



ACHIEVEMENT AWARD

Naira Hovakimyan, Ph.D.

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

For advancing a new control methodology with far-reaching applications and for pioneering contributions to the field of robust adaptive controls in aeronautics and aviation.

Naira Hovakimyan, Ph.D., is the W. Grafton and Lillian B. Wilkins Professor in the department of mechanical science and engineering at the University of Illinois at Urbana-Champaign. In spring she was named inaugural director of the Intelligent Robotics Laboratory at the University of Illinois. She has also held a research faculty position at Georgia Institute of Technology, and she was on the faculty of the aerospace and ocean engineering department at Virginia Polytechnic Institute and State University during 2003-2008.

Her research centers on open problems in mathematical control theory and their role in safety-critical applications in a wide variety of disciplines, including aerospace, mechanical, electrical, petroleum, and biomedical engineering. Dr. Hovakimyan has made unprecedented contributions to the areas of optimal control, robust control, differential games, nonlinear adaptive control, and networked systems.

One of her most notable achievements is flight testing and validation of L1 adaptive control architecture in stall and post-stall flight regimes of a subscale commercial jet by NASA Langley Research Center's

AirSTAR facility during 2010-2011. In March 2015, L1 adaptive control law was validated by F-16 and B-52 pilots on Calspan's variable stability Learjet. In 10 sorties and a range of seven different failure scenarios, the controller validated its theoretical predictions of robustness and performance, and delivered stable, predictable flight. This was the first attempt at validation on a manned aircraft that could lead to certification of L1 controllers in the future. The L1 adaptive controller is commercialized by Raymarine in its Evolution autopilots and by Caterpillar in its hydraulic pumps. It has been tested for drilling operations by Statoil, as well as in problems of anesthesia for drug dosing. Dr. Hovakimyan has collaborated with the Naval Postgraduate School on developing a novel framework for trajectory generation for teams of autonomous vehicles executing cooperative missions with spatial and temporal constraints.

Dr. Hovakimyan's work has garnered many honors. In 2011 she received the American Institute of Aeronautics and Astronautics Mechanics and Control of Flight Award; in 2014 she was awarded the Humboldt Prize from the Alexander

von Humboldt Foundation in Germany. In 2015, she received the Engineering Council Outstanding Advising Award, an honor determined by students at the University of Illinois.

She received her master's degree in theoretical mechanics and applied mathematics in 1988 from Yerevan State University in Armenia. She received her Ph.D. in physics and mathematics in 1992 from the Keldysh Institute of Applied Mathematics of the Russian Academy of Sciences in Moscow, where she focused on optimal control and differential games. In 1997 she was awarded a governmental postdoctoral scholarship to work in INRIA, France. She is fluent in English, German, French, Armenian, and Russian and is the keynote speaker at scientific and technical conferences worldwide.

The co-author of a book and more than 300 refereed publications, Dr. Hovakimyan serves on editorial boards of several journals. She is co-author on five patents. In 2014 she co-founded IntelinAir for commercialization of data drones to deliver actionable intelligence in various industries, including precision farming and public safety, and others.



SUZANNE JENNICHES UPWARD MOBILITY AWARD
ENDOWED BY NORTHROP GRUMMAN CORPORATION

Barbara Brockett

HONEYWELL AEROSPACE

For an exemplary record of technical achievement and industry firsts, and for demonstrating throughout her career the positive impact of women who help women.

Barbara Brockett is vice president of engineering test services for Honeywell Aerospace, where she leads a 2,160-employee organization spanning 28 global sites responsible for development and delivery of test solutions and flight test operations for all Honeywell aerospace products.

Brockett's love of math and curiosity about avionics and aerospace took flight at Honeywell in 1983. Hired as a design engineer on the U.S. Air Force QF-106 drone program, she was promoted to drone business leader by 1994, where her ability to lead collaboratively generated further roles. In 1997, Brockett led the OH-58/RC-12 business, developing a highly successful control display system for a U.S. Army digital warfare experiment.

Brockett's career continued to advance when she transitioned to Honeywell's commercial sector, where she led the flight controls product line and Honeywell's Primus[®] Epic engineering development. Her flight controls product line achieved technology firsts, including Honeywell's first fly-by-wire system, and Primus[®] Epic is now the largest integrated avionics system in the company's portfolio.

In 2004, Brockett became the director of Honeywell's Crew Interface Research and Technology Center, where one of her team's signature achievements was

the introduction of synthetic vision for business jets and military helicopters. By applying an integrated systems approach and establishing a cross-boundary team, the center was selected for the Sikorsky Sandblaster program, using synthetic visions and pilot interface technologies to correct "brown-out" conditions for Army helicopter pilots.

In 2007, Brockett was promoted to vice president of engineering operations, where her focus on growth strategies and core processes spurred a 23 percent increase in the global engineering work force.

She was promoted to vice president of electronics systems engineering and applications in 2009. Her team of 850 global engineers achieved numerous technology firsts, including introduction of the synthetic vision SmartView[®] display for aircraft, and successful flight demonstration of the U.S. Army's Block II micro air vehicle. Brockett then completed a two-year assignment as vice president of avionics transformation, where she drove cycle-time and quality improvements across 19 centers of excellence and 13 global sites.

Often finding herself alone at the top, Brockett has remained passionate about helping other women. After joining the Society of Women Engineers' Corporate Partnership Council, she sponsored the ad-

dition of the SWE-Smith College women's engineering leadership programs to the Honeywell talent-development process. Brockett has also improved Honeywell's SWE conference participation, increasing the company's conference hiring from just two in 2009 to 43 in 2014.

In addition to serving as Honeywell's SWE executive sponsor, Brockett co-leads the Aerospace Engineering and Technology Diversity and Inclusion Council, which has expanded the SWE strategy to the Society of Hispanic Professional Engineers and the National Society of Black Engineers, and formed a university liaison program with 22 university sections. In 2014, Brockett partnered with other executives to launch the Aero Women's Council and the Women in Honeywell Engineering Network, furthering the advancement of women engineers and leaders. She championed the launch of a sponsorship program that provides developing leaders with stretch assignments, organizational exposure, and executive advocacy.

First in her family to receive a college education, Brockett graduated with a B.S. in electrical engineering from the University of New Mexico. She is an accomplished executive; a frequent speaker; a sought-after mentor; and a wife, mother, and grandmother.



RODNEY D. CHIPP MEMORIAL AWARD

Hussein K. Mecklai

INTEL CORPORATION

For his commitment to recruiting, retaining, and progressing women in technical roles, including developing and supporting numerous programs to advance women engineers.

Hussein K. Mecklai is a vice president in the platform engineering group (PEG) and general manager of system validation engineering (SVE) at Intel Corporation, where he has worked to increase diversity and women's leadership in engineering.

His activities range from sponsoring and resourcing programs within his organization of 2,700, to influencing the 22,000-person PEG and engaging in corporate-level diversity initiatives. Within SVE, Mecklai serves as the diversity sponsor for the SVE Women in Technology (SVE WIT) employee affinity group, whose purpose is to increase female representation in key leadership roles and to support women's networking. The program kicked off at the Intel Oregon site in January 2014, and after a successful yearlong pilot, SVE WIT is expanding to eight other SVE sites by the end of this year. Mecklai has also formed an SVE Diversity Working Group to drive aggressive goals around hiring, retention, and progression of diverse talent.

His focus on improving the representation of women in technology begins at the intern and college graduate level with a con-

centrated hiring effort that SVE launched in mid-2014. With the goal of achieving 50 percent diversity representation for 2015 intern and college graduate hiring, SVE has since achieved greater than market availability for technical female representation in entry-level positions.

This significant progress was due, in part, to increased engagement with SWE sections during college recruiting opportunities as well as engagement in SWE, Grace Hopper Celebration of Women in Computing, and Watermark conferences. In addition, Mecklai has supported the implementation of an integration program to ensure that interns and recent college graduates feel welcome, are well supported, and have access to local leaders. This integration program provides interns and college graduates with a personal "buddy," two additional local support contacts, and regular tech-talk networking lunches.

Mecklai has also supported efforts to increase the representation of experienced technical women. He has funded a dedicated diversity-staffing representative to help source all SVE positions to ensure that each hiring manager is presented

with qualified diverse and technical female candidates for every position.

He also advocates for women in the parent organization, PEG. Based on his research, Mecklai recommended new hiring and retention programs, resulting in PEG's funding the hire of more than 50 senior technical women. As of February 2015, this plan resulted in the hiring of 92 technical women. For senior-grade job roles, PEG's hiring managers must interview at least one diverse candidate, and 40 percent of those new hires must be diverse.

At a broader level, Mecklai is also a sponsor for Intel's overall women's affinity group, the Women at Intel Network (WIN). In 2014, he sponsored WIN events in Oregon and Guadalajara, Mexico.

Mecklai earned his bachelor's degree from Lafayette College and a master's from Lehigh University, both in electrical engineering.

His greatest joy is spending time with his wife and two daughters. He also loves to golf, and play billiards, tennis, and squash. Leading people and enabling them to be their best both individually and as a team is Mecklai's greatest passion.



RODNEY D. CHIPP MEMORIAL AWARD

Brian Rauch

JOHN DEERE

For his passionate advocacy to increase the number of women engineers and to ensure a diverse and empowering work environment.

Brian Rauch, senior vice president of engineering, manufacturing, and supply management in the Construction and Forestry Division at John Deere, manages a global organization and ensures that products are available worldwide when customers and businesses need them.

Since joining the company in 1994, Rauch has dedicated himself to ensuring workplace diversity. After a manager of engineering services approached him in 2010 with a proposal to support a Society of Women Engineers section in Dubuque, Iowa, Rauch encouraged employees to charter a SWE section and to take on leadership roles in the Society. Rauch set a precedent by connecting the local SWE section to John Deere's goals of attracting, retaining, and developing talent.

His diversity-empowerment activities began in 2000, when he became the director of engineering and technology at John Deere's Construction and Forestry Division. Noticing that women made up only 7.35 percent of the engineering team, the next year Rauch set a goal of having 50 percent of college graduates coming into the engineering organization to be

diverse by gender, ethnicity, disability, or experience.

In 2002, Rauch started a process in which he and the engineering managers in his organization — 15 to 20 leaders — met outside of the office and discussed each of the 250 engineers they oversaw. The process ensures that all engineers are discussed, assessed, and a plan is in place to support their skills and knowledge development.

Rauch started his engineering career with Caterpillar, where he advanced to design engineer for the four-wheel drive loader division. He then worked for Hewlett-Packard as a heads and disk development engineer in the disk mechanism division.

After joining John Deere, he gained a reputation for leading technical change. He introduced remote parameter control to the Deere Technology Center and to the Construction and Forestry Division. The technology has become one of the primary ways to demonstrate product reliability. Rauch also grew his team several-fold after being promoted in 2000 to director, engineering and technology, in the Construction and Forestry Division.

In 2007, Rauch became vice president, engineering and technology, in the C&F Division and led the global engineering organization. In 2013, he became the senior vice president of the same organization, leading product development and operations for construction and forestry equipment. He is responsible for the company's engineering, manufacturing, and supply management globally. Under Rauch's leadership, the Construction and Forestry Division has entered new markets in China and Brazil while continuing to build upon Deere's strong position in the United States and Canada.

Rauch holds a B.S. in mechanical engineering from the University of Wisconsin-Platteville. He received an M.S. in engineering mechanics, a Ph.D. in engineering mechanics, and an MBA, all from the University of Wisconsin-Madison. In addition, he earned an international business certificate from the Dartmouth College Tuck School of Business.

He is an avid runner and traveler and the father of four children, three of whom are currently in college.



RODNEY D. CHIPP MEMORIAL AWARD

Lee Tschanz

ROCKWELL AUTOMATION

For initiative in analyzing why women were leaving his organization and determined implementation of specific strategies that are changing a deep-seated culture.

Lee Tschanz, vice president of North America Sales, Services and Solutions at Rockwell Automation, leads more than 1,200 engineers in 50 offices throughout the United States and Canada, with an eye on cultural expansiveness.

In an effort to determine the top reasons women left the company, Tschanz analyzed data from a retention study and started driving cultural change. While traditional diversity efforts had focused on how women should change, Tschanz's research convinced him the men of the organization would have to change to address the top four findings of his retention study: inappropriate behavior; gender stereotyping; an "old boy" network and an exclusive environment; and women's isolation, primarily in field offices, from other women. In the past five years, Tschanz's efforts have resulted in a 49 percent increase of women in sales and a 16 percent increase in female managers (first-level supervisors through executives).

Tschanz's key initiative, a "Women Get Connected" event, started in 2009 with a focus on issues that women face in the workplace and how they could better network and meet senior management.

The event has grown from 50 women and senior managers to more than 200 women attending in 2014.

He has also helped increase the number of women from field offices who attend SWE's annual conferences. The 2013 conference attendees recognized the need to strengthen the network for field-based women and formed a new field-based committee within an existing headquarters employee resource group for women in engineering. This provided women 13 new leadership opportunities and resulted in seven networking events and 12 new STEM outreach activities outside headquarters. As of 2015, two of the 13 women were promoted to team lead roles, and they attribute their career advancement to leadership experience gained from this committee.

After being asked to form a new employee resource group at Rockwell Automation focused on women working in the field, Tschanz led a workshop that revealed additional barriers to women who sought to advance their careers, including the need for greater support for career development and more job flexibility to ensure work/life integration. The

workshop resulted in a Women in the Field group. The group has generated more than 20 new leadership roles and an advisory committee with direct access to Tschanz and his team.

Tschanz was recognized in 2014 by Portland, Oregon-based consultancy White Men as Full Diversity Partners with the Courageous Leader Award, for his "passionate commitment and pioneering mindset to forging partnerships across differences."

He expanded his inclusion efforts to Rockwell Automation distributors, resulting in an increase in female sales leaders in the past five years and more than 50 participants from the distributors in inclusion workshops. At the same time, Tschanz has increased his organization's North American business by 27.2 percent.

Tschanz earned a bachelor's degree in mechanical engineering from the University of Wisconsin-Platteville and an MBA from the University of Wisconsin-Milwaukee. He and his wife, Jean, have been married for 29 years and have four children and two grandchildren.



WORK LIFE INTEGRATION AWARD

Karla Tankersley

CORNERSTONE BRANDS INC.

For longtime advocacy of flexible, family-friendly workplace policies and leadership on the e-book *Work & Life Integration Playbook*, helping position SWE's expertise on the topic.

Karla Tankersley, a senior e-commerce engineering manager with Cornerstone Brands Inc., a West Chester, Ohio-based operator of catalog and online retailers, has worked fearlessly and passionately for family-friendly workplace policies ranging from providing part-time engineering positions to a conveniently located lactation room for new mothers.

Throughout her career, Tankersley has been successful in challenging the status quo's opposition to employing mothers as part-time engineers by convincing senior staff that the necessary staffing and shifting of responsibilities would be managed professionally.

Another outcome of Tankersley's collaborative efforts was the installation of expectant-mother parking signs at the distribution center. Most recently, she was instrumental in implementing a 10 percent discount at a local day care for Cornerstone employees.

Tankersley, who earned her bachelor's and master's degrees in industrial engineering from the University of Cincinnati, has put SWE on the map for work/life integration leadership with her initiative

to gather family-friendly workplace policies into formal recommendations called the *Work & Life Integration Playbook* (the playbook is available for download at <http://societyofwomenengineers.swe.org/e-book-download>).

The playbook has become a valuable resource for engineers and their employers and formed the basis of SWE's first e-book. It considers work/life integration through several lenses, and for both women and men: parenting, elder care, and dependent care, as well as flexibility, financial implications, and health and wellness issues.

Each topic is presented with compelling research, best practices, and case studies. For employers, the playbook presents the case that, with the appropriate resources and environment, it is not only possible to improve work/life integration for employees, but that supporting work/life integration is a competitive advantage.

Tankersley's work on the *Work & Life Integration Playbook* has proved to be a catalyst for expanding SWE's public policy statement to include work/life issues, and for the Society to take a stance in the na-

tion's capital. It has spurred her to take part in congressional visits to discuss the issues involved with work/life integration throughout the country.

A senior life member of SWE, Tankersley has contributed to the Society at multiple levels. On the Society level, she is a member of the government relations and public policy committee and has been a senator, chair of the senate mega issues task force, a member of the advocacy board, and was instrumental in the chartering of the strategic initiatives committee. She has served in numerous roles at the local and regional levels, including president, vice president, and outreach chair of the South Ohio Section and as a member of the Region G outreach committee.

Among Tankersley's many successes in the realm of work/life integration include her time in the Spark Center at the 2014 SWE annual conference to discuss the topic with young moms, women with aging parents, and others — underlining the importance of the issue to SWE members.

Tankersley lives in Cincinnati with her husband and four children.



DISTINGUISHED ENGINEERING EDUCATOR

Nandika Anne D'Souza, Ph.D., P.E.

UNIVERSITY OF NORTH TEXAS

For contributions as a professor who shows girls and women in disadvantaged situations that being an engineer is fulfilling work and for bringing contemporary research to her students.

Nandika Anne D'Souza, Ph.D., P.E., is a Regents Professor with joint appointments in the department of mechanical and energy engineering and the department of materials science and engineering at the University of North Texas. In addition to her role as a professor in these departments, she serves as associate dean of undergraduate studies at her university.

She is active in EngineerGirl, recruiting women engineers to post their stories online, and is known for her work on biocompostable foams in career booklets distributed in national middle schools by Sally Ride's "Cool Careers in Green Chemistry" program. Dr. D'Souza, who originally intended to major in English during her college years until her godfather spotted her excellent math, chemistry, and physics grades, tells young women that engineering is "the key" to leading a fulfilling life.

After earning her bachelor's degree from Pune University, in her native India, Dr. D'Souza came to the United States to start a master's degree in the materials program at Auburn University.

She became the first faculty hired in the department of materials science at

the University of North Texas in 1996. She gained tenure in 2002 and was promoted from assistant professor to associate professor.

In the classroom, Dr. D'Souza concentrates on bringing contemporary research to her students, urging and supporting students' activities in professional societies and assessing new strategies for teaching.

Dr. D'Souza has created 15 new courses in the 18 years that she has taught and openly shares her story of initially feeling a sense of trepidation about having an engineering career and her gradual acceptance of increasingly complex challenges. She believes that students will grapple with how they, too, can gain confidence by taking on tough assignments, succeeding at them and understanding that learning is a lifelong process.

For her research in design, reliability, and optimization of polymers and composite materials for biomedical, microelectronic, and structural applications, Dr. D'Souza was selected in 2013 as a fellow of the Society of Plastics Engineers.

She has received global recognition for her research in polymers and composites, which has impacted fields as

diverse as biomedical, microelectronics, bioengineering, and buildings and transportation. The university recognized her accomplishments in teaching, research, and service by awarding her the Regents Professorship in 2015.

Dr. D'Souza is the faculty advisor to the university's SWE section and serves as vice president for outreach for the Dallas Section. She structured the "Design Your World" STEM conference for North Texas. The SWE section received the Society's 2014 Parent/Educator Gold Medal Award in recognition of Dr. D'Souza's tremendous outreach to parents and educators.

She is the faculty advisor and founder of the Society for the Advancement of Materials and Process Engineering at the university and is the founding faculty advisor for Beta Nu of the Pi Tau Sigma International Mechanical Engineering Honor Society.

Dr. D'Souza has a daughter who entered Stanford University this year, majoring in chemical engineering, and a son who started high school. She and her engineer husband enjoy their family and their Labrador, Brooks.



ADVOCATING WOMEN IN ENGINEERING AWARD

Roberta Banaszak Gleiter, F.SWE

GLOBAL INSTITUTE FOR TECHNOLOGY & ENGINEERING (GIFTE)

For extraordinary, continuous dedication and commitment to the advancement of the engineering profession, particularly advocating the advancement of women in engineering.

Roberta Banaszak Gleiter, past president of the Society of Women Engineers, earned her B.S. in chemical engineering from Purdue University in 1960, married following graduation, and spent the next two decades raising a family. Despite the climate of the time — adverse to career women, particularly in nontraditional fields such as engineering — Gleiter advocated improved math education and introduced her community to women in engineering. These efforts were forerunners to her later work and advocacy, which has encouraged hundreds of young girls and women to pursue and excel in engineering.

As a reentry woman, Gleiter's career was launched in 1980 when she joined satellite and ground systems management and project engineering at The Aerospace Corporation in Los Angeles. A National Science Foundation certificate program for reentrant women engineers helped make the transition more accessible. In 1986 she was awarded her M.S. degree in technical systems management from the University of Southern California.

Gleiter's career at Aerospace included work on launch vehicles; satellite launch pad safety/hardware; U.S. Department of Defense payloads on the space

shuttle; \$1.5 billion satellite software management; satellite program execution evaluations; and satellite and ground system software testing. She received the prestigious Aerospace Corporation Individual Achievement Award and many engineering accolades from both Aerospace and the U.S. Air Force. She was awarded the global positioning system program's Recognition of Excellence in Contributions Award.

She received the 2008 Outstanding Chemical Engineer Award from Purdue University. She is a Fellow of the Society of Women Engineers, as well as a Fellow of the Institute for the Advancement of Engineering.

Gleiter is now the CEO and board chair of the Global Institute for Technology and Engineering, a nonprofit educational public service organization dedicated to elevating the status of women in the international technology and engineering work force.

Throughout her career, Gleiter has supported women's organizations and STEM awareness on the congressional level. Serving as Society of Women Engineers president in FY99, she led efforts to increase public awareness of the value of women engineers.

A few years later, Gleiter initiated a public awareness of engineering effort while vice chair of the American Association of Engineering Societies. The impact from her efforts to raise the profile of women engineers became clear when she was asked to share her experiences as part of a filmed documentary for the Aerospace archives. Additionally, oral history interviews are in the SWE archives, as well as Purdue University's women's archives, which houses the Roberta Banaszak Gleiter Collection.

In a personal effort to assist women engineering students and celebrate the 55th anniversary of her student membership in SWE, Gleiter endowed a SWE scholarship — Engineering Endeavour — in 2011. Gleiter has endowed four engineering scholarships at Purdue University and one national Engineering Impact scholarship with the Chi Omega Foundation.

Gleiter's family includes John, her husband of 55 years; daughter, Alexis Schroeder; two sons, Nicholas and Christopher; and three grandchildren, Johannes Gleiter and Kate and Scott Schroeder. Her outside interests include cooking, tennis, judo, piano, and oil painting; also, now Gleiter walks trails in the Santa Monica Mountains.



ADVOCATING WOMEN IN ENGINEERING AWARD

Casee Eisele

JOHN DEERE

For innovative, inclusive, and inspiring leadership, including starting and growing SWE groups overseas, as well as technical achievements and involvement in the community through mentoring and outreach.

Casee Eisele, project manager with John Deere's Enterprise Customer Acquisition Process Program Management Office in Olathe, Kansas, has made her mark by achieving breakthroughs in product research and engineering design, through K-12 STEM outreach, collegiate mentoring, and starting SWE networks in Germany and at John Deere.

Immediately after graduating from Kansas State University in 1998 as a biological and agricultural engineer, Eisele began working in product design at John Deere's Product Engineering Center in Waterloo, Iowa. At the same time, she judged American Society of Agricultural and Biological Engineers international student competitions and scholarships. She soon became chair of the Association of Equipment Manufacturers Student Trophy Competition Committee.

Eisele entered the University of Iowa's executive engineering dual degree program, earning her MBA and a master's degree in systems engineering in 2002.

She established herself as a tractor design engineer, first in the chassis group and then in the wheel and tire group. Eisele patented a way to cast two separate pieces — one captured within the other but

with the ability to move independently. She also incorporated a bolt-tightening sequence into a wheel casting, for which she received the John Deere Simple and Elegant Design Award.

Her accomplishments led to an assignment in 2004 as a design engineer with John Deere Werke in Mannheim, Germany. While there, she facilitated more efficient internal procedures, ranging from a cross-functional wheel and tire team to leading the enterprise Wheel and Tire Community of Practice, to developing an engineering verification procedure for wheels.

Eisele founded a network of female engineers in Germany, starting an international pilot project with SWE. The group has grown to about 100 members and has held nine professional development conferences.

In 2007, she returned to the United States, joining Deere's operations in Waterloo, Iowa. Once again, she distinguished herself by implementing improved processes in her department. Then, following three years in manufacturing engineering, Eisele returned to design engineering as a senior engineer responsible for global sprayer operator station development. There, she led the team to breakthroughs

in cost efficiencies through engineering changes and increased commonalities with other platforms, for which she received the 2009 ASABE Young Engineer of the Year award for the Iowa section and Mid-Central region. She completed Design for Six Sigma training and went on to achieve Green Belt certification.

Eisele was a chartering member of the SWE East Central Iowa Section and a founding member of the Cedar Valley Section, serving as an advisor and outreach committee member. She also established a SWE internal network within John Deere. During Eisele's four years of leadership, the John Deere SWE group's efforts have resulted in membership growth from 41 in 2009 to nearly 500.

She serves on the advisory council for the biological and agricultural engineering department at Kansas State University; actively recruits talent for John Deere; serves as a STEM mentor with various organizations; coaches Junior *FIRST*® Lego League and *FIRST*® Lego League teams; judges student engineering competitions; and teaches Sunday school.

Eisele and her husband, Edwin, have three sons, Spenser, Lance, and Trent.



ADVOCATING WOMEN IN ENGINEERING AWARD

Agnes Chau Klucha

UTC AEROSPACE SYSTEMS

For a career dedicated to bringing women and diversity into the engineering profession, while introducing new, more effective and efficient strategies that help drive innovation in the workplace.

Agnes Chau Klucha, director, engineering for the sensors and integrated systems business unit at UTC Aerospace Systems (UTAS), has responsibility for engineering leadership of the Inertial Control and Aircraft Management Systems (ICAMS) business segment. During her career at UTC, Klucha has worked on corporate strategy with powerful results: She established an Engineering Innovation Center that has helped foster research, innovation, and prototyping so that the aerospace and defense products company can execute with speed and quality.

During her 20-year career with UTC, Klucha has been recognized for her extraordinary leadership and strategic vision, technical proficiency, and business acumen. Flight test engineer, Joint Strike Fighter (JSF) test planning manager, Tiger team leader, and “intrapreneur” are some of the positions she has held. Klucha led the initiative to establish the Additive Manufacturing Innovation Center at the University of Connecticut (UConn) that brought the first electron beam powder bed machine to the Northeast.

She has been recognized as a 2011 Connecticut Woman of Innovation recipient in

the Large Business Innovation and Leadership category, and a 2015 STEP (Science, Technology, Engineering, and Production) Award honoree, a national event sponsored by The Manufacturing Institute.

Despite her intense career activities, Klucha volunteers to increase the awareness and involvement of girls and young women in science, technology, engineering, and mathematics (STEM) fields. Most recently, she participated in The Franklin Institute’s 2015 Color of Science Program to promote diversity in STEM fields and participated in a panel of distinguished female STEM professionals and engaged more than 500 students and their families in a museum-based exhibition and showcase. She has also participated in career panels at UTC and to inform young engineers about various career paths in engineering.

Throughout her career, she has recruited, hired, retained, and promoted women and men in engineering. Klucha has mentored more than 20 women in engineering at various career stages.

She serves on advisory boards for UConn’s Management and Engineering for Manufacturing Program and the Ameri-

can Society of Mechanical Engineers’ (ASME) Additive Manufacturing + 3D Printing Conference.

Klucha was appointed by The Franklin Institute to serve on the 2015 Bower Science Award International Selection Committee. She was also appointed by the National Research Council to serve on the National Academies Panel on Mechanical Science and Engineering at the Army Research Laboratory. Klucha also garnered the National Academy of Sciences’ appointment to serve on a panel to review the engineering labs at the National Institute of Standards and Technology.

She earned a BSc in engineering science, aerospace engineering from the University of Toronto and an MBA from the University of Massachusetts at Amherst. In addition, she completed the Emerging Leaders Program at the University of Virginia Darden School of Business.

In her spare time, Klucha pursues karate and qigong and enjoys travel, cycling, and explores green initiatives with her husband, Matt.



ADVOCATING WOMEN IN ENGINEERING AWARD

Patty Lopez, Ph.D.

INTEL CORPORATION

For encouraging girls, especially in underserved communities, in STEM activities, and for addressing how organizational culture impacts women and minorities' recruitment, retention, and progression in STEM careers.

Patty Lopez, Ph.D., is a senior platform applications engineer at Intel Corporation, working with customers to deliver Xeon® server chip solutions that power high-end data centers and mission-critical applications. Before starting her career with Intel in 2008, Dr. Lopez spent 19 years as an imaging scientist for Hewlett-Packard (HP), creating and transferring technology in imaging into scanner, camera, and all-in-one products. She has released more than 50 products across five business lines and holds seven imaging patents.

At the same time, Dr. Lopez has spent the past two decades as a change agent, studying, understanding, and addressing the impact of organizational culture on the recruitment, retention, and progression of women and minorities in science, technology, engineering, and mathematics (STEM) careers. An active board member of several national organizations, including the Computing Research Association of Women and the Computing Alliance of Hispanic-Serving Institutions, her volunteer efforts across several venues focus on building the STEM pipeline for K-12 and beyond, and creating an inclusive work culture.

She spent a decade as the HP campus manager for New Mexico State University, receiving the HP Technical Leadership Award, the HP Campus Recognition Program Award, and the HP Diversity and Inclusion Award. While working at Intel, she received the 2010 Hispanic Engineer National Achievement Awards Corporation Great Minds in STEM community service award.

A founding member and co-chair of Latinas in Computing in 2006, Dr. Lopez is a MentorNet mentor and has served as a member of the National Center for Women and Information Technology Workforce Alliance.

Dr. Lopez's involvement in mentoring young women dates back 20 years. Starting in 1995 at the Hewlett-Packard offices in Greeley, Colorado, she led intern hiring and mentored five women and minority undergraduates, including one Native American, who were subsequently offered full-time jobs at HP.

After joining Intel, Dr. Lopez focused on developing technical women via the Women at Intel Network (WIN) employee group. Recognizing that men were critical to the development and advancement of technical women, she looked across Intel

for male advocates. In 2010, Dr. Lopez served as the WIN vice president and as the WIN cross-site liaison, working with leaders across Intel to develop and promote technical women. She helped a MentorNet protégé hired into Intel India create a WIN employee group, and has mentored several women across Intel.

Dr. Lopez developed a presentation that has been used across Intel annually to encourage women to submit proposals to conferences. An alumna of Intel's Blueprint for Extraordinary Performance Leadership program for Hispanic, black, and Native American leaders, Dr. Lopez has opened the door for other underrepresented participants. In 2014, she served as project co-lead for a 22-week development assignment as part of a progression and advancement team to create a five-day pilot immersion event for experienced women new to Intel, while still delivering in her primary job role.

In her spare time, Dr. Lopez enjoys traveling, hiking, biking, and skiing with her husband, a municipal prosecutor, and her three children. She holds a B.S., an M.S., and a Ph.D. in computer science from New Mexico State University.



ADVOCATING WOMEN IN ENGINEERING AWARD

Lynn Tinker

SIKORSKY AIRCRAFT CORP.

For demonstrating throughout her career that both subtle and direct daily actions can ensure a lasting effect in advocating women in STEM and in engineering.

Lynn Tinker serves as Sikorsky Aircraft Corp.'s chief systems engineer for the CH-53K King Stallion, a next-generation Marine heavy-lift helicopter designed to perform in extreme temperatures while flying a variety of missions.

In more than 30 years with the Stratford, Connecticut-based helicopter maker, Tinker has held leadership positions in engineering, corporate strategy, and program management. She turned a systems optimization process into an algorithm that is used to develop and substantiate Sikorsky design solutions, and she set up systems requirements that have proven to be competitive differentiators for the company.

Tinker has authored or co-authored several systems engineering and program management procedures, set up a process of interface definition and integration management, and developed the Sikorsky *Systems Engineering Guidebook*, among many other analytical and engineering breakthroughs.

She is highly regarded as a day-to-day mentor to the next generation of engineers at Sikorsky, and in particular, the next generation of female engineers. As a leader

in the systems engineering organization and on the CH-53K helicopter program, Tinker prides herself on the success of others. She has served as a mentor to a younger woman on many occasions, both formally as part of a mentoring circle and informally as a supervisor at work.

On the CH-53K program, she worked tirelessly to advocate for two of her reports, both of whom have since achieved chief systems engineer positions on two other large Sikorsky programs. Tinker also worked to ensure that her deputy chief systems engineer would succeed her. The result is a much greater leadership presence than might have otherwise been in the systems engineering operations, which account for more than half of the future military business base for Sikorsky.

She has developed personal relationships with universities, leading to more than 40 students — 30 to 40 percent of them women — working summer jobs or six-month co-op positions at Sikorsky over the past four years. The students work with engineering mentors. Those on Tinker's teams have gone on to receive engineering awards from their universities, earn master's degrees in engineering,

and stay in the engineering profession as they achieve higher levels of success and responsibility.

Tinker has long worked with younger children, too, by volunteering at her two daughters' schools as early as kindergarten to participate in STEM presentations, science fairs, and competitions in building mock-ups of parks, playgrounds, and helicopters. As a Girl Scout troop leader, Tinker emphasized the girls' acceptance of personal responsibility, being creative and taking on leadership roles by becoming assistant scout leaders for younger girls.

As a member of the Society of Women Engineers, Tinker has led committees and working groups, and served as past president of the International Council on Systems Engineering (INCOSE) Constitution chapter on the University of New Haven industrial advisory board for systems engineering.

Tinker holds a B.S. in mathematics from Central Connecticut State College, an M.S. in operations research from the University of New Haven, and an M.S. in system design and management from the Massachusetts Institute of Technology.



GLOBAL LEADERSHIP AWARD

Juliette J. McCoy

FORD MOTOR COMPANY

For a distinguished career in powertrain engineering leadership and valuable contributions to global product management and employee development and training, resulting in greater customer satisfaction.

Juliette J. McCoy was recently assigned to a new position: global chief engineer for powertrain control systems engineering at Ford Motor Company, based in Dunton, England.

Since joining Ford in 1986, McCoy has worked in powertrain engineering design, development, and project management for regional and global vehicles. Her work has led to three patents and executive sponsorship of two major team awards, including the 2010 SPE (Society of Plastics Engineers) Grand Prize and the 2014 President's Award for Diversity and Inclusion.

McCoy holds a bachelor's degree in computer science and a master's in electrical engineering, both from Wayne State University.

In her 29-year career with Ford, McCoy has held a range of positions, including design and development engineer, supervisor, manager, regional chief engineer, and global chief engineer. During her tenure as regional chief engineer for powertrain installation components (exhaust, air induction, cooling, fuel, and mounting systems), she saw an opportunity to reduce complexity and improve efficiency

by expanding the scope of her role from regional (North America) to global. She developed a proposal for a global team structure that was operational by the end of 2011.

As global chief engineer for powertrain installations, McCoy was responsible for powertrain installation components for all Ford Motor Company and Lincoln vehicles and touched nearly 1,000 employees in nine countries. Her technical and business leadership covered air induction, cooling, exhaust, fuel, and mounting systems. McCoy was one of only two chief engineers who reported directly to the global vice president of powertrain. She was based in Dearborn, Michigan, but traveled frequently and widely.

A strong commitment to employee satisfaction motivated McCoy to adopt a globally accessible database for employees to anonymously input information about obstacles in their workplace. This innovation has resulted in hundreds of improvements in her global team and a 50 percent improvement in European employee satisfaction since the launch of the global organization. McCoy conducted

feedback sessions with 10 to 15 engineers each week. The database and feedback mechanism has been recognized as a best practice and shared throughout powertrain engineering.

She also developed a globally aligned technical maturity model for technical training of powertrain employees. It is one of the few globally aligned models of its kind in product development engineering. In 2014, McCoy became an ambassador for the product development competency framework and worked with 30 other global leaders in product development to identify 38 competencies, which formed the basis of a behavioral-based training module for product development employees.

McCoy co-chairs the women in product development committee, which provides networking, mentoring, and partnership to women at Ford in all areas of product development.

She has two children: Ryan, an engineer at Ford, and Lia, a biology student at Colorado State University. McCoy's interests include travel, weight training, cooking, and boating.



GLOBAL LEADERSHIP AWARD

Mary D. Petryszyn, F.SWE

NORTHROP GRUMMAN AEROSPACE SYSTEMS

For outstanding contributions to engineering and technical leadership around the globe and for orchestrating unprecedented business success while serving as a champion to women in engineering.

Mary D. Petryszyn, F.SWE, is sector vice president, global strategy and mission solutions, at Northrop Grumman Aerospace Systems, where she is responsible for leading Aerospace Systems' global strategy and business development to shape and win new business worldwide.

Most recently, Petryszyn was sector vice president, international, for Aerospace Systems, where she was responsible for building international business by developing, expanding, and growing business, programs, and products around the world.

Before joining Northrop Grumman, Petryszyn served as the strategic growth and integration executive for Raytheon Integrated Defense Systems (IDS). In this role, she was responsible for worldwide mergers and acquisitions across Raytheon's IDS business. Previously, Petryszyn was vice president of the Civil Security and Response Programs business area, focused on defense, leading programs in chemical/biological/radiation/nuclear/explosives detection, maritime surveillance, and global decision support systems.

In addition to her experience with Raytheon, Petryszyn has worked all over the world in engineering, program management, business development, and

strategy on assignments of increasing responsibility for Singer-Link and Hughes Aircraft Co. and has worked closely with business and government leaders in many international markets.

At Northrop Grumman's Aerospace Systems sector, Petryszyn leads people and all activities related to global growth, strategic partnering, and business capture, which includes manned and unmanned aircraft systems, space systems, high-energy laser systems, and advanced microelectronics for the United States and other nations. She also leads people and business offices in Australia, Belgium, India, Japan, South Korea, United Arab Emirates, and the U.K., as well as contractual international offset program execution in Taiwan and South Korea.

In recent years, Petryszyn has led four major acquisition programs for Korea, Japan, and Australia. She demonstrated the combination of technical and diplomatic expertise to manage projects of this scale, complexity, and geopolitical sensitivity, which demand engagement with the U.S. Departments of Defense and State and the U.S. Congress, as well as with public officials and ministries in countries outside the United States.

Petryszyn serves on the Society of Women Engineers' Corporate Partnership

Council and was appointed to serve on the Civil Air Patrol Diversity Committee for 2011. She is a Fellow life member of SWE and the Girl Scouts of the USA, and a senior member of the Institute of Electrical and Electronics Engineers. In 2005, Petryszyn received the prestigious SWE Upward Mobility Award for attaining a significant and influential management position, and in 2000, the Mile Hi Girl Scout Council named her a Woman of Distinction.

For 15 years, Petryszyn has been active in Habitat for Humanity of Metro Denver, organizing a 200-person crew to build a house in 10 days and contributing to Habitat's *Women Build* program, which helps women learn construction skills. She has served on many community and STEM-related advisory boards.

Petryszyn graduated from Clarkson University with a bachelor's degree in electrical and computer engineering. She received her master's degree in computer engineering from Syracuse University. She has completed the Executive Business Leadership Program at The University of Chicago and the Executive Marketing Program at Indiana University.

She enjoys spending time with her family skiing in Colorado and walking on the beach in California.



GLOBAL LEADERSHIP AWARD

Joan Tafoya

INTEL CORPORATION

For making a lasting impact by changing paradigms for global semiconductor supply planning and for serving as a role model for women and minority engineers worldwide.

Joan Tafoya has recently moved to the Intel Corporation's Internet of Things business unit as a senior principal engineer and director. In this role, she leads a team working across Intel in co-designing, architecting, developing, and deploying analytic software solutions from edge to cloud to make factories, buildings, retail, transportation, and homes more efficient and intelligent. Prior to this position, Tafoya was a senior principal engineer and director of supply planning operations in the customer fulfillment, planning, and logistics group for Intel.

She is a 24-year veteran of Intel, with experience in nearly all aspects of the company's semiconductor manufacturing process. Her engineering background and vast experience have enabled her to be successful in both managerial and technical roles. As fab manufacturing manager, she led an organization of 1,700 people to produce Intel's leading-edge products. As a senior technologist, she directed large-scale projects across multiple locations and organizations to improve Intel's factory network, focusing on asset utilization, manufacturing throughput time, and equipment maintenance. She has had

extensive experience as a leader of both large and geographically dispersed teams and spent nearly eight years on assignments in Shanghai, China; Ho Chi Minh City, Vietnam; and Penang, Malaysia.

Supply planning has traditionally been done on spreadsheets by a largely nontechnical work force. Supply and demand data were used to respond to demand volatility or supply variation. As director of supply planning, Tafoya took an engineering approach, using data and analytics in creating sophisticated modeling tools for decision support. One of the planning systems her team introduced was a single tool that eliminated the need for hundreds of spreadsheets and 22 separate applications.

In her overseas assignments, Tafoya has consistently been able to strike a balance between the local culture and the driven culture of Intel. While living in Vietnam, Tafoya was a core senior member in charge of a new factory start-up, and one of her primary responsibilities was introducing lean manufacturing. She found that lean concepts resonated strongly with employees at the Ho Chi Minh City location because it's based on harmony,

solving problems together, and listening to all voices — all values congruent with Asian culture.

A strong advocate for women in science, technology, engineering, and mathematics fields, Tafoya actively supports the Women at Intel Network affinity group, an employee resource group chartered to empower women by helping them to make connections, gain skills, and obtain more representation. At the Society of Women Engineers' 2014 annual conference in Los Angeles, Tafoya was a panelist in the plenary "Leading and Managing in the Age of Globalization."

She is a board member for the Albuquerque Hispano Chamber of Commerce. Albuquerque Business First recognized Tafoya with a 2015 Women of Influence award in the technology category.

Tafoya holds a B.S. in computer science from Arizona State University and an M.S. in industrial engineering from Stanford University. She received a Graduate Education for Minorities Scholarship. A native of Albuquerque, Tafoya lives in New Mexico with her husband of 29 years and two teenage children.



PRISM AWARD

Rosalind Fox

JOHN DEERE

For building and maintaining world-class plant safety and skyrocketing employee engagement at her workplace while fostering partnerships that promote an inclusive and diverse work force.

Rosalind Fox is the factory manager of the John Deere Turf Care factory in Fuquay-Varina, North Carolina, where she oversees the company's multimillion-dollar manufacturing operations, driving key deliverables in safety, quality, delivery, and cost. The factory makes commercial mowing and golf and turf equipment and employs more than 400 salaried and production staff. During Fox's tenure, the plant has achieved its highest-ever profitability and employee engagement. In addition, Fox has overseen a company-record 10 million hours without a lost-time injury at her factory.

Prior to her current role, Fox served as director of global diversity and inclusion, working closely with human resources to leverage both to higher levels. She and her team were responsible for all equal employment opportunity issues and compliance requirements covering 30 facilities across the U.S., implementing and maintaining employee resource groups and overseeing the development of inclusive training modules for all 56,000 Deere employees. She was able to spark candid conversations with senior leaders about tackling the challenges that limited women's advancement outside of the U.S. Regular visibility with senior leadership provided Fox the means to improve

representation of women and people of color at all levels of the organization. The program is still active, with goals now being documented and measured in the top 100 leaders' annual performance reviews.

Fox was instrumental in creating support for John Deere's growing partnership with the Society of Women Engineers. Participation in the SWE employee-sponsored dues program has opened up SWE membership to all John Deere employees, resulting in an increase in membership from 41 in 2009 to nearly 500 currently. John Deere employees are now contributing to the globalization of SWE in significant ways, with the only international senator, the most international members, and, for the past two years, representation from eight different countries.

In the last year, Fox has worked to attract, develop, and retain women engineers, creating a local Women in Engineering group and facilitating talks with women engineers to better understand their challenges and concerns. As a result, Fox and her colleagues have implemented retention activities, such as speed-mentoring events, matching women engineers with other leaders who serve as mentors and advocates, "career story" meetings with visiting women leaders in

engineering, and supporting SWE conference attendance.

Seeing a decreasing number of students entering STEM fields, Fox led the development of John Deere Inspire, which encourages children, people of color, and young women to consider STEM careers. Since its inception, the organization and its supporters have contributed more than 25,000 volunteer hours from more than 500 employees. In addition, 152 John Deere mentors have supported 225 *FIRST*[®] Robotics teams, impacting approximately 1,600 students, and supported more than 100 teachers with real-world work experiences at multiple John Deere locations.

All of Fox's activities, directly and indirectly, serve the purpose of enabling women to achieve full career potential, and stimulate interest for young women to become engineers. Fox graduated from the University of Missouri-Columbia with a B.S. in electrical engineering, a minor in mathematics, and an M.S. in industrial engineering.

She is married to Claude Fox and has four stepchildren. In her spare time, she enjoys working out, following Missouri (Mizzou) football, and reading, as well as attending Broadway and comedy shows and music concerts.



PRISM AWARD

Lakecia N. Gunter

INTEL LABS

For brilliant versatility as an engineer and math teacher, and for lifelong commitment to the aspirations and empowerment of underserved youth.

Lakecia N. Gunter is the chief of staff and technical assistant to the managing director and corporate vice president of Intel Labs, Intel Corporation's industry-leading research organization. In this capacity, she is responsible for driving Intel's technology pipeline and assisting the director and his staff in establishing technology priorities for Intel Labs and the company as a whole.

Gunter joined Intel Labs in 2008 as technical program manager for the company's Café RIT Generation tools team in the Platform Validation Engineering organization, becoming manager of the team in 2009. In 2012, Gunter's team was awarded the Intel Software Quality Award — the company's highest software recognition — for developing and delivering a high-quality central processing unit functional validation tool for ensuring the overall quality of all microprocessor products produced by the corporation.

Her contributions in the engineering profession and in the community have earned national recognition and awards, including being named to *Diversity MBA Magazine's* 2014 Top 100 under 50 Diverse Executive Leaders, the Alumni on the Move Award from the National

Society of Black Engineers, as well as being named a Technology Rising Star by *Women of Color* and a Modern-Day Technology Leader by *U.S. Black Engineer* and *Information Technology Magazine*.

Growing up in a racially divided central Florida town, Gunter developed a strong social consciousness regarding inequality, while at the same time overcoming adversity with the support of family and teachers. She has made it a priority to do her part to level the playing field so others may succeed.

Throughout her career, beginning as a project engineer at Motorola in 1999, then as a cherished middle-school mathematics teacher, continuing through a four-year series of positions at Eglin Air Force Base, and now in her current role, Gunter has paired technical achievement and career excellence with service to her community, mentoring and developing countless programs to support at-risk youth. During her time with Eglin, Gunter was honored as Civilian of the Quarter, Engineering and Technical Management Civilian Engineer of the Year, and Outstanding Project Manager of the Year and earned the Blacks in Government Meritorious Service Award.

Recently, Gunter led Intel's Computer

Clubhouse Network activities, facilitated career workshops for middle and high school girls, and delivered community outreach programs, which bring more than 100 students to the Intel campus to gain exposure to engineering careers. She is founder and director of a nonprofit organization to empower youth in the areas of confidence, self-esteem, and leadership skills through exposure to science, technology, engineering, and mathematics careers and shares her expertise with other nonprofits, including the Urban League of Portland and the Gateway to College National Network.

Gunter earned her B.S. in computer engineering from the University of South Florida, her M.S. in electrical engineering from the Georgia Institute of Technology, and holds a project management professional certification. Her passion is use technology to enhance people's quality of life and to inspire the next generation of leaders and technology innovators.

The oldest of three girls and the oldest of 17 grandchildren, Gunter's biggest hero is her mother, Barbara. Gunter enjoys spending quality time with her family and traveling the world.



PRISM AWARD

Rahima K. Mohammed, Ph.D.

INTEL CORPORATION

For technical achievement and leadership that provides a shining example of intellectual engagement, action, and results, and for inspired mentorship of women and minorities in STEM.

Rahima K. Mohammed, Ph.D., is the only woman principal engineer in Intel Corporation's Manufacturing Development Organization (MDO) division of the Platform Engineering Group, a team of approximately 3,100 people. MDO transforms silicon designs into competitive products for all of Intel's market segments through test and validation. Dr. Mohammed specializes in advanced system test module technologies and their design, and drives programs critical to the success of both MDO and Intel.

Before joining MDO, Dr. Mohammed served as the pathfinding czar for strategic emerging technologies, designing and implementing the division's innovation programs. She led the team to deliver 15 advanced validation platform designs and pioneered innovative temperature margining thermal tools for more than 30 microprocessors. These contributions were recognized through 25 prestigious divisional and interorganizational awards, including the distinctive Intel Quality Award.

Dr. Mohammed's technical leadership and management skills have strategically impacted both Intel and the industry. She spearheaded the creation of the Intel-wide Thermal Technology Forum, building a strong community for sharing thermal knowledge. She also chairs various techni-

cal steering committees and serves on industry advisory boards.

Through consistent leadership in intellectual property creation, Dr. Mohammed, who holds five patents, has published more than 90 papers at both internal and external conferences such as SEMI-THERM, IMAPS, InterPACK, ITherm, the International Test Conference, and the IEEE Southwest Test Workshop (SWTW). She also serves as a reviewer and session chair for these conferences and is a program committee member and 2015 program chair of the IEEE SEMI-THERM 31 conference.

Among Dr. Mohammed's many accolades, she is a recipient of two Best Paper/Presentation awards from the IEEE SWTW conference and three Best Demo/Presentation awards from Intel internal conferences. She is a popular keynote speaker and a regular Intel University instructor, offering classes in technical leadership and career development. This year, Dr. Mohammed is representing Intel on the new Anita Borg Institute Partner Council and in the Grace Hopper Celebration Partner Collaboration Forum.

She works tirelessly to deliver diversity results at Intel, by leading the MDO senior women's leadership pipeline development program for all U.S. sites; internationally, by serving as the senior advisor and men-

tor and conference organizer for Intel's WIN-Mexico team; and representing the company at external conferences, including SWE's.

Dr. Mohammed continues deepening her commitment to society as an engineer, role model, and citizen. She has served for 17 years on the executive committee of SpaandanB, a nonprofit organization that has touched and impacted more than 100,000 lives in Bangladesh. This year, Dr. Mohammed was honored by the Bangladeshi American Democratic Coalition on International Women's Day for her contributions to engineering and her community.

She is regularly recognized for her work and in 2011 was one of the three invited panelists representing industry at the SWE conference plenary "Back to the Future of Engineering." She also received the Intel nomination for the SWE Emerging Leader Award for research, design, and engineering.

Dr. Mohammed received her bachelor's degree from Arizona State University, her master's from the University of Wisconsin-Madison, and her Ph.D. from Yale University, all in mechanical engineering. She balances her technical career advancement with the joys of raising two young children with her husband, who also works for Intel.



SPARK AWARD

Lew Dennis

CHEVRON ENVIRONMENTAL MANAGEMENT CO.

For serving as a mentor to and champion for women in the male-dominated oil industry, and for enabling the development of innovative technology to make the work safer.

Lew Dennis is the U.S. offshore area manager for Chevron Environmental Management Co. He is responsible for the budgeting, planning, and execution of upstream oil and gas decommissioning activities in the offshore Gulf of Mexico and California, in addition to onshore decommissioning and oilfield remediation along the Gulf Coast from Texas to Alabama.

From 2009 to 2012, as hurricane restoration team and decommissioning manager for Chevron's Gulf of Mexico Business Unit, Dennis was responsible for direct management of the company's hurricane restoration team, which conducted salvage and abandonment operations for the offshore platforms and wells destroyed by Hurricanes Katrina, Rita, Ike, and Gustav. While in this role, he led and mentored three women engineers, who are now successful and are managing significant projects across the Gulf of Mexico and Alaska in their new assignments.

He received the Chevron Chairman's Award for his innovation in driving the

development and use of a new technology, dubbed "The Claw," to reduce the risks in decommissioning offshore structures.

Over the past 15 years, Dennis has been actively involved in recruiting, managing, and mentoring a gender-diverse work force of 20- to 150-person teams of early to midcareer professionals and support staff. Dennis is known for advocating women engineers, for bringing new thoughts and ideas to workplace teams, and he is continually volunteering to speak at panel sessions, speed-mentoring events, and "Men Advocating Real Change" (MARC) sessions for the Chevron Women's Network.

He is praised for being willing to share personal difficult experiences and outcomes to help women in the early and mid stages of their careers. Dennis also encourages his teams to get involved in the local community by bringing his enthusiasm for volunteering to the workplace. For example, he has gotten teams engaged with the Covington, Louisiana Food Bank

and the St. Tammany Art Association.

From 2004 to 2008, Dennis worked as the Unocal/Chevron Alaska manager for facilities engineering and construction. He managed recruiting, mentoring, and career development as the group grew from 30 to 80 people during the Chevron/Unocal acquisition.

Dennis holds a B.S. in petroleum engineering from the Colorado School of Mines. He also graduated from the University of Colorado with a B.A. in environmental biology and Russian language.

In his free time, Dennis' interests include yoga, flying, art and photography, and camping and fishing in Alaska and Louisiana. He and his wife are beekeepers and are members of the Tangi-Tammington Beekeepers Association, where they serve as mentors and consultants. The honey is sold at two health food stores and is served at two restaurants in Covington, Louisiana, where the couple lives with their two entertaining Labra-Jack dog brothers, Gus and Rudi.



SPARK AWARD

Lisa Gable

IBM CORPORATION

For fostering a work environment that values diversity and integrates disparate groups into cohesive teams, and for navigating a successful technical and management career.

Lisa Gable is responsible for developing IBM's diverse technical talent globally, believing integrity and self-confidence are key to achieving success. She has been recognized with an IBM Top 50 People Management Award for fostering a work environment that values diversity. Gable is the only recipient of the IBM Austin Women's Exchange "Woman of the Year" award for her service to area organizations in support of women's advancement. She was the first recipient of the National Association for Female Executives Women of Excellence Global Awareness Award.

Within IBM, Gable chaired the global women's council, focused on the recognition, growth, and development of IBM women, and increased the available pipeline of technical women by encouraging girls and young women in grades K-12 to pursue education and careers in science and technology. Under Gable's leadership, IBM's summer program for middle-school girls, EX.I.T.E. (EXploring Interests in Technology and Engineering) reached more than 10,000 young women. During the same time period, Gable worked to increase IBM's number of Women in Technology chapters — focused on K-16 outreach — globally by 10 percent.

Gable was also successful in a number

of other initiatives. She developed and deployed the Brandon Hall award-winning Technical Women's Pipeline Program, designed to enable promotion of qualified technical women to executive leadership positions. More than 50 percent of program graduates have been promoted to senior technical leadership positions, including 11 to distinguished engineer or fellow. She drove the global deployment of IBM's Building Relationships and Influences (BRI) program to address the gap in the number of women advancing to executive roles. Today, BRI boasts an alumni network of more than 3,100 women, and 24 percent of the program's participants have been promoted.

Entries from a "Letter to My Younger Self" campaign she developed in 2010, which included input from more than 120 executive women, are now part of IBM's recruitment campaign.

Gable worked with The Humphrey Group and The Heim Group to globally deploy gender-based training such as "Taking the Stage" and "Changing the Rules" within IBM. In addition, she organized MentorNet within IBM, allowing IBM staff to mentor college students globally. More than 2,400 staff have participated in the program, and Gable herself has been a MentorNet mentor since

1999. Gable also managed IBM's global engagement with the DiscoverE (Engineers Week) Global Marathon.

For IBM, Gable submitted and the company was awarded the inaugural Anita Borg Institute Top Company for Technical Women award, recognizing IBM for demonstrated measurable results in the recruitment, retention, and advancement of technical women at all levels.

Gable was selected to manage IBM's Pathways for Experienced Technical Women program, focused on technical women's advancement. She has established new mentoring programs for women hired midcareer to IBM and has further developed programs to coach and sponsor rising stars.

Gable's leadership and collaborative skills culminated in a partnership between the Society of Women Engineers and the Japan Women's Innovation Network (J-Win). SWE and J-Win continue to share resources today via a memorandum of understanding.

She holds a bachelor's degree in industrial engineering from California Polytechnic State University, San Luis Obispo and a master's in manufacturing systems engineering from The University of Texas at Austin. Gable is married to her best friend and together they have three children.



SPARK AWARD

Barbara McAllister

INTEL CORPORATION DIVERSITY IN TECHNOLOGY INITIATIVE

For making it her personal mission to ensure that women have the support and tools they need to successfully navigate their careers, particularly during times of transition.

Barbara McAllister, deputy director of the Intel Corporation Diversity in Technology Initiative, has mentored hundreds of women and logged more than 500 hours of professional career coaching since becoming a certified coach by the International Coach Federation in 2009. Her work stems from a desire to share the lessons of coaching and mentoring broadly; she has launched an internal and external blog as well as a Twitter handle with about 2,000 active followers.

Her passion for advancing science, technology, engineering, and mathematics (STEM) practices is rooted in her own personal story and the belief in STEM's ability to fuel innovation, empower women and underserved youth, and transform lives.

A South Carolina native and the youngest of eight children, McAllister has established development conferences, community computer clubs, and formal mentoring and coaching programs, as well as a volunteer group of engineers speaking to parents in underserved communities about the importance of technology and engineering careers. As a result, McAllister has been recognized twice as the Intel Diversity Leader of the

Year, and in 2011, she was awarded Intel's Diversity Lifetime Achievement Award for her results and lifelong impact in mentoring and retaining diverse engineers. Her work as a mentor has earned her the nickname "The Steminist."

She credits a teacher at a summer engineering camp with giving her a sense of belonging and reducing her feelings of isolation. McAllister was a middle-school student at the time, and though her parents had no opportunity to further their educations, they believed that education had the power to transform lives and would prove a valuable investment for their children. McAllister was chosen to attend the engineering camp, which was held at Clemson University.

McAllister earned a B.S. in electrical engineering, an MBA, and is pursuing a Ph.D. in human and social dimensions of science and technology from Arizona State University.

Her STEM activism started in college, where, as an Engineering Ambassador, she helped support the integration of female and minority students into the engineering community at the University of South Carolina. For her efforts, she was recognized as

an Outstanding Student of the Year.

Since joining Intel Corporation in 1995, McAllister has recognized gaps in efforts to retain women and implemented solutions, even when it wasn't a part of her role. For example, she led the first cross-company professional development conference aimed at strengthening networks, support systems, and personal leadership and development. The Network of Intel African-American Professional Development Conference resulted in more than 350 employees in attendance, rated 4.5 out of 5.0 on overall satisfaction, and 10 years later, is still running effectively, meeting the needs of engineering professionals.

McAllister was also part of a leadership team that kicked off the first formal mentoring programs inside the African-American and women employee resource groups at Intel, and the mentoring program was adopted worldwide.

She enjoys writing poetry, scrapbooking, and spending time on a beach. McAllister is married to her best friend, Demetrius, and they have one son, Carlton, who is currently studying at the University of North Carolina in Greensboro.



SPARK AWARD

Jane Orsulak

RAYTHEON COMPANY

For mentoring others, formally and informally, in a way that encourages up-and-coming engineers to believe in themselves, and for initiating and leading technology-focused networks.

Jane Orsulak leads a team of engineers for an organization that she founded as part of Raytheon Intelligence, Information and Services (IIS) and has received recognition not only for the critical role of the group, but for mentoring others. As the mission analysis capability center director for IIS, Orsulak oversees her team in performing mission analyses, constructing discrete event and physics-based models, and providing analytical services across the breadth of Raytheon's mission areas, from cyber effects to satellite mission planning to support operations. Previously, Orsulak served as the mission systems integration technology area director, where she provided technology leadership across Raytheon's six business units, with a focus on systems engineering and architecture technologies.

She is a Raytheon certified architect, a certification program accredited by The Open Group organization, a global network dedicated to ensuring vendor-independent certifications and IT standards.

Orsulak is also active on Raytheon's architecture review board, and is chair of the

IIS business architecture review board. In this role, she provides governance of the company's architecture certification process, sits on certification boards, and supports architecture reviews of key proposed and developed architectures.

Throughout her career, Orsulak has mentored both women and men. Starting with her younger sister, she has mentored teenage girls and provided a positive role model of a successful female engineer. As she gained visibility and transitioned into the enterprise architecture domain, she actively sought out women who were aspiring toward enterprise architecture, and developed long-term formal mentoring relationships with several of them. For her dedication, Orsulak received the Raytheon Excellence in Mentorship Award in 2010.

In addition, as track chair for internal Raytheon symposia for more than 10 years, Orsulak mentors five to 10 presenters each year to help them prepare. She is growing the next generation of system modelers within the company by facilitating and teaching study groups to help hone needed modeling and simulation skills.

Orsulak takes it a step further, ensuring that all engineers assigned to her projects achieve an appropriate work/life balance while still meeting her cost and schedule commitments.

In addition to the targeted mentoring that she accomplished at Raytheon, Orsulak was a charter member of the Dulles Chapter of the Raytheon Women's Network, serving as vice president for more than two years.

She has been a family role model, too, including showing her younger sister, Barb, that engineers don't have to be "nerdy loners," as one stereotype suggests. Indeed, Orsulak became a role model for several women in her family. Her niece Leslie has been a software developer for more than 10 years; niece Sarah earned her master's degree in geographic information systems. Another niece, Emily, is a junior at the Rochester Institute of Technology, studying computer science.

Orsulak holds a B.S. in computer science from Indiana University of Pennsylvania and an M.S. in systems engineering/architecture based systems integration from George Mason University.



SPARK AWARD

Shawn Emerson Simmons, Ph.D.

EXXON MOBIL CORPORATION

For leadership as a role model and mentor, all the while working to ensure that the future engineering workplace is a diverse one, both in the United States and overseas.

Shawn Emerson Simmons, Ph.D., environmental and permitting manager for a Gulf Coast growth venture with ExxonMobil Chemical Co., got an early career start by attending an engineering high school in Houston.

As an active member of the ExxonMobil women's resource group, Dr. Simmons participates in the Lunch with Leaders program with the Upstream Women's Interest Network and has led Lunch and Learn events on topics ranging from "Mythbusters — How to Succeed" to "Dress for Success" and "The Written and Unwritten Rules of the Game." She also has served as a formal mentor to several ExxonMobil women.

Dr. Simmons works to recruit the next generation of engineers for the Society of Women Engineers, Rice University, The University of Oklahoma, and the National Society of Black Engineers.

For the past 10 years, Dr. Simmons has been involved with the Leadership Fellows Program, created by international service sorority Alpha Kappa Alpha to develop a cadre of leaders ready to fill key positions. Dr. Simmons, herself a 1991 Leadership Fellow, has served as a mentor, coach,

and leader with the program, reaching more than 400 students since 1999. She played an integral role in the ongoing development of key corporate partnerships with the program, which led to nearly 20 fellows doing internships with a number of supporting corporations and nonprofit organizations.

As a member of SWE's Houston Area Section and as an ExxonMobil employee, Dr. Simmons, a former Girl Scout, volunteers for her daughter's Girl Scout troop's Engineering Badge Day at Rice University, Dr. Simmons' alma mater. She has also volunteered at the annual SWE conference to help with the "Invent It. Build It." activity, in which local Girl Scout troops participate.

Dr. Simmons was part of a team that launched a women's network and started a mentoring program in Nigeria when she took an expatriate assignment there from 2007 to 2012. After three years of rallying support and setting the foundation for the group, Dr. Simmons wrote the charter, established the committee and advisory boards, and facilitated the first officer elections. She then worked with a team of Nigerian women to plan the inaugural

event, "Introduce a Girl to Science and Engineering Day," in which 30 intermediate-grade schoolgirls and 15 ExxonMobil women engineers participated. The special day is now an annual event.

For her commitment to identifying and working with the next generation of leaders, Dr. Simmons received the Mentorship and Training Award from the Safety, Health and Environment organization, an ExxonMobil award that recognizes those individuals who provide meaningful mentoring, training, and development experiences to allow staff to achieve their full potential.

Dr. Simmons' other leadership roles include those with ExxonMobil's Black Employee Success Team, Junior Achievement's Inspire job awareness fair and program, and the ExxonMobil Bernard Harris Summer Science Camp.

She holds a B.S. in petroleum engineering from The University of Oklahoma, an M.S. in environmental engineering from Rice University, and a Ph.D. in environmental toxicology from Texas Southern University. She and her husband, Philip, have been married 20 years and have two children, Jonathan and Jacquelyn.



EMERGING LEADER

Sumita Basu, Ph.D.

INTEL CORPORATION

For innovations in semiconductor manufacturing and a track record of balanced and respectful leadership that contribute to the success of all her professional and volunteer endeavors.

Sumita Basu, Ph.D., is a novel form-factor strategist and technical assistant to the vice president and general manager of the Reference Systems and Technology group at Intel Corporation. Prior to her most recent role, she led the equipment installation and qualification program for Intel factories worldwide as a technical program manager in the technology and manufacturing group. She has worked at Intel, in positions of increasing responsibility, since 2002. She holds a Ph.D. in chemical engineering from Rensselaer Polytechnic Institute. Her dissertation work, conducted at the NASA Glenn Research Center in Cleveland, involved research in preparation of a microgravity fluid physics experiment for the International Space Station.

Within a few months of joining Intel as a senior technology development engineer in the Portland Technology Development group, Dr. Basu delivered the world's first lead-free patterning process for Intel's far back end bump technology (chip interface to packaging), enabling Intel to be the first semiconductor company in the world to restrict the use of lead and comply with European Union standards. During her six years in this position, she

managed development of many patterning and plating processes and implemented numerous lean solutions for high-volume manufacturing.

To deal with nanoscale defects, a critical issue in semiconductor manufacturing, Dr. Basu created "The Defect Atlas," an online repository of information about every known defect, its root cause, and material disposition criteria. The atlas made it possible to catch and characterize inline defects and to make the necessary changes to process flows. Inline defects for four generations of microprocessors were reduced and earned Dr. Basu the title "defect czar." She also drove the use of environmentally sustainable and cost-effective processing materials and devised a method for reprocessing patterned wafers multiple times without destroying the surface of the wafer or the pattern beneath. Her various lean strategies have saved Intel more than \$2 million every year since 2004.

When she was in high school, Dr. Basu met Mother Teresa, an encounter that set her on a lifelong course of community service. She began by collecting clothing and food and raising money for Mother Teresa's centers for homeless and aban-

doned children. Her current volunteer efforts focus on encouraging girls to participate in science, technology, engineering, and mathematics programs and on helping low-income students pursue nontraditional careers.

In 2012, when the National Center for Women and Information Technology launched its pilot middle school outreach program in the northwest, Dr. Basu volunteered to lead a team of engineers and colleagues in identifying 54 girls for an AspireIT award. This award enables girls to expand their technical skills. Now in its third year, the program has recognized 173 young Oregon and southwest Washington women. Dr. Basu was also the chair of the executive board for the Women at Intel Network. Her generous donation of more than 2,000 hours of volunteer service earned her companywide recognition as one of the top five volunteer heroes in 2012.

Dr. Basu lives with her family in Portland, Oregon. Her eclectic personal interests include watching action movies, making artistic cakes, listening to music, traveling, reading, and entertaining with friends.



EMERGING LEADER

Jennifer Braganza

BANK OF AMERICA

For engineering talent paired with sound judgment and an instinct for leadership and mentorship, and for dedication to the retention and success of young leaders pursuing engineering careers.

Jennifer Braganza has broad experience in project and program change management; management leadership; teaching, training, and mentoring; and product development and process improvement both in the United States and abroad. She is currently a business strategy and initiatives manager in compliance with Bank of America, responsible for an enterprise training program and policy for Regulation W, a Federal Reserve Bank regulation concerning transactions between banks and their affiliates. The training program for which she is responsible impacts more than 40,000 employees annually.

Before assuming her current position, Braganza was a project manager for Bank of America, overseeing cross-functional, complex projects using Six Sigma tools to meet mortgage regulations. In this position, Braganza implemented business and technology processes to meet the regulatory requirements of agencies such as the Federal Trade Commission (FTC) and the Consumer Financial Protection Bureau (CFPB). Her last project directly impacted 5 million customers where she was responsible for employee readiness, customer communications, and exception process-

ing. She received multiple awards from technology partners, the project sponsor, and her program for her contributions to the success of this critical project.

Before joining Bank of America, Braganza was a faculty associate and director of the Maximizing Academic and Professional Success (MAPS) program at The University of North Carolina at Charlotte's Lee College of Engineering, where she developed new courses and programs, including new global courses that took students to Germany to live and learn and industry mentoring programs. Braganza was recognized as a university college fellow in 2010-2011 and was a member of university committees for academic success and study abroad scholarships.

Braganza earned a B.S.E. in chemical engineering and a B.S.E. in industrial and operations engineering, both from the University of Michigan. After graduation, she worked at Continental AG, a global automotive supplier, and was assigned to Hannover, Germany, for two years. She then earned a master's in engineering from the University of Illinois at Chicago and a master's in industrial engineering from North Carolina State University. In addition, Braganza has a Green Belt

certificate, Six Sigma, from the Institute of Industrial Engineers and a certificate in business coaching from North Carolina State University.

A longtime SWE member, Braganza is active in her local community and through UNC Charlotte, where she is a guest presenter for the university's leadership academy and a member of the advisory board for the systems engineering department and leadership academy. She is also a volunteer leader and mentor for HOBY, Hugh O'Brian Youth Leadership. In 2015, Braganza founded an animal welfare and advocacy nonprofit, Play with Purpose Pet Academy and Rescue. In addition, she serves on the Citizens Transit Advisory Group for Mecklenburg County, representing the town of Pineville, North Carolina, where she lives, and is an alternate member on Pineville's planning board and board of adjustments.

Personally, Braganza enjoys traveling with friends and family, often for a half-marathon. In her free time, she can be found reading a book; volunteering; or playing with her 3-year-old, very spoiled German Shepherd, Leia.



EMERGING LEADER

Noramay Cadena

THE BOEING COMPANY

For accomplishments in satellite integration driven by a desire to excel and the ability to leverage the talents of others, and for exceptional dedication to community service.

A highly regarded role model, Noramay Cadena is nationally recognized for her technical achievements in the aerospace industry, and for promoting science, technology, engineering, and mathematics (STEM) careers in the Hispanic community.

Cadena has worked at The Boeing Company for 12 years and is currently leading process improvement strategies across large development programs and helping Boeing become service-ready with a capsule transporter for the International Space Station by 2017. As process improvement leader, Cadena draws on both her technical experience and her business training to manage profit and loss and drive improvements. She has a track record of leading by example and recognizing the contributions of all team members. Cadena has received many company awards for her successful team leadership, including the 2015 John Van Gels Award and the 2014 Team of the Month Award for delivering a satellite ahead of schedule.

In a previous position as an integrated product team leader in El Segundo,

California, Cadena led a cross-functional team through assembly, integration, and test of a commercial satellite program. She managed a multimillion-dollar budget and a multiyear schedule. Before that, she was a manager supporting final assembly of 787 airplanes in the Seattle area, and prior to that, held positions as systems engineer, team leader, test engineer, and test director.

Cadena holds an MBA, a master's degree in engineering systems, and a bachelor's in mechanical engineering, all from the Massachusetts Institute of Technology (MIT). She is a member of the Society of Women Engineers, the Society of Hispanic Professional Engineers, and the National Society of Hispanic MBAs.

She is executive director of the Latinas in STEM Foundation, a nonprofit organization she co-founded in 2013 to inspire and empower Latinas to pursue and thrive in STEM fields. She speaks widely about her career in engineering and her perspective as a Latina in STEM. In 2014, Cadena was named one of the Top 20 Latinos in Technology by CNET. That same year, she was a TEDx speaker

in Boyle Heights, California, and a panelist at the World Summit on Innovation and Entrepreneurship in New York. In 2013, she was one of five featured speakers during a Latinas Think Big™ event hosted by the ELLA Institute. In 2012, Cadena was the keynote speaker during the Adelante Mujer Latina Conference, which promotes postsecondary education and careers to nearly 2,000 young women each year. In 2008, she received a Most Promising Engineer award from Great Minds in STEM, and a Rising Star award from Women of Color in Technology.

Cadena grew up in California's San Fernando Valley and became a mother when she was 17. She pursued her undergraduate and graduate education and her engineering career as a single mother. She lives in the Los Angeles area with her daughter and is active in STEM outreach, Latina mentorship and professional development, and other volunteer work. She also mentors students applying to undergraduate programs at MIT.



EMERGING LEADER

Jocelyne Gray, P.E.

MASON COUNTY PUBLIC UTILITY DISTRICT NO. 1

For remarkable generosity and initiative in public, private, and professional life; for educating the public about water safety and quality; and for encouraging many future engineers.

Jocelyne Gray, P.E., is the director of operations-water for Mason County Public Utility District No. 1 in Washington state. She is responsible for providing safe drinking water to more than 2,000 customers. She manages 36 water systems, a 20-customer community septic system, a \$500,000 operating budget, and a \$500,000 capital improvement budget.

Gray was promoted to her current position within eight months of joining Mason County PUD No. 1, the second female on the executive team in the history of the district. Since 1945, water operations had been managed by the electrical superintendent, so Gray's expertise as a licensed civil engineer and her experience in the water industry has enabled the district to significantly improve its services, profile, and its professional standing. She also works with nondistrict water systems to provide them with information about managing their systems or to solve problems.

A licensed civil engineer with 14 years of experience — nine in consulting engineering and five with the district — Gray has engineering experience in municipal, irrigation district, and private-investor project design and construction manage-

ment of utilities, roadways, fish passages, airports, master planning, and traffic/collision analysis.

Before joining Mason County PUD No. 1, she specialized in stormwater design for six years in eastern and western Washington. Her department received the 2011 Grace Under Pressure award from the state Office of Drinking Water for its handling of an E. coli contamination of two water systems in 2010 after the area received 200 percent of its normal monthly rainfall. *Worldwide Who's Who*® named Gray a Top Female Executive in 2012 for her leadership in public utilities.

One of the most complex and demanding of Gray's current projects is a 20-year, \$10 million master plan to consolidate six small water systems into a single regional water system. The six systems comprise 10 wells, eight storage tanks, and miles of aging water mains that must be physically connected with new mains and telemetry. This project requires applications for funding, environmental permitting, and working with local tribes regarding cultural resources. Gray is responsible for funding and permit applications, working with consultants (civil engineers,

surveyors, environmentalists, and archaeologists), organizing public meetings, and, once construction begins, construction project management.

Gray has held several offices locally and regionally within SWE. She is currently treasurer of the South Puget Sound Section, of which she is the charter president. She is the current president-elect for the Washington Society of Professional Engineers. Gray is a member of the American Water Works Association and enjoys speaking to high school students about engineering as a career. Since 2002, Gray has volunteered with the Washington State Future City Regional Competition, beginning as an engineering mentor in eastern Washington, then reviewing and judging essays, models, and presentations.

She graduated from Washington State University in 2000 with a B.S. in civil engineering. She received her Washington state professional engineer license in 2005. Gray and her husband are licensed foster parents and currently parent three children, two of whom are aspiring engineers. She enjoys camping, family dinners, and volunteering at her church.



EMERGING LEADER

Kerrie L. Greenfelder, P.E.

BURNS & MCDONNELL

For technical expertise in water/wastewater treatment, outstanding project management skills on the job and in the community, and a commitment to socially responsible engineering practices.

Kerrie L. Greenfelder, P.E., recently joined Burns & McDonnell in Kansas City, Missouri, as a project manager. Previously, she was a senior chemical engineer/senior project manager with CDM Smith Inc. in Albuquerque, New Mexico.

She graduated from the University of Kansas in 2000, with a B.S. in chemical engineering with an environmental emphasis. Greenfelder became a professional engineer in New Mexico in 2008 and a board-certified environmental engineer, water/wastewater, in 2013. In 2015, she joined Burns & McDonnell and will serve as a project manager in the firm's water division for a diverse slate of water and wastewater clients.

In her 14 years with CDM Smith, Greenfelder gained experience in water/wastewater treatment processing, landfill design and construction, and groundwater/soil remediation on projects throughout New Mexico and the Southwest. She has done project management, design, reporting, purchasing, construction oversight, project schedule coordination, and start-up. Greenfelder's expertise in removing arsenic from groundwater for municipal drinking water and integrating water and wastewater system improvements made her one of the area's most sought-after engineers for affordable water/wastewater treatment

and solid-waste facility projects.

As project engineer for the Arsenic Removal Demonstration Facility project for the City of Albuquerque — one of the largest coagulation/microfiltration facilities for arsenic removal in the United States — Greenfelder prepared technical drawings and specifications for construction and coordinated technical comments, and was the resident project representative throughout construction and start-up. Experience gained on this project enabled Greenfelder to provide technical guidance to engineers and clients for six other projects involving removal of arsenic from groundwater.

Greenfelder was project manager for the Caja del Rio Solid Waste Facility Permit Modification and Renewal and Landfill Cell 5B/6B projects in Santa Fe, New Mexico. For all phases of this comprehensive project, which included preparing landfill permit modifications, start-up, and meeting regulatory requirements, Greenfelder was the go-to engineer because of her extensive experience with solid-waste projects. Her ability to make technically sound decisions and to clearly communicate with state agencies was key to successful completion of the project.

As environmental sustainability practices have become available, Greenfelder has added them to her project portfolio. She collaborated with membrane bioreac-

tor technology for two municipal water reclamation projects in Rio Rancho, the first significant treatment facilities in New Mexico to use it. Effluent from the two plants was reused in parks and open space, a strategy that reduced the burden on the city's wastewater treatment facilities and delayed infrastructure expansion.

Greenfelder joined the Central New Mexico Section of the Society of Women Engineers in 2003 and rose rapidly through leadership positions, progressing from section secretary to section representative, and finally, to governor of Region B. Active in other professional engineering societies, Greenfelder was the New Mexico liaison to the Rocky Mountain Section of the American Institute of Chemical Engineers from 2003 to 2009 and recently served as president of the Albuquerque Chapter of the New Mexico Society of Professional Engineers.

Active in community service, Greenfelder served as a team leader for the Making Strides Against Breast Cancer Walk in Albuquerque. She has personally raised more than \$20,000 for the cause.

Greenfelder now lives in the Kansas City area with her husband, Matt, and son, Carter. She enjoys sewing and long-distance running.



EMERGING LEADER

Irma Khan

CATERPILLAR INC.

For exceptionally creative business leadership, strong technical knowledge, and the ability to bring diverse stakeholders and business units together, especially in launching new ventures.

Irma Khan is the marketing analytics supervisor in Caterpillar's Analytics & Innovation Division. A new position for Khan, she leads a team of nine analysts to use quantitative methods to solve problems of high complexity and business impact. Previously, Khan was a senior parts and service marketing consultant in Caterpillar's Global On-Highway Truck Division. In that position, she launched significant ventures for the company, including the Cat® Truck Maintenance Plan program and the aftermarket truck parts business. Under her leadership, the company saw a 950 percent growth in dealer truck parts orders. Prior to the consultant role, Khan was the Caterpillar industry representative in Toronto, managing all aspects of Canadian on-highway engine product support business and delivering a 15 percent increase in parts orders. Khan has also held a marketing representative position in Caterpillar's Global Marketing Talent Division.

She earned her undergraduate degree in engineering management with a minor in organizational psychology from the University of Missouri in 2003. She is currently pursuing her MBA from the University of Illinois at Urbana-Champaign.

Khan had a key role in the launch and continued success of the aftermarket

truck parts business, which gives Cat dealers access to non-Cat truck parts so they can service all trucks operating in North America. Because Caterpillar no longer manufactures truck engines, service expansion is critical. The obstacles to starting a parts business, however, were daunting. In 2012, Khan overcame these obstacles, in large part by successfully negotiating with Caterpillar's largest aftermarket truck supplier. Her broad knowledge of Caterpillar parts operations was another important factor in her ability to engage all stakeholders. To implement the launch, Khan led three distinct, cross-functional teams: internal development, supplier set-up, and field implementation.

The procedures Khan established executing the launch have become the standards for running the business. The aftermarket truck parts business has brought Caterpillar a significant increase in incremental sales, with products from the supplier with whom she negotiated representing 98 percent of the aftermarket truck parts sales.

A resident of Peoria, Illinois, Khan has made notable contributions to her community. She is a commissioner on the city's Fair Employment and Housing Commission, providing guidance about development of the city's new strategy. In

2014, Khan earned Peoria's prestigious 40 Leaders under 40 award for her professional achievements and dedicated service to the community.

A strong advocate for minorities; women; and science, technology, engineering, and mathematics education, Khan was the advocacy chair for the Society of Women Engineers' Central Illinois Section and partnered with the Heart of Illinois United Way to lead an awareness and fundraising effort for their Success by 6® program. Success by 6 is an early childhood preliteracy skills-development program that provides 3,000 new books per month to at-risk youth and low-income families. SWE members can volunteer in the program and donate toward the purchase of math books. Khan is FY16 president-elect for the Society of Women Engineers' Central Illinois Section.

Khan engages with fifth-graders through the Society of Manufacturing Engineers' Engineer in the Classroom program. She also participates in the Heart of Illinois United Way as a GENeration United volunteer and with the Islamic Foundation of Peoria as special projects volunteer.

In her free time, Khan enjoys reading, playing chess, and hiking. She is a devoted daughter and aunt to two nephews.



EMERGING LEADER

Lori A. Masso

RAYTHEON COMPANY

For significant technical contributions to U.S. defense systems, for earning the respect of both public- and private-sector leaders, and for mentoring women scientists and engineers.

Lori A. Masso has been an engineering fellow at Raytheon Integrated Defense Systems (IDS) in Tewksbury, Massachusetts, since 2013. Selection for the fellows level is highly competitive; few IDS engineers reach this level, and less than 7 percent of them are women. Masso is an expert in exportability (preparation of advanced defense systems for overseas customers) and system security solutions. She has been with Raytheon since 2001, when she graduated from the College of the Holy Cross with a bachelor's degree in physics. She earned a master's in physics from Tufts University in 2005 under the Raytheon advanced study program.

She is the lead chief engineer for the United Arab Emirates Terminal High Altitude Area Defense (THAAD) radar exportability program. Her responsibilities include design, development, integration, and test of exportable THAAD radar to its first foreign military sale customer. She is also a member of the cyber solutions and integration department, serving as the lead chief engineer of a large team responsible for architecture, design, development, integration, test, and implementation of advanced system security solutions. This position demands technical depth and coordination of team members, custom-

ers, specialized Department of Defense assessors, other subject matter experts, and Raytheon business units.

Masso's first assignment at Raytheon was on the Patriot surveillance team, working on requirements for new algorithms and supporting international customers. She was a member of the systems engineering team that provided 24/7 technical support to Patriot battalions deployed during the second Gulf War. In 2005, she joined the Ballistic Missile Defense System performance assessment team. When the first forward-based AN/TPY-2 radar was deployed overseas, Masso transitioned to a new role in support of site installation and operator training.

In July 2013, Masso co-authored an article for the International Council on Systems Engineering's *INSIGHT*, outlining Raytheon's management initiatives to integrate systems and security engineering and presented at a Raytheon conference that same year. In 2014, she received the Excellence in Engineering and Technology award, Raytheon's most prestigious technical award, for her work on the UAE AN/TPY-2 radar exportability build process team.

Throughout her career, Masso has been involved in efforts to promote science,

technology, engineering, and mathematics (STEM) education. She has participated in Math Masterminds, an after-school math tutoring program at the Clapp Elementary school in Woburn, Massachusetts; the Math-MovesU® project at the Kennedy Middle School in Woburn; and a math tutoring program at the Timony Grammar School in Methuen, Massachusetts. In 2011, Masso completed Raytheon's Systems Engineering Technical Development Program, focused on STEM education in the United States. Teams investigated the climate for STEM education in five states, and Masso's team was recognized for innovative analysis that correlated quality math textbooks with improved test scores.

Masso spoke at 2014 engineering fellows lunchtime seminars and "Lunch with Leaders" events sponsored by the Raytheon Women's Network, the Raytheon Black Employees Network, and the Young Employee Success Network. That same year, she was a panelist at Careers in Cyber Security, an event at Harvard University. In addition, Masso has volunteered at a horse-therapy facility that helps adults and children with physical and mental disabilities.



EMERGING LEADER

Katherine Medalle

NORTHROP GRUMMAN CORPORATION

For leadership in several technical areas of the aerospace industry and for dedication to inclusion for women, minorities, and the disabled in STEM and the community.

Katherine Medalle received her bachelor's degree in mechanical engineering from Marquette University, earned her master's in product development from Northwestern University, and completed the selective Mid-Career Leadership Training program at Northrop Grumman Corporation. She is currently director of airborne tactical sensors product support in Electronic Systems at Rolling Meadows, Illinois. She manages a 150-person team and is responsible for all international and domestic customer support for more than 750 LITENING precision targeting pods, which enable aircrews to detect, acquire, auto track, and identify targets at extremely long ranges. She has been awarded more than 25 quality awards.

Medalle has depth of expertise in engineering, program management, and business development. Her interpersonal, strategic, and communication skills have often been called upon to improve troubled programs and repair customer relationships. Medalle began her career with Northrop Grumman as a mechanical engineer in electronic systems for the F-16 program, doing analysis and design. She transitioned to engineering project

management (EPM) in radio frequency combat and information systems, as the technical lead for several programs, including the joint strike fighter. In 2008, she was the lead EPM on two large proposals and was responsible for cost, schedule, and technical performance of all engineering activities.

As program manager for the Guardian™ self-protection system, Medalle oversaw negotiations and capture of the joint contract of \$24 million to upgrade and refurbish Guardian pod and install. At the same time, she worked on near- and long-term strategies for the follow-on program for the KC-135 platform, for additional military aircraft and civil aircraft. Prior to her current position, Medalle was the business development manager for all U.S. Army and Air National Guard initiatives.

A believer in community service, Medalle participates in several efforts to promote science, technology, engineering, and mathematics (STEM) — especially to women, minorities, and disability groups. Since 2007, Medalle has been active in Northrop Grumman's Asian Pacific Professional Network, an organization that prepares Asian Pacific American

employees to seek job advancement. For the past five years, she has chaired the organization's Chicago dragon boat race, an event that promotes literacy in the Chinese community.

Medalle also chairs the Northrop Grumman Women's Initiative for Networking Success, which fosters leadership for women at the company. She coordinates campus events and participates in the Rolling Meadows diversity council, advising the company about programs that will attract and retain talented employees.

Active with her alma mater, Medalle serves on the Marquette University (MU) College of Engineering advisory board for the E-Lead program, which helps engineers meet 21st century global challenges. She also participates in an MU mentoring program and was a panelist for the College of Engineering alumni discussion. In 2013, she was presented with the MU Young Alumna of the Year Award.

In her free time, Medalle enjoys traveling, biking, snowboarding, and gardening. She has been to more than 65 countries and is always looking forward to the next adventure.