INVENTION-CON 2021

The Place for Inventors, Makers, & Entrepreneurs

USPTO's Inventors Conference · August 18–20 · Online

UNITED STATES
PATENT AND TRADEMARK OFFICE

uspto

Capitalizing on your intellectual property

The USPTO's Office of Innovation Outreach presents Invention-Con 2021 online

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Capitalizing on your intellectual property

Agenda

Wednesday, August 18, 2021

Noon – 12:05 p.m. **Welcome**

Cara Duckworth, Chief Corporate Communications Officer, USPTO

12:05 – 12:55 p.m. **Learning the ropes to protect your creative works**

Learn about the basics of patents and trademarks, and the initial steps to take to obtain the appropriate intellectual property protection

Scott Baldwin, senior staff attorney, Trademarks, USPTO

Greg Toatley, supervisory patent examiner, Technology Center 2800, USPTO

Karen Young, Director, Technology Center 2900, USPTO

Joe Zhou, supervisory patent examiner, Technology Center 1600, USPTO

12:55 – 1 p.m. **Break**

1 – 1:55 p.m. **Exploring pathways to inventing**

Learn from young inventors the best practices for turning your idea into an invention

Bishop Curry, inventor of "Oasis," a device to prevent hot car deaths

Brian Wen, founder, Youth Helping Youth International English Club, and co-inventor of Physical Bookmark

Jennifer Wen, co-inventor of "Physical bookmark"

Moderator: Jackie Cheng, supervisory patent examiner, Technology Center 3700, USPTO

1:55 – 2 p.m. **Break**

2 – 2:55 p.m. **Workshops *(registration closed)***

Capturing your own journey

Clara Mabour, STEM and humanities instructor, Northeast High School, Broward County, FL

Victoria Pasquantonio, education producer, PBS NewsHour

Creating your brand identity

Katherine Hoppe, STEM Education Consultant, STEMisED

Sheryl Sotelo, STEM outreach specialist in rural Alaska

Educators and students inventing the future

Katia Avila, computer engineering student at University of California, Santa Cruz

Anthony Perry, Invention Education Coordinator, Lemelson-MIT Program

Doug Scott, educator and Presidential Awards for Excellence in Mathematics and Science Teaching Fellow

2:55 – 3 p.m. **Break**

3 – 3:55 p.m. **Assignment: Resources**

Learn about the fun, free educational resources available for kids and teens

Patti Curtis, Robert Noyce/Ellen Lettvin Informal STEM Education Fellow, Office of Planning, Evaluation, and Policy Development, U.S. Department of Education

Louie R. Lopez, Director, DoD Science, Technology, Engineering and Mathematics

Erin Tochen, Director, InventEd Network, The Lemelson Foundation

Moderator: Dr. Jorge Valdes, Education Programs Advisor, USPTO

3:55 – 4 p.m. **Break**

4 – 4:55 p.m. **Fireside chat with TIME magazine's first Kid of the Year**

Gitanjali Rao, inventor and TIME magazine's Kid of the Year for 2020

Moderator: Molly Kocialski, Director, USPTO's Rocky Mountain Regional Office

4:55 – 5 p.m. **Closing**

Dennis Forbes, innovation outreach program manager, Office of Innovation Outreach, USPTO

Thursday, August 19, 2021

Noon – 12:05 p.m. **Welcome**

Sean Wilkerson, innovation outreach program manager, Office of Innovation Outreach, USPTO

12:05 – 12:55 p.m. **Keynote: Using innovation to answer the COVID-19 challenge**

Serene Almomen, Ph.D., co-founder and CEO of Senseware

12:55 – 1 p.m. **Break**

1 – 1:55 p.m. **Let's make a deal!**

Learn how different innovative entities work together to bring inventions to the marketplace

Clayton Banks, co-founder and CEO, Silicon Harlem

Jack Lander, inventor, author, and writer for Inventor Digest magazine

Alina Morse, founder and CEO, Zolli Candy

Moderator: James Wilson, Assistant Regional Director, USPTO's Midwest Regional Office

1:55 – 2 p.m. **Break**

2 – 2:55 p.m. **Workshops *(registration closed)***

Filing a provisional patent application

Sudhanshu C. Pathak, supervisory patent examiner, USPTO

Patent Pro Bono Program and finding a patent practitioner

John Kirkpatrick, Patent Pro Bono team member and staff attorney, USPTO

Amy Lehman, Director of Legal Services, Volunteer Lawyers for the Arts

Emily Sprague, Office of Enrollment and Discipline staff attorney, USPTO

Sameer Vadera, legal counsel, Palantir Technologies

Ask me anything about trademarks

Jason Lott, attorney advisor for Trademarks Customer Outreach, USPTO

The value of public relations for inventors

Andrea Pass, owner, Andrea Pass Public Relations

Ask me anything about design and plant patents

Brandon Rosati, management quality assurance specialist, Technology Center 2900, USPTO

Ian Simmons, design practice specialist, Technology Center 2900, USPTO

Joe Zhou, supervisory patent examiner, Technology Center 1600, USPTO

Meet the Patent Trial and Appeal Board:
What you need to know about the board

Scott E. Bain, administrative patent judge, Patent Trial and Appeal Board

Ryan H. Flax, administrative patent judge, Patent Trial and Appeal Board

Janet A. Gongola, Vice Chief Judge for Strategy, Patent Trial and Appeal Board

Cynthia M. Hardman, administrative patent judge, Patent Trial and Appeal Board

2:55 – 3 p.m. **Break**

3 – 3:55 p.m. **Inside inventive minds: You want to invent what?**

Learn about best practices when first coming up with an invention and tips to strengthen your perseverance skills

Carol-Ann Carrington, founder, Kickerfeast

Shari Hammond, co-founder and CEO, Inspired Product Development Group

Matt Nuccio, President, Design Edge, Inc.

Moderator: Warren Tuttle, President of the Board of Directors, United Inventors Association

3:55 – 4 p.m. **Break**

4 – 4:55 p.m. **Tech transfer and commercialization**

Learn about the process and how tech transfer can give you a competitive advantage

Dr. Laura Collins, Director of IP Development and Commercialization, North Carolina A&T State University

Cedric D'Hue, J.D., Ph.D., patent counsel, Eli Lilly

Moderator: Tanaga Boozer, South East Area Scientific Technology Transfer Coordinator, U.S. Department of Agriculture

4:55 – 5 p.m. **Closing**

Sean Wilkerson, innovation outreach program manager, Office of Innovation Outreach, USPTO

Friday, August 20, 2021

Noon – 12:05 p.m. **Welcome**

Dennis Forbes, innovation outreach program manager, Office of Innovation Outreach, USPTO

12:05 – 12:55 p.m. **A focus on fashion: Wearable tech**

Learn about the incorporation of technology into the design of clothing

David Canada, Director of Business Operations, Boeing Global Services

Pankaj Kedia, Global Business Head, Smart Wearables and Shareables Segments, Qualcomm Technologies, Inc.

Moderator: LaKisha Greenwade, founder and director, Wearable Tech Ventures

12:55 – 1 p.m. **Break**

1 – 1:55 p.m. **Music beatz and writingz – Copyright issues**

Learn about the importance of intellectual property rights for your musical and literary works

Ansel Brown, inventor, recording artist, and principal owner and Chief Amazement Officer of nvisionative

1:55 – 2 p.m. **Break**

2 – 2:55 p.m. **Workshops *(registration closed)***

What's in a patent claim?

Sudhanshu Pathak, Pro Se Assistance Program Coordinator, USPTO

What intellectual property protection should I choose?

James Carlson and Victoria Reinhart, patent attorneys, Osha Bergman Watanabe & Burton LLP

Learn how to file DOCX documents in your applications using USPTO systems

Alexis Winn, software tester, Patent Electronic Business Center's (EBC) Patent Center Support Team, USPTO

Manufacturing and production for inventors

Carmine Denisco, product development specialist and founder of EarMark Sourcing

Ask me anything about utility patents

Heidi Riviere Kelley, Esq., technology center operations manager, Technology Center 1700, USPTO

Vladimir Magloire, supervisory patent examiner, Technology Center 3600, USPTO

Gary Nickol, supervisory patent examiner, Technology Center 1600, USPTO

Claire X. Wang, supervisory patent examiner, Technology Center 2600, USPTO

2:55 – 3 p.m. **Break**

3 – 3:55 p.m. **Overcoming technology challenges of AI and robotics**

Learn how the ever-changing influence of technology can assist small businesses and inspire new inventions

Elnaz Sarraf, CEO, ROYBI®

Nisha Talagala, CEO, AIClub.World

Moderator: Peter-Anthony Pappas, supervisory patent examiner, Technology Center 2400, USPTO

3:55 – 4 p.m. **Break**

4 – 4:55 p.m. **Government resources: Connect, interact, and inquire**

Learn about the various government resources available to assist you

NaThanya Ferguson, manager, Office of Innovation Outreach, USPTO

Joann Hill, Chief of the Office of Business Development, Minority Business Development Agency (MBDA)

Ela Mirowski, program director, SBIR/STTR program in the Division of Industrial Innovation and Partnerships, National Science Foundation (NSF)

Brittany Sickler, Senior Innovation Policy Advisor, Small Business Administration (SBA)

4:55 – 5 p.m. **Closing**

NaThanya Ferguson, manager, Office of Innovation Outreach, USPTO

Speakers

Serene Almomen, Ph.D., co-founder and CEO, Senseware

Senseware's CEO and Co-founder, Serene Almomen, holds a Ph.D. degree in IT and is a certified PMP, SCM, ITIL, and SCJP. In building Senseware from the ground up, Almomen found a niche group of building owners, engineers, general contractors, and energy consultants that were all at a disadvantage by not having wireless, instant access to real-time facility and site data. As co-founder and CEO of the high-growth technology company, Almomen worked to provide a modern Internet of Things (IoT)-enabled technological solution to an age-old issue in an industry that was previously ignored by the IoT sector—the commercial and industrial real estate industry. Today, she continues to monitor the IoT landscape for opportunities and is known for pushing her team to stay one step ahead of the competition.

During the COVID-19 pandemic, Senseware's real-time indoor air quality solution grew in popularity across industries, including schools, commercial offices, medical facilities, and entertainment venues. Almomen has helped over 200 spaces reopen safer following COVID-19. She has filed and received 12 patents for her work, and Senseware has been named one of Forbes' "50 Women-Led Startups That Are Crushing Tech."

Katia Avila, technical lead, 2018 Garey High School Lemelson-MIT InvenTeam

Katia Avila was a technical lead of the 2018 Garey High School Lemelson-MIT InvenTeam. With no prior engineering knowledge, she led the production of an oxygen saturation sensor for the InvenTeam's project, Heart & Sole. Her experiences as a low-income Latina motivated her to join the InvenTeam and learn how to use technology to help her community. She now works at Microsoft as an Explorer Intern while pursuing a computer engineering degree at the University of California, Santa Cruz (UCSC). At UCSC, she has found a passion for education and aims to continue supporting the community as a professor in engineering.

Scott E. Bain, administrative patent judge, Patent Trial and Appeal Board

Administrative Patent Judge Scott E. Bain was appointed to the Patent Trial and Appeal Board (PTAB) on January 11, 2016 following nearly two decades of intellectual property law practice. Judge Bain began his career as a software engineer at Seagate Technology. Following law school, he served as a judicial law clerk to the Honorable Randall R. Rader of the U.S. Court of Appeals for the Federal Circuit. He began his legal career as an associate at Fish & Richardson, PC, and then an associate and subsequently partner at Wiley Rein LLP in Washington, D.C. He litigated patent and copyright cases on behalf of a wide variety of clients, including independent inventors, small businesses, technology companies, pharmaceutical firms, and media companies. Bain then left private practice to serve in several executive and in-house roles, including Chief Litigation Counsel at the Software & Information Industry Association (SIIA) and Vice President, Litigation for the Recording Industry Association of America (RIAA).

Bain earned his law degree (J.D.) from the University of California, Berkeley School of Law, and a Bachelor of Electrical Engineering degree from the University of Minnesota.

Scott Baldwin, senior staff attorney, Trademarks, USPTO

Scott Baldwin is a senior staff attorney in the USPTO's Office of Trademark Quality Review and Training (OTQRT). Prior to joining the OTQRT, he was an attorney in the USPTO's Global Intellectual Property Academy (GIPA), where he conducted capacity-building programs in the United States and around the world on intellectual property protection and enforcement. Prior to that position, he served as a trademark attorney with the USPTO's Office of Policy and International Affairs (OPIA), where he handled policy matters relating to trademark issues in the United States and abroad and provided technical assistance to foreign governments that wanted to develop or improve their trademark systems.

Baldwin also was a trademark examining attorney at the USPTO. In private practice, he worked as an attorney with the law firm of Fulbright & Jaworski in Washington, D.C.

Clayton Banks, co-founder and CEO, Silicon Harlem

Clayton Banks is the CEO and co-founder of Silicon Harlem, whose goal is to combine technology and innovation with affordable connectivity that can enable sustainable economic engines in emerging communities across the United States. Under his leadership, Silicon Harlem has attracted over $50 million dollars into Upper Manhattan for advanced infrastructure research and test bedding. Banks has positioned Upper Manhattan as a tech and innovation hub that is one of the fastest growing areas for tech startups, entrepreneurs, and companies. He has been able to galvanize the public sector, the private sector, universities, and community stakeholders to embrace tech as a sustainable economic engine for Upper Manhattan.

Banks has established critical programs based on science, technology, engineering, and mathematics (STEM) in public schools and several non-profits in Upper Manhattan to prepare citizens for 21st century jobs and careers. These programs have become gateway opportunities for many students to pursue further education.

Prior to Silicon Harlem, Banks was a pioneer in the cable and communications industry. He set the vision for Ember Media, a development group that builds digital solutions and interactive applications for top brands and non-profit organizations across multiple platforms. Known as a pragmatic visionary, Banks has developed and deployed leading-edge technology and applications for network cloud computing, gaming consoles, social media, augmented and virtual reality, interactive TV, tablets, mobile apps, and over 400 interactive properties.

Banks worked with former President Bill Clinton to publish a first-of-its-kind interactive college guide series called "The Key" that targets underserved communities and features Historically Black Colleges and Universities and Hispanic Serving Institutions.

Banks served as Vice President of Affiliate Relations for Comedy Central. While at Comedy Central, he was part of the launch of South Park, The Daily Show with Jon Stewart, and Upright Citizens Brigade.

He has been recognized with many awards and honors, including being selected as one of New York City's "Tech Power 50" leaders in the technology industry. The 2020 edition of "The Responsible 100 New Yorkers" recognized Banks for his COVID-19 response—providing free internet in common-area locations. Banks has been inducted as a History Maker in the United States Library of Congress and has received proclamations from the Public Advocate, Manhattan President's Office, Brooklyn President's Office, and Advocate of the Year from Society for Africans in Diaspora.

Tanaga Boozer, Southeast Area Scientific Technology Transfer Coordinator, USDA

Tanaga Boozer recently joined the Agricultural Research Service (ARS) as the Scientific Technology Transfer Coordinator to provide technology transfer and intellectual property assistance to researchers in 28 United States Department of Agriculture (USDA) facilities throughout the Southeast area. In this role, Boozer negotiates on behalf of ARS to transfer agricultural products from ARS to the private sector. Boozer advises the Area Director, Institute Directors, Center Directors, and the Assistant Administrator for Technology Transfer on policy matters regarding technology transfer. She plans education and outreach activities and reviews and approves technical presentations and applications for innovation funding and awards. Boozer serves on four Patent Committees (Chemical, Life Science, Mechanical, and Ad Hoc) to support and promote innovative technologies and advocate for wide dissemination of USDA's agricultural products.

Boozer joined the USDA after working at the USPTO in the Office of Education and Outreach (OEO), where she directed and coordinated intellectual property educational outreach programs and partnerships with external organizations, academic institutions, and federal agencies. Boozer conducted invention education seminars for science, technology, engineering and math (STEM) teachers and administrators to encourage integrating invention and innovation principles into the curriculum. She also developed and implemented new educational programs to support the policies, mission, and goals of the agency.

Prior to joining the USPTO, Boozer was the Director of Technology Transfer at Florida A&M University (FAMU) with a dual teaching appointment in the College of Pharmacy and Pharmaceutical Sciences. She was primarily responsible for working with faculty researchers to disclose, file, and license patented inventions. She developed and taught a graduate intellectual property course for scientists and engineers and hosted a summer invention camp for middle and high school children. In addition, while at FAMU, she invented the "Virtual Technology Transfer Office" (U.S. Patent No. 8,117,131), which was funded by two innovation grants—a Leon County Research Authority Technology Commercialization Grant and a Small Business Innovation Research (SBIR) Grant from the National Science Foundation.

Boozer gained extensive innovation experience early in her career working for Procter & Gamble, Insmed Biopharmaceutical Company, the National Institute of Standards and Technology (NIST), and the USPTO as a patent examiner. For many years, Boozer worked extensively with Minority Serving Institutions (MSIs) and Historically Black Colleges and Universities (HBCUs) to promote intellectual property and technology transfer programs.

Boozer holds a Bachelor of Science degree in chemistry from Rust College, an MBA from Prairie View A&M University, J.D. from the University of Mississippi, and an LL.M. degree from George Washington University.

Ansel Brown, inventor, recording artist, and principal owner and Chief Amazement Officer of nvisionative

With most artists, the listener is asked to engage in that particular artist's work, and the listener's experience is that particular effort of the artist. Many times it ends up being personal and yes, even self-serving—and that may not be a bad thing—it just is what it is!

With Ansel Brown, the difference is that he's on a musical expedition through his experiences, and the music allows the listener to take that journey with him. So, you may not have been able to get to Cape Canaveral for the final Space Shuttle landing, but listen to Brown's moving anthem, "When You Fly," and it will take you there. Brown says it simply, "I create experiences with my music."

Ansel got the country bug as people like Garth Brooks (one of his favorites) and others were literally exploding on the scene. It was the country boom period, and Brown knew that he was going to be a part of that. However, there were also bills to pay and life to take care of. Talking to Brown, you realize quickly and clearly—it's all about music and experiences. He's on a journey, and lucky for us, there's room in the rocket for everyone.

Great artists normally take detours and side roads before they end up on their path of destiny. For Brown it was no different. He started a record label, went to Nashville to be a star, and after recognizing it for what much of it is, he took a hiatus and re-grouped.

"I visit hospitals all the time," said Brown. "I want to meet kids, play them some music, and even if it's just for a little while, take their mind off their sickness. Well, some people don't think that's a good use of time when, according to them, I should be making money."

Brown clearly goes against the grain and will gladly tell you just that. This time it would be about experiences, and if radio success happens and songs become hits, as they very well may, it won't be because this artist became part of some star-making machine. "I am handling my music and career as I should have been doing all along," said Brown. "I'd love for millions of people to hear my music—for radio programmers to love the songs—but this time I'll be doing it my way."

Brown is involved with so many experiences! This guy goes from NASA to women's aviation to dirt racing, and in every case there's great music! For example, "A World of Outlaws," is the theme song for the largest dirt racing series in the U.S., and he was featured on Outcast Kustoms, an original series on the Discovery VELOCITY Channel. The song, "When You Fly," salutes aviation and was used as a tribute for the final space shuttle launch, landing, and farewell ceremony.

Brown's mission is to create experiences through his music, and the great thing is that you're invited.

"What sets me apart from other artists is the experience," proclaims Brown. "The song is actually the icing on the cake!"

David Canada, Director of Business Operations, Boeing Global Services, Boeing

David Canada is Director of Business Operations for Boeing Global Services (BGS). Named to this role in 2020, he has primary responsibility for driving digital literacy and digitizing the business. Additionally, he has overall responsibility for the management system and effective operations of the BGS business unit.

Canada joined The Boeing Company in 2007 as an industrial engineer on the V-22 Osprey line. He implemented new project management tools that resulted in automated workforce planning and improved the schedule planning efficiency. Canada grew, taking on new challenges and roles across Boeing.

As IT procurement manager, he managed 18 procurement agents, 30 suppliers, and more than $250 million in contracts. He moved on to serve as chief of staff to the Vice President of BDS IT Business Partners.

He continued his career as the Senior Manager, Mergers & Acquisitions Integration Strategy, where he led mergers and acquisitions estimated at $2.5 billion, and he also manages critical cybersecurity issues and systems.

Canada grew up in a single-parent household in inner-city Baltimore. His mother stressed the importance of a quality education. He had an inquisitive nature and was always quick to volunteer to solve problems. In elementary school, he was drawn to science and engineering through the Math, Engineering, Science Association (MESA). By age 10, he was winning engineering competitions by creating a rocket-propelled car or building a crane out of drinking straws that could hold a 50-pound cinder block. Through these experiences, he learned that science and engineering impacted all aspects of life.

Canada earned a bachelor's degree in mechanical engineering from Howard University, as well as a master's degree in business administration and a certification in project management.

Giving back is a part of who Canada is. He serves on the board of the following non-profit organizations: Black Alliance of Colleges & Employers (BACE), Step Afrika, Wearable Tech Ventures, The Life Enrichment Group, Positive Deposits, and Whine & Cheese. Canada is also very passionate about STEM education and increasing the number of minorities in technology fields. He serves as an active corporate representative for the Black Engineer of the Year Awards, Advancing Minorities Interest in Engineering, and the National Society of Black Engineers.

James Carlson, IP attorney, Osha, Bergman, Watanabe, Burton

James Carlson has practiced intellectual property law for over ten years, with an emphasis on domestic and foreign patent prosecution, patent and software licensing, and IP counseling in a wide variety of technical disciplines, such as computer software, video games, oil and gas technologies, business methods, semiconductors, and optical systems. In particular, Carlson has significant experience in providing legal counsel to clients regarding a wide range of artificial intelligence issues, such as the patentability of machine learning inventions. Carlson also specializes in patent-eligibility analyses in view of recent Supreme Court and Federal Circuit jurisprudence.

Prior to attending law school, Carlson worked with several nonprofits in developing software and providing technology counseling. He previously worked at TFA-Wireless, a research project developed by Rice University with a local Houston nonprofit, Technology for All. TFA-Wireless involved creating an operational wireless mesh research network for serving both Rice graduate students and area residents. Additionally, Carlson worked for the National Technology Assistance Project (NTAP), a technology team under the direction of the Legal Services Corporation to provide technical assistance to legal aid organizations throughout the United States.

Carol-Ann Carrington, founder, Kickerfeast

An immigrant from the beautiful island of Barbados, Carol-Ann Carrington migrated to New Jersey to live with her mother. She pursued a Bachelor of Science degree with a concentration in accounting and worked in accounting in several industries, including investment, entertainment, and healthcare. She also holds a Master of Science degree from John Jay College of Criminal Justice.

Colorful Eats became Carrington's passion in 2018. She was juicing carrots when her son asked for pancakes and she suggested that he should drink some of the carrot juice, which he politely declined. Simultaneously a light bulb went off, so she blended some of the carrot juice into the pancake mix. Her son ate the carrot pancakes and politely asked for more. Thus began her quest to bring colorful vegetable or fruit-based pancake mixes to market. Approximately two years later, she launched Kickerfeast Gourmet Pancake & Waffle Mix.

Jackie Cheng, supervisory patent examiner, USPTO

Jacqueline Cheng started her career at the USPTO in 2005 as a patent examiner working on patent applications in the field of medical imaging. She became a primary examiner in 2011 before taking on her current role as a supervisory patent examiner (SPE) in 2013. As a SPE, she currently oversees patent examiners working on patent applications in the field of medical diagnostic testing. Cheng earned her Bachelor of Science degree from Carnegie Mellon University in electrical & computer engineering with a double major in biomedical engineering.

Dr. Laura Collins, Director of IP Development and Commercialization, North Carolina A&T State University

Laura Collins, Ph.D. is the Director of IP Development and Commercialization at North Carolina Agricultural & Technical State University (N.C. A&T). In her 11 years as the university's patent agent, the number of patents related to campus research has grown from 11 to over 45. Before coming to N.C. A&T, Collins spent 10 years supporting an intellectual property law group in San Diego, California. She has a Ph.D. in chemistry from UNC Chapel Hill and undergraduate degrees in history with honors and chemistry from Bryn Mawr College.

Bishop Curry, inventor of Oasis — device to prevent hot car deaths

Bishop B. Curry, V is a 9th grader who lives in McKinney, Texas. He has a younger brother (Isaiah, 13) and a little sister (Anistyn, 5). In the summer of 2016, a baby named Fern died because she was accidentally left in a minivan. Fern lived close to Curry, and he decided to invent a device to stop hot car tragedies from happening.

In April 2018, Curry received a patent for his Oasis invention. If a baby is left in a hot car, Oasis blows cold air on the child and alerts parents and first responders. He partnered with Kickr Design in Atlanta to engineer the first functional Oasis device. Curry is currently working to have Oasis integrated into car seats and is reaching out to car seat companies who are evaluating his patent for usage.

Curry plays football and runs track. He recently participated in a youth advisory council program providing input on legislation impacting his community.

Patti Curtis,
Robert Noyce/Ellen Lettvin STEM Education Fellow

Patti Curtis became the Robert Noyce/Ellen Lettvin STEM Education Fellow serving in the Office of Elementary and Secondary Education after serving two years in the Office of Planning, Evaluation and Policy Development at the U.S. Department of Education (ED). She is involved in a variety ED's STEM efforts, including competitive grants, out of school programs, STEM newsletters, and briefing series. She participates in the Interagency Working Groups on Strategic Partnerships, Convergence, and building a STEM Portal.

Previously, Curtis served as the Director of the Washington, D.C. Office of the Museum of Science and their National Center for Technological Literacy, where she focused on advancing formal and informal PK-12 engineering education policies and programs.

Curtis also served on the U.S. House of Representatives STEM Education Caucus Steering Committee, the ASTC Public Policy Committee, and the Title IV, Part A Coalition Steering Committee. Previously, she was a government relations representative for the American Society of Mechanical Engineers and served as a leader of the STEM Education Coalition.

Originally from Rochester, New York, Curtis received her Bachelor of Arts degree in political science and her Master of Public Administration at the University of South Carolina. She worked for the South Carolina state legislature and the state Department of Parks, Recreation, and Tourism. She also studied political affairs at George Washington University and enjoys travel and watercolor painting.

Cedric D'Hue, J.D., Ph.D.,
Patent Counsel, Eli Lilly — Oncology

Cedric D'Hue graduated from Tufts University in Boston, Massachusetts with a Bachelor of Science in chemistry. He worked at a generic pharmaceutical company as a dissolution chemist, then as an analytical chemist before moving to Indiana to pursue a Master of Science in analytical chemistry at Indiana University Purdue University – Indianapolis. D'Hue realized

that becoming a patent lawyer would allow him to stay connected to the scientific world while also leading an exciting and active career out of the lab.

D'Hue had a strong focus on patent law from the very beginning of law school at IU McKinney School of Law. He wrote and published a note on using the past term to describe experiments that were never conducted as an example of committing fraud at the USPTO. He graduated with a J.D. having participated in both law review and moot court. He spent four years at a large Indiana law firm learning the basics of patent preparation and prosecution before starting his own law firm, D'Hue Law LLC. Then he realized his mistake of not pursuing a doctorate in chemistry.

His wife's job at IU Health Arnett required a move to West Lafayette. Being close to Purdue University provided D'Hue an opportunity to pursue a doctorate in chemistry. D'Hue successfully defended his Ph.D. thesis in analytical chemistry from Purdue (R. Graham Cooks, advisor) in 2017. His projects involved using multivariate statistical analysis of mass spectra to statistically differentiate non-cancerous and cancerous tissue of dog bladder invasive urothelial carcinoma and human oral squamous cell carcinoma. The latter project was supported by the Purdue Center for Cancer Research The Challenge award.

Pursuit of the Ph.D. also sharpened D'Hue's entrepreneurial skills. He continued to work as a patent attorney at D'Hue Law LLC during pursuit of the Ph.D. At the end of 2020, D'Hue accepted an incredible opportunity to join Eli Lilly in supporting their oncology assets. D'Hue currently has over 15 years of experience as a registered patent attorney.

D'Hue is very interested in cancer research and therapeutic and diagnostic systems, and he frequently participates in runs for the Purdue Center for Cancer Research The Challenge 5K. D'Hue is married and has four young children.

Carmine Denisco, product development specialist and founder of EarMark Sourcing

Carmine Denisco is a successful entrepreneur, inventor, author, podcaster, investor, and patent and trademark holder. He has designed, developed, and manufactured many products sold in retail stores, TV shopping channels, online, and on infomercials; some have gone on to be licensed by major chain stores.

Denisco is dedicated to helping inventors correctly navigate the invention and manufacturing process, giving each inventor their best shot at success.

NaThanya Ferguson, manager, Office of Innovation Outreach, USPTO

NaThanya Ferguson serves as the manager of the USPTO's Office of Innovation Outreach, which focuses on outreach to independent inventors, small businesses, entrepreneurs, and underrepresented communities of innovators across America.

Ferguson joined the USPTO in 1989. During her 32-year tenure at the agency, she has worked as a contracting officer representative, lead patent analyst for the Patent Process Reengineering initiative, strategic planning project manager for the Office of the Commissioner for Patents, and project manager for the National Council for Expanding American Innovation (NCEAI).

Ferguson has received numerous awards, including a Department of Commerce Gold Medal in 2015 for her contribution to the innovative and collaborative implementation of the First Inventor to File statutory provisions of the America Invents Act, a Department of Commerce Distinguished Career Award in 2011 for continued outstanding service, and a Silver Medal Award in 1999 for her contribution to the development and implementation of the Patent Process Reengineering initiative.

Ferguson holds a Bachelor of Science degree in business and management from Johns Hopkins University and a Master's Certificate in project management from Management Concepts and Regis University.

Ryan H. Flax, administrative patent judge, Patent Trial and Appeal Board

Administrative Patent Judge Ryan H. Flax was appointed to the Patent Trial and Appeal Board (PTAB) on February 22, 2016. Judge Flax presides primarily over trials before the Board, but also handles ex parte appeals.

Flax was a research scientist at R.J. Reynolds Tobacco Company's Research and Development Division, focusing on DNA research, prior to attending law school. After earning his law degree, Flax entered private practice, where he served as counsel at the law firm Dickstein &

Shapiro, LLP (now Blank Rome LLP). Prior to joining the PTAB, Flax served as Managing Director for Litigation Consulting and General Counsel at A2L Consulting. He has also taught as an adjunct professor at American University Washington College of Law, where he taught a litigation practice course.

Flax earned a law degree from Southern Methodist University's Dedman School of Law and a Bachelor of Science degree in biology from Wake Forest University.

Dennis Forbes, innovation outreach program manager, Office of Innovation Outreach, USPTO

Dennis Forbes is an innovation outreach program manager in the USPTO's Office of Innovation Outreach, where he actively develops and launches outreach engagement programs that foster meaningful patent education awareness for independent inventors, small businesses, entrepreneurs, makers, universities, and K-12 students. In addition, he conducts interactive informational presentations about design intellectual property products for USPTO visitors.

Forbes holds a Master of Public Administration degree from American University in Washington, D.C. and Master of Arts and Bachelor of Arts degrees from North Carolina Central University in Durham, North Carolina.

Janet A. Gongola, Vice Chief Judge for Strategy, Patent Trial and Appeal Board

Janet A. Gongola is the Vice Chief Judge for Strategy at the Patent Trial and Appeal Board (PTAB) at the USPTO. She is part of the executive management team with a focus on stakeholder education and engagement.

Previously, Gongola served as the Senior Advisor to the Under Secretary of Commerce and Director of the USPTO. She advised the Director on patent policy and legal matters. She also served as the USPTO Patent Reform Coordinator and Associate Commissioner for Patent Examination Policy. She managed the agency's implementation of the America Invents Act and developed patent policy to guide examiners. Gongola joined the USPTO as Associate Solicitor, where she defended agency decisions before the U.S. Court of Appeals for the Federal Circuit and district courts.

Before joining the USPTO, Gongola served as a law clerk for the Honorable Paul R. Michel at the U.S. Court of Appeals for the Federal Circuit and for the Honorable Sue L. Robinson at the U.S. District Court for the District of Delaware. In addition, she worked as a patent attorney, patent agent, and research chemist at Eli Lilly and Company.

Gongola graduated summa cum laude with a J.D. from Indiana University School of Law, and she received a B.S. degree in chemistry and mathematics from Muskingum University.

Gongola is a past President of the Giles S. Rich American Inn of Court and has taught patent law and appellate advocacy as an adjunct professor at the George Mason University School of Law and the George Washington University Law School.

LaKisha Greenwade, founder and director, Wearable Tech Ventures

LaKisha Greenwade is the founder and director of Wearable Tech Ventures, an award-winning Forbes Leadership Coach, and Harvard University Guest Lecturer.

Greenwade is heading the charge to support 100 wearable startups led by underrepresented founders by 2030, actively raising a $100 million fund for emerging wearable founders, chairs the Wearables Roundtable, and is developing a pipeline of future innovators.

Affectionately known as "Coach L," she teaches ambitious entrepreneurs, experienced professionals, and senior and mid-level managers how to push past their self-imposed limits, unleash their innovative spirit, and design the life of their dreams.

Her business and leadership tips have been featured in the U.S., China, UAE, UK, and Brazil. Her honors include being Maryland Leading Women honoree, Baltimore City Innovator of the Year, a Dingman Center for Entrepreneurship Startup Mentor Coach of the Year nominee, and a two-time 40 under 40 honoree. Greenwade is a three-time South by Southwest (SXSW) presenter, a featured Forbes.com and Boss Babe contributor, a Black Enterprise Tech Connext Fellow, a Founder Gym Tech Founder Graduate, and the best selling author of "Rejection to Reward" and "40 Days to Unshakable Self-Confidence."

Greenwade is a graduate of The Ohio State University (Bachelor of Science) and University of Maryland (MBA), and she attended Johns Hopkins University. She resides in Maryland.

Shari Hammond, co-founder and CEO, Inspired Product Development Group

Shari Hammond is the co-founder and CEO of INSP!RED Product Development Group (PDG), where she co-invented the Cabinet Caddy and the Go Hang It! with her father and co-founder, Ron Hunt.

Hammond began her career helping her father develop and sell CD holders and obtained her first patent at the age of 16. She has 25+ years of graphic and packaging design, product development, video and photography, and content creation experience. Prior to starting INSP!RED PDG, Hammond served as the creative director for CD3 for 17 years.

Cynthia M. Hardman, administrative patent judge, Patent Trial and Appeal Board

Cynthia M. Hardman is an administrative patent judge at the Patent Trial and Appeal Board (PTAB) at the U.S. Patent and Trademark Office. She joined the PTAB in 2019, and focuses on ex parte appeals and patent trials under the America Invents Act.

Before joining the PTAB, Hardman was a partner and patent litigator at two U.S. law firms. She has nearly 20 years of experience litigating patent disputes before U.S. district courts, the ITC, and the PTAB.

Hardman holds a J.D. from Boston University School of Law and a B.S. degree, cum laude, in molecular biology from the University of Pittsburgh.

Joann Hill, Chief of the Office of Business Development, MBDA

Joann J. Hill, a native of Columbia, South Carolina, is the Chief of the Office of Business Development for the United States Department of Commerce, Minority Business Development Agency (MBDA). Hill has served at MBDA for two decades and in her current capacity has oversight of the Office of Business Development. She also serves as the lead federal program officer for the nationwide network of more than 50 MBDA Business Centers, programs, and initiatives that generate $6 billion in performance goals annually.

She is responsible for the creation and implementation of strategies for business development in the areas of access to capital, access to contracts, access to emerging domestic and international markets, and global supply chains. She engages in international business initiatives, both domestically and abroad, designed to promote business-to-business linkages.

Hill has served as Acting National Field Director and Senior Policy Advisor on Federal and State Export Promotion at the U.S. Department of Commerce, International Trade Administration, Global Markets Division. Prior to joining MBDA, she worked in the areas of operations management, banking, and finance.

Hill holds a Bachelor of Science degree in business administration from Benedict College, earned her Master of Business Administration degree from Emory University, Goizueta Business School, and is a graduate of the Harvard Kennedy School of Government, Senior Executive Fellows Program.

Kathy Hoppe, education consultant at STEMisED

Kathy Hoppe is currently an education consultant at STEMisED and was a former education associate at the United States Patent and Trademark Office (USPTO) in the Office of Education and Outreach. Hoppe has over 30 years of teaching experience and was a STEM/Science Instructional Specialist and Director for the Elementary Science Program at Monroe 2-Orleans BOCES in Spencerport, New York. She also

taught AP Biology, Regents Biology and Intermediate Level Science at Kendall Junior Senior High School and served as a Regional Biology Mentor and STANYS Director at Large for Biology and Professional Development. Hoppe is a former Albert Einstein Distinguished Educator (2013-15) who was placed at the National Science Foundation in the Directorate of Engineering, Division of Engineering Education and Centers. In addition to practicing case-based learning, Hoppe has been trained as a facilitator at the Illinois Math and Science Academy's advanced PBL, Buck Institutes PBL (Level 1, 2, coaching) and has been a National Flipped Learning presenter. Many of the strategies used in the PBL model are adapted and used in cases presented to the students at the Monroe 2-Orleans BOCES and through Invention Education with the USPTO.

Pankaj Kedia, Global Business Head, Smart Wearables and Shareables Segments, Qualcomm Technologies, Inc.

Pankaj Kedia is the founder, business lead, and Senior Director of the Wearables segment at Qualcomm Technologies, Inc. He incubated the business over six years ago and continues to lead its growth, having shipped 250+ products across 50+ countries during this time. Kedia also leads the shareables audio business for the company in collaboration with global audio brands.

Prior to Qualcomm, Kedia held a series of strategy, product, business development, customer, and marketing roles at Intel over 15 years. Under his leadership, Intel launched a series of laptops, tablets, handhelds, and smartphones, bringing growth beyond the PC at the company.

Kedia is an active investor in the tech space, advisor to start-ups and non-profit companies, and has served on multiple boards. He is an avid TED follower and has spoken at multiple industry events about the impact of mobile, wireless, and wearable technologies around the world. Kedia holds an MBA from Wharton, M.S. from the University of Michigan, and a B.S. from Indian Institute of Technology.

Heidi Riviere Kelley, Esq., technology center operations manager, Technology Center 1700

Heidi Riviere Kelley is currently a technology center operations manager for TC1700. Kelley has been a supervisory patent examiner in the Chemical and Material Arts Technology Center where she supervised a staff of examiners in the areas of liquid purification and gas separation. She received a Bachelor of Science degree in chemistry from the College of William and Mary and a Juris Doctor degree at the American University Washington College of Law.

John Kirkpatrick, Patent Pro Bono administrator and staff attorney, USPTO

John Kirkpatrick is a Patent Pro Bono Team member and staff attorney at the USPTO. He is dedicated to making sure that all inventors, including those who are financially under-resourced, have access to the patent system. He works with patent pro bono programs across the nation to guarantee pro bono coverage in all 50 states pursuant to the Leahy-Smith America Invents Act (AIA).

Previously, Kirkpatrick served as a patent examiner and was employed by a private intellectual property firm. Kirkpatrick received his undergraduate degree in electrical engineering from Villanova University and graduated, cum laude, from The Catholic University of America, Columbus School of Law. He is a member of the Virginia Bar.

Molly Kocialski, Director, USPTO's Rocky Mountain Regional Office

As the Director of the Rocky Mountain Regional USPTO since January 2016, Mollybeth (Molly) Kocialski carries out the strategic direction of the Under Secretary of Commerce for Intellectual Property and Director of the USPTO and is responsible for leading the Rocky Mountain regional office. Focusing on the nine states within this region and actively engaging with the community, Kocialski ensures the USPTO's initiatives and programs are tailored to the region's unique ecosystem of industries and stakeholders.

Kocialski brings more than 20 years of intellectual property experience to the USPTO. Most recently, Kocialski was the Senior Patent Counsel for Oracle America, Inc., where she was responsible for managing an active patent prosecution docket and was also responsible for all of the post-grant procedures and patent investigations for Oracle and its subsidiaries. Prior to Oracle, she worked at Qwest Corporation and was also in private practice

in both New York and Colorado focusing on intellectual property litigation for multiple high-tech companies while maintaining an active prosecution docket.

Kocialski is a recognized IP leader in the Rocky Mountain region. She currently serves on the Colorado Federal Executive Board's Executive Committee. Kocialski is the President of the Colorado IP Inn of Court and was previously the Chair of the Planning Committee and a member of the Board of Directors of the Colorado IP Inn of Court. Further, Kocialski is a member of the Planning Committee for the Rocky Mountain Intellectual Property Institute, an annual two-day conference on intellectual property that attracts over 500 attendees. She was the Chair of the Intellectual Property Section of the Colorado Bar Association and served on the Colorado Bar Association's Board of Governors. Kocialski served as the head of the IP Committee and was a member of the Board of Directors for the Colorado Chapter of the Association of Corporate Counsel and served on the National IP Committee of the Association of the Corporate Counsel. In 2015, Kocialski was recognized by ManagingIP magazine as one of its North America Corporate IP Stars.

Kocialski is a graduate of the State University of New York at Buffalo School of Law and received a Bachelor of Science in chemical engineering from the University of New Mexico. Kocialski is a registered patent attorney and is admitted to the USPTO, the New York and Colorado state bars, and to the United States Courts in those jurisdictions.

Jack Lander, inventor, author, and writer for Inventors Digest Magazine

Jack Lander is an electromechanical engineer with 13 patents for products such as the world's first disposable laparoscopic surgical instrument, an electrical/heat-sink connector, a shift-under-power bike transmission, and an IC chip testing probe.

He has written the Inventors Digest column Lander Zone for the past 25 years and is the author of four books for inventors and startup entrepreneurs. His latest book is "Hire Yourself, The Startup Alternative."

Amy A. Lehman, Director of Legal Services, Volunteer Lawyers for the Arts

Amy Lehman comes to the practice of law after having a long career as a professional ballet dancer before returning to school to get her bachelor's degree in theater history and dramatic literature from NYU. She studied copyright, trademark, and media law while at University of Michigan Law School, where she served as president of the Entertainment, Media, and Arts Law Students Association.

Prior to joining Volunteer Lawyers for the Arts, Lehman practiced in New York as a commercial litigator and advised clients in non-profit corporate compliance. She is a trained mediator, running VLA's MediateArt program, and is on the panel of mediators assigned to resolve cases for the Southern District of New York.

Lehman is a member of the Entertainment Law Committee of the New York City Bar Association and was selected to Super Lawyers Rising Stars 2014, 2016, 2017 and New York Metro Super Lawyers 2018 –2021.

Louie R. Lopez, Director, DoD Science, Technology, Engineering and Mathematics (STEM)

Louie Lopez is the Director of the Science, Technology, Engineering and Mathematics (STEM) programs in the Office of the Under Secretary of Defense in Research and Engineering's (OUSD/R&E) Defense Laboratories and Personnel. Lopez is responsible for the management and execution of the Department of Defense (DoD) K through Graduate STEM efforts under the National Defense Education Program (NDEP). His responsibilities include the Science, Mathematics, and Research Transformation (SMART) scholarship, Military Child Pilot Program, Manufacturing Engineering Education Program, and STEM education and outreach initiatives under the Defense STEM Education Consortium (DSEC) cooperative agreement award in collaboration with partners from academia, industry, and other community organizations with a shared mission in STEM. He is also responsible for policy and coordination

of STEM efforts across the DoD components to ensure alignment with DoD and Federal STEM Strategic plans.

Prior to April 2019, Lopez served as the chief of STEM Education and Outreach for the U.S. Army Combat Capabilities Development Command (CCDC), overseeing STEM efforts across the enterprise, leveraging eight major Army laboratory and engineering centers and its approximately 11,000 scientists and engineers, to engage and support command-wide STEM initiatives. His responsibilities included the technical and fiscal oversight of the Army Educational Outreach Program (AEOP) cooperative agreement award on behalf of the Army science and technology community and the Office of the Deputy Assistant Secretary of the Army for Research and Technology (DASA R&T). Lopez also managed the Army, Navy, and Air Force Junior Science & Humanities Symposium high school research competition on behalf of AEOP. In 2017, Lopez served as the Acting Chief of Human Capital and talent management for CCDC. In 2017-2018, Lopez also served as the COR on the U. S. Army Manufacturing Technology (ManTech) program support contract at CCDC.

Prior to serving in the federal government in 2011, Lopez worked as Director of pre-collegiate STEM programs in the Lyles College of Engineering at California State University, Fresno from 2006 to 2011, and previously served as Associate Director for the University of California's Mathematics, Engineering, Science Achievement (MESA) Program at California State University, Fullerton from 1998 to 2005. From 1999 to 2003, Lopez taught computer science courses at California State University, Fullerton. Lopez proudly served in the United States Marine Corps.

Lopez successfully completed the OPM sponsored Aberdeen Proving Ground Senior Leadership Course as part of COHORT 8 in 2016-2017. He earned his bachelor's degree in mathematics from the University of California, San Diego, and master's degree in educational technology from National University in San Diego, California.

Jason Lott, attorney advisor, Trademarks

Jason Lott is the attorney advisor for Trademarks Customer Outreach at the USPTO, where he specializes in helping small business owners understand trademarks and the federal trademark registration process through live presentations, creative videos, and other multimedia platforms. He has been with the USPTO since 2000, previously serving as an examining attorney, and is a recipient of multiple career service awards. Lott earned his J.D. from the Dickinson School of Law of the Pennsylvania State University and his B.A., magna cum laude, from Kenyon College.

Clara Mabour, STEM and Humanities instructor at Northeast High School, Broward County, Florida

The child of two artists, Mabour was born in Haiti and immigrated to the United States as a young child. She spent most of her life living at the intersection of arts and sciences. As a STEM and humanities educator, problem solver, creative, and maker, she is excited by the combination of arts and sciences. The core of Mabour's pedagogy is rooted in invention education and project/problem-based learning, which she uses to develop cross-curricular learning experiences for her students.

Mabour is a 2017 Lemelson-MIT Excite Award recipient and a Lemelson-MIT InvenTeams grant recipient, through which she advised a group of student inventors who developed a patented invention that addresses mosquito breeding behaviors. During the 2019-2020 school year, Mabour led a different group of student inventors, who were semifinalists for the Samsung Solve for Tomorrow competition. In addition, she writes invention education lesson plans for PBS NewsHour Extra and facilitates an after-school STEM club and new groups of young inventors and future scientists who conduct independent and team research projects that address local and global issues.

Vladimir Magloire, supervisory patent examiner, Technology Center 3600, USPTO

Vladimir Magloire joined the USPTO in 2007. He has been a supervisory patent examiner for six years in radar, GPS and cellular communications. Prior to joining the USPTO, he worked in the wireless communications industry designing cellular systems and also taught math and computer science to first graders and all the way up to college students. He has given numerous IP Basics talks and enjoys engaging with inventors.

Elizabeth (Ela) Mirowski, program director, SBIR/STTR program in the Division of Industrial Innovation and Partnerships, National Science Foundation

Elizabeth (Ela) Mirowski started as an SBIR/STTR program director in the Division of Industrial Innovation and Partnerships at the National Science Foundation (NSF) in May 2020. Before the NSF, Mirowski was a founder and CEO of Verellium, a medical device startup. At Verellium, she built strong collaborative partnerships across industry, academia, and federal labs to develop novel solutions for clinical imaging that resulted in new products and new market segments. She also worked for High Precision Devices (HPD), where she successfully transferred several technologies into prototypes and commercialized them, creating a standalone, revenue-generating company, QalibreMD, in just three years.

As a principal investigator on SBIR grants from various federal agencies, Mirowski led the program direction, including research, engineering, manufacturing, and market development. In addition to these activities, she engaged in fundraising from venture capital and private equity sources. For more than 17 years, Mirowski worked for and consulted small businesses, managing the development of technologies involving photonics for displays, semiconductor electronics, renewable energies, nanomaterials, and lab-on-chip platforms for evaluating neural growth and biological processes at the single-molecule level.

Mirowski holds a Ph.D. in physical chemistry from the University of Colorado, a B.A. in chemistry from Columbia University, and she completed a National Research Council post-doctorate at the National Institute of Standards and Technology.

Alina Morse, founder and CEO of Zolli Candy Company

Sixteen-year-old Alina Morse is a real-life "BOSS BABY," as depicted in Dreamworks' "BOSS BABY: Family Business," as Alina is the founder and CEO of Zolli Candy Company. Morse founded her candy company after a trip to the bank with her dad when she was seven, and it became the fastest growing candy company in America for 2020 with a growth rate of 865%, according to INC Magazine's 2020 INC 5000 List. She delivered a TED Talk, "Why I eat candy to avoid cavities," was the youngest ever keynote speaker at Advertising Week, and InStyle Magazine named her one of 50 Badass Women Changing the World alongside First Lady Michelle Obama, who invited her to the White House twice as the exclusive candy provider for the annual Easter Egg Roll. She is the youngest person to ever appear on the cover of Entrepreneur Magazine and the youngest vendor to the #1s: Walmart (#1 Retail), Kroger (#1 Grocer), CVS (#1 Drug), and Amazon (#1 Ecommerce).

Gary Nickol, supervisory patent examiner, Technology Center 1600, USPTO

Gary Nickol has served at the USPTO for more than 20 years in the biological sciences with an emphasis on patent prosecution in bacterial immunology and oncology. He is a 2015 recipient of the Department of Commerce's Gold Medal Award for developing and implementing Patents 4 Patients, a fast-track review for cancer immunotherapy-related patent applications. Nickol currently serves as a supervisory patent examiner in Art Unit 1645 (bacterial immunology).

Matt Nuccio, President, Design Edge Inc.

Matt Nuccio is the owner of Design Edge, a toy and game development, marketing, manufacturing, inventing, and consulting agency. They are headquartered in New York with two satellite offices in China. For over 30 years, Design Edge has been a leading development agency in the toys and games industry.

For four years, Nuccio co-chaired the Toy Industry Association (TIA) associate panel, representing all designers and inventors in the toy industry. Currently, he sits on the board of directors of the United Inventors Association of America (UIA) and on the Chicago Toy and Game Fair (ChiTAG) advisory board.

Nuccio also writes a column in Toy Family Entertainment magazine focusing on the toy industry and often lectures

at New York Toy Fair, ASTRA, Chicago Toy & Game Fair, and Hong Kong Toy Fair. Design Edge's products have been nominated for, and have also won, many industry awards, such as TOTY (Toy Of The Year), Games 100, Origin, and Family Fun, to name a few.

Peter-Anthony Pappas, supervisory patent examiner, Technology Center 2400, USPTO

Peter-Anthony Pappas serves as a supervisory patent examiner for the USPTO. He previously served as a special advisor to the Under Secretary of Commerce for Intellectual Property and Director of the USPTO. In this role, he advised the Director and other USPTO executives on IP-related and operational matters, such the impact of artificial intelligence (AI) on intellectual property policy and the use of AI tools to aid in the examination of patent and trademark applications. He has also served as USPTO Branch Chief of the Patent Trial and Appeal Board Analysis and Process Improvement Branch and as a primary patent examiner.

Pappas serves on the USPTO AI Working Group and the USPTO Patents AI Point of Contact Team, the latter of which oversaw the development of an AI-based prototype search system. Pappas took part in drafting, as part of a cross functional team, the 2020 USPTO report "Public Views on Artificial Intelligence and Intellectual Property Policy." He also serves in an official capacity on the Networking and Information Technology Research and Development (NITRD) AI Research and Development Interagency Working Group and the Interagency Committee on Standards Policy (ICSP) AI Standards Coordination Working Group. In a personal capacity, Pappas serves on the Institute of Electrical and Electronics Engineers (IEEE) USA Intellectual Property Committee and the IEEE USA Artificial Intelligence Policy Committee.

Pappas received his Bachelor of Science in computer engineering from the Georgia Institute of Technology.

Andrea Pass, owner, Andrea Pass Public Relations

For over 30 years, Andrea Pass has created and implemented public relations campaigns in a wide range of categories, including consumer products, lifestyle, business-to-business, education, health/wellness/fitness, beauty, food, authors, non-profits, and more. Andrea Pass Public Relations has an expertise in national, regional, and local media relations outreach. Her strength in relationships, coupled with her knowledge of the ever-growing media base, results in securing top tier, targeted media placements to increase brand awareness, reputation management, and sales for established businesses and growing entrepreneurs alike.

She has represented clients including 4ocean, Cabinet Caddy/Go Hang It, Vinci Housewares, Peel Away Labs, Circadian Optics Light Therapy Lamps, Extreme Mist, Wolfgang Puck Pressure Oven/Wolfgang Puck Cooking School, Top Dog Direct, Bluewater Media, TeleBrands/BulbHead, Blackstone Products Outdoor Griddles, Ronco, Migraine Hat, VinThin Weight Loss Supplement, Par Avion, Specialty Sleep Association, African Pride Products, Brainy Baby, Tiny Love Developmental Baby Toys, and a wide range of entrepreneurial ventures.

Pass is credited for successful media relations programs for non-fiction and fiction books, including "Inventor Confidential: The Honest Guide to Profitable Inventing," "Diaries of The Unbalanced Paddleboarder: Crash and RISE, From Victim to Thriving Survivor," "John and Mary Margaret," "Bailey Bloom and the Battle of the Bug," "Alternate Channels: Queer Images on 20th Century TV," "Who Knew: 10,001 Easy Solutions for Everyday Problems," "Dump Cakes," "Great Kitchen Secrets," and "How To be Organized in Spite of Yourself."

Pass serves on the Board of Directors of the non-profit United Inventors Association (UIA), as Workshop Council Chair for The Performance-Driven Marketing Institute (PDMI), and as Vice President, Membership of the New Jersey Association of Women Business Owners (NJAWBO). She has created the webinar series "Resonate to Revenue." Pass is also the Founder of Our Virtual Lunch Club (Bergen).

Victoria Pasquantonio,
education producer, PBS NewsHour

Victoria Pasquantonio is education producer at the PBS NewsHour and a former middle and high school social studies and English teacher of 13 years. Pasquantonio directs NewsHour EXTRA, NewsHour's classroom resource and current events website. Key features of the site include daily news stories and lessons plans on civics, media literacy, STEM, and invention education, all designed to make learning fun and meaningful for young people. EXTRA's "Invention Education" curriculum contains 24 lesson plans which use current events to teach young people about invention as well as a hands-on project in which students create their own invention. Victoria has presented on the topic of invention education on many occasions, including ISTE, National Science Teaching Association, and Texas A&M's K12 Summer Institute in Texas. Like many, she is a huge fan of the USPTO's invention trading cards.

Sudhanshu C. Pathak,
supervisory patent examiner, USPTO

Sudhanshu Pathak joined the USPTO in 2003. Over the years, he has held numerous positions at the agency, including patent examiner, patent reexamination specialist, supervisory reexamination specialist, supervisory patent examiner, supervisory patent quality assurance specialist and, currently, Pro Se Assistance Program Coordinator. He has worked at the USPTO headquarters in Alexandria and the Rocky Mountain Regional Office in Denver.

Prior to joining the USPTO, Pathak was an electrical engineer for a variety of companies, primarily in the wireless and mobile communications industry, including Motorola Inc., Arraycomm Inc., and Custom Manufacturing and Engineering.

He earned his Bachelor of Science and Master of Science degrees in electrical engineering, with a specialization in RF/Microwave communications, from the University of Illinois at Chicago.

Anthony Perry, Lemelson MIT InvenTeams

Anthony (Tony) Perry joined the Lemelson-MIT Program in 2015 as the invention education coordinator. Perry supports teams of high school students, teachers, and mentors from around the country as they work through the invention process from problem identification to building a working prototype during their InvenTeam grant year. Prior to joining the Lemelson-MIT Program, he taught high school science in Chicago and worked in museum education.

Perry received his master's degree in science education from Northwestern University and bachelor's degree in astronomy-physics from the University of Wisconsin-Madison. In addition to his role at Lemelson-MIT, Perry is a Ph.D. student at Texas Tech University, concentrating in curriculum and instruction.

Gitanjali Rao, inventor and TIME magazine's Kid of the Year for 2020

Gitanjali Rao was recognized as America's Top Young Scientist and received an EPA Presidential award for inventing her device "Tethys"—an early lead detection tool. Rao is also the inventor of "Epione"—a device for early diagnosis of prescription opioid addiction using genetic engineering, and "Kindly"—an anti-cyberbullying service using AI and Natural Language processing.

She was honored in Forbes "30 Under 30 in Science" in 2019 and as TIME's "Top Young Innovator" and "TIME Kid of the Year" for her innovations and STEM workshops she conducts globally, which have inspired over 40,000 students in the last two years across four continents. In her sessions, she shares her own process of innovation that can be used by students all over the world. She is an experienced TED speaker and often presents in global and corporate forums on innovation and the importance of STEM.

Rao is the author of the book, "Young Innovator's Guide to STEM," which guides students, educators, and teachers with a prescribed 5-step innovation process.

Victoria Reinhart, IP attorney, Osha, Bergman, Watanabe, Burton

Victoria Reinhart's practice emphasizes foreign and domestic patent prosecution in the field of chemical engineering. Reinhart's experience in the patent arts includes assisting in preparing and prosecuting patent applications for the chemical and oilfield industries, as well as litigating all stages of complex cases in the oilfield and mechanical industries. In addition to patent prosecution and litigation, Reinhart has experience drafting legal opinions, including invalidity and non-infringement opinions, as well as trademark prosecution and pre-trial matters.

Prior to entering the legal field, Reinhart was a process engineer at a leading industrial gas company where she became a Six Sigma black belt and sharpened her skills in plant design and optimization.

Reinhart's robust career also includes several positions in the innovation sector. She was lead project manager at the University of Michigan's Innovation Studio, as well as a Design Thinking consultant at an innovation consultancy firm. She is an active participant in the entrepreneurial ecosystem of her city, especially as it relates to the protection of intellectual property rights of small businesses and emerging technology.

Brandon Rosati, management quality assurance specialist, Technology Center 2900, USPTO

Brandon Rosati is the management quality assurance specialist (MQAS) for Technology Center (TC) 2900, Designs. In his current role, he advises the TC Director and works to continuously improve the quality of the TC 2900 examination process.

Rosati previously served as technology center operations manager (TCOM) and as a supervisory patent examiner (SPE) in TC 2900.

Rosati began his career at the USPTO in 2007. Before being selected as a SPE in the Design area, he rose through the ranks to become a utility primary patent examiner, in TC 3700, examining applications related to heat exchangers.

Further, he has served multiple details as a teaching assistant and lecturer in the Patent Training Academy for both utility and designs. Finally, Rosati has served as an advisor detailee in the Commissioner's Office.

While at the USPTO, Rosati has led or contributed to numerous projects, such as The Design Publication Quality program to enhance the quality of the images found in the patent grants of design patents. Further, he collaborated and contributed on many projects impacting patent operations, including drafting and implementing the design examiner performance appraisal plan and leading multiple international efforts for the TC.

He has received a Director's Award, Exceptional Career Award, and three distinct Department of Commerce Bronze Medal Awards.

Rosati received a Bachelor of Science in mechanical engineering from The Pennsylvania State University.

Elnaz Sarraf, CEO, ROYBI®

Elnaz Sarraf is the CEO and founder ROYBI, the creator of the award-winning Roybi Robot—the world's first AI-powered smart toy to teach children language and STEM skills. Roybi Robot has been named one of TIME Magazine's Best Inventions in Education and was listed in Fast Company's 2019 World-Changing Ideas. ROYBI was featured in the 2019 CNBC Upstart 100 list as one of the world's most promising startups. Sarraf is also a Board Member of the Consumer Technology Association, Small Business Council and a member of Forbes Technology Council.

Growing up as a woman in Iran, Sarraf witnessed the limited opportunities, leading her on her journey in the U.S. to become an entrepreneur and create a technology that would empower children by providing universal access to personalized learning and an education that prepares them for a better future. With 15 years of experience as a serial entrepreneur, Sarraf leads ROYBI, an investor-backed EdTech company that raised $4.2 million in its seed round focusing on early childhood education and self-guided learning through artificial intelligence. Before starting ROYBI, Sarraf co-founded and led a consumer electronics/IoT company, iBaby, serving as the company's President.

As an immigrant and female founder, Sarraf has made worthy accomplishments in a short duration while living in the U.S. Honors include being selected as a Nasdaq Entrepreneurial Center Milestone Maker, named the Woman of Influence by the Silicon Valley Business Journal, and Entrepreneur of The Year in Silicon Valley. She has been a speaker at several conferences, such as the Mobile World Congress, ASU GSV Summit, Consumer Technology Association, and more.

Doug Scott, educator, NSTI alum, PAEMST Fellow

Doug Scott is a robotics and information technology teacher at Hopkinton High School in Massachusetts. He was a business undergraduate student at Framingham State University, but was always a lifelong inventor at heart. Scott's 12-year teaching career sprang from his hockey coaching experiences, which have been instrumental in helping him motivate students through the inventing processes. He shared his personal interest in underwater exploration with his students through innovative wreck discoveries. Scott is married and has a daughter with whom he enjoys fishing.

Scott and the Natick High School InvenTeam supported the Lemelson-MIT Program at the state and national levels during the 2013-2014 school year. Doug accompanied two student representatives from the Natick High School InvenTeam to the fourth White House Science Fair in May 2014, and their invention was awarded U.S. Patent 20,140,360,420 in January 2017.

Scott was awarded the 2014 Massachusetts STEM Teacher of the Year during a state-wide ceremony on October 22, 2014. Raytheon Corporation and the Hall at Patriot Place presented the award.

Most recently, Scott was honored with the 2020 Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST) from the White House.

Brittany Sickler, Senior Innovation Policy Advisor, Small Business Administration

Brittany Sickler serves as the Senior Innovation Policy Advisor for the Small Business Administration's (SBA) Office of Investment and Innovation. Her primary duties support the advancement of the Small Business Innovation Research/Small Business Technology Transfer (SBIR/ STTR) programs, known as America's Seed Fund, which now total over $4 billion a year. She directs a wide range programs and initiatives to build the SBIR pipeline and connect the R&D innovation ecosystem, mobilizing networks across the country to increase support for deep tech entrepreneurs of all backgrounds, increasing their potential to shape the future.

Prior to serving at the SBA, she was a Peace Corps volunteer in Guatemala, focusing on economic development and environmental conservation. During that time, she completed a master's degree in community economic development.

Ian Simmons, Design Practice Specialist, Technology Center 2900, USPTO

Ian Simmons is the design practice specialist who provides assistance and guidance to design patent examiners, applicants, inventors, and attorneys on the USPTO's design practices and procedures.

Simmons began his career at the USPTO in 1992 as a design patent examiner, and became manager a supervisory patent examiner in 2006. He examined numerous design applications in the medical, dental and laboratory fields. Simmons holds a Bachelor of Science degree in industrial design from the University of Bridgeport.

Fun facts: Simmons grew up on the beautiful island of Bermuda and has a collection of over 30,000 comic books.

Sheryl Sotelo, STEM outreach specialist in rural Alaska

Sheryl Sotelo has been a classroom teacher for 31 years, 7 years in Arizona and 24 years in Alaska. She has taught intermediate elementary grades, middle school and elementary special services, and the intermediate level in a Montessori School. She has taught in the rural Alaskan villages of Gambell on St. Lawrence Island and Unalakeet in the Bering Strait School District. Sotelo and her husband, Ed, taught for six years at a two-teacher K-8 school in Cooper Landing, Alaska.

Sotelo utilizes a science thematic approach and project-based learning in her teaching. Projects include citizen science and environmental monitoring programs, robotics programs, interpretive archaeological trails and student digs, outdoor education programs, a student-written and published trail guide to Kenai Peninsula Plants and Animal Signatures—a trail guide to animal tracks and scat, and the Cooper Landing Museum Brown Bear Articulated Skeleton in a permanent display, Bear in a Box: A traveling brown

bear skeleton that can be assembled and taken apart for reassembly.

She currently works as a STEM specialist and travels to rural Alaskan villages in small bush planes to work with students and teachers. Sotelo was an awardee of the Albert Einstein Distinguished Educator and the Presidential Award for Math and Science Teaching.

Emily Sprague, staff attorney, USPTO

Emily B. Sprague is a staff attorney and Law School Clinic Certification Program Team member in the Office of Enrollment and Discipline (OED) at the USPTO. As a staff attorney, Sprague primarily investigates grievances alleging misconduct by practitioners and conducts moral character investigations of applicants requesting registration before the USPTO. As a member of the Law School Clinic Certification Program Team, Sprague helps administer and oversee the Law School Clinic Certification Program, which includes over 60 participating law school clinics that provide patent or trademark legal services pro bono to the public.

Prior to joining the USPTO, Sprague worked at a small litigation firm in Washington, D.C., focusing on labor and employment law, professional malpractice, personal injury, criminal law, and foreign service matters. Prior to her work in private practice, Sprague served as a judicial law clerk for the Circuit Court for Anne Arundel County, Maryland. She received a Bachelor of Arts degree in international relations with a minor in criminal justice from Saint Joseph's University in Philadelphia, Pennsylvania and a Juris Doctor from The Catholic University of America, Columbus School of Law in Washington, D.C. She is licensed to practice law in the District of Columbia and Maryland.

Nisha Talagala, CEO, AIClub.World

Nisha Talagala is the CEO and founder of AIClub. World, which brings AI literacy to K-12 students, professionals, and other individuals worldwide. Talagala has significant experience in introducing technologies like Artificial Intelligence to new learners from students to professionals. Previously, Talagala co-founded ParallelM, which pioneered the MLOps practice of managing machine learning in production for enterprises and was acquired by DataRobot. Talagala is a recognized leader in the operational machine learning space, having also driven the USENIX Operational ML Conference, the first industry/academic conference on production AI/ML.

Talagala was previously a Fellow at SanDisk and Fellow/ Lead Architect at Fusion-io, NVM Software Lead and Intel and CTO of Gear6. She has more than 20 years of expertise in enterprise software development, distributed systems, technical strategy, and product leadership.

Talagala earned her Ph.D. at UC Berkeley in Computer Science. She holds 73 patents, has written over 25 refereed research publications, is a frequent speaker at industry and academic events, and is a contributing writer to Forbes and other publications.

Greg Toatley, supervisory patent examiner, Technology Center 2800, USPTO

Gregory J. Toatley, Jr. joined the USPTO in June 1995, after working as a physics teacher at Central High School in Capitol Heights, Maryland. He served as a patent examiner primarily in class 320 (Battery Charging/Discharging) and class 307 (Electrical Transmission and Interconnection Systems). He was promoted to primary examiner in December of 2001 and to supervisory patent examiner July of 2004.

Toatley received a Bachelor of Science degree in physics from Lincoln University in Pennsylvania in 1993. He resides in Upper Marlboro, Maryland, with his wife Kysha and has four wonderful grown children, Tia, Jayln, Jarel, and Jordan.

Erin Tochen, Network Director, InventEd

Erin Tochen is the Network Director for InventEd, an initiative of The Lemelson Foundation. InventEd is a national network of educators, researchers, funders, agencies and other supporters who are building the field of Invention Education. In this role, Tochen develops overall program strategy, designs and implements systems/processes, and leads community engagement work. Prior to her current work,

she spent the last 16 years in the invention, innovation and entrepreneurship space, including as a Program Officer at The Lemelson Foundation, a Fellow at Kiva supporting artisan entrepreneurs, and a Foundation Relations Director building innovation education programs at the University of Portland. She's thrilled to be back working in K-12 education to grow a community of Invention Education champions.

Warren Tuttle, President of the Board of Directors, United Inventors Association

Warren Tuttle has for many years overseen the Open Innovation product programs for several industry leading companies, including Lifetime Brands in the housewares and table top arenas (Farberware, Kitchen Aid, and 40 other brands), Techtronics Industries Power Tool Group in the power tool and hardware industries (Ryobi, Rigid, Hart Tools and other brands) and Merchant Media in the Direct Response Television category (Smart Spin, True Touch, and many other brands). He was also the person behind the launch of several highly successful consumer products, including MISTO, The Gourmet Olive Oil Sprayer, and the SmartSpin Storage Container System.

Tuttle personally interacts with many thousands of inventors every year and has initiated well over 100 new consumer product licensing agreements that have collectively generated over a billion dollars in retail sales. Tuttle is also a well-known advocate for inventor rights. He served for 12 years as the President of the United Inventors Association Board of Directors, a national 501c3 non-profit with high ethical standards that helps inventors through education, advocacy, and the sponsorship of inventor booth pavilions at several industry trade shows, most notably the National Hardware Show. Tuttle is also a member of the National Pro Bono Patent Commission and the USPTO National Council for Expanding American Innovation.

Tuttle's new book, "Inventor Confidential: The Honest Guide to Profitable Innovation," is published by Harper Collins and is available on Amazon. He lives with his wife Lynn in Southern Connecticut and has three wonderful daughters, all well-educated and working. He enjoys skiing, motorcycling, golf and travel.

Sameer Vadera, legal counsel, Palantir Technologies

Sameer Vadera is a patent attorney who has counseled industry-leading clients on building valuable IP portfolios for high-tech innovations. Vadera has managed domestic and global patent portfolios, driven IP protection strategies across major markets, and counseled enterprises on boosting IP assets by increasing enterprise-wide innovation capture. Vadera has prepared and prosecuted patent applications directed to a wide range of technologies, including artificial intelligence, Software-as-a-Service, and network security. Additionally, Vadera frequently publishes and presents on data ownership and data privacy issues in the context of artificial intelligence.

Dr. Jorge Valdes, education programs advisor, USPTO

Dr. Jorge L. Valdes is an education programs advisor for the USPTO's Office of Education and Outreach (OEO). OEO develops and implements education and outreach programs dedicated to promoting awareness of different aspects of intellectual property (IP), including the creation of IP and the enforcement of IP rights at all levels. OEO aims to increase IP knowledge through education, outreach and collaboration with internal and external stakeholders.

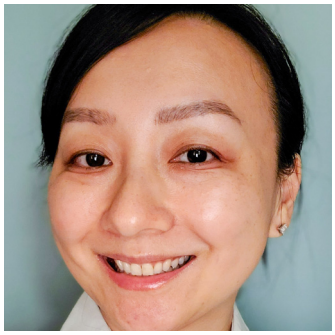
Science, technology, engineering, and mathematics (STEM) play a significant role in the USPTO's K–20 education and outreach programming because STEM is vital to invention, innovation, and the development of a future USPTO workforce. OEO is responsible for the design, development and delivery of professional development programs focused on the significance of STEM education to innovation and IP for K-12 teachers nationwide.

Valdes is a STEM educator with experience in project-based learning pedagogy in chemistry, physics, astronomy, and oceanography. Prior to his career in teaching, Valdes held senior leadership roles at AT&T, Lucent Technologies, and Alcatel-Lucent. While at Bell Labs, he was responsible for managing global R&D organizations spanning leading edge physical sciences and engineering research, development

and commercialization. He received the E.O. Lawrence Laureate gold medal award from the U.S. Department of Energy on behalf of the President of the United States for his pioneering work in reagent generation, a technology with profoundly positive implications for the energy efficient production of high purity chemicals, environmental health, and cost reduction in manufacturing.

Valdes has a Ph.D. in electrochemical engineering from Columbia University and an executive MBA from the Kellogg Graduate School of Business. He holds 33 U.S. and international patents, has published more than 100 science and technology research papers in peer-reviewed journals and magazines, and has won numerous corporate and industry awards for his contributions to science, technology, education, and diversity. Valdes is the co-founder of the Young Science Achievers Program (YSAP®), a national program dedicated to inspiring and empowering more girls and students under-represented in science and math to pursue careers in STEM fields.

Claire X. Wang, supervisory patent examiner, Technology Center 2600, USPTO



Claire Wang currently serves as supervisory patent examiner in Technology Center 2600 in the technology of image analysis. She recently served as technology center operations manager from 2019-2021. Wang began her career at the USPTO in 2006 as a patent examiner and became a primary examiner in 2012.

Brian Wen, founder, Youth Helping Youth International English Club, and co-inventor of Physical Bookmark

Brian Wen, 19 years old, graduated from Folsom High School in 2020 and currently attends UC Berkeley as a chemical biology major. Wen loves exploring novel activities and derives inspiration from a variety of sources. While volunteering at a Sacramento STEM Fair in 2015, he noticed Chinese students presenting their projects to an American audience. Unfortunately, due to the language barrier, the students were not able to effectively explain their ideas. Seeing this predicament, Wen decided to found the Youth Helping Youth International English Club (YHY) to deliver online English lessons to students in non-English speaking countries. Wen has led his YHY team to numerous entrepreneurial events such as ThinkTank Learning's PitchFest 2016 and Columbia Business School's Model Entrepreneur.

His passion for innovation also guided his motivation to patent a Physical Bookmark with his sister, Jennifer, in 2019 and file a continuation in part patent for the bookmarking device. In the summer of 2021, Brian and Jennifer proceeded to apply for a third patent for their UV light sanitizing container. Wen aims to continue making positive impacts by encouraging others, especially youth, to believe in the power of their imagination and seek to turn their creations into reality.

Jennifer Wen, co-inventor of Physical Bookmark

Jennifer Wen is 11 years old and graduated from Sandra J. Gallardo Elementary School in Folsom, California in 2021. Wen likes to invent things and explore new ideas, and even has a craft table at home! She enjoys drawing and creating art. Oftentimes, when she sees something cool, she attempts to make it using her own craft supplies. Some things Wen makes are slime, micro-bit games, infinity cubes, and experiments with different materials.

In early 2019, Wen created a new type of bookmark with Velcro that marks the last word read in a book. She filed a patent application for this invention in June 2019. Wen was granted her first patent in December 2020. She made improvements on that patent and filed a continuation-in-part patent application in November 2020.

Sean Wilkerson, innovation outreach program manager, Office of Innovation Outreach, USPTO

Sean Wilkerson works in the Office of Innovation Outreach at the USPTO creating intellectual property (IP) awareness programs and managing outreach services to independent inventors, small businesses, entrepreneurs, makers, and universities. Wilkerson previously worked as an outreach coordinator for the programs leading up to the opening of the USPTO's Silicon Valley and Texas Regional Offices. He also spent a year as part of the New York engagement team that developed the 2015 Future of Urban Innovation Startups Summit in coordination with Columbia University and the USPTO.

From 2011–2013, he served as the program manager of the inaugural Select USA Summit, developing the program, structure, and outreach efforts of a U.S. government-wide program housed in the International Trade Administration of the U.S. Department of Commerce. As an education program analyst in the Global Intellectual Property Academy from 2008–2011, he managed international programs focused on providing IP training related to enforcement of patents, trademarks, and copyrights and the U.S. patent and trademark system. Prior to working for the federal government, he served as the Director of Events for the National Association of Homebuilders in Washington, D.C. and as the Ideas Exchange Manager for Accenture in Reston, Virginia.

James Wilson, Assistant Regional Director, USPTO's Midwest Regional Office

Assistant Regional Director of the USPTO's Elijah J. McCoy Midwest Regional Office James Wilson has been a member of the USPTO since January of 1989. He received his Bachelor of Science degree in zoology from Howard University in 1984 and a Master of Science degree in cellular and molecular Biology from the University of Michigan in 1987.

Wilson has served on the Executive Board of the Patent and Trademark Office Society and continues to be an active member of the organization. As a primary examiner, he served as a chemical representative in the Patent Office Professional Association. Wilson became a supervisory patent examiner in TC 1600 in 2002. In 2007, he served as a managerial detailee in the Office of the Commissioner for Patents.

Over the years, Wilson has been an instructor for several classes in the Patent Examiner Initial Training Program and has served as a supervisory patent examiner instructor in the Office of Patent Training. Wilson has also had the distinction of serving as an acting director in Technology Center 1600 from November 2013–March 2014 as well as the Acting Director of the Elijah J. McCoy Midwest Regional Office from October 2018–September 2019.

Alexis Winn, software tester, Patent Electronic Business Center's Patent Center Support Team, USPTO

Alexis Winn is a software tester for the Patent Electronic Business Center's (EBC) Patent Center Support Team. Winn also works on the Patent Center project and system as a business analyst. Winn assists with the development of Patent Center by gathering system requirements and working with developers to test and implement them. She has experience working with USPTO eCommerce tools, including EFS-Web and PAIR.

Karen Young, Director, Technology Center 2900, USPTO

Karen M. Young received her Bachelor of Science in petroleum and natural gas engineering from the Pennsylvania State University in 1986. She received a Certificate in Accounting from the University of Virginia and passed the Certified Public Accountants examination in 1993. She joined the USPTO upon graduating from Penn State and was a patent examiner in the fluid handling and dispensing art unit. She became a supervisory patent examiner in 1995 in Technology Center 3600 in the material and article handling area.

Throughout her career, Young has served on numerous details, including assignments to the Office of Petitions and to the Office of the Commissioner for Patents. She served as the Administrator for the Office of Patent Resources Administration, assisting the Commissioner of Patents and Deputy Commissioners in the formulation, justification, and execution of the Patent business area budget. Young has served as Acting Director for the Office of Corporate Planning (now called the Office of Planning and Budget), which is responsible for the coordination of the overall USPTO budget.

Young received a Silver Medal for the implementation of the American Inventors Protection Act of 1999, a Bronze Medal for superior performance of official duties, and a Bronze Medal for outstanding service in producing the 2002 and 2003 Performance and Accountability Reports that were awarded the Certificate of Excellence in Accountability Reporting (CEAR) Award by the Association of Government Accountants.

Young became a technology center group director in 2006 in Technology Center 3700, Mechanical Engineering, Manufacturing, and Products. In March of 2011, she moved to Technology Center 1700, Chemical and Materials Engineering. Since January of 2017, Young has served as the Group Director of Technology Center 2900, Designs.

Joe Zhou, supervisory patent examiner, Technology Center 1600, USPTO

Joe Zhou joined the USPTO in 2000 and has examined applications involving a variety of subject matters in biotechnology, including nucleic acids, proteins, bioinformatics, plants, and plant biotechnologies. Zhou has been a supervisory patent examiner since 2012 for Art Unit 1661 (plant patents) and for Art Unit 1662, one of the two art units for utility plant biotechnologies.

Before joining the USPTO, Zhou was a staff fellow scientist at the National Institutes of Health.

Zhou obtained his master's degree in plants from UNC-Chapel Hill and his Ph.D. in molecular genetics and genetic engineering from Emory University.

Virtual resource booths

Minority Business Development Agency (MBDA)

The Minority Business Development Agency (MBDA) is an agency of the U.S. Department of Commerce that promotes the growth of minority-owned business through the mobilization and advancement of public and private sector programs, policy, and research. We work throughout the nation to link minority-owned businesses with the capital, contracts, and markets they need to grow. We advocate and promote minority-owned business with elected officials, policy makers, and business leaders. Our programs and services better equip minority-owned firms to create jobs, build scale and capacity, increase revenues, and expand regionally, nationally, and internationally.

National Science Foundation (NSF)

Innovation programs at the National Science Foundation (NSF) advance ideas from the laboratory to the marketplace to strengthen America's economy, health, and security. NSF has several programs to translate fundamental research into market solutions, and supports and trains researchers with promising technologies, as well as funding high-tech startups. Learn about the NSF's central role in accelerating the growth of the national ecosystem and hear about specific funding opportunities.

Small Business Administration (SBA)

The U.S. Small Business Administration (SBA) works to ignite change and spark action so small businesses from main street to new high tech startups can confidently start, grow, expand, or recover. SBA's Office of Innovation and Technology coordinates America's Seed Fund, programs that spur business development and commercialization of research and development, including the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. SBIR/STTR is the nation's largest source of early-stage, non-dilutive capital to turn your inventions into products that solve critical problems for the world,

U.S. Copyright Office

The U.S. Copyright Office is a separate department of the Library of Congress. Most of the 400 employees examine and register hundreds of thousands of original authorship copyright claims each year. In the pandemic fiscal year of 2020, the Office issued 443,911 registrations, recorded 7,098 documents containing titles of 233,694 works, and forwarded hundreds of thousands of works, net value of $45,274,336 million, to the Library.

USPTO — Free Legal Services

The Patent Pro Bono Program endeavors to match financially under-resourced independent inventors and small businesses with a patent practitioner who provides patent preparation, filing, and prosecution services, without charge for their legal services. The program consists of 21 independent not-for-profit regional programs which endeavor to match qualified applicants with volunteer patent practitioners. Applicants may apply for assistance through the program in their region. A list of regional programs can be found on the USPTO's Patent Pro Bono Program webpage. Regional programs may charge a fee for the screening and matching service and applicants are responsible for all USPTO filing fees.

USPTO — Office of Petitions

The USPTO's Office of Petitions (OPET), which is a centralized office within the agency's Patents unit, is responsible for reviewing and deciding most petitions, requests, and inquiries related to the prosecution of patent applications. OPET also maintains a help desk available to assist internal and external customers with petitions-related matters.

USPTO — Office of Education

The Office of Education (OE) at the USPTO provides K-12 educational and outreach programming for students, educators, and young inventors and innovators. The OE supports the mission of the agency by providing relevant intellectual property, innovation, and invention resources to school administrators,

teachers, students, and parents. The OE also has a robust outreach program that supports many community-based invention and innovation programs.

USPTO — Global Intellectual Property Academy

The Global Intellectual Property Academy (GIPA) is under the Office of Policy and International Affairs (OPIA). In furtherance of the UPSTO's strategic goal to lead in Intellectual Property policy and improve IP systems, GIPA provides international capacity-building intellectual property training in a variety of IP topics for the benefit of U.S stakeholders. Classes are conducted around the world for U.S. and international audiences in multiple languages, with many at USPTO headquarters in Alexandria, Virginia or broadcast remotely. Instructors are OPIA subject matter experts in all areas of IP protection and enforcement, IP attachés, and experts from other business units at USPTO, and from around the U.S. government.

USPTO — IP Attaché Program

The IP Attaché Program is within the USPTO's Office of Policy and International Affairs. IP attachés advocate to improve IP policies, laws, and regulations abroad for the benefit of U.S. stakeholders. They also provide information to help U.S. stakeholders entering foreign markets or conducting business abroad, such as how to navigate foreign laws and regulations, and how foreign courts and governments work.

USPTO — Office of Innovation Outreach

The Office of Innovation Outreach (OIO) develops awareness and outreach programs and training for inventors, organizations, and universities. The OIO is located in the Office of the Chief Communications Officer of the USPTO and supports the mission of the agency by providing relevant intellectual property (IP), innovation, and invention resources to independent inventors, small businesses, entrepreneurs, and underrepresented or underserved populations. The OIO creates annual programming and works with partners from other federal agencies, organizations, and universities to help everyone better understand, secure, and utilize IP.

USPTO — Office of International Patent Cooperation

The Office of International Patent Cooperation (OIPC) implements initiatives that make the international filing and prosecution system more efficient for IP offices and users around the world. For example, OIPC works with the European Patent Office (EPO) to keep the jointly owned and operated Cooperative Patent Classification (CPC) scheme up-to-date, which is used by examiners when searching. In addition, OIPC develops work sharing initiatives in which the work product generated by one IP office can be used by another IP office in its processing of a corresponding application directed to the same invention. Further, OIPC oversees USPTO's administration of the Patent Cooperation Treaty (PCT), an international agreement that makes it possible for inventors to seek patent protection for an invention simultaneously in multiple countries by filing a single "international" patent application.

USPTO — Office of Patents Stakeholder Experience: Inventors Assistance Center

The Inventors Assistance Center (IAC) provides patent information and services to the public. The IAC is staffed by former supervisory patent examiners and primary examiners who answer general questions concerning patent examining policy and procedure.

USPTO — Office of Patents Stakeholder Experience: Patents Application Assistance Unit

The Application Assistance Unit assists with a broad range of questions and issues pertaining to pre-examination processing of patent applications by the Office of Patent Application Processing and the post-examination processing of patent applications by the Office of Data Management. For example, the AAU can provide assistance with questions related to the status of an application that is in the pre-examination or the post-examination phase of processing, filling receipts and missing parts letters.

USPTO — Office of Patents Stakeholder Experience: Patents Ombudsman

The Patents Ombudsman provides assistance to applicants and attorneys throughout the application process including initial filing, patent examination, and post-examination. We assist applicants when the normal processing has stalled, helping to get applications back on track. The Patents Ombudsman Program is not intended to circumvent normal communication between applicants or their representatives and examiners or supervisory patent examiners (SPEs) or TC directors.

USPTO — Office of Patents Stakeholder Experience: Pro Se Assistance Program

The Pro Se Assistance Program provides outreach and education to inventors who file patent applications without the assistance of a registered patent attorney or agent (also known as "pro se" filing).

USPTO — Office of Patents Stakeholder Experience: Stakeholder Education and Training Division

The Stakeholder Education and Training Division's (SETD) goal is to be the premier focal point to the IP community for comprehensive patent related training and education by providing timely and innovative training products, delivery methods, and educational assistance. SETD's mission is to provide excellent education and training to the IP community by delivering curricula tailored to each specific stakeholder group, in order to provide a foundation, empowerment, and ongoing support to navigate the application and examination processes.

USPTO — Office of Policy and International Affairs

USPTO's Office of Policy and International Affairs (OPIA) assists the Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office in advising the President, through the Secretary of Commerce, and federal agencies on domestic and international IP issues as well as on United States treaty obligations. Comprised of experts in all areas of intellectual property law and policy, OPIA formulates U.S. domestic and international policy regarding protection and enforcement of intellectual property rights. The office promotes the development of intellectual property systems, nationally and internationally, and through a variety of activities, advocates improvements in and more effective means of protecting and enforcing intellectual property rights of United States nationals in the United States and throughout the world.

In addition to housing the USPTO's Office of Government Affairs and Office of the Chief Economist, OPIA houses two resources highlighted in more detail on their Invention-Con 2021 Virtual booths: the Global IP Academy (GIPA) and the IP Attaché Program.

USPTO — Patent and Trademark Resource Centers

Patent and Trademark Resource Centers (PTRCs) are a nationwide network of 83 public, state, and academic libraries designated by the USPTO to disseminate patent and trademark information. PTRCs support the diverse intellectual property needs of the public. PTRC librarians can help you learn to conduct a preliminary patent search or a preliminary trademark search. Examiners search tools are also available at PTRCs.

USPTO — Patent Electronic Business Center

The Patent Electronic Business Center (EBC) at the USPTO assists customers with filing their electronic patent application submissions via the Electronic Filing System (EFS-Web) and the newest filing system, Patent Center, with the review of patent applications in Public and Private PAIR (Patent Application Information Retrieval), and Searching the Patent and Patent Application Full-Text and Image databases. The EBC also issues, administers, and supports the use of customer numbers and digital certificates for the access and use of EFS-Web, Patent Center and Private PAIR.

USPTO — Regional Offices

The USPTO operates the Eastern Regional Outreach Office at our headquarters in Alexandria, Virginia, and four additional regional offices, including the Elijah J. McCoy Midwest Regional Office (Detroit, Michigan), Texas Regional Office (Dallas, Texas), Rocky Mountain Regional Office (Denver, Colorado), and Silicon Valley Regional Office (San Jose, California).

Combined, our offices provide services and resources to inventors, entrepreneurs, and small businesses across the United States. Our goal is to promote innovation and stimulate the economy by connecting entrepreneurs to government resources, supporting students and teachers through our STEM education programs, gathering feedback from regional stakeholders, and recruiting diverse talent from the region.

Each regional office offers a variety of services, including events, patent examiner interviews, teacher professional development and STEM workshops, consultations with patent and trademark experts, and Patent Trial and Appeal Board hearings. Additionally, each regional office collaborates with the network of Patent and Trademark Resource Centers.

USPTO — Small business vendors information

The USPTO's Office of Procurement is committed to ensuring small businesses have maximum practical procurement opportunities to become both prime contractors and subcontractors. Ongoing outreach incorporates innovative procurement technologies and strategies across a variety of contract vehicles, in order to further develop and expand industry partnerships. We are committed to integrating small businesses into our operations and providing them with opportunities to contribute to the future of domestic and global intellectual property protection.

To schedule a small business capabilities session, please fill out a Small Business Capabilities Input Form and send it to the Small Business Specialist and Industry Liaison. **Please note:** The next available slots are in mid-October 2021.

Trademark Assistance Center (TAC)

The Trademark Assistance Center (TAC) is the main support center for all customers, from first-time filers to legal professionals and experienced trademark applicants. We can answer your questions on a variety of trademark topics, but cannot provide legal advice.

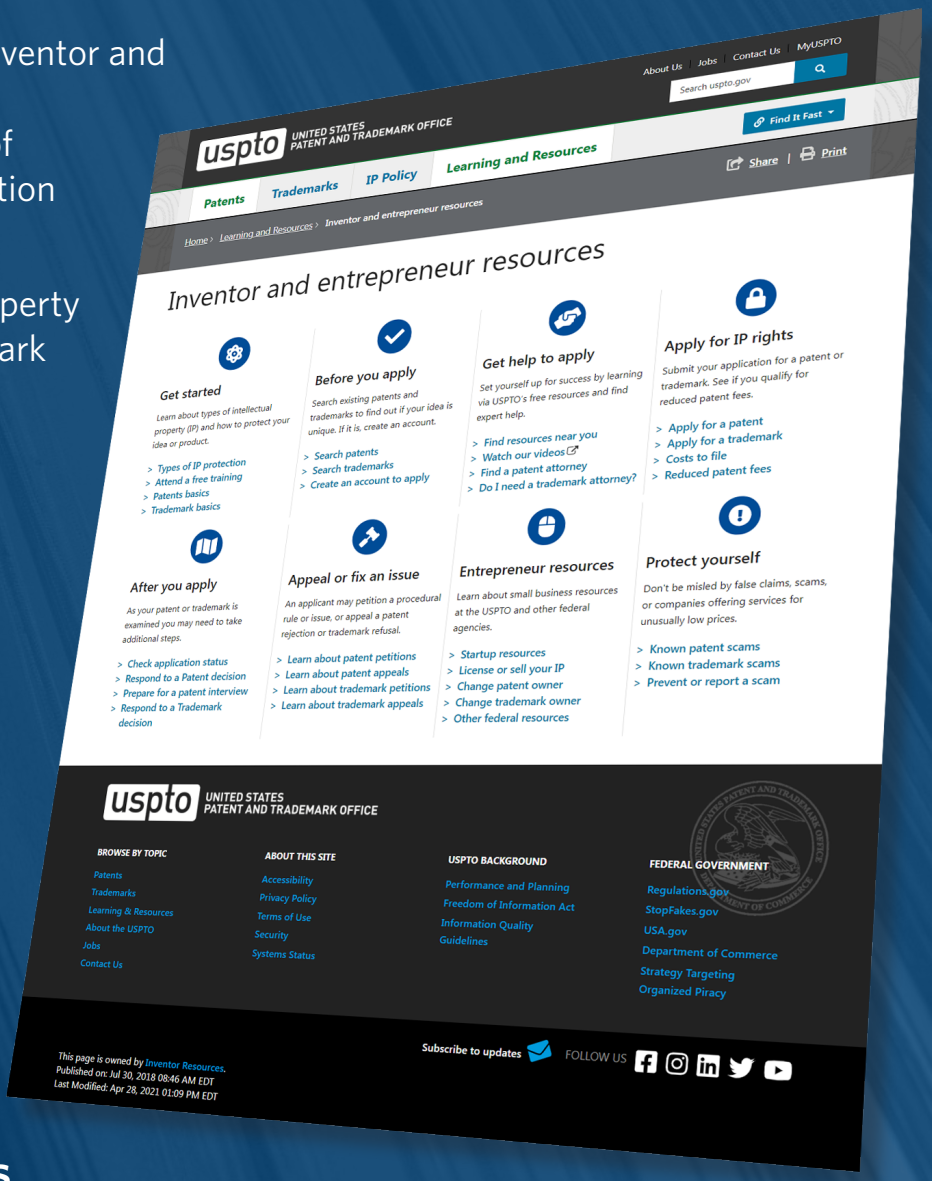
Trademark Trial and Appeal Board (TTAB)

The Trademark Trial and Appeal Board (TTAB) is an administrative board that hears and decides adversary proceedings between two parties, namely, oppositions (party opposes a mark after publication in the Official Gazette) and cancellations (party seeks to cancel an existing registration). The TTAB also handles interference and concurrent use proceedings, as well as appeals of final refusals issued by USPTO trademark examining attorneys within the course of the prosecution of trademark applications.

Resources for inventors and entrepreneurs

The USPTO's newly redesigned inventor and entrepreneur resources webpage can help you navigate each step of the patent and trademark application process with:

- Information on intellectual property (IP) basics, patent and trademark search tools, and how to get assistance with applications
- Links to application systems and fee tables
- Information on checking application status, responding to office actions, and utilizing petitions and appeals
- Links to assist startups and users interested in licensing or selling their IP
- How to avoid known patent and trademark scams



www.uspto.gov/Inventors

The search for lost X-patents

By Adam Bisno, USPTO Historian

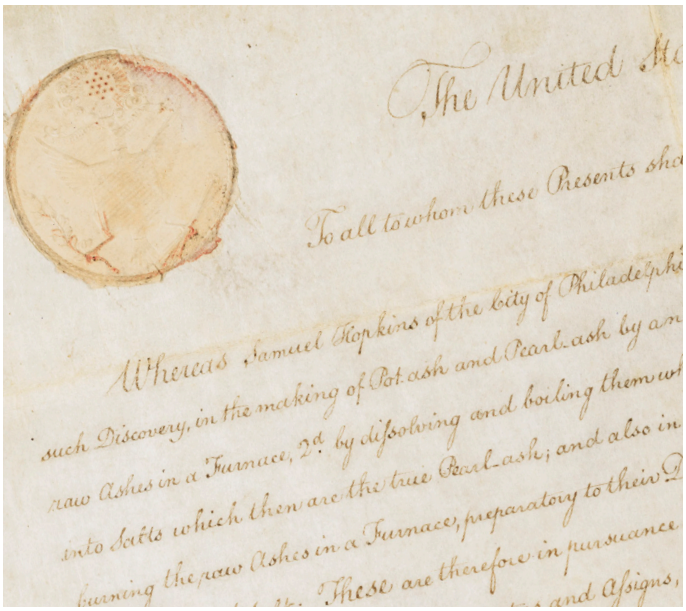
In December 1836, a catastrophic fire at the United States Patent Office destroyed records of American innovation kept since the earliest days of the Republic. We call patents from this era (1790-1836) "X-patents" not because they're shrouded in mystery (although they are) but because they predate the numbering system now in use.

The so-called X-patents had been registered according to the name of the inventor and the date of issue. Only after the 1836 fire, as the Patent Office was reconstructing its collection, did examiners begin numbering the early grants retroactively. To distinguish them from contemporary patents, numbered from one (issued in July 1836) to 11 million (issued in May 2021) and counting, the letter X was affixed. Eli Whitney's patent for the cotton gin, for example, issued in 1794, became 72X, as distinct from U.S. Patent No. 72, issued in October 1836 to Silas Lamson for an improvement in the construction of scythes. We now refer to all patents from before U.S. Patent No. 1 (issued July 13, 1836) as X-patents.

The fire of 1836 destroyed the specifications and scale models for nearly 10,000 X-patents. The only remaining records were kept by the inventors themselves, in the form of "letters patent," handwritten precursors to today's typed and digitized patent grants.

Standing amid the ashes, Commissioner of Patents Henry L. Ellsworth faced an impossible situation. With the transition to a rigorous examination system, enacted just five months prior to the fire, the Patent Office now relied on the records of past inventions to determine the patentability of future inventions. To keep functioning—to survive—the Patent Office needed those records, and fast.

The solution became the Patent Office's first attempt at crowdsourcing its own history. Within a few months, Congress and Commissioner Ellsworth put out a call to patentees for information about their inventions, and



based on the mailed-in responses, some 2,800 patents could be reconstructed. But the rest—more than 7,000—were never recovered.

Chronically overtasked, patent examiners of the later 19th century had little time to look for the Patent Office's missing documents. In the 20th century, the devastating fire of 1836 and the lost records became a dim, distant memory to all but a few patent history enthusiasts. These volunteers—archivists, librarians, historians, patent examiners, and interested members of the public—have found hundreds of X-patents, and the USPTO has been adding the scans to its Patent Full-Text and Image Database (PatFT) for several years. The work continues to this day.

Surviving X-patents are scattered far and wide. Some are at grand repositories like the National Archives and the Smithsonian Institution. Others are at state and local archives, buried amid the papers of inventors, their businesses, or their families. Some X-patents have even turned up in people's attics and at public auctions. If you happen upon one that isn't already in the USPTO's PatFT, please notify the USPTO Historian, and we'll add it to the database.

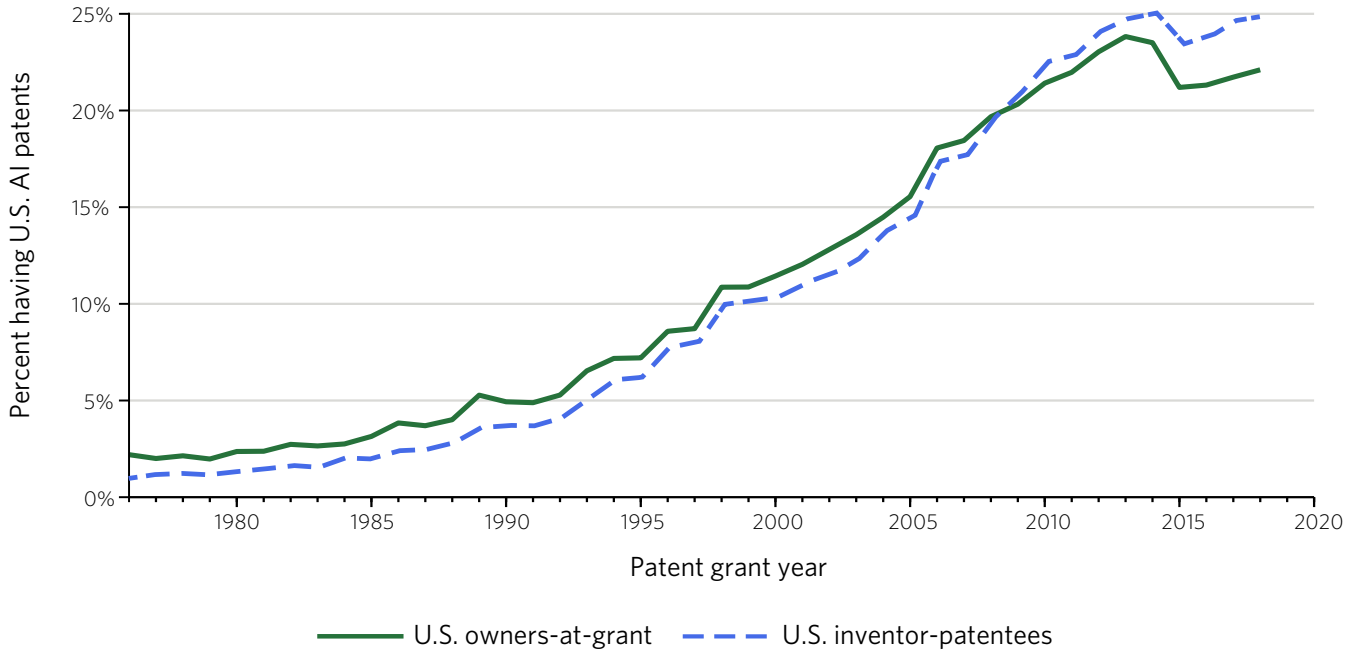
Inventing AI: Tracing the emergence of artificial intelligence (AI) with U.S. patents

Technology diffusion is the spread and adoption of a new technology by inventors, companies, and other innovators. Technologies that diffuse broadly have potentially large effects on innovation, productivity, and economic growth. For example, steam power, electricity, and information technology greatly enhanced the volume, as well as the variety, of goods produced within the economy.

A recently released USPTO report, titled "Inventing AI: Tracing the emergence of AI with U.S. patents," finds that AI is diffusing broadly across technologies, inventor-patentees, companies, and U.S. geography. The figure below shows that the percentage of U.S. organizations (green line) and inventors (dashed blue line) that AI patents increased from under 5% in 1980 to just over 20% in 2018. This is remarkable growth and shows that AI is increasingly important to U.S. invention.

Among the report's major findings:

- Artificial intelligence (AI) is increasingly important for invention, diffusing broadly across technologies, inventor-patentees, organizations, and geography.
- In the 16 years from 2002 to 2018, annual AI patent applications increased by more than 100%, rising from 30,000 to more than 60,000 annually. Over the same period, the share of all patent applications that contain AI grew from 9% to nearly 16%.
- Patents containing AI appeared in about 9% of all technology subclasses used by the USPTO in 1976 and spread to more than 42% by 2018.
- The percentage of inventor-patentees who are active in AI started at 1% in 1976 and increased to 25% by 2018. Growth in the percentage of organizations patenting in AI has been similar.
- Most of the top 30 AI companies are in the information and communications technology sector, with some notable exceptions such as Bank of America, Boeing, and General Electric.
- AI diffusion is occurring widely across the United States. For example, inventor-patentees in Oregon are using AI in fitness training and equipment, and in North Dakota, AI is used in agriculture.



USPTO and the National Inventors Hall of Fame

The USPTO is a founding partner of the National Inventors Hall of Fame® (NIHF). Founded in 1973, this nonprofit organization connects inventors who have built the world around us with the creators, innovators and entrepreneurs of tomorrow.

Together, the USPTO and NIHF induct exceptional inventors and share their stories through the NIHF Museum located within the USPTO Headquarters in Alexandria, Virginia. The USPTO and NIHF also work directly with Hall of Fame Inductees to develop programs designed to inspire creativity, exploration, and inventiveness in people of all ages and communities, from children and educators to independent inventors.

NIHF education programs are offered across the country, providing accessible, equitable learning opportunities. These programs include the nationally acclaimed K-6 Camp Invention® summer program, the afterschool Club Invention® program for grades 1-6, and Invention Project® K-6, an immersive school year curriculum. Through hands-on creative problem solving and open-ended exploration, these programs guide the next generation to build the mindset, skills and intellectual property knowledge they need to reach their full potential.

NIHF education programs provide curricula created in collaboration with NIHF Inductees, and each program integrates lessons inspired by great inventors and inventions. On May 5, 2022, a new class of world-changing innovators will join the Hall of Fame, including several independent inventors.

2022 Inductees Lisa Lindahl, Hinda Miller and Polly Smith invented the sports bra and founded Jogbra, Inc., which was financed in part by SBA loans and is now a division of Champions.

R. Rox Anderson, the co-founder of six medical start-ups, will be inducted for his development of laser dermatology.

Mick Mountz, Peter Wurman and Raffaello D'Andrea will be inducted for their invention of mobile robotic material handling for order fulfilment. This team founded Kiva Systems, which was acquired by Amazon and now operates as Amazon Robotics.

Members of the latest Inductee class, both living and historical, represent a broad array of backgrounds, industries and impacts. These Inductees will add to the growing diversity of the patented inventors featured in the NIHF Museum and incorporated into NIHF's education programs.

A special thanks to the Invention-Con 2021 planning team

Invention-Con 2021 Program Managers

NaThanya Ferguson, Program Lead

Dennis Forbes, Speaker and Agenda

Matt Palumbo, Marketing

Sean Wilkerson, Logistics

Mehdi Ahmadi

Andrew C. Arbuckle

Paul Fucito

Becky Fritchman

Dawn Hembry

Samuel House

Jeff Isaacs

John Jacquette

Travis Rozia Lightfoot

Richard McCormack

Becky Oakes

Juan Valentin

Amelia Vorce

Joyce Ward

Lauren Washburn

Miriam Wolff

Capitalizing on your intellectual property

UPCOMING EVENTS

As the dates approach, details on the events below, and many more for inventors and entrepreneurs, will become available at www.uspto.gov/events. You can also learn more from the USPTO's Office of Innovation Outreach.

Hispanic Innovation and Entrepreneurship Program	**October 2021**
Veterans Innovation and Entrepreneurship Program	**November 2021**
Black Innovation and Entrepreneurship Program	**February 2022**
Women's Entrepreneurship Symposium	**March 2022**

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