In my two decades at Xerox I’ve had the privilege of collaborating with a wide variety of individuals: people from many cultures and races, from pre-baby boomers to millennials, men and women of different social backgrounds, sexual orientations, gender identities, religious beliefs and disabilities.

The diversity of our people is impressive and creates an enormous opportunity for our company. At Xerox “diversity is a business imperative” says Ursula Burns, our chairman. I could not agree with her more. As you might have experienced, diversity also poses unique challenges. Personally I’ve had the privilege to get to know and appreciate some of these issues. Let me highlight a few of the different minority groups at Xerox that I have been closely involved with: the Xerox Innovation Group Women’s Council; the Young Professionals NeXus (YP NeXus); the Black Women’s Leadership Council (BWLC); and GALAXe Pride at Work, the resource group for our lesbian, gay, bisexual and transgender employees. In addition to these, there are many other active caucus groups at Xerox: The Women’s Alliance (TWA), the Hispanic Association for Professional Advancement (HAPA), the National Black Employee Association (NBEA) and Asians Coming Together (ACT). Each of these groups has similar and yet very unique challenges.

As my favorite proverb states: each of these challenges is a great opportunity. Let’s make sure we capture these opportunities. Diversity of thoughts, opinions and ideas have significant business value, especially in the Xerox Innovation Group. Most successful innovations come from looking at problems in new and unique ways. Diverse life experiences often help create the context for diverse and innovative insights.

We welcome the diversity and uniqueness of the people with whom we work. We value the new, unique and different viewpoints and ideas that come from that diversity. Xerox has a 50 year heritage of actively creating and nurturing a diverse work environment. All of us and our customers significantly benefit from that. I have witnessed other companies where minority groups have no role and diversity is treated as an option. At Xerox, I assure you it is not an option. It is a priority business imperative! Especially in difficult economic times, keeping focused on diversity is critical so we can attract the best people to come work at Xerox and the broadest set of customers to partner with us. While we have made great progress, creating and maintaining a diverse and inclusive company is a duty we all own. It is a journey with no end.
Global Research Centers

**Xerox innovation brings together many disciplines and technical competencies.** Xerox is unique in this respect in that its research spans everything from basic physical sciences and mechanical and electrical engineering to social science and psychology. Our research and technology centers around the world each provide their own unique perspective.

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**Xerox Research Centre of Canada**

The Xerox Research Centre of Canada is a world-class materials research center located in Mississauga, Ontario. Founded in 1974, it is home to a team of scientists and engineers with broad expertise in materials chemistry, formulation design, prototyping, testing and chemical process engineering. Our researchers work closely across all stages of the innovation process to deliver materials solutions for applications in printing systems and electronic devices, as well as consumer packaging, sustainable chemical processes, coatings and security/authentication. Examples of past innovations include Xerox® EA toner, long-life photoreceptor materials and conductive nanosilver ink for electronics applications. Our current research programs include the development of new printing technologies, metal-based inks for electronics and coatings and chemical process design and scale-up for both Xerox and external clients.

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**Xerox Research Centre Europe**

Xerox established its European research center in France in the early 1990s to create innovative document technology and drive the corporate transition in becoming a services-led technology business. The center coordinates research, engineering and the Technology Showroom, a customer showcase for Xerox research and a technology exchange forum.

The center also develops connections within the wider European scientific community through collaborative projects and partnerships. Research is focused on text and image content processing, document transformations, data mining and the study and understanding of work practices.
Xerox Research Center India

Our research center in India is the latest addition to the Xerox Innovation Group and our fifth research center worldwide. This center explores, develops and incubates solutions for industries like banking, transportation, healthcare and education, with a special focus on the needs of emerging markets. Besides conducting research in the areas of analytics, mobile, distributed computing and human computation, the center also extends our tradition of innovation and excellence in technology and services via extensive open innovation partnerships.

Palo Alto Research Center (PARC, Inc.)

Founded in 1970 as part of Xerox Research and incorporated as an independent, wholly owned subsidiary in 2002, PARC, a Xerox company, is an integral part of our strategy for long-term research investment.

PARC is in The Business of Breakthroughs®. Practicing open innovation, they provide custom R&D services, technology, expertise, best practices, and intellectual property to Xerox and non-competitive Fortune 500 and Global 1000 companies, startups, and government agencies and partners. The organization creates new business options, accelerates time to market, augments internal capabilities and reduces risk for clients. Since its inception, PARC has pioneered many technology platforms – from the Ethernet and laser printing to the GUI and ubiquitous computing – and has enabled the creation of many industries. PARC’s core focus areas now include innovation services and ethnography; Content-Centric Networking; cleantech and energy; printed and flexible electronics; contextual intelligence; design and digital manufacturing; and more.
Ursula Burns is chairman and chief executive officer of Xerox Corporation. During her tenure, she has helped the company transform from a global leader in document technology to the world’s most diversified business services company serving enterprises and governments of all sizes.

Ursula joined Xerox as an intern in 1980 and during her career she has held leadership posts spanning corporate services, manufacturing and product development. She was named president in 2007, chief executive officer in 2009 and chairman in 2010.

 Shortly after being named CEO in 2009, she spearheaded the largest acquisition in Xerox history, the $6.4 billion purchase of Affiliated Computer Services. Today, Xerox is the leader in diversified business process services with its Services business representing over 50 percent of the company’s total revenue. Its Document Technology business remains the market share leader in the industry and continues to grow in key areas including graphic communications.

Ursula, who regularly appears on Fortune’s and Forbes’ list of the world’s most powerful women, is a board director of the American Express Corporation, Exxon Mobil Corporation and the Ford Foundation. In 2009, U.S. President Barack Obama appointed Ursula to help lead the White House national program on Science, Technology, Engineering and Math (STEM), and she was appointed chair of the President’s Export Council in 2015 after service as vice chair since 2010.

She also provides leadership counsel to several other community, educational and non-profit organizations including the Massachusetts Institute of Technology, the U.S. Olympic Committee, the National Academy Foundation and FIRST (For Inspiration and Recognition of Science and Technology), among others.

Ursula holds a bachelor of science degree in mechanical engineering from Polytechnic Institute of New York University and a master of science degree in mechanical engineering from Columbia University.
Monica Beltrametti is Xerox Chief Services Research Officer. She directs research related to services across the Xerox research centers in California and upstate New York (PARC), in Grenoble, France and the most recent center in Bangalore, India, whose creation she oversaw.

Beltrametti is also vice president of the Xerox Innovation Group and director of the Xerox Research Centre Europe (XRCE) which she helped establish in 1993. Practicing Open Innovation, XRCE applies its world renowned competencies in text and data analytics, computer vision and ethnography to novel transportation systems, customer care, financial services and other industries.

Beltrametti specializes in integrating technology, market, and business opportunities – from fundamental R&D to commercial scale-up, while working closely with Fortune 500 customers. She supported and created new ventures that were later acquired by companies such as SAP and EMC. In her previous roles she was responsible for university computer and network services, the development of operating systems and research in physics. Beltrametti holds a Ph.D. in theoretical astrophysics from the Max Planck Institute for Astrophysics in Munich, Germany.
Patricia Burns leads the Advanced Materials Laboratory at the Xerox Research Centre of Canada where her team is responsible for the design and development of materials used for printing applications. Her research teams focus on the design, synthesis and evaluation of composite polymeric materials and small molecules for applications related to toners, inks, photoreceptors and fusers as well as specialty materials for electronic applications.

Burns joined Xerox in 1995 as a research scientist working on thermal inkjet ink development. That work led her to researching latex design for the emulsion aggregation (EA) toner technology and she eventually took over management of that research group in 1999. As manager she oversaw a team of researchers investigating novel materials for enhanced toner performance.

In 2004, Burns became the manager of the center’s Reprographic Materials Synthesis and Characterization Laboratory, which developed advanced and enabling materials to provide lower-cost, higher-quality color printing materials as well as more environmentally friendly materials and production methods for Xerox® products.

In 2009, Burns was tapped to manage the Marking Elements and Integration Laboratory in Webster, NY. In that role she oversaw the design and development of hardware systems for printing applications. Her teams focused on the fundamental physics, design and integration of hardware subsystems to create new technology options in printing systems.

Burns received a Ph.D. in synthetic organic chemistry from the University of Waterloo in 1992 and then held a two-year postdoctoral fellowship administered by the Natural Science and Engineering Research Council (NSERC) at the University of British Columbia. She received her bachelor’s degree in chemistry from the University of Windsor in 1988.

Burns holds more than 20 U.S. patents on ink and toner technology.
Tong Sun is a principal scientist and lab manager with expertise in R&D leadership, Big Data computing, social media mining, predictive data analytics, service oriented architecture, knowledge management and ontology modeling, business process automation and decision support.

She was recently appointed to lead a new research laboratory, which will build and deliver a social analytics platform for a number of Xerox businesses, integrating social intelligence with vertical business processes, such as customer care, retail, transportation and health care. In addition to the lab manager role, Tong heads up the research team developing the Xerox Innovation Group’s Big Data Center of Excellence, an initiative aimed at discovering new insights from Big Data through fusing a variety of data sources including text, graph, spatial, temporal and video data. She also provides predictive analytic thought leadership for the Xerox Urban Informatics initiative.

Tong, who grew up in China, joined the Xerox research team in 1995. She holds a Ph.D. in distributed computing and parallel processing from the University of Rhode Island, and holds 10 U.S. patents and more than 20 patent-pending applications. In 2012, the National Academy of Engineering selected her to participate in its 18th annual U.S. Frontiers of Engineering symposium, an elite meeting of the nation’s most promising young engineers.

Tong also has led several open innovation projects with academic institutions in the area of social computing and big data analytics, service computing and workflow modeling. She is an adjunct faculty member at the Rochester Institute of Technology, has authored and co-authored more than 30 papers in prestigious conferences and journals and has served as guest journal editor, industry liaison chair, special session chair and program committee member for various international conferences.

What makes my every working day a joy is the intelligent, creative, supportive and friendly people I work with at Xerox. Outside of my professional life, I enjoy taking pictures of places and people that touch my heart, traveling and downhill skiing with my family and teaching. My dream is to someday travel around the world to teach and help underprivileged children.

Tong Sun
Principal Scientist and Lab Manager
PARC, Inc
Geetha Manjunath leads the analytics competency at Xerox Research Center India and mentors researchers skilled in machine learning to deliver innovative solutions for health care, transportation, customer care and other verticals. She also serves as a Xerox Innovation Group program manager, working closely with business leaders to create an innovation strategy and vision for Xerox Communications and Marketing Services.

Manjunath joined Xerox in 2013, but has more than 20 years of research expertise in the information technology industry. She was a principal research scientist and research manager at Hewlett-Packard (HP) Laboratories, India. At HP, she proposed and led multiple research projects in crowdsourcing, cloud computing, data mining, semantic web, mobility, distributed computing, compilers and embedded systems. In 2012, she led a group of researchers and developers to create a next generation cloud platform that orchestrates the use of machine resources and crowdsourcing for smarter analytics solutions, with a particular focus on social media analysis. Earlier at HP, she was a co-principal investigator of the Vayu Project, which developed a new computing device for emerging markets called VinD, a TV-connected Internet appliance. Her research on simplifying web interactions resulted in a novel cloud service for emerging markets called SiteOnMobile that enabled non-tech savvy users to perform web-based transactions from their low-end phones. She also introduced a new perspective of the Internet through a concept called “Tasklets” to enable end-user-programming and multi-device access of personal Web tasks. Before her 16 year stint at HP, she was a senior technical member at the Center for Development of Advanced Computing (C-DAC), Bangalore for seven years where she lead a research team to develop parallel compilers for distributed memory machines.

Manjunath is a winner of the Computer Society of India (CSI) gold medal from the Indian Institute of Science where she obtained a master’s degree in computer science in 1991 and completed her Ph.D. in 2012. Her brainchild, SiteOnMobile was awarded National Association of Software and Services Companies Information Technology (NASCOM IT) Innovator 2009, Massachusetts Institute of Technology (MIT) TechReview Grand Challenge Winner in 2011 and also was tagged as an “HP Legend.” Her book on cloud technologies, published by Elsevier in December 2011, is used for engineering courses. She holds five U.S. patents and is the Vice Chair and a member of the executive committee of the Institute of Electrical and Electronics Engineers (IEEE) Cloud Computing Innovation Council of India.
Jennifer Belelie joined the Xerox Research Centre of Canada in 2002 as a Natural Sciences and Engineering Research Council (NSERC) Industrial Research Fellow. She received a bachelor’s degree in chemistry from Brock University in 1997 and a Ph.D. in synthetic organic chemistry from the University of Waterloo in 2002. Her Ph.D. thesis focused on the asymmetric synthesis of small molecules. She holds over 50 U.S. patents.

Belelie has worked on and led various ink projects since she started at Xerox. She began her career designing and synthesizing new materials for inks, but soon broadened her expertise to include formulating these compounds into functional materials. In 2007 she received a Xerox Excellence Award for her research contributions. She is currently the Formulation Design Area Manager at the center.

In 2007 Belelie completed a Marketing Design for Lean Six Sigma (DfLSS) Green Belt which gave her a new and exciting connection to the business side of Xerox. She was also a representative on the Xerox Innovation Group Women’s Council from 2004-2007 and The Women’s Alliance (TWA) Board from 2004-2006.

When I was four years old I used to pretend that the kitchen set my parents bought me was a lab. Instead of baking or cooking, they often found me doing “speriments.” They were not surprised when I announced that I wanted to be a chemist, although lots of other people were! My advice is to always pursue your passion, no matter how crazy it may seem.

Jennifer Belelie
Area Manager
Xerox Research Centre of Canada
Marina Tharayil is a research competency manager for the Systems Design and Controls area at the Palo Alto Research Center (PARC). Systems Design and Controls is a multi-disciplinary group of researchers with controls and systems skills that innovates in a wide range of applications. Recently Tharayil and the team have been adapting their expertise to focus on services domains and are developing a new competency in complex systems.

Tharayil joined the center in 2005 as a research staff member working with the center’s Advanced Media Handling group where she specialized in mechatronics. Her work includes paper path design and control for various Xerox® printers. She led the media registration technology development effort for the Xerox® iGen3® digital press family, which resulted in the improved registration performance of the Xerox® iGen4® and subsequent models. She also has worked on short paper path control in office printers, and advanced concept generation and development for new technologies. Tharayil is the author of several research publications and holds 14 U.S. patents.

She earned a bachelor’s degree in mechanical engineering from University of Illinois at Chicago in 1999. She went on to graduate school at the University of Illinois at Urbana Champaign as a National Science Foundation Fellowship recipient. Her Ph.D. (2005) thesis focused on developing high performance algorithms for precision motion control algorithms. Her work included developing time-varying algorithms for Iterative Learning Control and Repetitive Control for improved performance.

Tharayil received the 2009 Rochester Business Journal “Forty Under 40” award and was one of five finalists for the Rochester Engineering Society’s 2011 “Young Engineer of the Year” award. She served as chair of the Xerox Innovation Group Women’s Council from 2007 to 2010 and co-led the creation of a Controls Community of Practice at Xerox. She currently is the technical liaison for The Women’s Alliance at Xerox and a senior member of the Institute of Electrical and Electronics Engineers.

Women in Research and Engineering

I am grateful for the opportunity to contribute to innovations that I am excited about, work with people I respect, learn continuously and to have an impact on people and products.

Marina Tharayil
Area Manager
PARC, Inc
Victoria Bellotti is a research fellow at Palo Alto Research Center (PARC) and the developer of PARC’s Opportunity Discovery research and strategic investment targeting program, which assists clients in identifying the best direction to move with new technology-centered business ventures. She studies people to understand their practices, problems and requirements for future technology, and designs and analyzes human-centered systems, focusing on user experience.

Best known for her research on personal information management and task management, Bellotti has more recently been focusing on user-centered design of context- and activity-aware computing systems. Her previous work at London University, United Kingdom, The British Government’s Department of Trade and Industry, EuroPARC and Apple encompasses domains such as transportation, process control, computer-mediated communication, collaboration and ubiquitous computing.

Bellotti received her Ph.D. in human computer interaction from Queen Mary and Westfield College, a master of science degree in ergonomics and a bachelor of science degree in psychology from University College, all within London University in the United Kingdom. She is a co-inventor on 16 patents and 12 patent applications and an author or co-author on over 50 papers and book chapters. She also serves as an Adjunct Professor in the Jack Baskin School of Computer Engineering at University of California, Santa Cruz and Associate Editor of the International Journal of Human-Computer Interaction. She has been serving as one of the two co-chairs of the “Understanding People” technical papers subcommittee for 2013 and 2014 of the Association for Computing Machinery’s Special Interest Group in Computer-Human Interaction (ACM SIGCHI) Conference. In 2013 she was awarded membership of the ACM SIGCHI Academy for her contributions to the field and professional community of Human Computer Interface.
What I enjoy most about my job is being able to creatively explore long term research directions while at the same time design systems destined for people working in the real world today.

If I could recommend something to a young researcher I would say be open and curious. Always strive to learn new things, be interested in other people’s work and always explore research directions with rigor.

Stefania Castellani is a senior scientist at the Xerox Research Centre Europe in Grenoble, France. She first joined the center as a student on a European Union grant in 1994 and then in 1995 as a member of the Coordination Technology research group. She is currently a member of the Work Practice Technology research group where she applies her computer science background together with ethnographers and research engineers towards the design and the development of techniques and systems based on the analysis of field studies. Castellani has also been the center’s Customer Care Champion.

During more than 20 years of her research activities working for Xerox, Castellani has been interested in the design and realization of interaction mechanisms, semi-automatic and flexible support to work processes, coordination models and protocols, and distributed systems. She has been involved in a number of projects including adaptive scheduling and workflow, negotiation infrastructures and protocols, advanced search mechanisms, support for remote troubleshooting of devices and call center activities. More recently she has been working on the design of technology to promote behaviour change in mobility activities towards more sustainable commuting practices.

Castellani is co-author of more than 30 publications in international conferences, journals, and book chapters. In 2011 a paper that she co-authored received a best paper award at the ACM Conference on Computer Supported Cooperative Work (CSCW). The paper shows how the authors moved from an ethnography study to the design, implementation and testing of a mixed reality system that supports device troubleshooting activities.

Castellani has 26 patents and 11 published patent applications.
Corie Cobb joined the Palo Alto Research Center (PARC) in 2010 as a member of the research staff and is a contributor to PARC’s Cleantech Innovation Program. With a broad background in product development, mechanics of materials, Micro-electro-mechanical Systems (MEMS), intelligent systems, computational modeling and multi-objective optimization, Cobb enjoys applying and adapting her knowledge to new innovative direct printing and patterning technologies related to energy storage. Currently, she is researching and developing methods for co-extruding thick films of interdigitated functional material for advanced battery and fuel cell electrodes. Prior to joining PARC, Cobb worked at Applied Materials as a mechanical engineer designing hardware for plasma etch applications. She has also worked in the areas of ink jet printing, imaging and industrial design for portable electronics through internships at Hewlett-Packard, Google and Toshiba Design Center. An internship at Bell Labs inspired her to pursue doctoral studies in the area of MEMS with a focus on how to create intelligent design synthesis and optimization tools for MEMS designers to give early-stage feedback on device design. She was a Bell Labs Cooperative Research Fellowship Program (CRFP) recipient (2002-2005) and an Alfred P. Sloan Ph.D. Scholar (2005). Cobb has co-authored 10 papers for peer-reviewed conferences and journals and is a co-inventor on 11 patent applications related to gas/fluid delivery and novel printed architectures. Cobb holds a Ph.D. in mechanical engineering from the University of California, Berkeley, a master’s degree in mechanical engineering and a bachelor’s degree in product design from Stanford University.

Women in Research and Engineering

PARC brings ample opportunity to work on leading edge technology and products with other worldclass researchers in a highly multi-disciplinary environment. I enjoy solving challenging problems and leveraging both experimental and computational methods to help uncover solutions. I value that PARC allows me the freedom to leverage my diverse toolkit of skills, while continuing to assist me in my professional growth and without limiting me to one functional role.

Corie Cobb
Senior Member of Research Staff
PARC, Inc
Yasmine Charif is a research scientist at Palo Alto Research Center (PARC), who works in the Analytics and Large Scale area of the Computing and Information Services Laboratory. Her research in service computing, business process management and business analytics is aimed at assisting knowledge workers by making business process design, discovery and analysis more accessible to non-specialists. Her interests also lie in the areas of agent models and ambient intelligence.

Charif joined Xerox in 2011. She holds an engineering degree in computer science from Université des Sciences et Technologies Houari Boumediene in Algiers, Algeria, a master’s degree from Université René Descartes (Paris V) in Paris and a Ph.D. in computer science from Université Pierre et Marie Curie (UPMC, Paris VI) in Paris. She was awarded a grant from the French National Center for Scientific Research to fund her Ph.D. research on dynamic service composition enabled by intelligent agent coordination.

During her post-doc in the Laboratory for Research on Technologies for e-Commerce at the University of Quebec at Montreal, Charif worked on the e-Tourism Platform, a project sponsored by the United Nations, as a lead architect in the design and prototyping of an open source e-tourism portal aimed for the least developed countries. Having served on the program committee of various conferences and journals, she has also published numerous journal and conference articles on multi-agent system coordination for service composition, ontology-driven development, management of contextual knowledge for ambient intelligence, design of compensation processes for long running business transactions and development of reusable workflows. While at the center, she earned her Design for Lean Six Sigma software Green Belt.
Diane Larlus is a research scientist at the Xerox Research Centre Europe in the Textual and Visual Pattern Analysis (TVPA) group. She joined the center in October 2010. Before that, she worked two years as a research assistant at the TU Darmstadt University in Germany.

Her research interests include machine learning applied to computer vision and wearable computing. Since she joined Xerox, she has been working on semantic image segmentation, document segmentation and object localization.

Larlus obtained a master’s degree in image, vision and robotics from Université Joseph Fourier/Institut polytechnique de Grenoble (UJF/INP), Grenoble, France, in 2005. From 2005 to 2008, she worked as a doctoral candidate in the Learning and Recognition in Vision (LEAR) group, at Inria Grenoble. During the summer 2007, she did an internship at the Joint Robotics Laboratory/Intelligent Systems Research Institute (JRL/AIST) in Tsukuba, Japan. She obtained her Ph.D. degree in 2008 from INP Grenoble. Diane is on the program committee of the Conference on Computer Vision and Pattern Recognition (CVPR), International Conference on Computer Vision (ICCV) and European Conference on Computer Vision (ECCV).

I joined the Xerox Research Centre Europe recently, and I found a really stimulating working environment there: smart and friendly researcher colleagues that I can learn so much from, and challenging but exciting research problems with strong applications in the real world.

Diane Larlus
Senior Research Scientist
Xerox Research Centre Europe
Women in Research and Engineering

Caroline Privault joined the Xerox Research Centre Europe in 1998. She received her Ph.D. in operations research from the University Joseph Fourier in France and Institut National Polytechnique de Grenoble (INPG) in 1994. She has lectured at a number of universities and engineering schools and was a postdoctoral fellow at the Laboratoire d’électronique des technologies de l’information (LETI) laboratory of the French Commission for Atomic Energy (CEA).

Her role as senior project leader in the Advanced Development Lab (ADL) is to effectively transfer technologies developed in the lab to the Xerox business groups. She is currently working on automatic textual classification and its applications in the field of litigation and e-discovery. She previously worked on finite state linguistic technologies.

Over the last three years, she has also been exploring multi-touch interface design and interaction, and with a multi-disciplinary team she works on a prototype for document discovery that fits machine learning technologies into a multi-touch environment.

Privault has received six U.S. patents with six more pending. She is a certified Green Belt in Design for Lean Six Sigma (DFLSS) Software.
Beilei Xu, a senior research scientist at Palo Alto Research Center (PARC), works in the Vision Systems area. Her research interests include image processing, pattern recognition and statistical analysis. She has been a key member in developing and delivering many image rendering and image processing technologies to various products. Recently, she extended her research into video analysis and synthesis and hyper-spectral imaging. Her research work has applications in the field of health care and transportation.

Xu, who holds a Ph.D. in medical physics from University of Chicago, joined the center in 1997. Prior to working for Xerox, she was a physicist involved in developing particle detectors for high energy physics experiments.

Born in China, she received her bachelor’s degree in nuclear physics from Peking University, Beijing, China. She first came to the United States as a visiting scientist at the Laboratory for Nuclear Science at Massachusetts Institute of Technology (MIT).

Xu is a member of the Institute of Electrical and Electronics Engineers and the Society for Imaging Science and Technology (IS&T), serving on the council of the local IS&T chapter. She has been a reviewer for multiple journals and served on the program committees of many conferences in the area of image and video processing. In addition to her journal and conference publications, she holds 57 U.S. patents and more than 40 pending applications in the areas of image processing, video analytics and statistical analysis. She is a certified Black Belt in Design for Lean Six Sigma electromechanical engineering.