under Dr. Hyslop’s direction, the ETA team deepened engagement with the Anita Borg – Grace Hopper Celebration (GHC). In 2019, Dr. Hyslop tripled investment to create a much stronger booth presence at the GHC conference, and he has personally appointed female executives and future leaders as engineering liaisons to GHC.

Under Dr. Hyslop’s leadership, Boeing has partnered with SWE and iRelaunch to kick off Boeing’s “Return to Flight” midcareer STEM re-entry internship program, boosting the number of letters of intent at SWE from 85 in 2017 to 143 in 2018, with the number of acceptances growing from 58 to 97 in the same period. Dr. Hyslop also directly supports other women-focused ETAs, such as Women in Aerospace, Women of Color in STEM, and Women in Aviation International.

He is a member of the aeronautics committee of the NASA Advisory Council, a fellow of the American Institute of Aeronautics and Astronautics, and a trustee of its foundation. He also serves on the board of trustees of Washington University in St. Louis, the advisory board of the University of Nebraska College of Engineering, and the board of trustees of the Museum of Science and Industry, Chicago.

Dr. Hyslop earned a B.S. in electrical engineering and an M.S. in mathematics from the University of Nebraska, and a D.Sc. in systems science and mathematics from Washington University in St. Louis.

He is an avid gardener, enjoys ballroom dancing with his wife, and has three grown daughters and four granddaughters.
Meg Abraham, DPhil
THE AEROSPACE CORP.

For breakthrough engineering achievements in contamination control; and for demonstrating that high sensor performance can be achieved on the low-cost, high-risk missions essential to the space industry’s future.

Meg Abraham, DPhil, is a senior project leader in the NASA and Civil Space Division at The Aerospace Corporation in El Segundo, California. She is a materials science and contamination specialist with more than 34 years of experience in the application of systems engineering, mission assurance, and failure analysis. Her expertise includes space science, contamination control, failure analysis, process development, laser machining, packaging of electro-optics, and optics design for space applications. She also has expertise in small satellite design, aerospace thruster engineering, reliability engineering, assembly integration and test engineering, clean room processing, MEMS and nanotechnology, and radiation effects on optics and electro-optics.

Dr. Abraham first joined The Aerospace Corporation in 1999, working as a member of technical staff (MTS) in the lasers and electro-optics department and the micro-nanotechnology department, where she supported an array of space programs, including the Space-Based Infrared System (SBIRS), the Defense Support Program, the Defense Meteorological Satellite Program, and more. Notable research projects included a demonstration for NASA of novel methods for making arrays of truncated spherical micro lenses as part of a design to enhance coupling efficiency of diode pumps in solid state and fiber lasers.

In 2006, Dr. Abraham joined Lockheed Martin Space Systems in Sunnyvale, California, where she served on several programs including as a senior systems engineer on SBIRS and an optical designer on the James Webb instrument NIRCam. She presented to engineering review boards; attended and signed off on preship reviews; managed verification on systems and subsystems; designed and tested optics; and wrote wavers, systems specifications, and test plans.

In 2011, Dr. Abraham rejoined Aerospace and serves as senior project leader in the NASA Ames and new space program office in Sunnyvale. She served as the contamination lead engineer for the Lunar Atmosphere and Dust Environment Explorer (LADEE) project at NASA Ames. In 2016, Dr. Abraham traveled weekly to the L-3 SSG facility in Wilmington, Massachusetts, to assist with the integration and testing (I&T), specialty engineering, quality control, mission assurance, and systems engineering Google Skybox (now Terra Bella) Optical Payload. She currently supports several missions, including BioSentinel, currently scheduled to launch in 2020, and the NASA Geostationary Operational Environmental Satellite.

Dr. Abraham holds 10 U.S. patents in the field of materials science. She received a NASA Group Achievement Award for her efforts on the Icebreaker team in 2015, and was recognized with a NASA Ames Honor Award for contamination control efforts on the LADEE mission in 2014. Dr. Abraham received The Aerospace Corporation’s Woman of the Year Award in 2016.

She was awarded a DPhil in materials science from the University of Oxford. She also earned an M.A. in archeology/anthropology from the University of California, Los Angeles; a B.S. in physics and a B.A. in art history from San José State University; and a B.A. in history from UC San Diego.

Dr. Abraham and her husband, Dr. Edward Holland, are the proud parents of young Master Thomas Holland. She would like to recognize her family for their tremendous support of her work and career over many happy but busy years; she could not have done it without them.
Roble Alanis is compensation and benefits manager for John Deere Mexico, responsible for 2,000 salaried employees within the Mexico operations. Areas under her jurisdiction include country market analysis, salary administration, and employee benefits.

Prior to this role, Alanis held positions of increasing responsibility in human resources and manufacturing, including serving as project manager for Latin America and organizational development manager for the same region. Before moving into those roles, she served as a master black belt for Latin America, where she leveraged her strong technical background and data analysis skills to drive significant change to the region. Alanis implemented several new programs, including organizational efficiency and diversity and inclusion. For the organization, she implemented metric analysis and action planning. She also led the creation of the diversity and inclusion strategy for Latin America, implemented in 2016.

Her most significant accomplishment was championing and leading the implementation of flexible work arrangements within John Deere Latin America, including policies specific to unique country legal requirements. Alanis was also instrumental in the creation of several employee resource groups, including WomenREACH Mexico in 2011, WomenREACH Argentina in 2013, and WomenREACH in Indaiatuba, Brazil, in 2015.

She has contributed to operations in Mexico and around the globe, championing lean manufacturing processes in Spain, China, the U.S., and throughout Latin America. These include coaching quality assessments of 12 factories in seven countries and improvements with inventory accuracy and material line flow design. In addition to process improvements, Alanis co-authored “A Simulation Approach to Improve Assembly Line Performance,” published in the *International Journal of Industrial Engineering*.

Alanis is a trailblazer in Latin America. When she assumed her current role, there were 10 cases of flexible work within John Deere Latin America. There was no training or awareness, and it required director approval. Today, both men and women benefit from the significant improvements Alanis drove for flexible work arrangements. Currently, 800 of 4,000 eligible employees take part in telework, flextime, compressed workweek, or part-time work programs. Women have shown an even larger benefit, opting to stay in the workforce after starting families. Alanis broke through the glass ceiling in Latin America and provided sustainable tools for others to follow. Today, about 24% of leadership positions at John Deere Latin America are filled by women.

She holds a B.S. in industrial engineering from the University of Monterrey and an MBA with a focus on strategy from the Instituto Tecnológico y de Estudios Superiores de Monterrey. A Six Sigma black belt, Alanis is certified in production and inventory management through the American Production and Inventory Control Society (now APICS) and in executive leadership from eCornell University.

In her spare time, Alanis volunteers with a local underserved community, providing mentoring and workshops on self-sustainability. She lives in Monterrey, Mexico, with her husband and children.
A materials science engineer and research and development manager in the Material, Physical, and Chemical Sciences Center at Sandia National Laboratories, Blythe Gore Clark, Ph.D., leads 20 employees in materials characterization, providing chemical and structural analysis and developing applied forensics solutions for a range of materials and applications. Her department owns and manages 20 experimental laboratories engaged in: spectroscopic and diffraction techniques; light and electron microscopy; metallography; and surface, chemical, thermal, and mechanical analysis. Before assuming her current position, Dr. Clark was a principal member of the technical staff at Sandia, and prior to that, she was a postdoctoral visiting scientist at the Max Planck Institute for Metals Research in Stuttgart, Germany (now known as the Max Planck Institute for Intelligent Systems).

A leading advocate for women in science and engineering at Sandia, Dr. Clark brings together multidisciplinary teams and drives implicit bias mitigation practices to create an inclusive workplace. She has studied implicit bias extensively and has built relationships with academic experts in sociology and psychology, bringing their professional perspectives to Sandia. Dr. Clark meets frequently with Sandia’s senior executives and others to seek out and implement best practices to mitigate implicit bias. Her ability to draw on her extensive knowledge on the subject has been critical to conveying its importance to largely male audiences. Additionally, she is a strong role model and an active mentor for female staff and managers, and through her service as co-chair of the Sandia Women’s Action Network, she is influencing organizational changes that improve the workplace for women and shape a culture free of bias for everyone.

Dr. Clark was featured in “Why Did You Become a Scientist?” — a New Mexico Public Broadcasting Service video for young viewers — and recently presented a keynote on the value of diverse teams in engineering to The University of Texas at Austin’s graduate engineering students and visiting industry partners. Active in the Microscopy Society of America (MSA); The Minerals, Metals, and Materials Society (TMS); and the Materials Research Society (MRS), Dr. Clark serves on technical-interest committees and organizes symposia for annual meetings. She has been an invited guest editor for the Journal of Microscopy, served as a career panelist for the Student Group of MSA, given numerous research presentations, and helped with student outreach and diversity. She serves on the diversity council for the 14,000-member TMS and was recently invited to publish an article on mitigating implicit bias as a leader in the TMS journal.

In her community, Dr. Clark volunteers at STEM outreach events and engineering design competitions and gives talks about science and microscopy at nearby schools. In 2018, she received the Profiles in Diversity Journal’s Women Worth Watching® Award for “executives leading the way to excellence in the workplace, marketplace and the world.”

Dr. Clark earned her B.S. from Northwestern University in Evanston, Illinois, and her Ph.D. from the University of Illinois at Urbana-Champaign, both in materials science and engineering. In her free time, she travels with her husband and two young daughters, exploring new cultures, languages, and local foods. The family also enjoys hiking adventures in U.S. national parks.

For thoughtful and persistent advocacy on behalf of women engineers and scientists; and for drawing upon extensive research to influence policies and implement practices to mitigate implicit bias in the workplace.

ADVOCATING WOMEN IN ENGINEERING AWARD

Blythe Gore Clark, Ph.D.
SANDIA NATIONAL LABORATORIES

For thoughtful and persistent advocacy on behalf of women engineers and scientists; and for drawing upon extensive research to influence policies and implement practices to mitigate implicit bias in the workplace.
An advocate for women in engineering and a leader in the microwave and millimeter wave field of electrical engineering, Katherine J. Herrick, Ph.D., is a senior engineering fellow and director for enabling technologies in the advanced air warfare systems and technology directorate at Raytheon Missile Systems (RMS) in Tucson, Arizona.

Dr. Herrick earned her B.S.E., M.S.E., and Ph.D. degrees in electrical engineering from the University of Michigan, Ann Arbor. She was a postdoctoral research fellow at the radiation laboratory there, conducting research on multilayer silicon structures, supervising a lab, and advising and mentoring graduate students. She joined Raytheon in 2001.

In her director role, Dr. Herrick manages a $120 million portfolio of advanced sensor and electronics technology pursuits. As senior engineering fellow, chief engineer, and lead technologist, she leads advanced semiconductor radio frequency component design and unconventional millimeter wave aperture development. Her broad, cross-company experience includes program manager/microelectronics focus area lead for Raytheon’s integrated defense systems (IDS); technical director of cross-company initiatives, IDS; deputy to the RMS technical director managing a $30 million annual budget; and technical director of cross-company initiatives.

Early in her career at Raytheon, as industry advisor for the company’s university research program, Dr. Herrick sponsored and advised two female student interns and saw them embark on successful careers. She continues to mentor female engineering fellow apprentices, is an active member of the Raytheon Women’s Network, and led a focus group on diversity and inclusion at the Raytheon Women’s Forum in 2017.

That same year, asked to lead a panel session focusing on women, she invited female engineering fellows from across Raytheon, and titled the panel session, “Women Leaders in Technology Inspiring the Next Generation Multi-Function RF Systems.” As a result of the interest the session generated, among both women engineers and men with daughters, Dr. Herrick has been asked to lead a session on this subject at every MFRFS symposium.

Dr. Herrick is a member of the electrical and computer engineering council at the University of Michigan and is focused on recruitment of women and underrepresented minorities. She serves on University of Michigan panel sessions concerning diversity and inclusion of women. She is past president of the Women in Science and Engineering board at The University of Arizona. As a senior member of IEEE, Dr. Herrick has led multiple panel sessions on women in engineering at the annual IEEE International Microwave Symposium, the world’s largest microwave engineering conference. She also participates in her daughter’s after-school STEM club giving presentations on STEM fields.

In 2019 she received the Technology Champion Women of Influence Award from Inside Tucson Business. Among her many other awards are the National Academy of Engineering Frontiers of Engineering Award and the Raytheon Integrated Defense Systems President’s Award. She is a senior member of IEEE, has published more than 50 technical papers, and holds patents in the areas of antennas, RF microelectrical mechanical systems packaging, and microwave circuits.

Outside of work, Dr. Herrick enjoys spending time with her family, college football, playing cello, and practicing yoga.
Jennifer Howland is the executive for IBM’s Pathways program, a global effort launched to improve the representation of women and under-represented minorities in IBM’s technical executive positions. The program attracts, recruits, develops, and advances experienced mid-career technical, diverse talent into leadership positions. Howland’s 34-year career with IBM as an engineer, manager, and executive has spanned engineering, strategy, product and services development, business and process transformation, and service delivery. A constant in her many assignments has been a passion for helping women advance their careers.

One of the standout and globally recognized Pathways programs Howland created and implemented is the Tech Re-Entry Program, a 12-week internship for technical women returning to work. Howland developed all aspects of the program from the ground up into a successful program that has expanded into more than 20 IBM locations across four countries. She has educated IBM leaders worldwide about the Pathways programs available and has worked through specific challenges. She is a key resource for IBM’s technical women around the world, helping to progress their careers anywhere from getting travel approvals to speaking at conferences to counseling in unconscious bias situations. Howland is a frequent keynote speaker on unconscious bias, progressing technical women, and career lessons learned, both inside and outside of IBM.

A strong partnership with SWE is another channel for Howland’s advocacy. In her Pathways role she lobbied to have IBM join the SWE/iRelaunch STEM Reentry Task Force as a founding member and was an active leader of the seven-company cohort. Howland assumed leadership of the SWE@IBM community, organizing community calls two to three times a year and developing an online SWE@IBM community. She has spoken at many SWE events, including the WIT conference held in Japan by J-Win and SWE and at WE Local Providence, where she was a panelist for an unconscious bias panel and a co-presenter with one of her daughters on generations in the workplace. She moderated the WE Local Europe “Men as Diversity Partners” plenary and has been a panelist numerous times for the Smith College Specialist to Strategist program.

Howland is an active leader with DiscoverE and is on the Clarkson Honors Program advisory council. She has received numerous honors for her efforts on behalf of women in engineering. Recent accolades include the 2017 Good Housekeeping “10 Women Changing the Way We See the World” award for leadership in science and technology, one of 15 recipients of the 2018 Hudson Valley Magazine Women in Business award, and the 2018 Women’s Leadership conference Accelerator award for her lifelong work as an advocate for women.

She earned her B.S. in electrical and computer engineering from Clarkson University and an M.S. in manufacturing systems engineering from Rensselaer Polytechnic Institute. Howland has two daughters, who both hold engineering degrees. An Adirondack 46er (those who have climbed and descended the summits of the 46 highest peaks in the Adirondack Park), Howland enjoys hiking, backpacking, snowshoeing, and skiing in her leisure time.
Before her retirement in early 2019, Marilyn Tears was safety, security, health, and environment manager for ExxonMobil Development Company, where she managed a series of diverse, global projects. Previously, she held project management roles for the Deepwater Portfolio for Hadrian South, Marine Well Containment Interim Response System and, most recently, was the senior project manager for a subsea tieback project in water depths of more than 7,000 feet with oil production in 2016. During her 37-year career with ExxonMobil, Tears held various technical and supervisory positions, managed operations, planned and supported offshore development and global construction, and led project management and execution teams.

Tears established and led women’s mentoring programs in ExxonMobil throughout her career. She was an active mentor through formal networks and informally mentored many more. Once “adopted” by Tears, an individual is linked for life. She was a founding member of the team that established the Upstream Women’s network at ExxonMobil, in which she held several leadership positions. In 2011, she was honored with the ExxonMobil Upstream Women’s Leadership Role Model award. Tears also represented ExxonMobil on the SWE Corporate Partnership Council.

As a long-term campus recruiter at her alma mater, the University of Illinois, Tears participates in engineering society discussions, technical talks, and mock interviews. In 2013, she presented at the first University of Illinois graduate women weSTEM conference on one of her favorite topics, mentoring and networking. In 2014, Tears established an endowed fund at the university. The Duane Edward and Phyllis Ann Erickson Memorial Scholarship in Civil and Environmental Engineering honors her parents, who were staunch advocates of education.

She shares her enthusiasm for engineering in her roles as Girl Scout leader, Sunday school teacher, and through many high school volunteer organizations. Featured in an ExxonMobil commercial in 2002 on an offshore platform in coveralls and hardhat, she established a new view of what an engineer could be. Tears was featured in Changing Our World: True Stories of Women Engineers, published in 2006 by the American Society of Civil Engineers to encourage high school girls to choose engineering, with stories of extraordinary women engineers. Tears has given many copies to high school girls, to demonstrate why engineering is a desirable career path. Her mantra is sincere: “It’s fun, it’s challenging, and you can make a difference in our world!”

Tears obtained her B.S. in civil engineering and her M.S. in civil engineering/structural design – construction management, both from the University of Illinois. She lives in Houston with her husband of 36 years, Nelson, a senior technical consultant in ExxonMobil Development Company. They have two daughters — one a certified public accountant and the other a chemical engineer.
Marilee J. Wheaton, F.SWE
THE AEROSPACE CORPORATION

For career-long promotion and support of women engineers; for bringing creative advocacy to multiple professional organizations; and for serving as a catalyst and role model within SWE.

Marilee J. Wheaton, F.SWE, is a systems engineering fellow at The Aerospace Corporation. Previously, she was executive director and general manager of The Aerospace Institute, which coordinated all education, training, and staff development for the corporation. Wheaton has held a variety of technical leadership positions, including general manager of the Systems Engineering Division, and general manager of the Computer Systems Division. From 1999 to 2002, Wheaton was a director with TRW Systems, providing leadership for cost estimation, metrics, and quantitative management goals. She is a trained capability maturity model integration (CMMI) appraiser, and led process improvements as a Six Sigma black belt.

Wheaton joined SWE while a student at California State University, Northridge, and her involvement in the Los Angeles Section (SWE-LA) has continued for more than 35 years. Her service to the Society has never been interrupted by the demands of raising children, job responsibilities, or involvement in other organizations. She has held high-profile leadership positions and provided important behind-the-scenes support, chairing numerous committees and mentoring future SWE officers and leaders.

Her service to SWE-LA includes committee chair for awards, publicity, programs, membership, student section liaison, corporate support, scholarship banquet, and anniversary banquet. She has served as vice president, president, and section representative. At the Society level, she has been a membership committee member and life member coordinator, a position she held for 15 years. Previously, she was the SWE counselor for the University of Southern California (USC) Collegiate Section.

A life member for almost 30 years, in 1986 Wheaton was elected president of SWE-LA, leading more than 300 members and collaborating with 15 student sections. As president, the section made a spectacular “triple play,” garnering all three major Society awards at the time: for career guidance of high school and college students, for continuing development of professional members, and for the monthly newsletter. Her leadership supercharged SWE-LA, setting in motion a decade of strong contributions. Wheaton was recognized as a Distinguished New Engineer in 1990, a Fellow in 2000, and received the Distinguished Service Award in 2010.

Wheaton is a fellow of the American Institute of Aeronautics and Astronautics and an active member of the organization’s technical committees on economics and systems engineering. She is a fellow of the International Council on Systems Engineering (INCOSE) and received the INCOSE Foundation Kossiakoff Award for best systems engineering research. Wheaton is a board member and past chair of the Cal State Northridge Oviatt Library Dr. Bonita J. Campbell Endowment for Women in Science and Engineering (WISE). Wheaton has served as adjunct faculty in the Systems Architecting and Engineering Program at USC Viterbi School of Engineering.

She holds a B.A. in mathematics and a B.A. in Spanish from California Lutheran University, both magna cum laude. She earned an M.S. in systems engineering from USC and is a graduate of the University of California, Los Angeles Executive Program in Management. Married to fellow aerospace engineer, Kevin, for 39 years, Wheaton has two grown children, twins Alanna and Travis.
GLOBAL LEADERSHIP AWARD

Tamara Hedgren
DEERE & COMPANY

For operational excellence based upon transparency and respect; for leading with a spirit of optimism; and for setting an example of women’s leadership on the global stage.

Tamara Hedgren is John Deere’s new global director of the Combine and Front End Equipment Product Line, promoted into this position in July 2019. She is responsible for the overall strategic direction and leadership of the global combine and front-end equipment business, including seven global factories and more than 4,100 employees.

Hedgren has spent her career breaking barriers. She was the first female manager of Harvester Works (one of John Deere’s flagship factories with more than 1,600 employees), John Deere Ibérica in Spain, and John Deere Ottumwa Works; the first female business unit leader of John Deere Seeding; and the first female global product line director at John Deere Seeding and Tillage.

Throughout her 23-year career with John Deere, Hedgren has held positions around the globe in operations, engineering, and supply management. As global product line director for Seeding and Tillage, she was responsible for six factory locations. During this time, she led the team through a factory startup in Russia and the acquisition of a critical business. Prior to this role, Hedgren served as director of Ibérica operations in Getafe, Spain, where she significantly improved safety of operations by instilling a cultural change, leaving a lasting legacy focused on employee well-being.

She has served in several operations roles within John Deere, including operations manager at Ottumwa Works, manager of strategic planning for the Agricultural Division, and business unit leader at the Seeding Group in Moline, Illinois. In addition to her strong operations background, Hedgren was the manager of supply management order fulfillment at the Seeding Group and held several other roles within supply management.

Within John Deere, Hedgren is a leader in the women in operations employee resource group. She mentors dozens of individuals on a regular basis, speaks at outreach events on behalf of John Deere, and volunteers at employee resource group events. Recently, Hedgren initiated a new moms group to help employees work through the transition of adding members to their households. In this role, she shares her passion and approach for being strategic about work and life outside of work.

Outside of John Deere, Hedgren is a member of SME and is actively involved with local organizations. She previously served on the campaign committee for the Trinity Health Foundation, where she helped raise $1.55 million to build a new birthing unit, meeting an underserved community with critical resources. She has also been a member of the board for local United Way organizations and volunteers with her church.

Hedgren holds an associate of arts in engineering administration from the Morrison Institute of Technology, a B.S. in manufacturing engineering technology from Bradley University, and an MBA from Drake University. She enjoys spending time with her husband, who works as a construction engineer, and her three children. Her family enjoys going on vacations, adventures, and volunteering together.
Tami Heilman-Adam is the customer experience and commercial excellence director for Dow Consumer Solutions business. In this role, she leads the global customer experience and commercial excellence team to gather, analyze, and share customer insights with the Consumer Solutions business to continuously improve the customer journey, delivering an easy, effective, and enjoyable customer experience.

Previously, Heilman-Adam relocated to China to lead the Application Engineering and Technical Service (AETS) teams for the nine markets in the Performance Industries business unit. This opportunity included new challenges of leading managers across an entire business encompassing more than 50% of the application engineers in China, with five team leaders and 40 employees across the nine markets.

While in China, Heilman-Adam’s leadership supported strong business growth of nearly 40%. She returned to Midland, Michigan, after two-and-a-half years, where she assumed the North American healthcare and beauty care AETS managerial role, later adding the healthcare AETS global coordinator role. Prior to moving into Customer Experience, Heilman-Adam was the North America Technical Service and Development manager for personal care as part of the integration of the joint Dow and Dow Corning teams.

After years of serving on the Women Enriched strategy team at Dow Corning, and now a North America (NA) Women Inclusion Network (WIN) steering team member, Heilman-Adam has been directly involved in understanding women’s pay equity data and outlining actions to improve it. Both programs provide learning opportunities for men and women on networking, support groups, and how to avoid unconscious bias. Heilman-Adam is on the WIN+5 network committee, which connects women with influencers to help them develop networks. Having been a nursing mother traveling around the world and delivering a baby in China, Heilman-Adam proactively supports new mothers, showing they can be excellent in their careers and in their personal lives.

She provides business leadership mentoring and personal donations that help women and children live to their full potential and break the cycle of poverty through sustainable trade and education. Since joining the Global Compassion board (India), fundraising has increased by more than 30% through her targeted communications program. Global Mamas (Ghana, Africa) is now expanding into a new business model, based on Heilman-Adam’s coaching and personal piloting for home “prosperity parties.”

Heilman-Adam earned a B.S. in chemical engineering from the South Dakota School of Mines and Technology and an M.S. in technological processes from Saginaw Valley State University. Outside of work, she enjoys spending time with her husband and three children and traveling around the world to learn about new countries and cultures. She is an avid figure skater and enjoys skating alongside her daughter.
Elisabeth C. Martin is the senior director of mission assurance and airworthiness for Boeing Defense, Space & Security (BDS). In this role she is responsible for developing and deploying the BDS mission success strategy, policy, and practices and has independent approval authority for mission readiness of all BDS divisions and programs.

Before taking on her current position, she was vice president and managing director, Boeing Research and Technology-China. Her main responsibilities included formulating and implementing Boeing's research and development strategy in China, establishing and supervising research project portfolios with the aim of delivering mutual benefits for Boeing and China through innovation. She was also responsible for university relationships in China, focused on strengthening Boeing's presence there. Martin lived in Beijing for five years, investing her efforts in building bridges between Boeing's global teams and organizations, to harness the creative endeavors that lead to being a global industrial champion. Through her own experiences, she has learned the value of diversity of thought and of fostering an environment that allows for emergent thought. As such, Martin was an executive champion for Boeing's Women in Leadership group in China, fostering diverse leadership styles that can create stronger R&D portfolios and an engaging and dynamic work environment.

Previously, she was the director of Asia-Pacific Safety and Regulatory Affairs for Boeing Commercial Airplanes. In that role, Martin moved to China and engaged in efforts to build greater understanding between global regulators, airlines, and manufacturers. She worked with the Aviation Cooperation Program, a public/private partnership of Chinese and U.S. industry, the Civil Aviation Administration of China, and the U.S. Federal Aviation Administration, to deliver an annual aviation safety symposium focusing on mutual learning and sharing of best practices, understanding of cross-cultural aviation experiences, and environmental constraints and opportunities that can foster a safer aviation system.

Prior to this, Martin served as deputy to the 787 vice president and chief program engineer, overseeing product integrity and reliability for the global 787 fleet, supporting entry into service on five continents.

Martin supports the development of Boeing’s employees around the world. She has created several new leadership positions within her organization as opportunities for growth and has successfully nominated a number of employees for excellence awards, more than half of them women.

She has been a member of Boeing’s diversity council, and is now executive champion for Boeing Women in Leadership. She represented Boeing at the American Chamber of Commerce Women Economy Summit and represents the company at SWE events, from which she has hired talented new employees. She mentors engineers interested in international careers, and university students in China and in the U.S., including at her alma mater, the Georgia Institute of Technology.

Martin earned her B.S. in aerospace engineering from Georgia Tech and an M.A. in whole systems design from Antioch University Seattle. She also completed an executive program at Stanford University with 52 leaders from around the world. Martin recently relocated to Southern California with her family. She enjoys spending her spare time with family and friends, exploring the world, reading, and appreciating nature.

GLOBAL LEADERSHIP AWARD

Elisabeth C. Martin
THE BOEING COMPANY

For bridging cultures and nationalities to build consensus; for systems leadership that achieves larger goals; and for advancing diversity of thought that improves aviation safety worldwide.
The Liza Phase 1 Project Team comprises leaders from across ExxonMobil’s businesses driven to deliver a world-class, deepwater development, and to establish the foundation for the future for Guyana’s emerging oil and gas industry. The team is on target to deliver startup within five years of resource discovery, well ahead of industry standards. This level of performance is sustained through proactive communication, collaboration across time zones, meeting commitments, and a line-of-sight focus on startup.

Chosen for her project management and execution experience and integration skills, Gina Dickerson, senior project manager, was responsible for building a diverse international team. This team’s success builds on the diversity of experience in the leadership that included contractor experience, military experience, and technician experience, as well as careers spent solely at ExxonMobil. The team consists of 30% women in leadership and boasts more than 250 years of combined industry experience. This global team has found success by leveraging its combined expertise, authentically collaborating with contractors and partners, and sharing ownership of the project objective, as one team delivering a foundation for the future.

So far, the team has achieved its multibillion-dollar project sanction in record time, just two years after initial field discovery. Incorporating efficient designs and execution strategies, Liza Phase 1 will be one of ExxonMobil’s most cost-efficient projects. With execution in more than 25 locations around the world, the project is on budget and expected to achieve first oil by or before the planned first quarter of 2020 target. The team also worked closely with Guyana’s Environmental Protection Agency to meet the requirements of its permit process. As a result of this collaboration, Guyana’s coastline is now mapped for environmental sensitivity.

Led by Dickerson, the project comprises three key scopes: floating production, storage and offloading facility (FPSO); subsea and umbilical; and risers, flowlines, and offshore installation.

The FPSO scope is led by Dan Rhude, project manager; Steve Swick, topsides engineering manager; and Matt Jenkinson, construction manager, who oversees contractor SBM, in the Netherlands and Singapore in the design and fabrication of the Liza Destiny FPSO. Amy Styslinger, marine project manager, brings marine expertise for the vessel conversion work and related mooring systems.

Jonathan DuBois, manager, subsea and umbilicals, oversees the contractor TechnipFMC. Risers and flowline scope is led by David Yost, SURF project manager, who oversees the contractor Saipem. Antoine Minois, installation manager, oversees Saipem’s installation scope. Elaine Beck serves as a dedicated safety, security, health, and environment lead; Erin Brennan, quality manager, implements project quality programs; James Steves, startup manager, provides the key interface between the Guyana operations and project teams; and Theresa Allen, business manager (succeeded by Frank Kerze), provided contracting, planning, and project controls estimates.

GLOBAL TEAM LEADERSHIP AWARD

Liza Phase 1 Project Team

EXXONMOBIL

For outstanding collaboration across borders and cultures; for superior delivery of complex objectives ahead of deadline; and for shared ownership of the project’s economic development aims.
Johnson & Johnson Supply Chain (JJSC) was challenged to create a highly accurate, cost-effective, scalable, compliant, and user-friendly UHF radio frequency identification (RFID) solution for tracking medical device implants within Johnson & Johnson Supply Chain for loaner set processing. Having a globally recognized standard solution based on the needs of customers and patients enables an end-to-end supply chain. Initially, a small team to explore standardization, using the global labeling standard, GS1, developed a guidance document that could be leveraged in future RFID projects.

Building on this experience, the team tackled a larger challenge for the Orthopedics business in Japan — to change the way medical devices are labeled and scanned, and provide a more agile customer experience. To drive the long-term vision and benefits, a diverse team of cross-functional associates from around the world was formed to create a solution that ensured read rate accuracy, product accuracy, and traceability for daily shipments applicable to thousands of orthopedic products. Through collaboration, the team engineered a solution that delivered 99.96% read rate accuracy and an 80% reduction in the manual labor time required to inspect and verify loaner sets. The team also leveraged its serialization program to track activity for each RFID-tagged product in the supply chain.

JJSC is shaping the industry adoption of GS1 RFID through global sharing at healthcare conferences, with hospital RFID providers and publication of white papers. The team is now at different phases of implementation in Europe, Latin America, and other parts of Asia. Johnson & Johnson Supply Chain is sharing its success story with the healthcare industry to encourage alignment to the standard. The solution delivered the highest accuracy rates for UHF RFID technology ever achieved in the global industry, while providing direct savings and improved patient safety.

The team is diverse in region, function, ethnicity, and gender, and is championed by Blair Korman, whose experience in logistics, packaging, labeling, and front-line operational supervision supports her work with the UDI requirements developing globally, and with U.S. Food and Drug Administration compliance. The Supply Chain Engineering Team included Aleasha Burnell, process engineering; Daniel Giroux, system engineering; Shane Phelan, system engineering; Shinichi Ike, project engineering; and Luis Fernando Silva, system engineering.

The Supply Chain Technology Team included global system management from Brant Johnson and Rajendra Kulkarni, and regional system management from Pramod Pacheeri (Asia) and Giacomo Finocchiaro (Europe). Project management from Dawn Torres (U.S. project) and Ravi Kumar (Japan project) was an integral component of the initiative’s success. RFID standard development was co-led by Blair Korman and Wooselyne Dufresne-Desouvre as part of a strong supply chain and quality collaboration. Operational implementation was led by Nozomi Oishi and Tsuyoshi Toda at supply chain sites.

GLOBAL TEAM LEADERSHIP AWARD

Global Team – Standardized RFID System for Medical Device Implant Tracking

JOHNSON & JOHNSON SUPPLY CHAIN

For delivering a standardized RFID solution that can be leveraged around the world; for cross-functional organization that communicates seamlessly; and for results that improve patient safety while driving savings.
Rocky Mountain Institute’s Islands Energy Program guides islands to develop energy transition strategies, scales renewable projects, and supports the capacity of islands to achieve sustainable energy goals. The team delivers technical expertise, engages with governments, utilities, and island stakeholders, and provides communications support. With an independent, fact-based approach, the program employs experience gained from engagements with island and continental governments and utilities to solve the toughest energy challenges. It harnesses diverse skills in integrated resource planning, project identification, project development, construction management, and consulting services.

Accelerating the transition of islands toward energy systems that include renewable energy, energy efficiency, and other resources can stabilize the cost of electricity, reduce dependence on imported fossil fuels, and reduce emissions. It can create investment opportunities and returns on-island, increase the resilience of distribution and transmission grids and systems, and provide higher-skilled, better-paying jobs. In this process, the Islands Energy Program is creating a blueprint to be replicated in other isolated economies, and on a continental scale.

The team partners with the regional association of electric utilities, CARILEC, to build and launch the Caribbean Renewable Energy Community (CAREC), a virtual platform that helps island energy practitioners speed energy projects by connecting them to the resources they need. To date, there are more than 1,000 members in the CAREC community (compared with an initial target of 200 members) across 40 countries, 31 of which are islands. Engagement is increasing as various webinars and other resources are shared.

The Islands Energy Program also established the Women in Renewable Energy (WIRE) Network, in response to the underrepresentation of women in the island energy sector. Its mission is to deliver leadership and technical skills development opportunities, and provide a support system for women becoming the next generation of leaders in island nations. WIRE also supports midcareer women who demonstrate leadership potential in government ministries, energy regulators, utilities, and nonprofit organizations, and as energy entrepreneurs and employees at private companies. WIRE Network has more than 400 members, 20 of whom are in its annual mentoring program.

The team of 15, led by Kaitlyn Bunker, Ph.D., P.E., brings a range of backgrounds and experience in engineering, integrated resource planning, project identification and development, construction implementation support, and business advisory services. Team members are located in North America (Colorado; New York City; Washington, D.C.; and Canada) and the Caribbean region (Barbados, Montserrat, Saint Lucia, and Saint Vincent and the Grenadines). Partner islands include Aruba, Anguilla, The Bahamas, Belize, Bermuda, the British Virgin Islands, Colombia (San Andrés and Providencia), Grenada, Guyana, Montserrat, Puerto Rico, Saint Lucia, Saint Vincent and the Grenadines, and the Turks and Caicos Islands.

GLOBAL TEAM LEADERSHIP AWARD

Islands Energy Program

ROCKY MOUNTAIN INSTITUTE

For superbly nuanced collaboration across time zones, governments, and cultures; and for delivering on a model of sustainable and renewable energy for isolated island economies that advances a practical blueprint for others.
Karen Devine, Ph.D.
SANDIA NATIONAL LABORATORIES

For significant and ongoing contributions to computational engineering; for clear and forward-looking leadership that advances new methods and tools; and for exemplary mentorship of girls and women in STEM.

Karen Devine, Ph.D., is a Distinguished Member of the Technical Staff in the Center for Computing Research at Sandia National Laboratories in Albuquerque, New Mexico, where her research is centered at the intersection of engineering and computer science. Dr. Devine has a career-long record of technical quality and impact through her development of new algorithms and software for high-performance computing to support engineering applications. She is the principal investigator (PI) for the widely used, open-source Zoltan project, which provides tools that improve the computational efficiency of distributed memory computations, increasing throughput and reducing time-to-solution. Dr. Devine is also the data services product area leader for the open-source Trilinos solver framework.

She has leveraged scientific software to create new high-performance tools for cybersecurity and data analytics, including the MapReduce-MPI framework and parallel sparse tensor decomposition methods. Her work with the MPSalsa chemically reacting flow code was a finalist for the 1997 ACM Gordon Bell Prize for outstanding achievement in high-performance computing. Dr. Devine was also involved in the first lifted-jet unsteady computation of a triple flame, as predicted in theory (1998).

Dr. Devine is the deputy director of the U.S. Department of Energy’s multilaboratory FASTMath Institute for Scientific Discovery through Advanced Computing (SciDAC4). She was Sandia’s PI in the SciDAC3 FASTMath project, deputy PI for the ITAPS SciDAC2 Institute for mesh-based technologies, and an organizer in the SciDAC2 CSCAPES Institute for combinatorial scientific computing research.

Dr. Devine’s research has been published in more than 20 journals and refereed conferences. She has co-authored articles and book chapters with more than 50 collaborators. Her paper on hypergraph repartitioning won a Best Algorithms Paper award at the 2007 IEEE International Parallel and Distributed Processing Symposium, and her paper on graph algorithms for ice sheet simulations won the Best Paper award at the 2019 International Conference on Parallel Processing.

Dr. Devine has been invited multiple times to speak at technical conferences and workshops promoting technical careers to women and minorities. She is the current chair and past secretary for the Society for Industrial and Applied Mathematics (SIAM) activity group on computational science and engineering. She previously served as vice-chair of the SIAM activity group on supercomputing. She has been conference/track chair in six major computer science and math conferences and has served on 13 program committees of leading computer science conferences.

Committed to increasing diversity in science and engineering, Dr. Devine has organized events connecting middle school girls to role models of successful women in math and engineering and has volunteered in family-oriented “math nights” in low-income elementary schools. She has mentored 17 students, postdoctorates, and early-career researchers. In addition, Dr. Devine has led and spoken in outreach workshops for undergraduate and graduate students, sharing the excitement of STEM careers with the next generation of scientists and engineers.

Dr. Devine earned her B.S. in computer science from Wilkes University and her Ph.D. and M.S. degrees in computer science from Rensselaer Polytechnic Institute.

Using Sandia’s family-friendly benefits and work policies, Dr. Devine has worked part time for the past 20 years, allowing her to spend more time with her family. She also enjoys playing piano and percussion.
Lynda Grindstaff, F.SWE

For outstanding collaborative leadership; for inspiring excellence in others by demonstrating it herself; and for leveraging her service in SWE to help women engineers achieve their full potential.

Lynda Grindstaff, F.SWE, is vice president of engineering, Enterprise Products Group for McAfee. She has held diverse roles in myriad businesses, applying the totality of her experience to each subsequent role. She has the unique ability to adapt and be successful in many different environments, including running deep technical teams in multiple geographies, product marketing, strategic planning, operations, worldwide customer enabling, business development, innovation, and international software development teams. As a leader of global teams, she has influenced consumers, small and large businesses, computer hardware design, and, most recently, the cybersecurity industry.

For the past 26 years, Grindstaff has been an active and continuous SWE member, holding positions at the Society, regional, and local levels. She has been a frequent presenter at Society, region, and WE Local conferences. Grindstaff is immediate past-chair of the SWE editorial board, where she led discussions on content ideas for the award-winning SWE Magazine. She has written numerous articles for the magazine, focused on complex topics, such as midcareer challenges and unconscious bias. In addition to being a SWE Fellow and life member, she is a recipient of the SWE Emerging Leader Award and is featured in the SWE book Be That Engineer: Inspiration and Insight from Accomplished Women Engineers.

Grindstaff is a change agent for the National Center for Women and Information Technology (NCWIT), where she has influenced countless male and female engineers. She has led key programs for NCWIT, focused on the challenges that midcareer women face and how to write job ads that attract diverse applicants. Both resources are still in use and have been downloaded thousands of times.

A leader in her community for more than 20 years, Grindstaff has been active in both Boy Scouts and Girl Scouts, taught computer classes for homeless women, and hosted students on International Day of the Girl. She has worked with middle and high school STEM teachers to increase the public’s awareness and benefits of engineering as a profession for women. She is a certified trainer for microinequities, emotional intelligence, and unconscious bias, and serves as a center of information on women in engineering. She continually encourages women engineers to attain high levels of educational and professional achievement and drive the value of diversity.

Grindstaff’s achievements have been recognized through many awards, including the Intel Achievement Award, Intel Software Quality Award, and McAfee’s MVP Award. Grindstaff holds a B.S. in computer science with a minor in business administration from California State University, Sacramento. Outside of her career and external leadership activities, she enjoys traveling the world with her husband and two children.
Kayleen Helms, Ph.D., is an External Engagement Lead for Intel Corporation. In this role, she drives interaction with customers, industry consortia, suppliers, and various Intel organizations to address structural integrity challenges in manufacturing, thermal-mechanical enabling, and other quality and reliability risks.

Even though she was pursuing a tenure-track faculty position, Dr. Helms was recruited by Intel for an industry position and joined its Assembly Test and Technology Development organization in Chandler, Arizona. There, she has worked in multiple groups supporting package architecture, assembly and test, design for excellence, geometric dimensioning and tolerancing, thermal enabling, and quality and reliability projects.

When asked how she could go from civil engineering to aerospace to the electronics industry, she replies, “While the materials, geometries, loads/constraints, and design approach may change by application; the laws of physics and mathematics do not.”

Dr. Helms has taught several courses, coordinated and taught on engineering study abroad programs in Europe, and led multiple engineering curriculum research and diversity and inclusion (D&I) efforts, along with participating in STEM outreach and mentoring.

She is a member of several professional organizations across disciplines; a reviewer for various journals; and is invited to appear at various conferences as a speaker, delegate, or panelist. She is active in a number of external leadership and service roles, including chairing the JEDEC JC-11.2 design requirements committee and serving on external advisory boards for research, education, and D&I.

Since joining Intel, Dr. Helms has promoted SWE’s mission through internal efforts, serving as a Women at Intel Network mentor, establishing the first local community in her department for technical women to address the challenges of working in isolation. Her coaching of junior women and underrepresented minority employees, and serving as a D&I champion, inspired similar communities in other Intel departments, and a larger community for the organization as a whole.

Externally, Dr. Helms judges at international science and engineering fairs, and has served as a mentor at both of her alma maters, in the SWE FLAME program at Texas A&M University and the Marquette Mentors program at Marquette University. She has mentored 100-plus students and professionals who are referred to her or whom she meets at conferences, and recently assisted in a reboot of the IEEE Phoenix Women in Engineering affinity group, which serves women professionals in the local community.

In Dr. Helms’ first university class, her professor looked at the three women in his group of 100 students and said, “Women do not belong in engineering.” In spite of those words, Dr. Helms has never wavered in her path to success, or failed to light that path for others. Originally from Milwaukee, she completed a B.S. in civil engineering (structures) from Marquette University, and an M.S., Ph.D., and two postdocs in aerospace engineering at Texas A&M University. Having spent time in more than 40 countries, she is known to family, friends, and colleagues as a “world traveler.”
Colleen O’Shea McClure
THE BOEING COMPANY

For outstanding contributions to tanker aircraft design and safety; for steady and transparent leadership that produces stellar results; and for inspiring her mentees to become mentors themselves.

Colleen O’Shea McClure is senior engineering manager, environment, health, and safety (EHS) engineering at The Boeing Company in Renton, Washington. McClure is leading the engineering profession to design for both a better planet and zero workplace injuries. Her implementation of designs for EHS was recognized by the National Safety Council with the 2018 Campbell Award. Beyond designing for EHS, McClure is an inventor in the field, leading new technologies nationally and internationally.

Her accomplishments at Boeing have earned and inspired respect. She is a motivational leader, a team builder, and a change initiator, building and improving teams that dramatically improve performance. Her contributions to the structures design of the KC-46 Pegasus tanker and the overall success of the program brought her internal awards and a standing ovation from her peers. One of her key accomplishments was in Boeing’s flammability test labs in 2009, where, due to her efforts, disruptions to Boeing commercial airplane deliveries went from 23% to zero, and the engineering team at last enjoyed a year-end holiday break.

McClure became involved with SWE as a university student, where, eager to understand the engineering world, she engaged her peers and led technical tours. The community around them was an inspiring mix of massive construction and world-class companies. Witnessing soaring student engagement, McClure became energized and committed to sparking the joy of engineering within others. Since then, she has worked extensively in her workplace and in her community to stimulate women to achieve their full potential as engineers and leaders.

For more than 10 years, SWE has recruited McClure to mentor. Her influence has touched the lives of hundreds of students. She most enjoys the one-on-one mentoring that allows her to see the engineering and leadership qualities of women bloom. She also takes advantage of SWE networking and leadership opportunities, judging student competitions, award nominations, grading math contests, coaching math students, lecturing in college classes, and speaking as a panelist.

McClure continues to be a highly visible role model in her community. While working, she has served on the boards and as an officer of local nonprofit organizations. She was chair and vice-chair of the North Seattle College Education Fund, a charitable organization distributing more than $9 million for funding program development and scholarships. She is now on the University of Washington’s mechanical engineering external advisory board.

She graduated from the University of Washington with a B.S. in mechanical engineering. She completed an MBA, also from UW, and executive training with Columbia University. McClure and her husband of 37 years are the proud parents of an adult son and daughter, and, when not traveling and hiking, the couple enjoys their home in West Seattle.
Susan B. Orr is senior director of program management for Medtronic’s Restorative Therapies Group. In this sector-level position, she is accountable for improving the predictability of new product development processes to execute large, cross-functional projects that support a global $8 billion in annual revenue business, which consists of brain therapies, pain therapies, specialty therapies, and spine medical devices.

Over the past 28 years, Orr has held roles of increasing responsibility with both Johnson & Johnson and Medtronic in research and development, product development, program management, market intelligence, business model innovation, strategic account sales/marketing, and strategic planning. Her significant technical and leadership contributions have earned numerous patents and awards. Orr has been selected for countless professional development opportunities, from leadership consortium; Smith College, advanced project management training, Prosci-change management, to high-performance leader and leadership transitions forum executive development programs.

She has been an active leader in corporate initiatives that support SWE’s mission. For six years at Johnson & Johnson, she led her local Women’s Leadership Initiative chapter, with an emphasis on developing female leaders at the site. She led development of a unique campaign focused on retention of women at the Johnson & Johnson companies, earning the Rising Star Award from the Healthcare Businesswomen’s Association.

Orr is a founding member and co-leader of the culture team for Medtronic’s Women in Science and Engineering (WISE) initiative, which increased women’s representation in technical roles by 13% over the last three years. She continues to develop female leaders at Medtronic. Orr’s visibility as a role model has been key to the initiative’s success. One WISE initiative began with internal and external benchmarking and resulted in the development of four pillars: refresh culture, outreach, acquisition, and development (ROAD). Orr co-led the “refresh culture” portion of the WISE ROAD, organizing “sensing sessions” with more than 350 female employees from 18 cities across four countries. A follow-up survey received 1,084 responses across 25 U.S. cities. Based on the feedback, Orr and team created “persona stories,” which resulted in a comprehensive strategic approach to creating an inclusive culture.

In her community, Orr has served on the board of Pine Castle, a northeast Florida nonprofit that empowers adults with intellectual and developmental differences through opportunities to learn, work, and connect. Today, Orr is part of the class of 2019 Leadership Jacksonville program, which analyzes major areas of community concern.

She also supports the University of North Florida’s College of Computing, Engineering and Construction. By joining forces, Medtronic and the university’s Center for the Advancement of Women in Engineering are accelerating solutions that improve recruitment, development, advancement, and retention of women engineers at Medtronic and in the university programs.

Orr holds a B.S. in chemistry from Florida State University. When not serving as a mentor, volunteer, or Medtronic leader, she treasures the time she spends with her husband, daughter, and large, extended Italian family.

Susan B. Orr
MEDTRONIC

For outstanding technical leadership; for instilling a culture of integrity, trust, and inclusion; and for serving as the kind of leader others can aspire to be.
Stacy Kalisz Johnson is the university program manager for Keysight Technologies’ Design Engineering Software division. She has been based in Gilbert, Arizona, for her nearly 20-year Keysight career. During her career with Keysight, Johnson has worked in applications engineering, technical marketing, product management, product marketing, field marketing, distribution marketing, global marketing and has acted as a market development manager, and region email marketing manager.

With science kits ready for easy dispatch to a STEM event, and three engineering friends’ resumes in her inbox to review and refresh at all times, Johnson constantly seeks opportunities to help others. Mentoring is a part of her daily routine. With more than 10 current early-career engineering mentees, five peer mentees with whom she meets regularly, and countless clients whom she mentors for health and wellness, the sphere of influence she touches on a daily basis is large. Mentoring is more than what Johnson does; it is at the core of who she is. She thrives on coaching interview skills, teaching concepts, brainstorming with people, and creating actionable plans to ensure better futures for all involved.

Over the last five years, Johnson has been active within Keysight as a member of the Keysight-SWE Enterprise Program (KSWEP) council. KSWEP’s eight-person council sets strategy for Keysight/SWE shared initiatives, including supporting the success and advancement of women engineers in the workplace and providing equal opportunities for them to participate in the annual SWE conference.

Since 2008, Johnson has been an active volunteer for the American Heart Association (AHA) — as a Go Red Ambassador board member and, from 2016 to 2018, as chair, leading the 40-person board, providing advocacy and education for the city of Phoenix. In 2019, the board obtained 10 proclamations of cities in the greater Phoenix area, four of which were personally obtained and received by Johnson. In 2018, she facilitated STEM Goes Red, a daylong workshop with the local AHA, the Arizona Science Center, and local sponsors. At the workshop, Keysight After School kits were provided to 140 girls to promote math and science, along with a heart-healthy message. Johnson received the organization’s highest honor, the American Heart Association Outstanding Community Health Leader Award, in 2017. In addition, she volunteers frequently at her church and in her community.

Johnson holds B.S. and M.S. degrees in mechanical engineering from the Rochester Institute of Technology and a Master Certificate in project management from The George Washington University. She is the “operations manager” of a household of three athletic boys. She and husband, Rich, enjoy fitness and travel activities. Johnson enjoys soccer and is active in her local SWE section and in her local Zeta Tau Alpha alumnai association.
Reiko A. Kerr

LOS ANGELES DEPARTMENT OF WATER AND POWER

For consistent, dedicated mentoring of both men and women; for building an inclusive workplace culture; and for serving as a shining example of empowered women empowering other women.

Reiko A. Kerr is senior assistant general manager, power systems, engineering, planning, and technical services for the Los Angeles Department of Water and Power (LADWP). With 25 years in the financial and utility industries, Kerr has a strong leadership background in both technical and financial aspects of water and power utilities. In 2016, she moved to her current position, overseeing strategic planning; planning and engineering operations; and co-leading Clean Grid L.A., a project that aims to convert the current grid to clean-energy alternatives.

Driven to improve gender equity and diversity among LADWP employees, Kerr has developed an extensive mentoring program to support and recruit emerging women engineers, and to mentor male leaders, administrators, and supervisors to mitigate cognitive biases and offer a level playing field for female candidates. Throughout LADWP, women engineers consult Kerr for advice and ways to improve their career paths and professional development. As the first woman at LADWP to hold her current position, Kerr is a role model to the women she leads and mentors, helping transform the workplace so that women engineers and technical staff feel there are no barriers to what they can achieve.

Kerr is also viewed as a role model for younger women beginning their STEM careers. She also supports women's rise into upper management. Her advocacy led to an astonishing 600% increase in the number of women promoted into power engineering management positions at LADWP between 2017 and 2018.

Another goal that Kerr works toward at LADWP is ensuring that the diversity of the workforce reflects the communities it serves. To that end, ongoing discussions are taking place between LADWP and the City of Los Angeles on issues related to equity and promotional practices.

Outside work, Kerr has been an active member of the Association of Women in Water, Energy and Environment since its founding in 2007 and has served on its board since 2015. Kerr is an executive mentor in the Western Energy Institute's Business Acumen for Emerging Leaders program, and is an active and founding member of the LADWP-SWE affiliate group, launched in March 2018.

She has served on multiple boards and committees, including the American Public Power Association, the California Municipal Utilities Association, the Southern California Public Power Authority, the Intermountain Power Project, the San Onofre Nuclear Generating Station, and the Boulder Canyon Project – Hoover Dam.

Kerr holds a B.S. in business administration from California State University, San Bernardino, and is a CPA. She and her husband, Larry, have five children and four grandchildren.
Leslie L. Oliver is director of global supply chain for Solar Turbines – a Caterpillar Company. Over her 22 years with the company, she has held a variety of roles and has spent the majority of her career as a leader. In her current position, Oliver is responsible for managing Solar Turbine’s worldwide supplier relationships, overseeing hundreds of millions worth of material and more than 200 worldwide employees. Her career path has included roles in supply chain, quality, manufacturing, and information technology. She also spent two years on an international assignment in Switzerland as a supply chain manager and was the first employee to earn a Solar-sponsored graduate degree in supply chain management.

Oliver makes it her mission to help women succeed and advance by pioneering new programs that forge a path for their future. She piloted Solar Turbine’s telecommuting policy and created an inclusion council within the company’s largest business unit to oversee diversity and inclusion initiatives. With Oliver’s leadership and influence, Solar Turbines introduced inclusion training for hiring managers and revised its recruiting processes, targeting schools and industry conferences where female candidates are represented. She has been an employee resource group sponsor and advocate, and is one of the founding members of the conscious inclusion task force, which seeks to increase awareness of inclusive language and behaviors among leaders and employees. Oliver’s enthusiastic leadership and “focus on the positive” mentality has been instrumental in helping drive the company to a more inclusive culture.

Throughout her career, Oliver has mentored hundreds of women on topics ranging from career development to the struggles of working in a male-dominated environment. She has been a resource for connecting women to sponsorship and development opportunities and a frequent speaker at events. Oliver recently co-founded a reverse-mentoring program with Solar Turbines executive leadership to create a safe environment for conversations on gender bias, accelerating change toward an inclusive culture that holds more opportunities for women. One of Oliver’s greatest impacts has been her unwavering momentum to create a climate of conscious inclusion within senior leadership at Solar.

In addition to her successful career and advocacy work, Oliver serves on several boards and advisory panels for universities, industry organizations, and nonprofits. She is a founding member of United Way’s Women’s Leadership Council, focused on preparing underserved women and children of all ages, and part of the founding team for Solar’s Women in Leadership team, a volunteer-run program that prompted action among the management and expanded leadership teams to change both culture and policies to remove barriers women face in advancing their careers in manufacturing and engineering, and an advocate for First Robotics within Solar. Oliver also volunteers her time with United Way programs; supports many fundraisers such as the CARE House to help homeless children, and the Soroptimist International to raise funds for abused women in transition; and attends fundraisers for the YWCA to break the cycle of domestic violence and homelessness, and other charities.

Oliver holds a B.S. in business administration from San Diego State University; an M.S. in supply chain management from the University of San Diego; and holds numerous awards, credentials, and certifications. She is also a wife, and mother of four daughters and one son.
Karen Tokashiki is director of engineering for Northrop Grumman Corporation, Aerospace Engineering, where she is currently responsible for leading the System Test and Operations home room. Before assuming her current role in 2019, she led organizations of multidiscipline engineers supporting satellite and aircraft program execution.

Throughout her 35-year career, Tokashiki has been a force for diversity and inclusion. She co-created Northrop’s Women in Leadership (WiL) program in 2010, when she became operations director for the 10,000-person Aerospace Engineering organization. WiL brought together outstanding women with different backgrounds from various locations across the organization, with the goal of growing inclusion of female leaders by developing competencies and providing visibility.

As program director and lead mentor, Tokashiki directed the yearlong program, which included workshops, mentoring, networking with executives, and team projects, ensuring that the participants were matched with mentors. She established personal mentoring relationships, obtaining sponsorships from executives, and opening doors by making introductions. Tokashiki inspired women to develop career-long relationships.

She continued to direct WiL after becoming director of specialty engineering. When traveling, she met with alumnæ and current WiL participants, encouraging relationships to develop. WiL was so successful that, in 2015, Northrop took it corporationwide. It continues today as a model corporate program focused on developing new female directors.

Following the success of WiL, Tokashiki directed a program aimed at development and retention: the Northrop Grumman Aerospace System’s Women in Science and Engineering (WISE) program, which pairs junior women with senior technical mentors. Tokashiki leads workshops showcasing technical career paths and teaches sessions on team building and creating psychological safety.

In addition to WiL and WISE, Tokashiki is a mentor and sponsor of the company’s leadership development and engineering technical leadership programs. Through the American Corporate Partners program, she mentors returning veterans, providing career advice, resume review, and interview support.

Tokashiki speaks to and provides advice to students of all ages. She mentors at university SWE events and has taught seminars on male/female biases in the workforce. She is an active member and leader in her community, volunteering in schools and serving as an art docent. She currently serves on the Manhattan Beach Hometown Fair executive board, planning and executing the annual citywide fair. Tokashiki has continued to expand her engagement with the community by supporting Manhattan Beach’s Young Entrepreneurs Academy, reviewing business plans for high school students’ potential enterprises.

She is a recipient of the Northrop Grumman’s Women of Achievement award and its Champions Circle Innovation award. She earned her B.S. from the University of California, Davis; an M.S. in electrical engineering from the Massachusetts Institute of Technology; and is a graduate of the University of California, Los Angeles’ executive MBA program.

Tokashiki enjoys skiing, sports, musical activities, and vacationing with her husband of 33 years, Robert, and her family. She is the proud parent of daughter, Jenna, and son-in law, Matt, both serving as U.S. Air Force officers at Andrews Air force Base in Maryland, and son, Alan, an electrical engineer at Northrop Grumman.
Mary C. Verstraete, Ph.D., F.SWE
THE UNIVERSITY OF AKRON, RETIRED

For a distinguished career spent encouraging and supporting women engineers with wholehearted commitment to their success; and for decades of philanthropy and volunteerism transcending academics and influencing her community.

Mary C. Verstraete, Ph.D., F.SWE, is an associate professor emeritus of biomedical engineering at The University of Akron (UA). She retired from UA in May 2018 as the interim associate dean for undergraduate studies. She was the faculty advisor for the UA SWE collegiate section for 26 years and is chair of the SWE editorial board.

Dr. Verstraete received her B.S., M.S., and Ph.D. degrees in engineering mechanics from Michigan State University and joined UA as an assistant professor in 1988. During her 26 years with the university, she received tenure and promotion to associate professor (only the second woman in its College of Engineering to do so), served as the inaugural Women in Engineering director, and was elected department chair of biomedical engineering. As department chair, she developed an undergraduate program in biomedical engineering, which won approval from the state of Ohio in 1998, and has been continuously accredited by the Accreditation Board for Engineering and Technology. She administrated the program from 2001 until 2016, when she began serving as interim associate dean for undergraduate studies in the College of Engineering.

In addition to mentoring hundreds of women at the beginning of and throughout their careers, Dr. Verstraete has been active in the Biomedical Engineering Society; the American Society of Biomechanics; and the American Society for Engineering Education, and received its Theo C. Pilkington Outstanding Educator Award in 2008 and its Outstanding Teaching Award in 2016. She has been highly active in the Society of Women Engineers, holding numerous offices at both the section and Society levels, including chair of the Women in Academia committee. She was awarded the Distinguished Engineering Educator Award in 2007, the Outstanding Faculty Advisor Award in 2011, and became a SWE Fellow in 2016.

Dr. Verstraete is an avid philanthropist, whether she is supporting activities to increase the number of women in engineering or supporting charitable not-for-profit organizations. She has participated in 10 Susan G. Komen® 3-Day® walks, either raising money and walking 60 miles in three days, or supporting walkers as a volunteer at the events. Over these 10 years, Dr. Verstraete collected donations exceeding $25,000 and has been entered into the Commitment Club of the organization.

She is also a fervent volunteer with Habitat for Humanity® and has spent countless hours on sites, helping build homes. Dr. Verstraete serves on the board of directors for Habitat for Humanity of Summit County and, since her retirement, volunteers at least once a week, putting up walls and mudding drywall, earning the title “Loyal Volunteer,” the only woman to work with the other “LVs” each week on the job sites. Dr. Verstraete hopes to recruit more female retirees to volunteer with her.

In her spare time, Dr. Verstraete loves to golf and is an avid photographer. She plans to travel more now that she is retired and is looking forward to visiting four remaining states next summer to complete all 50.
Elif Ertekin, Ph.D.
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

For a forward-looking, interdisciplinary approach to engineering research and teaching; for significant contributions to the understanding of materials for next-generation energy solutions; and for community outreach and engagement.

Elif Ertekin, Ph.D., is an associate professor in the department of mechanical science and engineering and the materials research laboratory at the University of Illinois at Urbana-Champaign. She leads the Ertekin Research Group, and her research program lies at the intersection of materials science, mechanics, and modeling and simulation. Her team is focused on the development of numerical approaches and frameworks that seek to connect the atomic and microscale structure of a material to its resulting properties and functionality. Dr. Ertekin’s modeling and simulation techniques range in scale from atomistic to microscale to continuum levels. Applications of interest include thermal management for power systems or thermoelectrics for waste heat harvesting, shape memory alloys and other phase transformation materials, and emerging low-dimensional materials for next-generation electronics and optoelectronics, materials for renewable energy technology, such as solar photovoltaics and solar photocatalysis, and emerging solid-state approaches to cooling and refrigeration. She currently serves as the director of the National Science Foundation nanomanufacturing node of the Network for Computational Nanotechnology.

At the University of Illinois, Dr. Ertekin teaches courses spanning from early undergraduate to the graduate level. She was a leading member of a faculty team responsible for modernizing and restructuring the classic engineering undergraduate sequence of courses in statics, dynamics, and solid mechanics. Dr. Ertekin was instrumental in introducing technological innovations and active learning into the classroom. She established a new class, “Fundamentals of Modern Photovoltaics,” which acquaints students with renewable energy technologies with an emphasis on solar photovoltaics. She has appeared on the “List of Teachers Ranked as Excellent by Their Students” nine times at Illinois, an honor reserved for engineering faculty ranked in the top 10%.

Dr. Ertekin has received several research and teaching awards, including the College of Engineering’s Dean’s Award for Excellence in Research and the Everitt Award for Teaching Excellence; the Early Career Faculty Fellow Award from the Minerals, Metals, and Materials Society; and the CAREER award from the National Science Foundation. She has co-authored 60 journal publications and delivered more than 85 invited or contributed oral research presentations at conferences, workshops, and at U.S. and international academic institutions.

Active in professional and community outreach, in one of her classes Dr. Ertekin directly engages graduate students in community outreach to middle and high schools with large populations from groups traditionally underrepresented in STEM. She is also co-director of an annual summer camp that brings high school girls to campus to promote their interest in pursuing STEM careers.

Dr. Ertekin earned dual B.S. degrees in engineering science and mechanics and applied mathematics, and an M.S. in engineering science from The Pennsylvania State University. She obtained her M.S. and Ph.D. in materials science and engineering from the University of California, Berkeley. Her current hobby is retrofitting her 1920s residence to a net-zero energy home.
Britta Jost is a new product introduction team leader for Caterpillar’s medium tractor products business. In this role, she is responsible for managing programs with investments totaling more than $50 million and leading a cross-functional team of more than 20 in the concept-through-production of new medium dozer designs. She is charged with increasing customer value through productivity, reducing owning and operating costs, improving ease of use, and reducing fuel consumption. Her team includes the engineering, marketing, product support, manufacturing, and accounting leaders of the program.

Jost joined Caterpillar in 2005. In her first 15 years with the company, she gained technical expertise and accepted steadily increasing responsibilities. She worked in the dynamic simulation area, building on her academic study of dynamic systems modeling by using internally developed simulation software to build and run computer models of track-type tractors. Accepting a developmental assignment as a test engineer at Caterpillar’s proving ground, Jost designed tests and collected data that validated the computer models she once built, and was named co-inventor on three patents.

Promoted to senior engineer, Jost took on design-control responsibility for D6 track-type tractor chassis components worldwide, providing new, quality designs; working with product support and manufacturing areas; and providing timely resolutions to field and production problems. Promoted again to cost team leader for all medium tractor product design areas, Jost gained a better understanding of the business side, as well as the customer value, which has served her well in her current role.

Jost is Caterpillar’s lead engineering recruiter at Michigan Technological University.

An active member of the Society of Women Engineers, in 2014 Jost was named a SWE Distinguished New Engineer, for her leadership, work accomplishments, and community service. She has served the Central Illinois Section as president-elect, president, and section representative, and received her section’s Distinguished Member Award in 2012. Jost is currently the counselor for the Michigan Tech SWE section.

She is dedicated to community service, as demonstrated by her work as a court-appointed special advocate (CASA) for children. As a CASA, Jost is specially trained and appointed by a judge to serve as an advocate for abused and neglected children. Over the past 10 years, she has been an advocate for three sets of siblings, logging more than 600 hours of volunteer work on her cases. She was named one of Peoria’s 40 Leaders Under Forty in 2013.

Jost earned her B.S. in mathematics (magna cum laude) and an M.S. in mechanical engineering in dynamic systems from Michigan Technological University. She is married to fellow engineer Jeff Jost, and the couple has two young children.
Jamie Krakover is a first-line manager for strength engineers on the F/A-18 in Boeing Global Services, where her team supports sustainment and modification of the legacy aircraft. Previously, Krakover was a structural and teardown engineer at the teardown lab for Boeing Research & Technology in St. Louis, where she and her teams provided cost analysis to assist with part redesign, cost reduction, and/or purchase negotiation for a variety of aircraft platforms. She served as a key contributor to the lab’s more than $1 billion in total cost savings.

Krakover has grown a majority of her Boeing career as a strength engineer with the Structures Technology group. She developed a Boeing-wide database for additively manufactured materials, and database tools that provide faster certification of materials for structural applications. She also performed strength analysis on composite test articles for the Defense Advanced Research Projects Agency. As a materials and process engineer within Boeing Research & Technology, Krakover performed materials modeling for thermal and acoustic metamaterials, and collaborated with several universities on materials research.

During her time in the Boeing Leadership Excellence Acceleration Program (LEAP), Krakover organized monthly training and development opportunities for 100 participants, managed an employee engagement project, and established a new engagement team for the program. She also leveraged her knowledge from LEAP to stand up Boeing’s “one leadership” program, Leadership Next. She was instrumental in developing the learning objectives and alumni structure for the 400-person program.

As the 2017 SWE Region i conference chair, Krakover organized the conference in St. Louis. She also led more than 1,400 SWE members as the Boeing SWE membership chair. As the Boeing St. Louis SWE focal, she hosted career development and networking events, secured funding for conference attendees, collaborated with Boeing resource groups, and planned Introduce a Girl to Engineering Day at the site. As the Boeing SWE conference chair, she managed all conference planning activities for Boeing’s 100-plus attendees. Previously, Krakover served as St. Louis section secretary for five years and has spoken at regional, WE Local, and annual conferences.

Passionate about inspiring young people to pursue STEM fields, Krakover mentors an all-girls FIRST® Robotics team, volunteered at the annual FIRST Robotics national championship, and is an active participant on the EngineerGirl website. With her LEAP colleagues, she has volunteered at food pantries, homeless shelters, and schools.

Krakover holds a B.S. in aeronautical and astronautical engineering from Purdue University and an M.S. in aeronautical and astronautical engineering from Washington University in St. Louis. In her spare time, she writes children’s science fiction and fantasy, and has had two short stories published in the Brave New Girls anthologies. She also enjoys attending comic-book conventions and cosplay, and spending time with her husband, Andrew, and their son and dog.
Jennifer LaVine is global military systems and services program manager for Sikorsky Aircraft – A Lockheed Martin Company. In this role, she has a responsibility for the segment’s upgrades and sustainment business, focusing on the aftermarket execution with Polskie Zakłady Lotnicze Sp. z o.o. (PZL Mielec), a subsidiary of Sikorsky Aircraft. Previously, she was the Denmark program manager in naval helicopter programs and assisted in Royal Thai Navy MH-60S and future foreign military sales product requirements, planned for both the Indian and Hellenic navies. As Denmark program manager, she was responsible for more than $250 million with nine total aircraft deliveries and in-country retrofits. She led the integrated program team to achieve contract requirements while meeting business objectives, including financial targets, safety and quality specifications, technical requirements, and delivery dates. LaVine interfaced and developed working relationships with the customers, suppliers, and Sikorsky leadership teams to ensure program success.

She began her career as a quality engineer at Schick Wilkinson Sword, where she was awarded a patent for movable center of gravity razor handle design that improved shave ergonomics. In 2008, LaVine joined Sikorsky as program quality engineer for the Seahawk MH-60S helicopter program. She co-developed a new program quality management team process, improving customer reporting from 10% to 100% on time, for which she received the Team Hawk Award.

Changing course to program management in 2012, she worked on the Black Hawk program, then returned to Naval Hawk. LaVine is now deemed a subject matter expert in Naval Hawk government proposal process within Sikorsky. One project required her team to produce a test kit within three months of contract award, or risk cascading delays. The team’s creative solution enabled the customer to maintain its original flight test schedule, with LaVine fostering a safe environment despite high pressure. The customer commended the team as the “miracle workers,” giving it the highest possible rating.

LaVine has been an active SWE member since her university years at Rensselaer Polytechnic Institute (RPI). She served as the SWE-RPI section treasurer and, after moving to Connecticut, served as its section representative for many years. She took a break from leadership after her first daughter was born and attended school part time to earn her MBA, finishing a year after her second daughter was born. As both girls entered school, LaVine joined the Hartford Section, where she is currently vice president. At her recommendation, Lockheed’s Women’s Impact Network (WIN) began partnering with local SWE sections, and a SWE liaison position was created within each WIN chapter. LaVine currently serves as the first SWE liaison for CT-WIN.

She earned a B.S. in mechanical engineering, a B.S. in management, and an MBA from Rensselaer Polytechnic Institute. LaVine lives in Guilford, Connecticut, with her husband, David, and two daughters. She enjoys traveling to national parks with her family, singing in a competitive barbershop chorus, knitting, listening to audiobooks, and pretending she has a green thumb.
Jessica Mattis-Carolan is business unit manager, Roadside Assistance and Business Resource Center, at General Motors (GM). As part of this role, she and her team are responsible for leading processes for more than 500 advisors, a $70 million budget, and 2 million customer interactions annually. Previously, she led the creation of a new program execution team for OnStar retail experiences, including time architecture, processes, and one-team culture. As a lead program manager in 2018, she guided implementation of a $150 million project, receiving feedback that “she is magic in leading teams to accomplish the impossible.”

During her early career in process engineering, Mattis-Carolan worked on energy management, process optimization, and cost-savings projects that saved millions of dollars. As paint launch coordinator at Orion Assembly, she demonstrated her conflict management ability, timeliness in decision-making, and ability to develop peer relationships by coordinating the high-stakes, $180 million new paint shop project.

Mattis-Carolan’s technical results and leadership capability have resulted in a series of promotions and cross-functional development leadership roles in manufacturing, manufacturing engineering, and global connected customer experience. She has repeatedly demonstrated an inclusive coaching style, ability to activate new processes, and strong belief in teamwork. Her leadership is recognized by four key strengths: championing change, building effective teams, timely decision-making, and managerial courage.

She is an active participant in GM’s employee resource group, GM WOMEN. She was part of the company’s Women in Manufacturing group, where she co-chaired the Pontiac Assembly chapter (2007-2009), initiated revitalization of the Orion Assembly chapter (2010), and planned corporatewide annual conferences (2014-2016). In 2015, Mattis-Carolan led GM to participate in International Women’s Day (IWD), to drive diversity and inclusion. In her role as IWD coordinator, she exponentially grew GM’s participation to 16 countries, 32 functions, and 86 sites/groups participating in “Painting GM Purple” in 2019.

An active SWE member since joining as a student at the University of Michigan, Ann Arbor in 2000, Mattis-Carolan became a life member in 2007. She was a SWE nominee in the 2009 New Faces in Engineering program and recognized in 2013 as a SWE Distinguished New Engineer. Locally, she held elected positions in the Detroit Section for more than a decade, including treasurer, secretary, section representative, 60th anniversary president, and vice president of professional development. She volunteered and led many SWE activities, including professional development conferences and outreach events. Mattis-Carolan also served on SWE’s finance and awards committees. As a change agent, she led the Detroit Section to adapt to meet member needs, create new positions, and re-energize joint local events with the Society of Hispanic Professional Engineers and the National Society of Black Engineers.

Mattis-Carolan holds a B.S.E. in chemical engineering and an MBA in lean manufacturing from the University of Michigan. She enjoys spending time with her husband, parents, brother, and SWE friends, and taking part in church activities.
Kate Maxwell is the engineering lead for Raytheon Company’s Indianapolis site and chief engineer for the Navigation and Modernization Solutions (NMS) Product Support business area. Maxwell has been with Raytheon since 2004, working in Software Engineering, Systems Engineering, Program Management, Operations, and Research & Development (R&D). Raytheon Company, with 2018 sales of $27 billion and 67,000 employees worldwide, is a technology and innovation leader specializing in defense, security, and civil markets throughout the world. Raytheon is headquartered in Waltham, Massachusetts.

Maxwell has 15 years of experience supporting programs for government customers; managing strategic research and development efforts across the business; and providing technical expertise in the areas of mission management and unmanned systems. Maxwell was founding director of Raytheon Intelligence, Information and Services (IIS) Innovation Center, which inspires and empowers Raytheon employees to innovate at all levels and across all functions. Her leadership led to explosive growth in innovation and intellectual property filings, for which she received the 2018 IIS Competitive Advantage Award for driving innovation culture change within Raytheon.

Maxwell is an accomplished and sought-after public speaker who has contributed to multiple patent filings, invention disclosures, publications, and conference proceedings both domestically and abroad. She has held the Raytheon Technical Honors distinction on several occasions, as voted by her engineering peers, and was a 2018 Raytheon Excellence in Engineering and Technology Award recipient for her innovative technical accomplishments in countering threats from unmanned aircraft systems.

Maxwell is a passionate advocate for STEM outreach, mentoring, and diversity and inclusion. She frequently volunteers with organizations such as SWE, Girl Scouts of America, DiscoverE, PowerToFly, EngineerGirl, the Boys and Girls Club, and with local schools and universities. She also founded the Maxwell Scholarship for Women in Computing and Engineering at her high school alma mater, where she awards one scholarship annually to an outstanding young woman pursuing higher education in a computing or engineering major.

Early in her career, Maxwell founded and led a chapter of the Raytheon Women’s Network (RWN) at her former site in State College, Pennsylvania. She led this organization for a number of years, during which she planned and executed events covering career development, technology, work/life balance, and networking topics for Raytheon employees. Maxwell also identified a need to support mothers returning to the workforce and spearheaded a movement to establish nursing rooms at her Raytheon site and at others across the enterprise. In addition, she serves as executive sponsor of the Raytheon Women’s Network in Indianapolis, is an advisor to the Raytheon Young Employee Success Network, and is a sought-after mentor and mentee.

A member of the Society of Women Engineers, Maxwell is a mega-issue contributor and conference speaker and frequently engages with SWE collegiate sections nationwide.

Maxwell holds a M.S. in systems engineering from George Mason University and a B.S. in computer science from the University of Pittsburgh at Johnstown. She is a graduate of the Raytheon Engineering Leadership Development Program and the IIS Accelerator Program. Maxwell is married with two children, and in her free time, she enjoys skiing, paddle boarding, and traveling the world.