

The 2019 IEEE-USA Annual Report:

ENGAGING & EMPOWERING OUR PROFESSIONAL COMMUNITY



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LETTER FROM PRESIDENT THOMAS COUGHLIN



As President of IEEE-USA in 2019, I sought to spread the word about IEEE and IEEE-USA, and the value of having a professional home. I also supported the work begun by my predecessors, especially Candy Robinson, to focus IEEE-USA on public policy and career and membership services, while providing continuing support for region-driven programs. While serving in this role, I sought out new ways to make IEEE-USA more relevant to other parts of IEEE through several joint activities.

As President, I wrote monthly blogs for **IEEE-USA InSight** on numerous topics—including industry engagement; taking local steps to recover non-renewing members; diversity and inclusion in the IEEE; commemorating the 50th anniversary of the first humans to walk on the moon; the importance of voting; public policy; and dangers for California consultants, due to AB-5.

In 2019, the IEEE-USA Board approved a series of activities to commemorate the 50th anniversary of the first Apollo Moon Landing. The Board also funded the development and promotion of a series of short membership recruitment videos, featuring young professionals, to support a focused membership marketing campaign in partnership with the IEEE Computer and Power and Engineering Societies.

I was also involved in efforts to reach out to industry and attract potential IEEE members. To that end, I participated in an Industry Summit that was part of the Rebooting Computing Conference. I also worked with the IEEE Future Directions Committee to organize sessions, and get a booth we used for IEEE membership promotion at the UBM Drive World/Embedded System Conference. In addition, I participated with IEEE Future Directions at the AWE USA conference (focusing on mixed reality technology).

During my Presidency in 2019, I travelled extensively for IEEE-USA. Besides attending the IEEE Board retreat and meetings in February, June and November, I also attended many meetings to represent IEEE-USA in all the U.S. IEEE Regions. I attended and spoke at HKN, GHTC, VICS, and the IEEE Honors Ceremony; as well as the YP and SAC meetings, a Smart Cities event in Austin, Texas, ISTAS, Globecom, and the Rebooting Computing Conference. I also attended IEEE-USA's Congressional Visits Day, with many other folks from California.

Giving back to your community is a way to share your adventure with others. It has been my pleasure to be your 2019 IEEE-USA President. As in some of my other IEEE roles over the years, I worked with IEEE-USA staff to come up with an IEEE-USA t-shirt that celebrates American ingenuity—and the fun of being an important part of the world's largest technical professional organization.

Wishing you more technology, for the pursuit of happiness.

A handwritten signature in black ink that reads "Thomas M. Coughlin". The signature is fluid and cursive.

Thomas (Tom) Coughlin
2019 IEEE-USA President

INTRODUCTION

The Institute of Electrical and Electronics Engineers-United States of America (IEEE-USA) is a major organizational unit of the IEEE, that traces its origins to the 1973 formation of the IEEE's U.S. Activities Committee.

IEEE-USA was created to advance the public good, and promote the careers and public policy interests of the nearly 160,000 engineers, scientists and allied professionals who are U.S. members of the IEEE.

A member-elected IEEE-USA President and a volunteer board of directors lead IEEE-USA. Its professional staff, based in Washington, D.C., as well as more than 650 active IEEE member volunteers, support IEEE-USA's operations.

This Annual Report documents our collective efforts to support our members, advance the engineering profession, and serve the public interest, during the 2019 calendar year.

MISSION AND PURPOSE

As provided in IEEE's By-Laws, IEEE-USA's mission is to “recommend policies and implement programs specifically intended to serve and benefit IEEE members, engineering professionals, and the general public in the United States. IEEE-USA shall be the organizational unit that represents the professional interests of the IEEE before U.S. governmental bodies. It shall also be responsible for coordinating and reporting, under federal disclosure laws, all official communications with government.”

IEEE-USA Policy 1.2, describes this mission further, outlining IEEE-USA's responsibility to:

- **PROMOTE** the professional, social, economic and ethical status of electrical, electronics, communications and computer engineering; as well as computer science and allied branches of engineering, and the related arts, sciences and technologies, and related technical professionals in the United States, with a special emphasis on U.S. IEEE members
- **PROVIDE** technical advice and policy perspectives to U.S. policymakers at all levels, in the areas of electrotechnology and information technology, to improve the quality of life, and for the benefit of the public
- **WORK** with U.S. policymakers and regulators to enhance the careers and improve the working conditions of U.S. engineers, and other technical professionals
- **DEVELOP** products and services that support the lifelong professional development and career vitality needs of U.S. IEEE members, and other technical professionals
- **SUPPORT** communication with and among U.S. IEEE members, potential members, their employers, and the public about IEEE-USA, and the professional issues that affect its members and their professions
- **ENHANCE** public awareness and understanding of electrical, electronics and computer engineering, and related technical fields



PRESIDENTIAL GOALS

At the start of the year, President Coughlin outlined his 2019 priorities to the IEEE-USA Board of Directors. Coughlin called on the Board, our dedicated corps of volunteers, and the IEEE-USA staff to:

- **Work to enhance the top-level membership experience and increase membership in IEEE and IEEE-USA (with a focus on both retention and growth)**
- **Create a more efficient and cost-effective IEEE-USA**
- **Represent the interests of U.S. IEEE members to the government**
- **Increase IEEE member awareness of IEEE-USA, and its value**
- **Increase IEEE-USA's connections with industry**
- **Increase our engagement with, and perceived value to, other IEEE organizational units**
- **Have fun! (The Pursuit of Happiness)**

Our progress in each of these areas is captured in the balance of this 2019 IEEE-USA Annual Report, which highlights our finances at year-end; and our progress in shaping public policy, supporting members' careers, promoting the profession, serving the public, sponsoring technical conferences, and communicating what we do.



Thomas M. Coughlin
2019 IEEE-USA President



Ramesh Nair (l) and 2019 IEEE-USA President Tom Coughlin (r) having fun at a Young Professionals Meeting in San Diego.

FINANCES

IEEE-USA operates on an annual budget approved by the IEEE Board of Directors. IEEE-USA's 2019 operations budget was \$5.26 million. This budget supported the programs, volunteer activities and professional staff highlighted in this annual report.



IEEE-USA's 2019 Treasurer was Scott Tamashiro.

A mandatory assessment of IEEE's U.S. Higher Grade members, indexed to inflation, primarily funds IEEE-USA's programs and activities. The 2019 assessment was \$46. This assessment generated approximately 97 percent of IEEE-USA's operating revenues for the year.

Despite a revenue shortfall of more than \$100,000—due to IEEE's continuing U.S. membership decline—through careful budgeting and efficient management, IEEE-USA ended Fiscal Year 2019 with an operational surplus of \$136.5K, slightly below its target of a \$156.5K net surplus. Interest and dividends paid on IEEE-USA's reserve investments brought IEEE-USA's year-end surplus to \$623.8K in a strong market year, increasing IEEE-USA's financial reserves to \$3,996.8K.

In addition to IEEE-USA's operating budget, tax-deductible member contributions to the IEEE-USA Fund, the IEEE-USA E-Week Fund, the MOVE Community Outreach Fund, and/or the IEEE-USA Awards Fund provided seed funds used to support our disaster recovery efforts—as well as new career and professional programs and services. For information on how you can contribute to support MOVE or other IEEE-USA's programs, see: www.ieeeusa.org/about/development.asp.

SHAPING PUBLIC POLICY

IEEE-USA's public policy programs serve a three-fold purpose. We proactively advocate for new laws and regulations that enhance the engineering profession, and the roles technology plays in advancing quality of life and our national standard of living. We work to educate policymakers about the potential uses, limits and social implications of technology. We also inform and engage our U.S. members on important public policy issues, helping them become effective advocates for their interests, and the needs of the profession.

In each of these areas, we celebrated successes and saw notable progress during 2019. Here are highlights of those efforts:

- On 2 January, the Senate confirmed IEEE-USA-endorsed Dr. Kelvin Droegemeier as Director of the White House Office of Science and Technology Policy. Subcommittee Chair Sen. John Thune publicly cited IEEE-USA's endorsement, when the Senator voiced his support for Dr. Droegemeier.
- IEEE-USA filed comments on 10 January, with the Commerce Department, providing input on its review of export controls for certain emerging technologies (RN 0694-AH61). The Board of Regents of the University of California system endorsed IEEE-USA's comments.
- The U.S. Supreme Court announced a unanimous decision on 22 January, in *Helsinn v. Teva*, adopting a position IEEE-USA recommended in an amicus curiae brief—asking the Court to uphold the traditional “on-sale bar” to patentability—in a case involving the sale of an invention to a third party under obligation to keep the invention confidential.
- Mina Hanna, chair of IEEE-USA's AI and Autonomous Systems Committee, highlighted IEEE-USA's AI policy efforts, as a featured speaker at the 2019 State of the Net Internet Policy Conference (29 January, in Washington, D.C.), which has been dubbed America's premiere internet policy conference.
- IEEE-USA endorsed the successful appointment of IEEE Senior Member Ademola Peter Adejokun (Lockheed Martin) to the Texas Board of Professional Engineers. Adejokun was the recipient of the 2016 IEEE-USA Professional Achievement Award for his efforts to professionalize software engineering.
- Former IEEE-USA 2016-2017 Congressional Fellow Jonathan Rayner took a position in January 2019, as Legislative Assistant on the congressional staff of Rep. Anthony Brown (Maryland), where he will be responsible for overseeing military affairs issues. Rep. Brown sits on the House Armed Services Committee and its Readiness and Land/Air Forces Subcommittees.
- In February, IEEE-USA submitted statements to the Senate Energy and Natural Resources Committee, for its hearing on the *Outlook for Energy Innovation in the United States*; and to the Senate Commerce, Science and Transportation Committee, for its hearing on *Policy Principles for a Federal Data Privacy Framework in the United States*.

IEEE-USA VOLUNTEER CHAMPIONS ARTIFICIAL INTELLIGENCE

One of IEEE-USA's public policy priorities for 2019 was supporting the work of the IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems, by raising awareness of their findings and efforts to promote the development and ethical use of AI technologies. Mina Hanna, co-chair, IEEE-SA Global Initiative on Ethics of A/I Systems' Policy Committee; and chair of IEEE-USA's AI & AS Policy Committee, provided extraordinary service in support of this public outreach.

Provided below is a listing of Hanna's public engagements and presentations as an IEEE-USA representative during 2019. For this prolific effort, Hanna was named the first recipient of IEEE-USA's new John Meredith Professional Service Award—created to recognize individuals for outstanding volunteer efforts and contributions to advancing IEEE-USA's mission.

- Invited Speaker, Consumer Technology Association (CTA)'s CES 2019, on *Artificial Intelligence Ethics*, Las Vegas, Nevada, 7 January
- Invited Speaker, Internet Education Foundation (IEF)'s State Of The Net, on *Artificial Intelligence and Algorithms*, Washington D.C., 29 January
- Invited Participant, Bloomberg, Executive Roundtable on DOD modernization and AI strategy, with DOD CIO, Dana Deasy, Washington D.C., 29 January

- Invited Member, Global Governance of Artificial Intelligence Roundtable (GGAR), 2019 Expert Community, Dubai, UAE, 10 February
- Invited Participant, World Government Summit, Dubai, UAE, 7-13 February
- Invited Participant, Center for Strategic and International Studies (CSIS)'s *AI Strategy Roundtable*, with a delegation representing the Government of Singapore, Washington D.C., 15 February



- Invited Reviewer, Knight Foundation's Research Centers RFP, Miami, Fla., 18 February
- Invited Speaker, Organization of American States (OAS), addressing member states on *Artificial Intelligence Risks to National and Hemispheric Security*, Washington D.C., 19 March
- Invited Plenary Panelist, World Summit AI, on *Algorithmic Fairness and Countering AI Bias*, Montreal, Canada, 10-11 April
- Invited Speaker, United Nations STI Forum, on *Ethical Code: Designing and Governing Ethical AI*, United Nations HQ, New York, N.Y., 13-14 May
- Invited Participant, UN's International Telecommunication Union (ITU)'s, *AI for Good Global Summit*, Geneva, Switzerland, 28-31 May
- Invited Speaker and Panelist, LEADx CHANGE, with speakers from the Fletcher School of Diplomacy, Harvard Kennedy School, U.S. Air Force, NATO, Atlantic Council, IWPR (supported by the U.S. Embassy in Georgia), on AI ethics, policy and issues—relevant to Georgia and the Caucasus region—Tbilisi, Georgia, 1-4 July
- Moderator, U.S. House of Representatives AI Caucus Congressional Briefing on *Industry Approaches to Ethical AI*, Washington D.C., 10 July
- Invited Speaker, Texas AFL-CIO Constitutional Convention, on *Automation, Robotics, Artificial Intelligence and the Future of Work*, San Antonio, Texas, 27 July
- Invited Speaker, British Embassy, on the *Ten-Year Future of AI*, Washington D.C., 3 October
- Invited Speaker, Coalition for Digital Intelligence (DQ), World Economic Forum, New York, N.Y., 10 October
- Invited Speaker, Launch of E-AIMM – Electronic AI Maturity Model, Emory University, Atlanta, Ga., 11 October
- Invited Participant, National Security Commission on AI (NSCAI)'s conference, on *Strength Through Innovation: The Future of AI and U.S. National Security*, Washington D.C., 5 November
- Invited Speaker, Vested Summit, several panels and presentations on *AI Ethics and Policy for Emerging Markets*, Sahl Hasheesh, Red Sea, Egypt, 7-9 November
- Organizer and moderator, IEEE International Test Conference panel on *U.S. AI Policy Leadership*, with speakers from the White House OSTP, Department of Energy, NIST and NSF, Washington D.C., 12 November
- Invited Speaker, G-STIC (Global Science, Technology and Innovation Conference), IEEE-TechEthics and UNMGCY (UN Major Group for Children and Youth) panel on AI, Brussels, Belgium, 22 November
- Invited Speaker, Internet Governance Forum (IGF)—several panels, including the German Ministry of Economic Affairs' High-Level Internet Governance Panel on *Internet Safety, Security and Resilience*; *OECD Open Forum's Panel on AI – from Principles to Practice*; and the IGF MAG Main Session on *Applying Human Rights and Ethics in Responsible Data Governance and AI*, Berlin Germany, 25-28 November
- Invited Participant, Consulate General of Canada in New York City, with the Consuls General of Canada in New York City and Los Angeles; organized by the Harvard Kennedy School's Belfer Center: *Project Kana Roundtable on Human Rights and AI*, New York, N.Y., 10 December
- Invited Speaker, AI Summit New York, headline panel on *The Role of Policy and Regulation in the Development of AI*, New York, N.Y., 11 December



- IEEE-USA provided comments to the House Science Committee Energy Subcommittee on their 26 February hearing on, *The Future of ARPA-E*; and gave suggestions to Reps. Eddie Bernice Johnson (Texas) and Frank Lucas (Oklahoma), concerning proposed ARPA-E legislation.
- In response to requests from congressional staff, IEEE-USA also prepared questions used by Members of Congress participating in the House Science, Space and Technology Committee's 7 March hearing, on *Maintaining U.S. Leadership in Science and Technology*.
- IEEE-USA worked with U.S. Reps. Brenda Lawrence (Michigan) and Ro Khanna (California) on a draft resolution supporting the development of guidelines for the ethical development of artificial intelligence, introduced as House Resolution 153, on 27 February.
- IEEE-USA joined the UBIT Coalition, in support of Senate Bill (S.632) by Sens. James Lankford (Oklahoma) and Chris Coons (Delaware) that would repeal sections of a 2017 tax bill that imposed a 21 percent UBIT tax on non-profit association's employer-provided benefits—such as transportation, parking, and on-premises athletic facilities. Thanks to a broad advocacy effort IEEE-USA supported, Congress eventually repealed the UBIT tax in the year-end spending, and adopted the tax package in December.
- Majority Staff for the U.S. House of Representatives' Committee on Science, Space and Technology invited IEEE-USA and IEEE Standards representatives



to brief committee staff on IEEE's newly released treatise on *Ethically Aligned Design of Autonomous Systems* on 2 May; followed by meetings with the Senate Commerce, Science and Transportation Committee staff on 30 October.

- IEEE-USA organized a meeting on 15 March with the U.S. Space Council, for representatives from industry, university and professional groups to discuss the administration's plans for civil, commercial and military space activities. Among topics discussed were FY20 budget amendments; development of space nuclear capability; spectrum issues for the space sector; space-related national security issues, including development of the U.S. Space Force; China relations and export controls; collaborations with developing nations; and NASA experiments planned for the South Pole.
- Seventy U.S. IEEE members participated in the 2019 Science, Engineering and Technology Congressional Visits Day on 2-3 April, to communicate the need for strong federal investments in science and technology, in 92 scheduled visits with Members of Congress and their staff. IEEE-USA staff co-chaired the coalition events.



2019 IEEE-USA CVD: (Above Left) IEEE-USA YP leader Gloria See (right) took a selfie with U.S. Representative Alexandria Ocasio-Cortez (New York); (Bottom Left) IEEE Region 5 leaders met with U.S. Senator Ted Cruz (Texas); (Above Right) 2019 IEEE-USA President Tom Coughlin (far right) takes a break with other CVD participants among the cherry blossoms.



Sparklebots Robotics Team Ladies Makayla Jackson and Zaicoria McLean showed off their robot to U.S. Representative Bill Foster (Illinois) during the Caucus automation event.

- On 28 April, IEEE-USA co-sponsored the Council on Undergraduate Research's *Posters on the Hill* competition, and presented two awards to undergraduate researchers at Iowa State University, and the Colorado School of Mines. The event was designed to broaden awareness in Congress of undergraduate-level science and engineering research at U.S. institutions.
- IEEE-USA and Carnegie-Mellon jointly organized a 29 April event for the congressional Robotics Caucus on *Preparing the Workforce for Automation*, featuring speakers on the topics of AI-related workforce retraining, leveraging AI to close the skills gap, and human-machine teaming. Several student robotics teams participated as exhibitors.
- IEEE-USA participated in the official unveiling of *Benchmarks 2019: Second Place America? Increasing Challenges to U.S. Scientific Leadership*, a special report by the Task Force on American Innovation (TFAI). The Task Force unveiled the report at a Hill briefing on 14 May for the Congressional Research Caucus. IEEE-USA arranged the briefing, is a member of TFAI, and a co-sponsor of the special report.



(Above) IEEE CEO Steve Welby and IEEE-USA Staffers, Russ Harrison and Aline McNaull, at the CNSR S&T Exchange; (Bottom) Dr. Nader Engheta gave a presentation at the CNSR S&T Exchange.

- In May, IEEE-USA endorsed two bipartisan bills introduced in the U.S. House of Representatives: *The American Manufacturing Leadership Act* (H.R. 2397) and *The Artificial Intelligence (AI) in Government Act* (H.R. 2575). *The Manufacturing Leadership Act* would reauthorize a NIST program that helps the private sector identify and commercialize the results of federally funded R&D. IEEE-USA provided input to the drafting of the *AI Act*, which seeks to facilitate the federal government's adoption of AI tools and resources.
- IEEE-USA submitted comments on digital privacy to the Federal Trade Commission; and it collaborated with the IEEE Standards Association on comments provided to NIST, regarding the federal role in promoting the development of AI-related standards.
- IEEE-USA helped plan the Coalition for National Security Research's *S&T Information Exchange*, held on Capitol Hill, on 22 May. The Exchange highlighted the U.S. Department of Defense's basic research investments. Featured exhibitors included IEEE Fellow Dr. Nader Engheta, of the University of Pennsylvania.

- The Engineering Societies' Washington Internships for Students of Engineering kicked off its nine-week summer program on 3 June. IEEE-USA hosted the multi-society 2019 WISE Interns and faculty adviser, in addition to sponsoring IEEE's 2019 Intern Jillian Johnson, from Christian Brothers University (CBU), in Memphis. Johnson is studying electrical engineering and cognitive neuroscience, is Vice Chair of the CBU IEEE Student Branch, and serves as Region 3's Regional Student Representative. Johnson completed her nine-week internship on 1 August, with the presentation of her research paper, *Wage against the Machine: The Wealth and Power Inequality on the Automation of Labor*.
- On 1 July, the IEEE Hawaii Section presented Rep. Ed Case (Hawaii) a statue recognizing the Congressman's commitment to promoting the STEM workforce in that state. The Section held the recognition ceremony at a small technology start-up in Honolulu, Nalu Scientific, founded by IEEE member Isar Monstafanezhad.



- Mina Hanna, chair, and Marc Canellas, member, of IEEE-USA's AI and Autonomous Systems Policy Committee, gave invited presentations at the Texas AFL-CIO's 60th Constitutional Convention on *Automation, Robotics, AI and the Future of Work*, held 27 July in Austin, Texas.
- On 12 August, the U.S. National Institute of Standards and Technology (NIST) released a plan for prioritizing federal agency engagement in the development of standards for artificial intelligence (AI). The plan extensively cited joint IEEE-USA/IEEE-SA input, in response to NIST's earlier request for information.
- *The National Defense Authorization Act*, signed into law by President Trump on 13 August, contains a number of amendments IEEE-USA specifically championed, including provisions to enhance DOD manufacturing S&T programs; establishing a technology and national security fellowship program, and a Defense-wide, national Security Innovation Network; and enhancing cybersecurity of the defense industrial base.
- IEEE-USA Managing Director Chris J. Brantley participated in the U.S. Government Accountability Office's (GAO) Expert Forum, on 4 September. GAO designed the Forum to help develop processes for an expanded technology assessment program—created to provide advice to Congress.



(Right) 2019 IEEE WISE Intern, Jillian Johnson; (Left) (Pictured l to r): WISE Faculty Member in Residence Dr. John Weidner, along with 2019 WISE interns Cammie Hong (AIChE), Joshua Stiff (SAE), Jillian Johnson (IEEE/IEEE-USA), Bradie Crandall (AIChE), and Kaitlyn Bishay (ASTM).

- IEEE-USA helped organize IEEE members in California seeking to modify provisions of a California Bill (AB5), requiring companies to classify consultants as regular employees, when seeking to retain the services of unlicensed engineers and IT professionals working as consultants. The Bill was subsequently amended and passed into law, with provisions creating an exception for consultants incorporated as a sole proprietorship, or registered as an LLC. Despite these amendments, IEEE-USA is continuing its efforts to repeal other provisions restricting technical professionals' abilities to work as consultants.
- IEEE-USA arranged for U.S. Representatives Bill Foster (Illinois) and Sean Casten (Illinois) to speak at the IEEE Women in Engineering AI Leadership Summit, held in Chicago, on 20 September. With IEEE-USA's assistance, Rep. Foster entered a statement into the Congressional Record (Vol. 165, No. 152), recognizing the Summit as a "valuable forum for women students, teachers, researchers and engineers to share their experiences and knowledge in the AI field."



2019 IEEE-USA President Tom Coughlin presents Rep. Ro Khanna (California) with IEEE-USA's Public Service Award.

- IEEE-USA helped plan a Task Force on American Innovation congressional briefing, on 25 September, on *How Federal Investments in Science Created a Revolution: The Story of 3D Printing & Additive Manufacturing*.
- On 27 September, the political newspaper, *The Hill*, published Mina Hanna's op-ed on *The Importance of Federal Investment in AI Research*. Hanna is Chair of IEEE-USA's AI and Autonomous Systems Policy Committee.
- On 8 October, IEEE-USA President Tom Coughlin presented IEEE-USA's Public Service Award to Rep. Ro Khanna (California), for his efforts to promote an Internet "Bill of Rights."
- In November, IEEE-USA released a special report AI: A Global Survey, prepared by Raine Sagrainsingh. Designed as a reference resource for policymakers, this survey provides insight into how other countries approach AI, and the regulation of related technologies. The Report provides an overview of the national AI strategies of 26 countries, as well as the European Union. Further, the Report includes references to the extant laws that address privacy and security. IEEE-USA will update the report regularly, as new laws are adopted.
- In response to a request from the White House, IEEE-USA, working in partnership with Georgetown University, recruited and sponsored Dr. Eric Burger as an IEEE-USA Government Fellow,

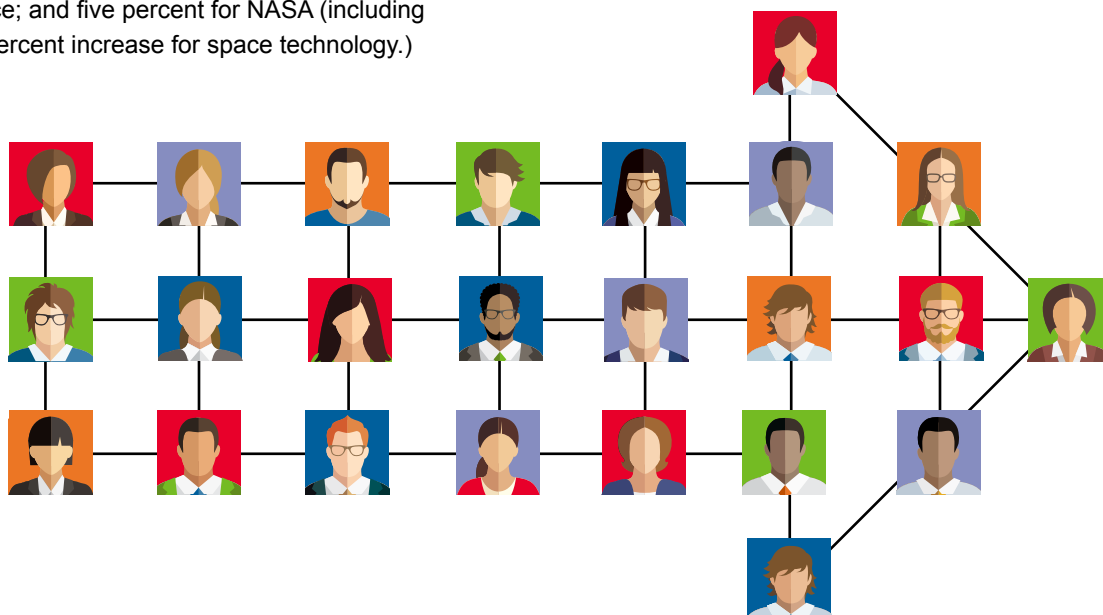


for a twelve-month assignment to work in the White House Office of Science and Technology Policy (OSTP). Named OSTP's Assistant Director for Telecommunications and Cybersecurity, Dr. Burger assisted OSTP in coordinating updates

to U.S. national spectrum strategy and policy implementation. He is a Research Professor of Computer Science at Georgetown University, and Director of the University's Security and Software Engineering Research Center (S2ERC). In a previous IEEE-USA Government Fellowship, Dr. Burger served as the Chief Technology Officer to the Federal Communications Commission (FCC).

- In its 11 December ruling in *Peter vs. Nantkwest*, the U.S. Supreme Court unanimously adopted a position IEEE-USA recommended in its amicus brief to the Court. The position upheld the so-called "American Rule," regarding the respective responsibility of parties for litigation expenses. Further, it ruled that the U.S. Patent Office could not use statutory language on recovering case expenses, as authorization to collect legal fees from opponents in patent denial cases brought against it. The case was a major victory for small- and medium-sized patent applicants, who would have faced the prospect of having to pay PTO's legal costs, to challenge PTO's denial of their patent applications legally.
- IEEE-USA fought successfully for meaningful increases in the FY 2020 science and engineering budgets. Highlights include a five percent increase for NIST; six percent for the DOE's Office of Science; and five percent for NASA (including a 19 percent increase for space technology.)

- IEEE-USA staff gave 24 talks to local, state and national groups on our policy efforts and the impact policy will have on IEEE's U.S. members. Government Relations staff also hosted 10 webinars on policy and Congress.
- IEEE-USA has a full slate of Fellows for 2019-2020:
 - Aubrey Paris, Diplomatic Fellow, State Department
 - Sarah Rovito, Congressional Fellow, Rep. Seth Moulton (Massachusetts)
 - Jamie Gardner, Congressional Fellow, Sen. Chris Coons (Delaware)
- IEEE-USA's 2018-2019 Fellows successfully completed their year of service:
 - Elliot Eichen, Congressional Fellow, Sen. Ron Wyden (Oregon)
 - Ethan Keller, Congressional Fellow, Sen. Maria Cantwell (Washington)
 - Daniel Bacerra, Congressional Fellow, Sen. Jeff Merkley (Oregon)
 - Daniel Moore, Diplomatic Fellow, State Department



SUPPORTING MEMBERS CAREERS

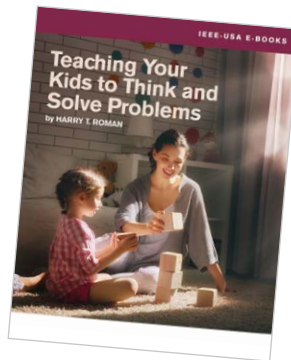
IEEE-USA strives to provide high quality products and services designed to enhance the careers and support the professional development of IEEE's U.S. members at all stages of their career life cycle. This chapter highlights our efforts to support members' career vitality in 2019:

- IEEE-USA offered 26 webinars in 2019, covering 15 career topics and 11 government relations updates. Career webinars covered a diverse array of topics—from leadership skills, job search and career planning—to tax planning and contracting for consultants. The career webinar offerings were:
 - Should You Trust Your Gut? Leadership Myths Busted for Technology
 - How Consultants will Save on Their Taxes and Keep More of Their Profits from the new *Tax Cuts & Jobs Act*
 - Contracts & Contract Provisions—Other Important Aspects to Consider
 - How to Be Happy at Work—For No Reason
 - Five Painful but Important Things To Do When You Lose Your Job
 - Developing Creative Literacy for Business
 - Interviewing Across Generations
 - Situational Leadership and How To Use It
 - IEEE Young Professionals—We Are the Future!
 - Having a Plan for Your First Job and Career
 - Gig Economy—How To Keep Your Day Job and Your Side Hustle
 - You Only Have Two Seconds To Make a First Impression
 - Is Your Focus Your Magic?
- Own the Room—How To Exude Executive Presence
- Engineering Licensure: From Point A to P.E.
- During 2019, IEEE-USA published 20 new e-books, including the *2019 Salary Survey Report* and the *2019 Consultants Fee Survey Report*. New releases focused on two books in a new series on critical thinking skills for engineers, pitching your ideas, process skills, making the most of one-on-ones with your manager, the ins and outs of mentoring, transitioning from student to engineer, boosting team creativity, publishing your work, an engineering coloring book for kids, and three new featured biographies in the *IEEE-USA Women in Engineering* e-book series.



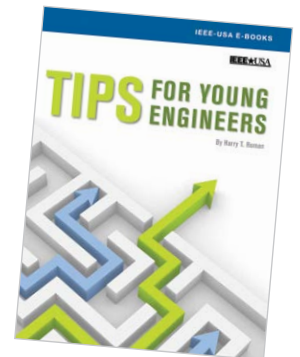


- IEEE-USA distributed 5,516 e-books from the IEEE-USA catalog of more than 150 titles in 2019. The most popular e-book was *Teaching Your Kids to Think and Solve Problems*, with over 750 downloads.
- IEEE-USA also continued to expand its audiobook offerings in 2019, releasing six new titles by author and educator, Harry T. Roman, including two of a three-volume set on *Developing Your People*, and a two-volume set on *Rewarding Your Employees in Tight Salary Times*.



2019 IEEE-USA Evolution of You (EVO) Leadership Conference on 2-3 August in Pittsburgh, Pennsylvania: (Clockwise from Left): Gateway Clipper sunset dinner cruise on Pittsburgh's three rivers; EVO panel on "The Future of Work – AI, AR, VR, Robotics and More"; 3K Fun Run.

- More than 160 people participated in the 2019 IEEE-USA EVO Leadership Conference on 2-3 August in Pittsburgh, Pa. The two-day Conference featured keynotes by Bran Ferren (Co-Founder/COO of Applied Minds), Sonita Lontoh (Global Technology Marketing Executive for HP), Caroline Stokes (Forward), former Congressman Phil English (Pennsylvania), and Myles Kovacs (*DUB Magazine*), as well as talks with featured futurist and entrepreneur, Maxim Jago.
- Single release e-books included *Tips for Young Engineers* and *Why STEM Is Important*. A total of 3,045 audiobooks were distributed in 2019, the most popular being Book 1 of Roman's *Rewarding Your People in Tight Salary Times*, with more than 600 downloads.
- IEEE-USA concluded its 2019 Salary Survey on 19 April. Despite a 2.2% decrease in the eligible survey population, member participation in the survey increased 55% over 2018—the highest rate of U.S. member participation since 2015.



- IEEE-USA released its *2019 Salary Survey Report* on 11 September; and an *IEEE Spectrum* article highlighted the *Report*. The Survey results found that median income for U.S. electrical engineers increased to \$145,000, up \$6,200 from 2017. Smartphone Developers and Machine Learning Engineers realized the largest increases.



- IEEE-USA also released its *2019 Consultants Fee Survey Report* on 11 September. The survey shows a modest increase in median fees charged by consultants in the electrical engineering and computing fields; however, consultants with 35 years or more experience saw their median rates drop nearly 15%.
- IEEE-USA helped arrange the IEEE-Consultants' Network of Silicon Valley's 12 November workshop on *Consulting in California: Understanding AB 5, and Keeping Your Independence*, to help IEEE member consultants in California understand and comply with a new state law (AB 5) regulating employment of independent contractors. An IEEE-USA Government Relations staffer spoke at the event.

In December, IEEE-USA released three Special Reports on *Salary & Benefits for Young Professionals*; for *Professionals in Computing*; and for *Professionals in Power & Energy*. The Reports highlighted trends in compensation and employment, with data derived from the IEEE-USA's 2019 Salary Survey of U.S. IEEE members.

PROMOTING THE PROFESSION

- More than 8,000 STEM teachers, parents and children participated in the IEEE-USA co-sponsored Discover Engineering Family Day on 16 February, at the National Building Museum in Washington, D.C., as a kick-off to 2019 Engineers Week. Twenty IEEE staff and volunteers interacted with hundreds of children—to create and launch small rockets designed to illustrate Newton's Law of Gravity and celebrate the anniversary of the Apollo space program.
- IEEE-USA President Tom Coughlin presented a Special Award to the Future City team from the Gratton School in northern California for integrating Smart Grid concepts into their city design. Forty-three teams participated in the 2019 Future City Competition Finals held on 19 February, in Washington, D.C., as part of National Engineers Week. IEEE-USA also helped promote the EWeek *Introduce a Girl to Engineering Day* on 21 February.

- IEEE-USA presented three awards at Region 3's SoutheastCon, including the Walleigh Award for Professional Service to Jon Paserba, the Watson Award for Promoting Student Professional Activities to James Peterman, and the Literary Award to Guru Madhavan, author of *Applied Minds: How Engineers Think*.



Clockwise from top left: IEEE-USA Public Relations Associate, Corey Ruth, helped a girl build a rocket at Engineers Week Family Day; IEEE-USA President Tom Coughlin presented John Paserba with IEEE-USA's Walleigh Award for Professional Service at Southeast Con; poster of three top IEEE-USA 2019 Awardees; Tom Coughlin presented a special Future City award to Gratton School children, for Smart Grid design, during Engineers Week.

CELEBRATING APOLLO 11'S 50TH ANNIVERSARY

The Apollo space program celebrated the 50th Anniversary of Apollo 11 in 2019, and IEEE-USA helped observe this important milestone of the U.S. manned space program with a variety of activities including:

- On 12-14 July, IEEE-USA co-sponsored the Astronaut Scholarship Foundation's *Celebrating Apollo* weekend series of events in Cocoa Beach, Florida, including an Astronaut Golf Tournament, public parade and outdoor concert; a series of discussion sessions (Women in Space, Future of Space, etc.); a VIP reception; and the grand re-opening ceremony for the refurbished Apollo Saturn V Control Center.
- IEEE-USA partnered with the IEEE History Center, and other IEEE groups, to co-sponsor the U.S. Patent and Trademark Office's conference on *The Role of Intellectual Property in Space Commerce*, held on 22-23 July, at the National Inventors Hall of Fame and Museum, in Washington, D.C. The event drew more than 1,000 attendees; and it featured keynote addresses by Secretary of Commerce Wilbur Ross, NASA Administrator Jim Bridenstine, and USPTO Director Andrei Iancu, along with panels of USPTO, NASA and space industry executives, as well as two astronauts.
- IEEE-USA arranged for conference speakers and participants to experience a virtual reality Moon Walk inside the Virtusphere, a 10-foot hollow sphere

that allowed users to walk freely in any direction, to experience movement in the virtual environment. Secretary of Commerce Ross, NASA Administrator Bridenstine and USPTO Director Iancu all participated in the Virtusphere experience. IEEE-USA extended the exhibit a second day, to allow visitors to the National Inventors Hall of Fame Museum, and staff from the USPTO and the National Science Foundation to enjoy the VR moonwalk experience.

- IEEE-USA also co-sponsored the Astronaut Scholarship Foundation Innovator's Gala, held on 24 August, in Washington, D.C.



(Above) Andrei Iancu (left), Under Secretary of Commerce for Intellectual Property and Director of the USPTO, and Laura Peter (right), Deputy Under Secretary of Commerce for Intellectual Property and Deputy Director of the USPTO, pose with inventor Ray Latypov (second from right) and his son in front of Ray's Virtusphere full-motion VR device at an event commemorating the 50th anniversary of Apollo 11. Ray and his son are holding Ray's original patent for the Virtusphere.



(Above) Andrei Iancu, Under Secretary of Commerce for Intellectual Property and Director of the USPTO, tests out the IEEE-USA Moonwalk Experience inside inventor Ray Latypov's Virtusphere. (Right) The Astronaut Scholarship Foundation Innovator's Gala, 24 August, Washington, D.C.



SERVING THE PUBLIC

Although everything IEEE-USA does is intended to serve the public interest, IEEE-USA also lent its support through organizational collaborations to two specific programs targeted at directly serving the public: the MOVE Community Outreach Initiative and the Science Kits for Public Libraries Initiative.

MOVE COMMUNITY OUTREACH INITIATIVE

- IEEE-USA partners with IEEE Regions 3 and 5, and the American Red Cross in the MOVE Community Outreach Initiative, an emergency relief program committed to supporting the Red Cross in its efforts to assist victims of natural disasters—by providing short-term communications, computer and power



solutions supporting Red Cross field operations and assist affected residents in disaster areas.

Some 2019 MOVE highlights:

- The MOVE vehicle deployed to Beauregard, Alabama on 5 March in the wake of devastating tornadoes, where MOVE volunteers provided critical communications infrastructure and support to a federal Multi-Agency Resource Center, and to Red Cross responders working in the affected community.
- The MOVE vehicle and volunteers made a public awareness and K-12 STEM deployment, in partnership with the IEEE Atlanta Section, at the Atlanta Science Festival on 22-26 March.
- The MOVE Public Outreach Vehicle participated as an exhibit in the *North Carolina-Charlotte Science and Technology Expo* (28 April). The Expo featured over 100 activities for the science-curious of all ages.



- On 4 May, IEEE-USA MOVE deployed to support the American Red Cross' Sound the Alarm event, in Fayetteville N.C., providing internet Wi-Fi, to help the Red Cross register volunteer teams and track community contacts. The *Sound the Alarm* program engages Red Cross volunteers in installing smoke detectors, and providing home fire safety education, in high-risk neighborhoods.
- In July, the IEEE-USA MOVE Community Outreach program received a Gold Award from the American Society of Association Executives as part of their 2019 **Power of A Awards program**. The Awards program honors associations that go beyond their everyday mission, to undertake initiatives that benefit America and the world.
- The MOVE vehicle and volunteer crew deployed for two weeks (2-14 September), traveling from Florida to the outer banks of North Carolina, in support of Red Cross response efforts to Hurricane Dorian. MOVE was instrumental in supporting communications related to food and emergency supplies deliveries to North Carolinians in the devastated communities on Cape Hattaras.

SCIENCE KITS FOR PUBLIC LIBRARIES INITIATIVE

IEEE-USA is pleased to co-sponsor Science Kits for Public Libraries (SKPL) Initiative, an IEEE Region 4 program that raises funds for public libraries to acquire and make science kits as easy to check out as a book! With access to a public library and a valid library card, children can check out high quality, hands-on STEM (Science, Technology, Engineering and Mathematics) experiences at zero cost to their parents.

SKPL seeks to: 1) make STEM learning available for children, regardless of race, gender, or income; 2) inspire and engage children in the pursuit of scientific discovery; and 3) plant the seeds for a STEM career.

SKPL began in 2009, as an initiative of the IEEE Chicago Section and the Mount Prospect Public Library, and championed by IEEE volunteer John Zulasky. A \$40,000 grant from the IEEE Foundation and IEEE Life Members Fund in 2012 allowed SKPL to provide 26 libraries with science kits throughout the mid-west. In 2017, IEEE Region 4 agreed to take on

SKPL as a regional initiative. In June 2018, IEEE-USA agreed to help SKPL, as it embarked on a multi-year effort to scale up the program from serving all libraries in the Chicago area (Phase I); to building IEEE Section-library partnerships throughout Region 4 (Phase II); and eventually, to taking the program national, with assistance from IEEE-USA (Phase III).

Some 2019 highlights:

- Thanks to a substantial gift from S&C Electric Company Foundation, SKPL achieved its Phase I goal of making science kit collections accessible to the public through all 81 branches of the Chicago Public Library.
- During 2019, SKPL raised more than \$12,000, allowing them to fund nine of the 22 public library requests received.
- IEEE SKPL volunteer groups are now active in the Chicago and Milwaukee Sections, and four other IEEE Sections in Region 4 have shown strong interest in collaboration.
- Efforts are underway to build a partnership with the Public Library Association (PLA), who can play a critical role in connecting interested public libraries with geographically corresponding IEEE sections.
- SKPL depends on IEEE member and corporate donations to provide funding grants. Public libraries use these grants to procure the IEEE-designed science kits (at cost). To learn more, and/or to make a donation to support the program, go to the SKPL website at: <https://sciencekitsforpubliclibraries.org/>



SPONSORING TECHNICAL CONFERENCES

In addition to its own EVO19 Conference, IEEE-USA sponsored, or technically co-sponsored, 17 IEEE technical/professional meetings in 2019, working in partnership with IEEE technical societies, U.S. Regions and/or Sections:

| DATE | CONFERENCE | CITY |
|----------------|--|----------------------------|
| 4-6 January | IEEE Rising Stars Conference | Las Vegas, Nevada |
| 7-9 January | 9th Annual IEEE Computing and Communication Workshop & Conference | Las Vegas, Nevada |
| 3-6 April | IEEE Green Technologies Conference | Lafayette, Louisiana |
| 11-14 April | IEEE SoutheastCon | Huntsville, Alabama |
| 15-18 July | Carbon Management Technology Conference | Houston, Texas |
| 15-19 July | IEEE National Aerospace & Electronics Conference | Dayton, Ohio |
| 27-29 August | Drive World Conference & Expo | Santa Clara, California |
| 6-9 October | International Conference on Smart Cities (HONET-ICT) | Charlotte, North Carolina |
| 7 October | IEEE-APL 5G Workshop on First Responder and Tactical Systems | Laurel, Maryland |
| 10-12 October | IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference | New York, New York |
| 16-18 October | IEEE International Conference on Wireless for Space and Extreme Environments | Ottawa, Ontario, Canada |
| 17-20 October | IEEE Global Humanitarian Technology Conference | Seattle, Washington |
| 1-3 November | IEEE-HKN Student Leadership Conference | Boston, Massachusetts |
| 5-6 November | IEEE International Symposium on Technologies for Homeland Security | Woburn, Massachusetts |
| 15-16 November | International Symposium on Technology & Society | Boston, Massachusetts |
| 23 November | IEEE Women in Engineering Forum East | Arlington, Virginia |
| 7 December | IEEE Signal Processing in Medicine and Biology Symposium | Philadelphia, Pennsylvania |

As part of IEEE-USA outreach and membership recruitment effort, IEEE-USA President Tom Coughlin delivered a keynote, and IEEE-USA sponsored and exhibited, at the combined Drive World + Embedded Systems Conference held in Santa Clara, California, on 27-29 August. Drive World is Silicon Valley's first and largest industry exposition, featuring innovations in autonomous vehicles.

COMMUNICATING WHAT WE DO

IEEE-USA communicates regularly with IEEE's U.S. members through a multitude of channels, including its online journal *InSight*, the *InSight Email Update* (monthly), the *IEEE-USA Future Leaders Connection* (monthly), the *IEEE-USA Conference Brief* (quarterly), and the *IEEE-USA Consultants Newsletter* (quarterly), as well as through our IEEE-USA Website and via social media.

In addition to keeping our members informed of our career-enhancing products and services, and the public policy activities we undertake on their behalf; IEEE-USA's communications volunteers and staff work to engage a broader public audience, with the goal of raising awareness of the engineering and allied professions, and the important contributions that they make to society. The following are some of our communications team highlights from 2019:

- *IEEE-USA InSight* continued to grow its readership in 2019, with higher average monthly users, sessions and pageviews than the previous two years. In 2019, we published more than 120 professional- and public-policy-themed articles, with the help of staff, volunteer and freelance contributions.
- In 2019, we migrated all three major campaigns—*IEEE-USA InSight Email Update*, *IEEE-USA Leadership Connection*, and *IEEE-USA Conference Brief*—to Marketo—which enabled vastly improved ease of set-up, as well as the enhanced tracking and marketing capabilities of the Marketo toolkit. While we noticed a slight drop in the overall open rates for our campaigns after the transition, we still registered higher open rates than 2018 for two of the three. In addition to the usual information, we utilized the email campaigns effectively to promote programs—including the WISE internships, Government Fellowships, and the MOVE Community Outreach hurricane response efforts.
- 2019 was also an excellent year for social media. IEEE-USA posts received engagement that exceeded previous years. IEEE-USA's Government Fellowship and WISE Internship advertisements on Facebook received a collective 6,700 link clicks, as well as more than 400+ shares and 400+ likes, in the span of a few months. On Instagram, EVO promotions for the month of July exceeded 500 likes, and greater than 5,500 views. Its post on Dr. Katie Bouman's work in capturing the first image of a black hole received almost 200 likes alone, making it the most engaged post, since the account's creation in 2016. On Twitter, IEEE-USA's posts regarding the organization's support of the *Relief Act* received more than 400+ likes and 300 retweets, making it the most engaged topic and post on its channel, since the account's creation in 2009. On LinkedIn, IEEE-USA's account has seen consistently high levels of engagement, with an engagement-to-follower ratio of 2:1 during the latter half of 2019—despite the account having been recently created, in November 2018.
- As a new approach to engaging and communicating with members, IEEE-USA tested a series of *Rooftop Socials* in Pittsburgh, Pennsylvania (9 May), and Washington, D.C. (16 May). These events attracted sold-out crowds of young and mid-career professionals, eager to network and learn more about what IEEE-USA has to offer.
- IEEE-USA's media relations highlights included stories or op-eds featuring IEEE-USA policy efforts by *Voice of America* and *The Hill* on AI policy, and the *National*

Law Review on the *Immigration Relief Act*, introduced by Senators Durbin (Illinois) and Leahy (Vermont).

- WRAL-TV (Raleigh, North Carolina) and WSB-TV (Atlanta, Georgia) featured the MOVE emergency vehicle in its televised broadcast segments, highlighting its 2019 deployments.
- IEEE-USA's *2019 Salary Survey Report* drew media attention in 2019, including stories in *EE Times* (reporting on compensation trends in the semiconductor industry) and *DICE* (highlighting compensation of engineers with machine-learning knowledge).



- IEEE-USA volunteers and staff manned the IEEE-USA Booth at numerous events, including the IEEE Rising Stars Conference (4-6 January), in Las Vegas, Nevada; Discover Engineering Family Day (16 February), in Washington, D.C.; GreenTech (3-5 April), in Lafayette, Louisiana; SoutheastCon (11-14 April), in Huntsville, Alabama; Awesome Con (26-28 April), in Washington, D.C.; the Engineering Societies' Carbon Management Technology Conference (15-18 July), in Houston, Texas; NAECON (15-19 July), in Dayton, Ohio; EVO19 (2-3 August), in Pittsburgh, Pennsylvania; Drive World Conference and Expo (27-29 August), in Santa Clara, California; the Homeland Security Technology Conference (5-6 November), in Woburn, Massachusetts; and the Women in Engineering Forum East (21-23 November), in Arlington, Virginia.



IEEE-USA's 2019 Rooftop Socials in Pittsburgh, Pennsylvania and Washington, D.C. were extremely popular among IEEE's Young Professional members. The events drew sell out crowds.

IEEE-USA RECOGNIZED FOR EXCELLENCE IN DIGITAL COMMUNICATIONS

During 2019, IEEE-USA received a total of eighteen professional recognitions and awards for excellence in digital communications and marketing. The granting organizations and the awards received are listed below:

AVA DIGITAL AWARDS

- Platinum Award for the 2018 Future Leaders Forum Show Opener
- Gold Award for the Future Leaders Forum Display (Single Pop-Up)
- Gold Award for the Future Leaders Forum Display (Double Pop-Up)

HERMES CREATIVE AWARDS

- Platinum Award for 2018 Future Leaders Forum Show Opener
- Platinum Award for IEEE-USA Website
- Gold Award for *Engineering Crossword Puzzles for Adults* E-Book
- Gold Award for *Engineering Crossword Puzzles for Students* E-Book
- Gold Award for the *2018 IEEE-USA Annual Report*
- Gold Award for the *IEEE-USA InSight* E-Journal
- Honorable Mention–2018 Future Leaders Forum Display (Single Pop-Up)
- Honorable Mention–2018 Future Leaders Forum Display (Double Pop-Up)
- Honorable Mention–*Engineering Coloring Book for Kids* E-Book
- Honorable Mention–*Engineering Coloring Book for Adults* E-Book

THE COMMUNICATOR AWARDS

(*International Academy of Visual Arts*)

- Silver Award for 2018 Future Leaders Forum Show Opener
- Silver Award for *Engineering Crossword Puzzles for Adults* E-Book
- Silver Award for *Engineering Crossword Puzzles for Students* E-Book

VEGA AWARDS

- Arcturus Award (Bronze) for the 2018 Future Leaders Forum Show Opener
- Arcturus Award (Bronze) for the IEEE-USA Website



IEEE-USA 2019 BOARD OF DIRECTORS



Front Row (L-R): Ramesh Nair, Robert Shapiro, Sandra “Candy” Robinson, Tom Coughlin, James Conrad, Chris Brantley

Middle Row (L-R): Brendan Godfrey, Keith Moore, Scott Tamashiro, Babak Beheshti, John Johnson

Back Row (L-R): Gregg Vaughn, John Walz, Tarek Lahdhiri, David Koehler

APPENDIX II

PRESIDENTIAL ENGAGEMENTS (2019)

The IEEE-USA President participates in numerous events each year as IEEE-USA's representative, serving as the public face of IEEE's U.S. members. The following was President Tom Coughlin's official calendar for 2019:

| DATE | EVENT | LOCATION |
|----------------|---|----------------------------|
| 18-21 January | IEEE Board Retreat | Portugal |
| 25-27 January | IEEE Region 6 Meeting | Phoenix, Arizona |
| 13-19 February | IEEE/IEEE-USA Board Meetings | Tampa, Florida |
| 23 February | Talk to IEEE Consultants Network | Pasadena, California |
| 23 March | IEEE HKN Pathways to Industry | Tucson, Arizona |
| 1-3 April | IEEE-USA Congressional Visits Day | Washington, D.C. |
| 5-6 April | IEEE Region 1 Meeting | Southbridge, Massachusetts |
| 12-14 April | IEEE Region 3 Meeting (SoutheastCon) | Huntsville, Alabama |
| 3-5 May | IEEE Region 2 Meeting | Hershey, Pennsylvania |
| 17-18 May | IEEE VIC Summit and Honors Ceremony | San Diego, California |
| 18-19 May | IEEE Young Professionals and Student Activities Committee | San Diego, California |
| 23-24 May | IEEE WIE ILC | Austin, Texas |
| 18-25 June | IEEE/IEEE-USA Board Meetings | Atlanta, Georgia |
| 2-3 August | IEEE-USA EVO19 | Pittsburg, Pennsylvania |
| 28 August | IEEE-USA at Drive/Embedded Systems Conference | Santa Clara, California |
| 17-19 October | IEEE GHTC | Seattle, Washington |
| 28-30 October | 50 Years of the Internet and HKN Event Honoring Henry Samueli | Los Angeles, California |
| 1 November | IEEE Smart Cities Conference | Austin, Texas |
| 4 November | IEEE Industry Summit with Rebooting Computing | San Mateo, California |
| 15-16 November | IEEE ISTAS | Medford, Massachusetts |
| 20-26 November | IEEE-USA/IEEE Board Meetings | Boston, Massachusetts |
| 9-10 December | IEEE Globecom | Waikoloa, Hawaii |

In addition to representing IEEE-USA, 2019 President Coughlin also participated in a number of other activities as an IEEE volunteer, including service on the IEEE New Initiatives Committee, the TA Future Directions Committee, the IEEE Consumer Electronics Society, IEEE Region 6, and other IEEE events and activities.

2019 IEEE-USA AWARDS AND RECOGNITIONS

Each year, the IEEE-USA Awards and Recognition Committee recommends, and the IEEE-USA Board of Directors approves, a slate of recipients for IEEE-USA's Awards and Recognitions. The 2019 Awards winners are highlighted below:

ROBERT S. WALLEIGH AWARD FOR DISTINGUISHED CONTRIBUTIONS TO ENGINEERING PROFESSIONALISM

Emily Sopensky

For sustained leadership in establishing innovative new IEEE programs, conferences and initiatives within the United States

IEEE-USA AWARD FOR DISTINGUISHED PUBLIC SERVICE

The Honorable David McKinley and The Honorable G.K. Butterfield:

For their efforts in promoting investment in science and technology, and for supporting IEEE-USA's Congressional Visits Day

THE JOHN MEREDITH PROFESSIONAL SERVICE AWARD

Mina Hanna

For outstanding contributions to the advancement of artificial intelligence technology, policy and strategy, on behalf of IEEE-USA

HARRY DIAMOND MEMORIAL AWARD

Philip Neudeck

For contributions to the development of silicon carbide integrated electronics and crystal growth technology at the NASA Glenn Research Center

GEORGE F. MCCLURE CITATIONS OF HONOR

James Mercier

For dedicated leadership promoting vibrant professional activities facilitating cross-organizational relationships within IEEE, and with industry partners

Richard Toftness

For continued advocacy and grassroots promotion of student, technical and professional activities in the United States

Chan Wong

For significant sustained contributions in promoting professional development and fostering industry partnerships

JIM WATSON STUDENT PROFESSIONAL AWARENESS ACHIEVEMENT AWARD

Megan Culler

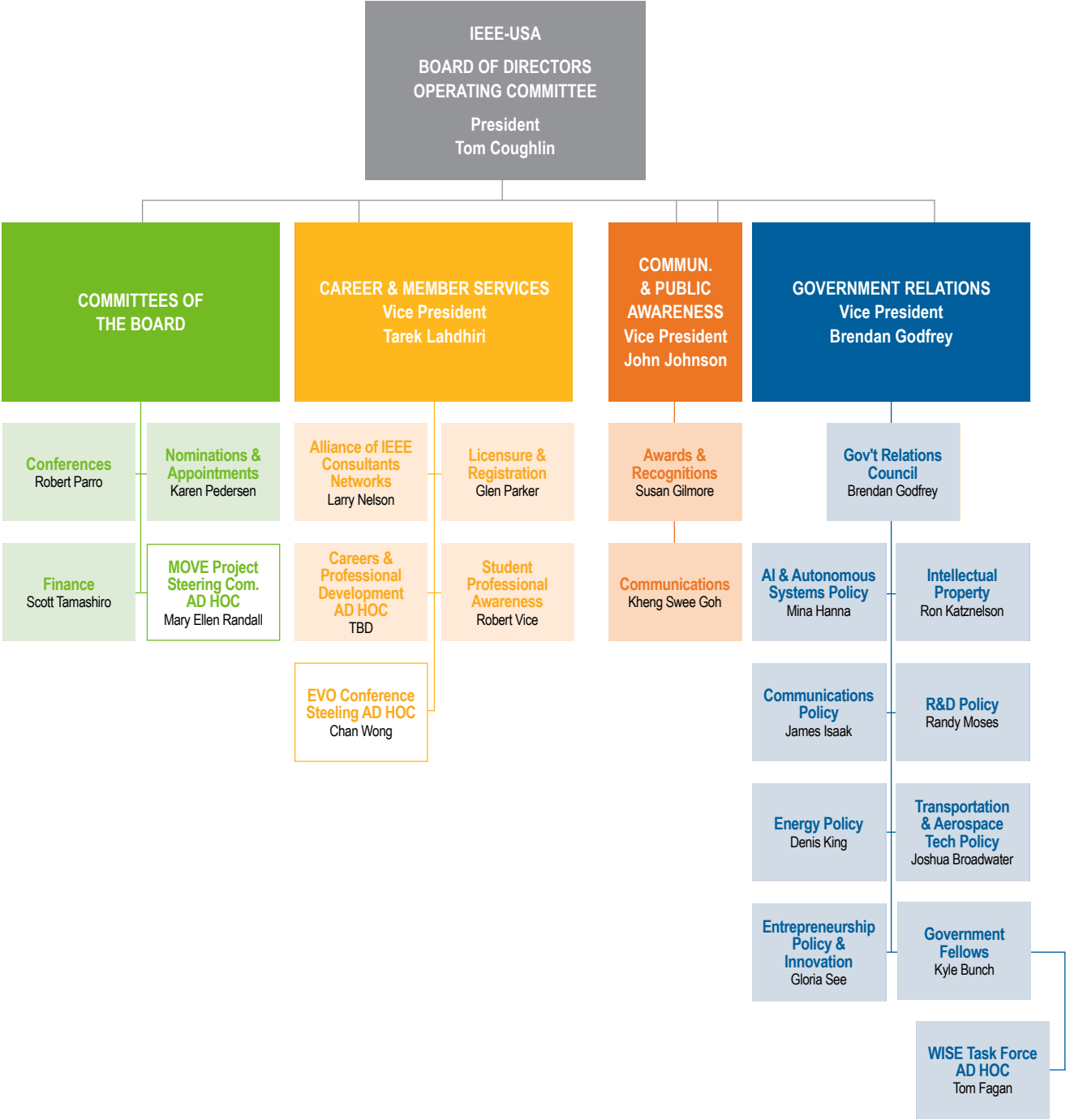
For tireless efforts to bridge the gap between students and professionals, by demonstrating the value of continued membership within IEEE

AWARD FOR DISTINGUISHED LITERARY CONTRIBUTIONS FURTHERING PUBLIC UNDERSTANDING AND THE ADVANCEMENT OF THE ENGINEERING PROFESSION

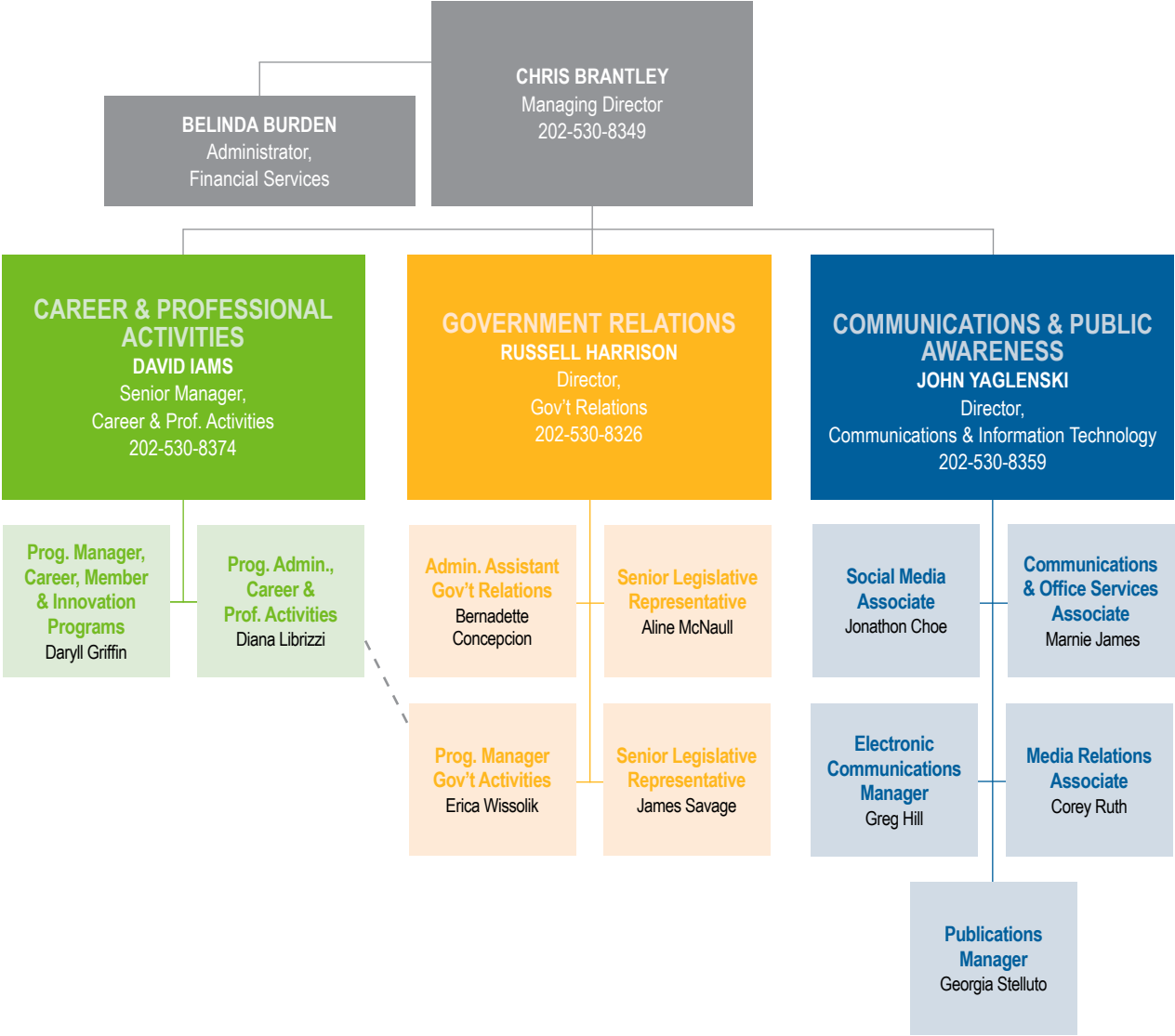
Ralph Hogan

For establishing a public radio program that engages IEEE members to communicate the importance of engineering and technology, and to raise IEEE brand awareness

2019 IEEE-USA VOLUNTEER ORGANIZATION



2019 IEEE-USA STAFF ORGANIZATION



ABOUT THE ANNUAL REPORT

The *IEEE-USA Annual Report* highlights the mission, goals and programs of IEEE-USA, and our activities and achievements during 2019. IEEE-USA produces and publishes this Report to increase awareness of IEEE-USA; its efforts to influence public policy; and the programs and services it provides as a benefit to U.S. IEEE members, and to the public. It also serves as a reference for members seeking information on specific IEEE-USA programs or issues, and for those in search of opportunities to volunteer their time and expertise, in support of their profession.

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Edited by Georgia C. Stelluto, IEEE-USA Publishing

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Communications and Office Services Associate

ABOUT IEEE-USA

IEEE-USA advances the public good and promotes the careers and public policy interests of the nearly 160,000 engineering, computing and technology professionals, who are U.S. members of IEEE.

With more than 400,000 members, in over 160 countries, IEEE is dedicated to advancing technological innovation and excellence, for the benefit of humanity.

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