

# FOCUS

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Illuminate



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## Introducing Ralph Ford, 2022 IEEE Foundation President



Ralph Ford was appointed the 23rd President of the IEEE Foundation by the Foundation's Board of Directors and began his term 1 January 2022. Ford brings us, and our community, more than 25 years of leadership experience in higher education and industry.



He serves as Chancellor of Pennsylvania State University

Erie, The Behrend College, was a Fulbright Scholar to the Czech Republic in 2005, and is the author of more than 40 publications, including the book *Design for Electrical and Computer Engineers* (McGraw Hill). He joined IEEE as a student member in 1987, eager for access to IEEE's publications and scientific materials, and has worn many IEEE hats over the past 35 years. He joined IEEE Foundation's Board of Directors in 2017 and had a central role in the Foundation's first fundraising campaign, which raised more than 30 million dollars.

When asked how he became interested in engineering, he talked about taking apart and rebuilding Schwinn banana seat bicycles as a kid in the 1970s, and how that interest has been a running theme in both his professional and personal life. He still enjoys road cycling today, as well as mountain climbing and other endurance sports, which he says "unwind his mind" and help give him insight into whatever problems he's working on professionally.

When asked which recent IEEE program achievements funded by the Foundation resonated with him, Ford said he could go "on and on." He cited the IEEE Power & Energy Society Scholarship Plus Initiative,

which, in 2021 alone, provided scholarships to 72 undergraduates across the US, Canada and Puerto Rico who are specifically interested in power and energy engineering careers. He also spoke about the IEEE Smart Village Program, which brings electricity, education and economic development to energy-deprived communities around the world. He underscored how much Smart Village's progress means to him and his wife, Melanie Ford (also an IEEE member, with a degree in Computer Science), as they donate to the program personally. Ford also mentioned the IEEE History Center, which dedicated 14 milestones last year, IEEE-Eta Kappa Nu, which nurtured 270+ students in 20 different countries via a 4-day student leadership conference, and the IEEE Awards Program, which recognized Jacob Ziv with the 2021 IEEE Medal of Honor for fundamental contributions to information theory and data compression technology. Ford emphasized that none of this work could have been done without the support of Foundation donors.

### PRESIDENT FORD'S VISION FOR THE FUTURE

When asked about his vision for the future of the IEEE Foundation, Ford answered, "My vision is the vision of the board and all who support us." He said that he stands on the shoulders of those who have done a tremendous amount of work before him, citing former President John R. Treichler and the successful comprehensive campaign that he oversaw. His aim for the Foundation is to be a good steward of those funds, as well as future donations, by managing them in a way that prioritizes intent and impact.

He also mentioned his focus on raising the visibility of the Foundation in the eyes of the general public, as well as through outreach to IEEE and its leadership. He is excited to work with donors to continue to explore how philanthropy can help realize IEEE visions. Ford discussed his goals and vision for the IEEE Foundation during a Fireside Chat earlier this year. Watch it on demand at [vimeo.com/676041384](https://www.youtube.com/watch?v=676041384). ■



IEEE Foundation is proud to welcome its 2022 President Ralph Ford and four new directors: Nim Cheung, Christopher Geiger, Howard Michel and Mary Ellen Zellerbach. Learn more about the new directions on [ieeefoundation.org/about/board-of-directors](https://www.ieee.org/about/board-of-directors).

# Celebrating the 2022 IEEE Medal and Recognition Recipients



The IEEE Vision, Innovation and Challenges (VIC) Summit and Honors Ceremony is an annual highlight for IEEE that recognizes the accomplishments and contributions of technology “Giants.” The 2022 IEEE Medal and Recognition recipients, whose groundbreaking technological advances span the spectrum of scientific, engineering and educational efforts to foster technological innovation and excellence for the benefit of humanity, were honored in person after two years of virtual celebrations. The event was held 6 May at the San Diego Marriott Marina hotel in California, US. This year, both the daytime Summit and the evening’s Honors Ceremony were livestreamed. Videos of all speakers, Q&A sessions and award presentations are available for viewing on the [IEEE Awards Channel on IEEE.tv](#).

## AN EVENING OF INNOVATION

Special thanks to Qualcomm, sponsor of the IEEE Richard W. Hamming Medal, for its tremendous support by hosting and sponsoring an “Evening of Innovation” at its headquarters on Thursday, 5 May 2022. This special evening provided an opportunity for some of the 2022 IEEE Medal recipients to share stories about their career paths, innovations and insights on emerging technologies. IEEE Awards Board Chair Karen Panetta welcomed attendees along with IEEE President K.J. Ray Liu and IEEE Region 6 Director Elect Kathy Herring Hayashi.

UC San Diego Dean Albert “Al” P. Pisano, Ph.D., moderated a lively discussion among Anantha Chandrakasan, Jason Cong, Deborah Estrin, P.R. Kumar, Thomas M. Jahns and Ingo Wolff. At the end of the panel Dr. Pisano encouraged the audience, including members and students from the IEEE San Diego Section, to speak with the panelists during a reception that followed; after all, “they’re just people.” The subsequent reception was filled with continued conversations between guests and IEEE Medalists.

Special thanks to Qualcomm’s leadership, the IEEE San Diego Section and the IEEE University Partner program for their donation to support the event, and everyone responsible for this successful collaboration.

## VISION, INNOVATION, AND CHALLENGES SUMMIT

There were many programs during the daytime IEEE VIC Summit, emceed by Vice President of Innovation and Programming at the Computer History Museum, Marguerite Gong Hancock. Keynote Speaker Harry Kloof, CEO and Co-Founder of Beyond Imagination, a company that has developed a suite of exponential technology solutions that deploys AI, AR, robotics, machine learning and human-computer interaction technology to enhance and revolutionize the world’s workforce, discussed robotics. Glenn Zorpette, Editorial Director for Content Development at *IEEE Spectrum* magazine, moderated a panel on Aerospace Technologies.



The Qualcomm panel (left to right): Moderator Albert Pisano, Dean of the Jacobs School of Engineering, UCSD; Deborah Estrin (IEEE John von Neumann Medal); Jingsheng Jason Cong (IEEE Robert N. Noyce Medal); Anantha Chandrakasan (IEEE Mildred Dresselhaus Medal); Panganamala R. Kumar (IEEE Alexander Graham Bell Medal); Ingo Wolff (IEEE/RSE James Clerk Maxwell Medal); and Thomas M. Jahns (IEEE Medal in Power Engineering).



Glenn Zorpette (far right) leads discussion with (left to right) Soyeon Yi, South Korea’s first and only astronaut; Tim Canham, Senior Software Engineer, NASA Jet Propulsion Laboratory; and Josh Brost, Vice President of Business Development at Relativity Space.



Keynote speaker Harry Kloof, successful serial entrepreneur, scientist, technologist, educator, policy advisor, author and Hollywood filmmaker, discussed robotics.



## HONOREE LUNCHEON

Midday on 6 May, the IEEE Foundation hosted an Honoree Luncheon for award recipients, sponsors and IEEE leaders. Sarah Rajala, a steadfast donor to the IEEE Foundation, and Vice President of Development for the IEEE Foundation Board of Directors, served as host and said she was, "thrilled to see how giving to the IEEE Foundation comes to life and to celebrate our 2022 IEEE Medal and recognition honorees!"

2022 IEEE President K.J. Ray Liu and IEEE Awards Board Chair Karen Panetta also spoke, expressing their appreciation for sponsors and excitement at celebrating the honorees whose work supports IEEE's mission of advancing technology for humanity.

After the event, guests were encouraged to visit the IEEE Mobile Outreach using Volunteer Engagement (MOVE) truck. MOVE is an IEEE Foundation donor supported program that provides emergency relief by assisting victims of natural disasters with short-term communications, computer and power solutions. When not deployed, it also provides STEM outreach.

## HONORS CEREMONY

At the evening's Honors Ceremony, IEEE's highest honor, the Medal of Honor, sponsored by the IEEE Foundation, was given to Asad M. Madni, Distinguished Adjunct Professor and Distinguished Scientist, Electrical & Computer Engineering Department, University of California, Los Angeles, Los Angeles, CA, US.

Madni's revolutionary contributions to sensors and systems for navigation and stability in aerospace and automotive applications have helped keep people safe around the world. He led the development and commercialization of the GyroChip®, resulting in a solid-state 6-degree-of-freedom microelectromechanical system inertial measurement unit. He also led a miniaturization effort resulting in significant sensor size reduction while increasing performance and was chief architect for signal processing techniques. He made seminal and pioneering contributions in the development of intelligent systems and instrumentation that significantly enhanced U.S. Combat Readiness and provided the DOD the ability to simulate more threat-representative ECM environments for current and future advanced warfare training. Madni also led the development of an adaptive



*Sarah Rajala addresses award recipients, sponsors and IEEE leaders during the IEEE Foundation-hosted Honoree Luncheon on the San Diego Marriott Marina Terrace on 6 May. Attendees enjoyed live music, a beautiful waterfront setting and, most importantly, great conversation.*

control system for a minimally invasive endometrial ablation system, used to eliminate the tissue responsible for menstrual bleeding and allows gynecologists to perform ablation under direct visualization on an outpatient basis under local anesthesia.

The ceremony included the inaugural presentation of the IEEE Frances E. Allen Medal, sponsored by IBM, to co-recipients Eugene Wimberly Myers, Jr. and Webb Miller, "for pioneering contributions to sequence analysis algorithms and their applications to biosequence search, genome sequencing, and comparative genome analyses."

Generous donations from our sponsors and donors enable these awards that are an invaluable part of IEEE's portfolio of programs. We appreciate the generous donations from our sponsors and donors that support these awards that are an invaluable honor in IEEE's portfolio of programs. We thank everyone who sponsored a table, bought a ticket, watched the live streams, and made the effort to attend. Your participation added to the success of this event! Visit the IEEE Awards Program website, [corporate-awards.ieee.org](https://www.ieee.org/corporate-awards), for more information. ■



*Asad M. Madni received the IEEE Foundation sponsored 2022 IEEE Medal of Honor "for pioneering contributions to the development and commercialization of innovative sensing and systems technologies, and for distinguished research leadership."*



*The IEEE Foundation also sponsors the IEEE Haraden Pratt Award, given for outstanding volunteer service to IEEE. Joseph V. Lillie received the award "for sustained and outstanding focus on the engagement of volunteers and staff in implementing continuous improvement of IEEE operations."*



*IEEE Life Fellow and Foundation Treasurer, Fred Mintzer received the IEEE Richard M. Emberson Award "for outstanding leadership of technical activities including the IEEE Collabratec and TAB technology-centric communities." A thank you goes to Fred for donating his cash prize to the IEEE Foundation.*

# IEEE MOVE is Positioned for Response



MOVE I, the original IEEE-USA's Mobile Outreach Vehicle, has been relocated to California to support the western United States. Cisco generously donated a new response vehicle (MOVE II), which will serve from MOVE's base of operations near Raleigh, NC. The new truck enables IEEE-USA MOVE to support the entire continental United States.

Moving MOVE I across the US was a true celebration. "IEEE MOVE Across America" began in North Carolina on 22 April and headed West, stopping along the way to meet IEEE members and introduce them to the vehicle and the volunteer team members. The first stop was Birmingham, AL, then the IEEE Power & Energy Society T&D Conference in New Orleans, then the University of Texas at Dallas. From Dallas the MOVE truck made stops at the University of Oklahoma National Weather Service in Norman, OK, The University of New Mexico and Phoenix, AZ before stopping at Qualcomm in San Diego, CA.

Finally, the MOVE truck arrived at the 2022 VIC Summit & Honors Ceremony Gala in San Diego, CA on 6 May. The truck will be housed in San Diego to support disaster recovery in the western half of the United States. ■



2022 IEEE President & CEO K. J. Ray Liu toured the MOVE truck and met with the program volunteers at the IEEE PES T&D Conference.

# Alumni Receptions: An Invitation for HKN Members to Celebrate and Reconnect



IEEE-Eta Kappa Nu (HKN) alumni, students and friends gathered to reconnect, reminisce and rally in support of HKN at the first HKN Alumni Receptions of 2022.

The first reception was held at the 2022 IEEE Radar Conference in New York City, NY, US on 21 March. That reception was co-hosted by the Greater NY HKN Alumni Chapter. Chair Charles Rubenstein and Vice-Chair Charlotte Blair were joined by students from Cooper Union and Manhattan College and IEEE-HKN members from more than 12 different chapters.

A second reception was held at the IEEE SoutheastCon 2022 in Mobile, AL, US on 2 April. Southeast Con Chair and HKN member Warren Nicholson and HKN Board Member Hulya Kirkici welcomed alumni from more than 20 chapters and many members of the Theta Lambda Chapter of the University of South Alabama.

The Alumni Receptions are made possible through a generous donation from HKN Eminent Member and HKN President (1998-2000) Dr. Richard "Dick" and Nancy Gowen. Dick passed away in November 2021, but his love for HKN will live on through these gatherings.

"Dick and Nancy saw the importance of bringing together HKN members in all stages of their careers so that they may connect with one another and with HKN today," said IEEE-HKN Director Nancy Ostin. "It is in coming together that we exchange ideas, share stories and strengthen the bonds between members of all ages, leading to a more fulfilling HKN experience for all. Alumni are our greatest untapped resources. By involving alumni in supporting HKN financially or through service, we can meet the changing and growing needs of current and future leaders of our profession."

For more information, to become involved in HKN, or if you would like to host an HKN Alumni Reception at your event, contact Nancy Ostin at [n.ostin@ieee.org](mailto:n.ostin@ieee.org). Be on the lookout for more HKN Alumni Receptions at upcoming conferences at [hkn.ieee.org](http://hkn.ieee.org). ■



SoutheastCon reception attendees pose for a group photo.



# First Deployment of IEEE MOVE International: Puerto Rico

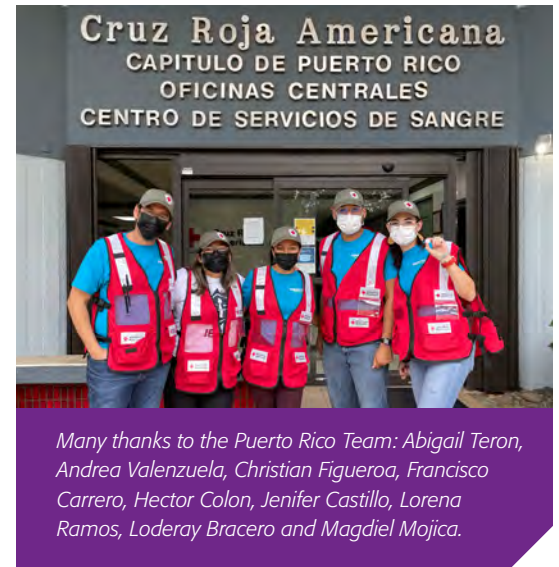
By Jennifer Castillo



In the first weekend of February 2022, non-stop rains caused heavy floods in the north coast of Puerto Rico. Toa Alta and Cataño were two of the most affected towns, receiving nearly 16 inches of rain.

The Red Cross began its assessment activities on 6 February, and due to the large number of areas affected, the local IEEE MOVE (Mobile Outreach using Volunteer Engagement) International volunteers in Puerto Rico were called into action. A total of six volunteers deployed for five days in the wake of this disaster.

Volunteers installed hot spots, connected computers for the Red Cross, assisted with connectivity, handled any technology issues and distributed and administered Disaster Response Devices. ■



Many thanks to the Puerto Rico Team: Abigail Teron, Andrea Valenzuela, Christian Figueroa, Francisco Carrero, Hector Colon, Jenifer Castillo, Lorena Ramos, Loderay Bracero and Magdiel Mojica.

## “A Telephone for the World” Wins 2021 Middleton Prize



In June 1990, Motorola publicly announced an ambitious business venture called Iridium. The project's signature feature was a constellation of 77 satellites in low-Earth orbit which served as the equivalent of cellular towers, connecting to mobile customers below using wireless hand-held phones, enabling a completely global communications system. Focusing on the Iridium venture, *A Telephone for the World: Iridium, Motorola, and the Making of a Global Age*, (Johns Hopkins Press, 2018) explores the story of globalization at a crucial period in US and international history. It received the 2021 William and Joyce Middleton Electrical Engineering History Award from the IEEE History Committee.

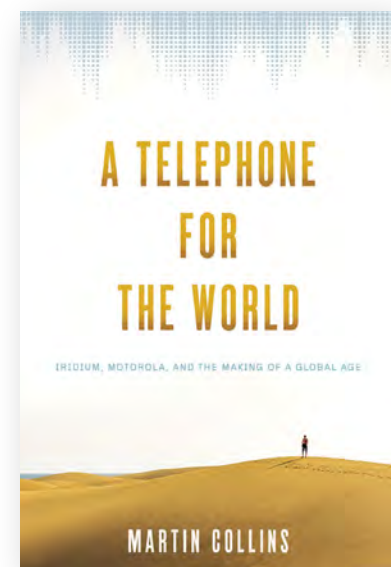
In *A Telephone for the World*, Martin Collins, a curator at the Smithsonian National Air and Space Museum combines oral history interviews with research in corporate records to reveal the role of the Iridium project's communication satellites in advancing globalization. *A Telephone for the World* has been called “a fascinating look at how people, nations and corporations across the world grappled in different ways with the meaning of a new historical era.”

The Middleton Award, established in 2014 thanks to a bequest from the estates of long-time IEEE leader William W. Middleton and his wife Joyce F. Middleton, recognizes annually the author of a book (published within the previous three years) in the history of an IEEE-related technology that both exemplifies exceptional scholarship and reaches beyond academic communities toward a broad public audience. It carries a cash prize of US\$2,000.

Past recipients of the Middleton Award include:

- 2015, W. Bernard Carlson, *Tesla: Inventor of the Electrical Age* (Princeton University Press)
- 2016, Walter Isaacson, *The Innovators: How a Group of Hackers, Geniuses, and Geeks Created the Digital Revolution* (Simon & Schuster)
- 2017, Megan Prelinger, *Inside the Machine: Art and Invention in the Electronic Age* (Norton & Co.)
- 2018, Marc Raboy, *Marconi: The Man who Networked the World* (Oxford University Press)

- 2019, Jimmy Soni & Rob Goodman, *A Mind at Play: How Claude Shannon Invented the Information Age* (Simon & Schuster)
- 2020, Lillian Hoddeson and Peter K. Garrett, *The Man Who Saw Tomorrow: The Life and Inventions of Stanford R. Ovshinsky* (MIT Press) ■



# IEEE REACH Gains Traction on a Global Stage



Through the lens of history, IEEE offers secondary school teachers resources that enhance students' critical thinking and problem-solving skills while boosting cultural and technological literacy. The Raising Engineering Awareness through the Conduit of History (REACH) program provides a new lens from which students may view engineering and technology as relevant to their lives and their future, providing a new STEM education pathway.

The program is gaining traction on a global stage. Under the IEEE/United Nations Educational, Scientific and Cultural Organization (UNESCO) Memorandum of Understanding (MOU), in association with the IEEE Africa Council and Uganda Section, a pilot program involving 70 teachers, introduced 1,000 students, predominantly girls, to REACH resources in urban classrooms and by a traveling classroom to rural villages. Due to the success of the pilot program, collaboration expanded to introduce REACH to Secondary Education

Science and Math Teachers during teacher workshops led by the Uganda National Commission for UNESCO. Teachers were inspired by the workshops, and it elevated interest by the Uganda Ministry of Education as part of a new curriculum agenda. As a result, teachers in Uganda have a new "toolbox" to help students think critically about the societal context of technology and enhance interest in STEM.

These efforts led to an invitation for Vincent Kaabunga, Past Chair IEEE Africa Council and IEEE Volunteer Lead for the IEEE REACH/ UNESCO program, to participate in a round table discussion during UNESCO World Engineering Day. The round table, *Build Back Wiser, Engineering the Future* was live streamed and can be viewed on YouTube. It ends with Ms. Amal Kasry, Chief of Section of Capacity-building in Science and Engineering at UNESCO, stating, "We are all thrilled at UNESCO...to have worked with IEEE on the REACH project and we look forward to expanding the project to different countries together."

In addition, Kaabunga and REACH team members presented, *Enhancing Secondary Teacher STEM Engagement and Increasing Access to Underserved Communities through International Collaboration, with IEEE REACH* at the Open Education (OE) Global in-person Congress 2022 in May in Nantes, France. ■



Teachers work on a hands-on activity during a STEM Mentorship Program facilitated by the Uganda National Commission for UNESCO with support from IEEE Foundation donors.

## Making a Difference Through Engineering: One Student's Dream Comes True



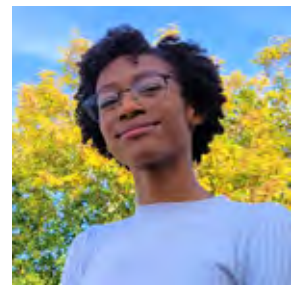
Arizona State University (ASU) graduate Kayla Richardson earned a degree in Electrical Engineering with a focus on Power and Energy. Richardson was attending Chandler-Gilbert Community College where she met her mentor, a professor in the Engineering Department, who encouraged her to go into civil engineering because of her interest in helping the environment, and to consider going to ASU after receiving her associate's degree. "So, that was the plan," Richardson said. "But life had other ideas."

That same year, Richardson's husband, who is in the military, received word that he was being stationed in Okinawa, Japan. Richardson had to make a decision: stay in the US and take in-person classes, or pursue her studies online. She said, "ASU offered electrical engineering online, but not civil. I made the switch because I realized I could still focus on my interests in solar and wind energy."

Richardson credits her mentors for helping her find the right path and hopes to do the same for others. "I wouldn't have gotten into engineering if it weren't for their encouragement and letting me know that I was actually good at something," she said. "I think it's good for kids to know where their talents lie, and that learning can be fun."

Richardson volunteered through the National Society of Black Engineers (NSBE) to teach at an online engineering summer camp for third to fifth graders. "The purpose...was to let the students know how engineering related to these cool toys they would be building and playing with that included some drones, an M-bot and something called a micro:bit for programming," she explained. "One of my student's grandmothers told me she had never seen her granddaughter open up so much. It actually made me cry and was a reminder of how impactful this kind of work can be."

Her community service initiatives and engineering prowess helped Richardson become a twice recognized Power & Energy Society (PES) Scholarship Plus Initiative recipient. "Through the scholarship and my subsequent PES membership, I have access to a lot of resources that I didn't have before. I'm looking forward to being able to tap into these resources even more as I enter my career and settle into my new position," she said. Richardson is excited to begin her career at Liberty Utilities where she will be working on water purification and various wastewater projects. ■



Twice recognized PES Scholar  
Kayla Richardson.

# The Generosity of Giving Time, Talent and Treasure



Dr. Noel N. Schulz knows a thing or two when it comes to supporting causes that benefit humanity in an impactful and sustainable way. Top of Schulz's list of causes she supports are those that bring life-changing sustainable development in the form of electrification, education and empowerment opportunities to people, especially women and young girls, who live in power-impooverished remote communities around the globe.

Schulz is a university educator with more than 26 years of teaching experience in power systems engineering. Intertwined during her career in academia, you find Schulz's leadership serving IEEE Power & Energy Society (PES), serving as President, Treasurer and Secretary. During the past 26 years, Schulz has witnessed energy impoverishment in remote settings in India and sub-Saharan Africa where limited sustainable development opportunities are a reality of life for villagers.

Schulz became aware of IEEE Smart Village when the program was first started, and during the past 10+ years, she has followed its progress closely as the program and measurable impact has scaled. "It is amazing to see all the lives touched by IEEE Smart Village projects and volunteers by providing technology solutions and electric power to villages worldwide. Lights, fans, mobile phone charging stations, refrigeration and more have changed lives."

Already a loyal supporter of various IEEE PES philanthropic causes, Schulz decided in 2015 to begin funding IEEE Smart Village in a somewhat unique way. Each and every month, Schulz makes an automatic distribution from her checking account to the IEEE Smart



*Dr. Noel N. Schulz is pictured with villagers in Kanpur District, Uttar Pradesh, India.*

Village Fund, administered by IEEE Foundation. Schulz's monthly donations are for unrestricted use by IEEE Smart Village. Schulz desired to make an impactful difference for IEEE Smart Village through her philanthropy. She also knew that her and her husband Kirk's other charitable commitments would make it challenging to make a one-time donation at the level that they desired. Knowing that unrestricted contributions are considered the 'life-blood' of any charitable organization, they embarked on making the automatic monthly donation through her financial institution.

"It is amazing to see how a smaller monthly amount adds up over time. For example, a US\$200 monthly gift is almost US\$1,000 in four years, a bigger impact. Additionally, it provides a steady stream of funding support for IEEE Smart Village. Giving in this way is convenient and makes it easier to budget support of IEEE activities. I wish others who find IEEE Smart Village worthy of their support, begin to contribute in this manner too. The automated feature established by IEEE Foundation makes it very user friendly. My husband Kirk and I have made 80 monthly contributions to IEEE Foundation in support of IEEE Smart Village and other causes through this process and plan to continue until we retire." Schulz and her husband, Kirk, are members of IEEE Heritage Circle Cumulative Giving program – Nikola Tesla level. ■

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**IEEE Foundation**





# IEEE Education Week Engages Members, Donors, Customers, and Staff

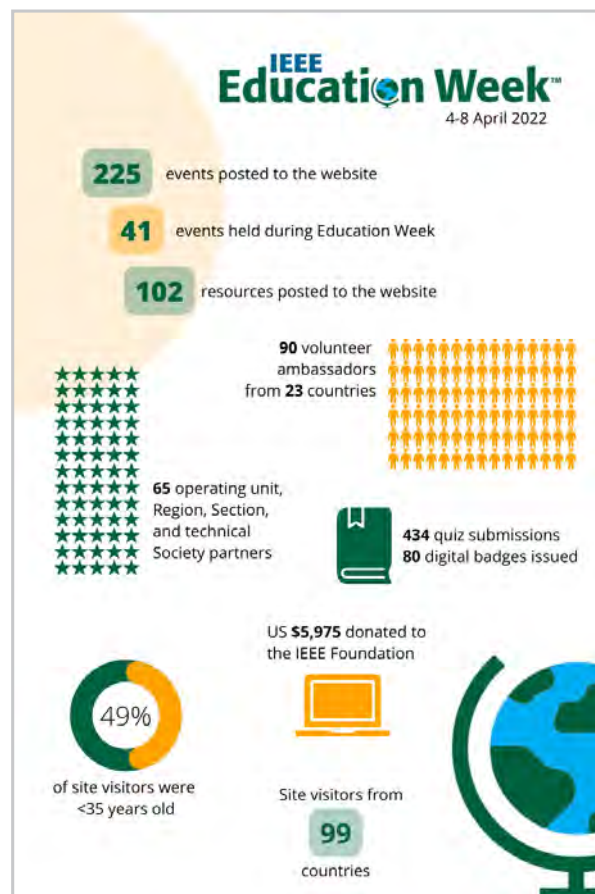


More than 60 IEEE operating units, regions, sections and technical societies celebrated the first-ever IEEE Education Week from 4-8 April 2022 with dozens of live events, virtual resources, special offers and even a daily online quiz that awarded a digital badge for participants who answered correctly.

"Education Week was a chance to show the collective impact IEEE has on lifelong learning and education at every level," said Managing Director, Educational Activities Jamie Moesch. "From pre-university science, technology, engineering, and math (STEM) programs, to university offerings, to continuing professional education courses, tutorials and more, there are so many ways to engage with education from IEEE. This week was about bringing all those resources together in one place and making sure our members know about all of the amazing educational opportunities available to them."

"Awareness and generous philanthropic support allow IEEE programs such as the PES Scholarship Plus Initiative, IEEE-Eta Kappa Nu, IEEE REACH, Science Kits for Public Libraries - a project of IEEE Region 4 and others to continue to provide resources, scholarships, programming and more for students, young professionals and established professionals around the world", said IEEE Foundation Executive Director Karen Galuchie. Though Education Week came to a close, IEEE Foundation continues to support the pursuit of education throughout the year.

It's never too early to start thinking about next year: Save the date for the next IEEE Education Week from 2-8 April 2023! Follow updates on social media via the hashtag #EducationAtIEEE and sign up for email updates at [educationweek.ieee.org](https://www.ieee.org/educationweek). ■



## EPICS Welcomes New Leadership

In 2022, the committee welcomed two new additions--a new volunteer committee Chair and staff Program Manager.

Dr. Stephanie Gillespie is the Associate Dean at the Tagliatela College of Engineering at the University of New Haven, and the new chair of EPICS (Engineering Projects in Community Service). She said, "After serving on the committee for three years, I am excited to have the opportunity to lead the committee as the chair. I know the projects supported by EPICS in IEEE have a positive experience on both our students and our communities. I'm excited to continue the positive momentum our committee has established under our prior chair Samarth Deo, and expand the impacts of service learning across the globe."

Ashley Moran, MBA, is the new Program Manager for EPICS in IEEE and brings a great deal of volunteer support, project management and communications/marketing experience. She has been with IEEE since 2019 and most recently was a program manager for the IEEE Standards Association. ■



*Dr. Stephanie Gillespie is the new chair of EPICS in IEEE.*



# Professor Azad Naeemi Receives the Inaugural James D. Meindl Innovators Award



Professor Azad Naeemi is the first ever recipient of the IEEE Solid-State Circuits Society (SSCS) James D. Meindl Innovators Award.



Naeemi is Professor at Georgia Institute of Technology, Atlanta, GA, US. His research crosses the boundaries of materials, devices, circuits, and systems investigating integrated circuits based on conventional and emerging nanoelectronic and spintronic devices and interconnects.

In 2021, IEEE SSCS established the IEEE SSCS James D. Meindl Memorial Educational Fund of the IEEE Foundation, in honor of Professor James D. Meindl. This award supports innovation in the field of solid-state circuits by funding projects that build excitement in the field and encouraging participation among future generations. The Fund provides long-term support to enable SSCS to nurture, encourage and celebrate students and early career innovators in the field of solid-state circuits.

Naeemi received his B.S. degree in electrical engineering from Sharif University, Tehran, Iran in 1994, and his M.S. and Ph.D. degrees in electrical and computer engineering from Georgia Tech in 2001 and 2003.

Prior to his graduate studies (from 1994 to 1999), he was a design engineer with Partban and Afratab Companies, both located in Tehran, Iran. He worked as a research engineer in the Microelectronics Research Center at Georgia Institute of Technology from 2004 to 2008 and joined the Electrical & Computer Engineering (ECE) faculty at Georgia Tech in fall 2008.

He has received the IEEE Electron Devices Society (EDS) Paul Rappaport Award for the best paper that appeared in IEEE Transactions on Electron Devices during 2007. In addition, he has received an National Science Foundation (NSF) CAREER Award, an Semiconductor Research Competition (SRC) Inventor Recognition Award, and several best paper awards at international conferences.

Meindl, a giant in the world of semiconductors and among the founding fathers of Silicon Valley, passed away on 7 June 2020. He was an active member of the IEEE Solid-State Circuits Council, the predecessor of the SSCS. He was a Past President of the Society, served as the founding editor of the IEEE Journal of Solid-State Circuits, and chaired the 1966 and 1969 International Solid-State Circuits Conference. For his contributions to microelectronics, the IEEE Life Fellow received the 2006 IEEE Medal of Honor.

Meindl had an infectious spirit and was passionate about nurturing future generations of solid-state circuits innovators. Mentoring more than 90 Ph.D. candidates during his time at Stanford, Rensselaer Polytechnic Institute (RPI), and Georgia Tech, Meindl was a trusted confidante and had a profound impact on his students.

To date US\$431,000 has been donated to support this important fund by 31 individual donors, most of whom were students and colleagues of Meindl. ■



*Inaugural James D. Meindl Innovators Award recipient Professor Azad Naeemi.*

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# Celebrate Michael C. Wicks' Legacy of Innovation and Altruism



On 21 - 25 March, industry professionals worldwide attended the 2022 IEEE Radar Conference (RadarConf'22), which for the first time was held in New York City's Times Square, an iconic location long known for its rich history in radar innovation. In another conference first, the inaugural three recipients of IEEE's newly-established Michael C. Wicks Radar Student Travel Grant, an annual award designed to commemorate Michael C. Wicks, were recognized.

Wicks was a gifted electronic engineer and a radar industry leader who passed in December 2020. He held a variety of prestigious positions in the U.S. government and academia, originated a number of radar signal processing concepts that have since become mainstream, and was a prolific author and distinguished lecturer. He was also a longtime member of the IEEE Aerospace & Electronic System Society (AESS) Radar System Panel and AESS Board of Governors.

## A LEGACY OF FRIENDSHIP

Along with his extensive industry accomplishments, colleagues and friends say that Wicks will be equally remembered for his altruism and desire to nurture the next generation of radar engineering students.

"Michael was my mentor, life coach and best friend," shared Lorenzo Lo Monte, Ph.D., Chief Scientist, Telephonics, General Chair, IEEE RadarConf'22, and IEEE AESS Distinguished Lecturer and Short Course Instructor. "He once told me, 'Be kind, give people a chance, and expect nothing in return,' a statement that embodied who Michael Wicks was and one that's shaped my own philosophy of life."

"Although he was an outstanding radar scientist, I think that what made Michael different from other radar gurus was his passion for helping others," Lo Monte continued. "While many renowned radar professionals in the industry today were positively impacted by Michael during their career, Michael also provided educational

opportunities to people from all backgrounds to help them better their lives and succeed. Michael is genuinely a person worth remembering forever and I wouldn't be where or who I am today without his friendship and guidance."

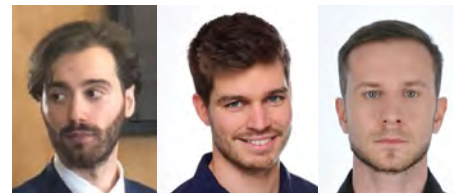
"It's not possible to be part of the radar community without being aware of Michael's contributions and especially the kindness he showed towards others," agreed Dr. Alex Charlish, Associate Editor for Radar Systems for *IEEE Transactions on Aerospace and Electronic Systems* and 2021 recipient of the prestigious IEEE Fred Nathanson Memorial Radar Award for outstanding work in the field of radar resource management and cognitive radar. "It's especially fitting that the Michael Wicks Award will continue this legacy of kindness by helping others for years to come."

## A LEGACY OF KINDNESS

The resources provided by the IEEE Michael C. Wicks Radar Student Travel Grant will enable graduate students who are the primary author on a paper in the area of radar signal processing that is accepted for presentation during the annual IEEE Radar Conference to attend the conference and present their research.

The three recipients of the 2022 Michael C. Wicks Radar Student Grant Travel Award were Marco Di Seglio for his paper, "Reducing the Computational Complexity of WiFi Based Passive Radar Processing," Marcel Hoffmann for his paper, "Filter-Based Segmentation of Automotive SAR Images," and Karol Abratkiewicz for his paper, "Radar Pulse Signal Filtering Using Vertical Synchrosqueezing."

According to Abratkiewicz, "I appreciated both the opportunity to present my research results to an international audience of industry professionals and to be honored at the awards ceremony and I sincerely believe that the IEEE Michael Wicks Travel Award will contribute to the promotion of my work and facilitate future cooperation with the IEEE AES Society."



Congratulations to Di Seglio, Hoffmann and Abratkiewicz for receiving the 2022 Michael C. Wicks Radar Student Grant Travel.

Fellow recipient Hoffmann agreed. "The Michael Wicks Travel Award not only covered the cost of the conference and the conference hotel, but it allowed me to stay for the full week and participate in interesting tutorials and other conference events -- activities that turned out to be very fruitful because I was able to get to know and speak with many important researchers from my field of study," Hoffman said. "This award goes much further than mere financial support, as I would never have had these experiences at an online conference, and I'm truly grateful for the opportunity!" ■



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# John and Jo-Ann McDonald Pledge Support to PES S+ and HKN Student Chapter Support



With 47 years of experience in the electric utility transmission and distribution industry, his role as an IEEE Foundation Director, and his one hundred fifty published papers and articles, it may be hard to imagine John D. McDonald as an undergraduate student at Purdue University. Yet, in 1971, it was coed John who first joined both IEEE and the Power & Energy Society (PES), and was inducted into HKN, initiating vital relationships that have spanned five decades. Throughout these past 50 years, McDonald has remained a steadfast supporter (both as a donor and as a volunteer) of IEEE and the IEEE Foundation. His unwavering and dedicated commitment of his time, talent and treasure nurtures the next generation of innovators and advances technology for the benefit of humanity.

In celebration of his 50 year anniversary as an IEEE and HKN member, John and his wife Jo-Ann made two new and significant four-year pledges to the IEEE Foundation. The first gift, to the IEEE Power & Energy Society Scholarship Plus (PES S+) Initiative, will help promising students become successful

practitioners in the field of power & energy. The second gift seeds the IEEE-HKN Student Chapter Support Program, which launched in March 2022 and designed to fuel the innovation and ingenuity of IEEE-Eta Kappa Nu (IEEE-HKN), its Chapters and its members. In recognition of the McDonald's philanthropic spirit of giving back, they have been elevated to the Thomas A. Edison Circle (US\$100,000 to US\$249,000) of the IEEE Heritage Circle.

McDonald says, "When I was inducted into HKN as a second year Electrical Engineering student at Purdue it gave me confidence that I was doing well in Electrical Engineering in a tough, competitive curriculum. This confidence has remained with me for more than 50 years since my induction on May 2, 1971. The PES Scholarship Plus Initiative has influenced many undergraduate Electrical Engineering students to take power engineering courses, and to have internships and co-op work sessions in the power and energy industry. Both IEEE PES and HKN have helped my career so significantly that Jo-Ann and I wanted to 'give back' to show our appreciation. I've been an IEEE member

for more than 50 years, and Jo-Ann and I have been married 42 years, so Jo-Ann has been an important partner with me in IEEE."

Throughout his years in the electric utility industry, McDonald has pursued his passion for encouraging young people to become involved in power engineering. In 2011, McDonald volunteered to participate in the scholar selection process of the IEEE PES Scholarship Plus Initiative, wherein he evaluated and scored applications in the first five years of the initiative from 2011 through 2015. "I was impressed with the quality of the student applications and encouraged that these motivated, exceptional students were the future of IEEE PES and our industry," McDonald explained.

McDonald served on the IEEE PES Governing Board for 12 years, where he held elected positions as Secretary and President, He served on the IEEE Board of Directors as IEEE Division VII Director and the IEEE Standards Association Board of Governors. During his five decades as part of the IEEE community, McDonald has given generously to advance the industry and the ideals of IEEE. ■



*Loyal and generous donors Jo-Ann and John McDonald with their dog, Bruno.*

## Congratulations to Board Member McDonald

John McDonald has been selected to receive the Purdue Distinguished Engineering Alumni (DEA) Award.

The Purdue DEA Award is presented to Purdue engineering alumni who have especially distinguished themselves in any field of endeavor that reflects on the spirit of innovation, discovery and ingenuity which continues to guide Purdue's footsteps into the next generation.

McDonald's accomplishments reflect this spirit in his own legacy, and in the engineering profession. Through his achievements, the fields of electrical and computer engineering have been forever changed. ■

# Ways You Give

## Donor Advised Funds

Giving through Donor Advised Funds (DAFs) is an excellent way for donors to invest in programs that advance technology for the benefit of humanity. Through DAF giving, donors, like you, find ways to fit the mission of IEEE and the IEEE Foundation into their philanthropic giving strategy.

**\$143,285.39 given in 2021**

## Individual Retirement Accounts

Donors in the US often opt to allocate the distribution of their Individual Retirement Account (IRA) directly to IEEE and the IEEE Foundation. Donors with IRAs should be aware that the CARES Act increased the minimum age for a required minimum distribution from 70½ to 72.

**\$316,255 given in 2021**

## Tribute Giving

To recognize and celebrate individuals who have made an impact on their lives, donors choose to give tribute gifts. During a year like 2021, it was a particular honor that donors selected IEEE and the IEEE Foundation as the vehicle to celebrate those who mattered most.

**\$181,717.06 given in 2021**

## Honorarium/Cash Prize Giving

Through awards and conference speakers, IEEE, and other professional associations, recognize individuals and groups who make contributions in advancing the fields of interest of IEEE. Some of these recipients chose to pay forward the cash prize or speaker fee associated with the recognition.

**\$374,533 given in 2021**

## Matching Gifts

As an employee benefit, many companies match gift or volunteer hours. These programs allow donors to double, or sometimes triple, the impact of their contributions. As volunteer driven organizations, IEEE and the IEEE Foundation are in a unique position for donors to make an impact by taking advantage of their current (or former) employer's volunteer matching program.

**\$54,613.79 given in 2021**

## Bequest Giving

Donors who are Forever Generous make a legacy gift to provide resources to face our collective global challenges. Donors who leave a bequest truly engrave a legacy of generosity and advancement on their professional home at IEEE.

**\$417,026.80 given in 2021**

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As the philanthropic partner of IEEE, the IEEE Foundation translates the values of our members and donors into social impact. We connect 200+ IEEE member-led initiatives with financing, expertise and philanthropic guidance. Our goal is to put effort where philanthropy and technology intersect. Together, we deliver opportunity, innovation and impact, and advance the IEEE mission across the globe. We categorize the IEEE programs supported by your donations under four main pillars: Illuminate, Educate, Engage and Energize, though their benefits actually span multiple categories.

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