



Illuminate



Educate



Engage



Energize



Future

A Special Message from John McDonald, 2026 IEEE Foundation President



Each year, [IEEE Foundation Day](#) gives us a chance to pause and reflect—not just on how far we’ve come, but on what enables us to keep moving boldly forward. As President of the IEEE Foundation in 2026, I am energized by this moment. Progress doesn’t happen in isolation. It is powered, sparked, sustained, and accelerated by people.

And the people who power IEEE’s global impact are you—our donors, volunteers, and champions.

The Power Behind the Breakthroughs

Technology evolves at an astonishing pace, but the driving force behind that evolution is remarkably consistent: visionary individuals who choose to invest in ideas, talent, and access. When you support the IEEE Foundation, you provide more than funding. You provide momentum—a catalytic force that propels STEM professionals, students, and communities toward a more equitable and technologically empowered future.

Together, we energize education by opening pathways for students who will design tomorrow’s breakthroughs. Through global

collaboration, we sustain the work by connecting professionals committed to solving the world’s biggest challenges. Simply put: your support is the current that helps keep the IEEE mission in motion.

Looking Ahead Together

As we chart the Foundation’s course through 2026 and beyond, my commitment is simple: to ensure that every donor dollar becomes a force multiplier. That it stretches, sparks, amplifies, and accelerates the good our programs can do.

We are expanding opportunities to engage, strengthening transparency around impact, and unlocking new ways for donors to directly support the initiatives that matter most to them. I’m excited for what we will achieve together—and grateful for your trust and energy.

Together, we are not simply supporting IEEE’s mission; we are energizing its future. You are the reason we can imagine boldly, act compassionately, and deliver technological solutions with global reach and local meaning.

Thank you for being the power source behind our progress. ■

— John D. McDonald, president, IEEE Foundation

Foundation Day 2026: Celebrating the Energy You Provide

IEEE Foundation Day is recognized annually on 16 February. It’s an opportunity for the IEEE community to celebrate the remarkable achievements and bright futures made possible by donors, volunteers, educators, and program partners. This IEEE Foundation Day, we honored the collective power of our community. We also honored the outcomes you make possible. Throughout the year, you will hear more stories of impact that demonstrate what happens when donor energy meets engineering vision:



Illuminating

the possibilities of technology to address global challenges.



Educating

the next generation of innovators and engineers.



Engaging

a wider audience to appreciate the impact of engineering.



Energizing

innovation by celebrating excellence.



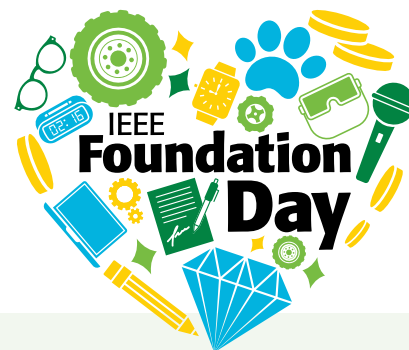
Future

initiatives that shape the destiny of the next generation.

These successes aren’t abstract. They are lived experiences. Real people have better futures because someone like you chose to invest in a smarter tomorrow.

Celebrating the People Powering the IEEE Foundation's Impact

On IEEE Foundation Day, the Foundation celebrated the passion and generosity of donors who help the IEEE mission thrive. We recognized some of the remarkable individuals whose stories embodied the energy behind IEEE charitable programs.



STUDENTS & YOUNG PROFESSIONALS: Tomorrow's Innovators



Sofia Brumbaugh - Hoveida Family Scholar

An IEEE member and young professional, Sofia Brumbaugh received support

through the [IEEE Power & Energy Society \(PES\)](#) and is a two-time [Hoveida Family Scholar](#). This scholarship is part of the [IEEE Power & Energy Society Scholarship Plus Initiative](#), which is supporting new talent for the power and energy industry's transition. Her scholarship allowed her to pursue microgrid research at Santa Clara University, presenting her master's thesis paper, *LQR Regulation for an Optimal Performance of a Multi-Battery System*, at the 2025 IEEE SusTech Conference. Now a Power Systems Controls Engineer at S&C Electric Company, Sofia works on large-scale microgrid projects.



Parker Megginson - IEEE Life Members Graduate Study Fellow

As an undergraduate, Parker Megginson found

community through [IEEE-Eta Kappa Nu \(IEEE-HKN\)](#). Now pursuing his Ph.D. at the Georgia Institute of Technology, he received the 2025 [IEEE Life Members Graduate Study Fellowship in Electrical Engineering](#). The Fellowship provided financial assistance and meaningful mentorship. Parker plans a career grounded in teaching and mentorship, stating, "I want to support students the way my mentors have supported me." His path shows the purpose of donor-supported fellowships: empowering young engineers who will, in turn, pay it forward.



Raghul Dayanithi - Inaugural IEEE-HKN Frank and Shelly Chang Outstanding Student Scholar

Raghul is the first-ever recipient of [this new scholarship](#), created in celebration of [Frank and Shelly Chang's](#) 50th wedding anniversary, which recognizes leadership, scholarship, and character. He shared, "This support has motivated me to advance my technical knowledge and continue contributing to impactful engineering projects." The scholarship will fund his future research in embedded systems and sustainable technologies. Raghul plans to pursue a Master's degree in VLSI Design, aiming to develop technologies for environmental safety and intelligent sensing.

EDUCATORS: The Mentor Who Sparks the Future



Elizabeth Vidal – EPICS in IEEE (IEEE Region 9)

Elizabeth Vidal believes engineering education should connect students with their

communities. Through [EPICS in IEEE](#), she helps students design real-impact solutions, like a soft robotic glove for fine-motor rehabilitation. Elizabeth became involved because of the program's "social impact and meaningful learning experiences for engineering students." Her students "gained confidence, technical skills, leadership abilities, and a profound understanding of their responsibility as engineers," while also providing practical support to the community.



Dr. CJ Reddy – Champion for Student Advancement

Dr. CJ Reddy has been a driving force for

students in antennas, electromagnetics, and RF engineering. He was instrumental in establishing the [IEEE AP-S Talent Development Fund](#) to nurture future technologists. His commitment is simple: investing in students invests in the future of innovation. He established the [CJ Reddy Travel Grant for Graduate Students](#) to support M.S. and Ph.D. students attending the IEEE International Symposium on Antennas and Propagation.



Mei Lin Fung – Donor Inspiring Technology for Human Flourishing

Mei Lin Fung advocates that technology should

help people thrive. Her support of the IEEE Foundation advances programs that strengthen digital equity and cultivate a more inclusive engineering ecosystem. Mei Lin shared, "We care about others around us and those following us because we are part of a lineage: many before us made choices so we could be here, and we must do the same for those who come after." She is motivated by providing an example for other IEEE members to foster the next generation.

These individuals embody the thousands who drive the IEEE Foundation's mission. Their accomplishments, generosity, and vision serve as a reminder that progress is fueled by people. ■

Engineering as Service

A Journey From Engineering Student to IEEE Foundation Leader



For Professor Saurabh Sinha, IEEE Fellow and Executive Dean of Engineering at the University of Canterbury, New Zealand, the journey with IEEE began with a simple desire to learn and grow. What started as a student membership evolved into a lifelong commitment to transforming engineering education and expanding its reach to communities worldwide. "I joined simply to learn and stay updated, but over time, the organization became much more than a resource. It became a community," recalls Saurabh.

His IEEE involvement trajectory changed dramatically in 2002 when his paper was accepted for the IEEE Region 8 Student Paper Competition, which took him to Cairo, Egypt. "It was eye-opening," he reflects. "I met people from different countries and disciplines who were united by curiosity and a willingness to share what they knew."

Saurabh obtained his bachelor's, master's, and doctorate degrees in electronic engineering from the University of Pretoria, South Africa, and is also an alumni of Wharton's Advanced Management Program. An established researcher, he has authored or co-authored over 140 publications. After serving as an academic, institute director, executive dean, and deputy vice-chancellor at the University of Pretoria and the University of Johannesburg for over 21 years, Saurabh moved to New Zealand in mid-2023, while retaining visiting affiliations at the University of Johannesburg and Princeton University. He is also a former IEEE Vice President and Board member, and the recipient of a prestigious U.S. Fulbright grant.

Empowering the Next Generation of Engineers

During his journey, Saurabh recognized that engineering education becomes truly meaningful when students work with real communities and witness the tangible impact of their work. As a proud member of IEEE-Eta Kappa Nu (IEEE-HKN), he has enjoyed helping nurture qualities like scholarship, character, and attitude in students, supporting mentoring and member inductions at various universities. This belief led him to co-found EPICS (Engineering Projects in Community Service) in IEEE with Kapil Dandekar (Drexel University, USA) building on the original formulation from Purdue University.

"Around 2004, I helped pilot a community-based project course at the University of Pretoria, the shift in student mindset was immediate and lasting," Saurabh explains. "Students who might have thought of engineering as a set of calculations began to ask different questions: What is the impact? What problem are we trying to solve and why?"

"Once students have worked on a project that affects real people, they never see engineering in the same way again," Saurabh notes. "They begin to understand that technology is not just something we build, but something that shapes lives. That realization stays with them long after they graduate."

For Saurabh, the values of engineering and philanthropy align naturally—both require trust, accountability, and a willingness to work toward long-term outcomes. He views service as an IEEE Foundation Director as an opportunity to combine technical excellence with societal impact.



The IEEE Foundation Board and Tom Coughlin visit to the Frugal Innovation Hub at Santa Clara University, CA, USA.

One of his most meaningful donor experiences have come from seeing EPICS in IEEE projects develop, such as his visit to the Frugal Innovation Hub at Santa Clara University. "What I value most is that giving has never felt like a transaction. It has felt like contribution, partnership, and responsibility," he reflects.

He believes meaningful change rarely happens through a single organization, and the most successful outcomes happen with shared shared motivation, partnerships, and responsibility. IEEE and the IEEE Foundation can serve as a connector of resources and people who have a shared purpose.

"Then..." Saurabh concludes, "collaboration becomes impact, not just activity." ■

IEEE-Eta Kappa Nu (IEEE-HKN) Nu Zeta Chapter Launches Ecuador's First University Aerospace Summit



In November 2025, IEEE-HKN Nu Zeta Chapter at Escuela Superior Politécnica del Litoral (ESPOL) made history by organizing the AeroTech Summit 2025, the first university-level conference in Ecuador dedicated entirely to aerospace technology and innovation. Funded in part by an IEEE-HKN Chapter Support Grant and organized jointly with the IEEE Student Branch, the event aimed to promote scientific dissemination, foster industrial collaboration, and train the next generation of STEM leaders. Managed by the IEEE Foundation, IEEE-HKN Student Chapter Support Fund was created to enhance the resources, training, and programs every Chapter needs to reach its full potential.

A Platform for Innovation

The summit featured top national and international speakers, along with an Aerospace Science Fair showcasing the country's best projects in robotics, telecommunications, and electronics. Attendees included special guests from major companies, IEEE representatives, IEEE-HKN alumni, and universities from across Ecuador.

The speaker lineup brought together industry heavyweights and visionaries, including:

- Dr. Nelson Guim (President, Ecuador Space Society) on Ecuador's opportunities within the Artemis Accords.
- Marcos Ribadeneira (Executive Secretary, Ecuador Space Society) on the origins of the aerospace industry.
- Dr. Bernard Moscoso (Founding Member, Ecuador Space Society) on building the nation's space ecosystem.
- IEEE-HKN Professional Member Sonya Dillard (Engineer, NASA Marshall Space Flight Center, and IEEE Region 3 Director) on building career connections in the field.

Technology on Display

The Aerospace Science Fair was a highlight of the summit, featuring a diverse array of technological advancements. Notable participants included CIDIS (ESPOL R&D Center), which presented "Walter" the robot, and Propulsion, a drone company showcasing agriculture-oriented unmanned aerial vehicles. Other exhibits included embedded systems by Tayulabs, personal research from the Funpython community, and rocket models presented by the "Astrociencias" Club.

Powered By Partnership

This massive undertaking was orchestrated entirely by a team of 39 student volunteers, including IEEE-HKN members, candidates, and students external to IEEE.

Support for the event was widespread. In addition to an IEEE-HKN Student Chapter Support Grant, funding ranged from the Ecuador Space Society to the Ministry of Production, Foreign Trade, and

Investments, which provided institutional endorsement. Academic support came from ESPOL's "I3Lab" Business & Innovation Center and various student associations, which provided financial sponsorship and logistical support.



IEEE-HKN Nu Zeta chapter summit attendees try on astronaut gear.

Fostering Curiosity

Joshua Vallejo, President of the Nu Zeta Chapter and General Manager of the summit, described the event as a journey transcending humanity.

"The Aero Tech Summit 2025 was born...from a single idea—an idea shared by a group of Ecuadorian students determined to reach the horizons of knowledge in a country still striving to unleash its full potential," Vallejo said. "I've always believed that a true engineer is not just someone who earns a degree, but someone who has the courage to play with knowledge and the audacity to create."

By bringing together dreamers, companies, and universities under one vision, the Nu Zeta Chapter has successfully connected student curiosity with the future of aerospace.

Thanks to the generosity of donors, the IEEE-HKN Chapter Support Grants are available to university chapters to support activities such as community service, academic support, and chapter-building initiatives. ■

Get more information

To learn more about IEEE-HKN Chapter Support Grants, please scan the QR code.



STEM Soars on the USS Hornet:

A Historic Setting for an IEEE REACH STEM Workshop Engaging Next-Gen Engineers



Building on the success of their 2024 STEM workshop in Puebla, Mexico, which drew approximately 3,000 students and educators, IEEE REACH and IEEE Society on Social Implications of Technology (SSIT) partnered again for an event on 7 September 2025. This time, the hands-on STEM workshop, held in association with the 2025 IEEE International Symposium on Technology and Society (ISTAS25), took place aboard the historic USS Hornet Sea, Air & Space Museum in Alameda, CA, USA. Hundreds of students, educators, families, and technologists came aboard for a full day of interactive learning, historical exploration, and STEM activities on one of the most storied aircraft carriers in U.S. history.

It was a gratifying event for all. A 12-year-old student shared, "The event was educational and engaging, offering lots of activities that made me understand more about naval history and sea navigation. The IEEE group was very helpful. They provided many informative educational videos and hands-on experiments that made learning about maritime navigation much more interesting. Overall, it was a valuable and enjoyable learning experience, and I hope that they will continue to have more events like this in the future." Mohan Sankaran, an IEEE volunteer, exclaimed, "It was a privilege to engage students and educators, sparking interest around STEM, history, and the social impact of technology.... The future of STEM looks brighter than ever!" Another volunteer explained that the event offered an opportunity to witness the power of young professionals reaching out to encourage the next generation of engineers.

SSIT's goal is to continue the STEM workshop annually as a side event to SSIT's flagship ISTAS Conference, with plans underway for ISTAS 2026 in the Kerala Region, India. The success of both events has shown that when students explore technology through a historical lens, they are inspired to delve deeper into STEM. Additionally, their curiosity is piqued when they understand the social relevance of technology and want to engage with it, recognizing its impact on their lives and future.

Events like this rely on the generosity of donors. Appreciation is extended to all who sponsored the SSIT STEM Workshop, as well as to all the dedicated volunteers who participated to create a positive impact on children's lives. ■



Kelly McKenna, IEEE REACH senior program manager aboard the USS Hornet for the IEEE REACH 2025 STEM Workshop.

Get more information

If you would like to donate to support IEEE REACH, scan the QR Code.



IEEE
REACH

Raising Engineering
Awareness through
the Conduit of History



IEEE
Foundation

Make it Monthly



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ieeefoundation.org/monthly

EPICS in IEEE: An AI-Powered System Targets a Clean Sweep in India

EPICS^{IN}IEEE



Many developing countries, such as India, struggle with unauthorized dumping of garbage. According to a study published in the *International Journal of Scientific Research in Science, Engineering & Technology*, February 2025, 90% of India's municipal solid waste is improperly disposed of, posing a significant threat to the environment and human health, but current management systems have proven largely ineffective. However, thanks to a student team in the Department of Computer Science & Technology at Manav Rachna University in Haryana, India, and their EPICS in IEEE project, their new drone-and-AI-driven system is poised to instantly identify Garbage Vulnerable Points (GVPs) and help enable faster clean-up by local authorities.

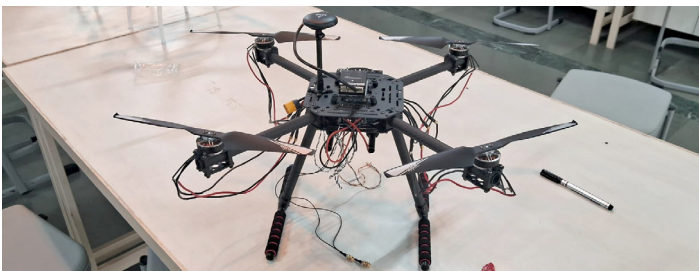
"Current monitoring systems largely rely on manual inspections and citizen complaints, which are reactive and inefficient," shared Team Leader Satvik Asthana, a fourth-year student majoring in B.Tech. Robotics and AI, and, along with his fellow teammates, a member of IEEE's Manav Rachna University Student Branch. "Our project introduces an AI-powered drone surveillance system capable of detecting, classifying, geotagging, and estimating the volume of waste in real time."

A Learning Experience

Partnering with the local non-governmental organization (NGO) Lakshya to better understand ground sanitation challenges as well as Delhi-based Yudru Technology for successful real-world deployment strategies, the four-student team acquired hands-on technical skills in drone operations, GPS data, sensor integration for obstacle detection, and machine-learning models to develop a scalable garbage-detection-and-waste-monitoring framework.

"During a technical demonstration for Lakshya, our system successfully identified and geotagged garbage dumping locations within selected test areas and helped the NGO understand how drone-based monitoring can survey larger areas in a shorter duration, improve reporting accuracy, and provide visual evidence of illegal dumping sites," Asthana said.

"Our goal is to support municipalities and NGOs in building cleaner, healthier, and smarter cities and to make drone-assisted waste monitoring a standard component of smart urban infrastructure," confirmed Asthana.



The drone platform in its initial stages of development.



A team meeting marking the delivery of the components that started the drone assembly process.

An Indelible Impact

Funded by generous EPICS in IEEE donors through the IEEE Foundation, the project had an indelible impact on its participants.

"The financial support and guidance we received from EPICS in IEEE was instrumental in turning our concept into a working system and providing us with both technical and strategic direction," Asthana said. "Ultimately, EPICS in IEEE empowers young innovators to create solutions with meaningful community impact."

"EPICS in IEEE is a transformative experience that moves engineering from the textbook to the ground level to help solve real-world challenges," agreed Dr. Manpreet Kaur, SMIEEE, Professor in the Department of Computer Science and Technology at Manav Rachna University and faculty mentor to the project. "In the case of our project, students received a beyond-the-lab opportunity to design a solution to combat the problem of garbage in India and gained a broad range of valuable technical and soft skills that will make them highly employable—all while being connected to the vast IEEE professional network, which provides visibility and a platform to showcase social innovation."

Above all, Dr. Kaur concluded, "EPICS in IEEE projects help students develop the community and environmental awareness that enables them to become socially responsible citizens." ■

Show your support!

To support more EPICS in IEEE projects like this, scan the QR code:



Twenty Years of IEEE TryEngineering



In 2026, [IEEE TryEngineering®](#) celebrates 20 years of empowering educators with resources that introduce engineering to students at an early age.

Launched in 2006 as a collaboration between [IEEE](#), [IBM](#), and the [New York Hall of Science](#) (NYSCI), TryEngineering began with a clear goal: make engineering accessible, understandable, and engaging for students and the teachers who support them.

What started as a new idea within [IEEE Educational Activities](#) has since grown into a global platform supporting pre-university engineering education around the world.

The Idea Behind TryEngineering

TryEngineering emerged as part of the broader IEEE initiative “**Launching Our Children’s Path to Engineering.**” A core element of this program was the creation of a public-facing website that would introduce young learners to engineering projects, roles, and careers. This concept eventually developed into the [TryEngineering.org](#) website.

The idea for TryEngineering.org itself grew from a successful model already in place. The [New York Hall of Science](#) operated [TryScience.org](#), a popular public website supported by [IBM](#) that helped students explore science topics through hands-on activities and real-world connections. At the time, IEEE Educational Activities was working with the NYSCI on TryScience projects. Building a parallel site focused on engineering was a natural next step, and IBM’s experience supporting large-scale educational outreach made it a strong partner in that effort.

From the beginning, TryEngineering focused on educators as the key to its success. Instead of complex technical explanations, the platform offered free, classroom-ready lesson plans, clear explanations about engineering fields, and examples students could relate to. Hands-on activities emphasized problem-solving, creativity, and teamwork—core elements of how engineers actually work.

Over the past two decades, TryEngineering has expanded significantly beyond its original website. In addition to offering an extensive library of lesson plans and resources that engage and inspire, it also serves as a central hub for a variety of programs that reach educators and students in different ways. Thanks to the generous support of donors to the IEEE Foundation, these programs include:

- The [TryEngineering Summer Institute](#), offering immersive [campus-based experiences](#) for students ages 13-17, with more locations and programs for 2026.
- [TryEngineering STEM grants](#), which allow IEEE volunteers around the world to provide STEM outreach activities for children ages 5-17 in their local communities.
- [TryEngineering Educator Sessions](#) provide free professional development programs aligned with emerging industry needs, such as semiconductors.

To mark its 20th anniversary, TryEngineering is celebrating with a year of special activities, new partnerships, and fresh resources for educators. Visit the [TryEngineering 20th Anniversary collection page](#) to explore what’s ahead, join the celebration, and discover 20 ways to celebrate 20 years of inspiring the next generation of technology innovators. It is an opportunity not just to look back, but also to help shape how the next generation discovers engineering in the years to come. ■



TryEngineering STEM Grants bring engineering education to students across the globe.



Resources from TryEngineering inspire students ages 5-17.

Learn more!

To visit the [TryEngineering 20th Anniversary collection page](#), scan the QR code:



2025 RECAP

Innovating for Impact

We are pleased to share key highlights from IEEE social impact programs in 2025.

These programs are partially funded by the generosity of donors to the IEEE Foundation.

To read the full IEEE Foundation 2025 Recap article, scan the QR code.



Illuminate

the possibilities of technology by using it to address global challenges



- **IEEE Smart Village (ISV)**
seed-funded seven new enterprises in seven countries in Africa and Asia, and provided additional funding to expand four ongoing enterprises.
- **EPICS in IEEE**
funded 48 projects involving nearly 1,000 students from 17 countries, making 2025 a record year for the program. 22 of these grants were funded by the IEEE Foundation.
- **IEEE MOVE Global**
had 128 active volunteers donating over 15,000 hours for the benefit of humanity. **IEEE Move India** launched its first Mobile Outreach Vehicle.
- **IEEE Humanitarian Technologies (HT)**
through its IEEE Tech4Good program, received a record 500 project proposals in 2025 and provided over US\$588,000 in grants to 71 IEEE-member teams in 15 countries. Twelve of the projects were funded with support from the IEEE Foundation.



Educate

the next generation of innovators and engineers

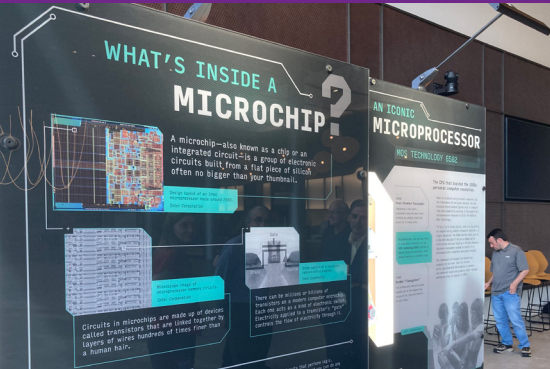


- **IEEE TryEngineering**
awarded US\$70,000 to projects in 21 countries around the world (eight of which were funded through donations to the IEEE Foundation). Support from the onsemi Giving Now program extended to the IEEE TryEngineering Educator Sessions on semiconductors.
- **IEEE Power & Energy Society Scholarship Plus Initiative (PES S+)**
more than doubled the scholarships awarded in 2025 compared to 2024, recognizing 244 high-achieving undergraduate engineering students as its 2025-26 class of PES Scholars.
- **IEEE REACH**
the IEEE History Center's pre-university open educational resources program, impacted hundreds of educators through its website, workshops, and webinars, with an estimated 100,000 students impacted.



Engage

a wider audience in appreciating the value & importance of technology



- **The IEEE Life Member Committee**

held its second IEEE Life Members' Evolution Conference at Tufts University in Boston, MA, USA, in June. During the year, the IEEE Life Members Group Mentoring Initiative expanded globally, hosting 11 events and mentoring students across seven IEEE Regions.

- **The IEEE History Center**

published 15 oral histories, including IEEE Past Presidents: Karen Bartleson, Richard Gowen, James (Jim) Jefferies, Moshe Kam, S. Kathy Land, and Howard Michel.

- **The IEEE Global Museum,**

a program of the IEEE History Center, launched its second traveling exhibit, *Microchips that Shook the World*.

- **The IEEE Milestone Program**

administered by the IEEE History Center, saw a record 28 dedications in 2025.



Energize

innovation by celebrating technological excellence



- **IEEE-Eta Kappa Nu (IEEE-HKN)**

the honor society of IEEE, marked its 15th anniversary of the merger between HKN, IEEE, with the IEEE Foundation as a silent third partner. More than 400 students from 68 Chapters worldwide attended the IEEE-HKN Student Leadership Conference at the University of Michigan, Ann Arbor, MI, USA, and 27 Chapter Support Grants were awarded, enhancing student experiences and expanding service projects that benefit local communities.

- **IEEE Awards**

presented 25 Medals and Recognitions during the 2025 annual IEEE Honors Ceremony in Tokyo, Japan, including the IEEE Medal of Honor (now accompanied by a new US\$2 million prize) to IEEE Fellow and Chairman of Broadcom, Henry Samueli.



Future

looks beyond our lifetime to shape the destiny of future generations



- **IEEE Women in Engineering (WIE)**

provided two IEEE WIE Family Cares Grants to cover caregiving costs, enabling individuals, regardless of gender, to attend IEEE conferences. The IEEE WIE Big Idea Pitch Competition, driving innovation and growth in tech startups, awarded two teams and one individual US\$1,000 each to take their ideas to the next level.

- **The IEEE Foundation**

awarded 12 grants from the IEEE Foundation Fund in 2025. A standout was the MGA Building Business Relationships Workshops Grant, which exceeded its target of 205 participants by reaching 245 individuals. The initiative has been awarded a renewed grant for 2026, with plans to expand from four to ten events next year, further broadening its impact.

Note: The statistics included in this article are preliminary and may change as our program partners complete their year-end reporting. These IEEE charitable programs receive support from generous donors to the IEEE Foundation as well as other funding sources.

Powering Opportunity: Enterprise-Driven Electrification



Henry Ureh, co-founder of Darway Coast.

To read the IEEE Smart Village 15-year historical retrospective brochure, scan the QR code.



When Darway Coast was founded in 2015 by Henry Ureh and his brother, the goal was clear: to address Nigeria's persistent lack of reliable electricity. Early research showed that conventional, large-scale grid solutions were ill-suited to a power sector shaped by privatization, regulatory complexity, and uneven infrastructure. Rather than forcing progress through traditional systems, the founders identified distributed, community-centered energy as a more viable and resilient path forward.

That strategic shift proved foundational. By developing solar-powered mini-grids, Darway Coast began delivering reliable electricity to underserved communities or those entirely off-grid. This decentralized approach reduced reliance on fragile national infrastructure while enabling faster deployment, local engagement, and immediate social and economic benefits.

A critical catalyst in the company's evolution was its engagement with IEEE Smart Village (ISV). Henry's long-standing involvement with IEEE led him to ISV in 2016, where exposure to global practitioners reinforced how solar microgrids could unlock sustainable development. ISV's support extended well beyond knowledge-sharing: early seed funding enabled Darway Coast to build its first operational mini-grids, transforming a promising concept into a functioning enterprise. These proof-of-concept projects were especially significant in a high-risk sector, providing the credibility needed to attract additional commercial debt, grants, and equity investment.

Today, Darway Coast operates as a private enterprise that develops, owns, and manages solar mini-grids using battery storage and Pay-As-You-Go prepaid metering. This model balances affordability for customers with long-term financial sustainability. From rural villages to urban and peri-urban areas, the company now complements unreliable grid supply, filling gaps in communities that receive as little as eight hours of electricity per day and extending access toward near 24-hour power.

The impact is measurable and growing. Darway Coast currently serves approximately 20,000 customers and supports more than 100 jobs, with a clear pathway to scale its reach fivefold. Reliable electricity has enabled small businesses to operate longer hours, improved household quality of life, and generated local employment. Building on its electrification foundation, the company is expanding into productive-use energy, cold-chain services, light manufacturing support, and e-mobility, multiplying economic value while reducing fuel dependence, lowering costs, and addressing environmental challenges.

As Dr. Rajan Kapur, ISV president, notes, Darway Coast embodies ISV's vision of scalable, enduring impact driven by local enterprises, local procurement, and deep community engagement. ISV's long-standing partnership reflects a model of early investment and sustained collaboration, one in which today's beneficiaries, such as Henry, strengthen the ecosystem by mentoring the next generation of innovators.

Henry's work has been made possible by the generous support of the IEEE Nuclear & Plasma Sciences Society (NPSS), the IEEE Power & Energy Society (PES), IEEE Industry Applications Society (IAS), and donations to the IEEE Foundation. ISV gratefully acknowledges their support.

In addition to seed funding, ISV functions as a remote business incubator, operated by a cadre of dedicated volunteers working from home. If you wish to volunteer with ISV, please email isvmarketing@ieee.org. ■

Show your support!

If you wish to support more initiatives like this, please scan the QR code:



Entrepreneurship Program Brings Incubator Ideas to More Countries



Technology evolves rapidly, and innovation is key to business survival, so mentoring young professionals, promoting entrepreneurship, and connecting tech startups to a global network of experts and resources is essential.

Some IEEE volunteers do all of the above and more as part of the [IEEE Entrepreneurship Ambassador Program](#).

The program was launched in 2018 in [IEEE Region 8](#) (Europe, Middle East, and Africa) thanks to a grant from the IEEE Foundation. The ambassadors organize networking events with industry representatives to help IEEE young professionals and student members achieve their entrepreneurial endeavors and strengthen their technical, interpersonal, and business skills. The ambassadors also organize pitch competitions in their geographic area.

In 2024, the program was introduced in [Region 9](#) (Latin America) with funding from the [IEEE Jon C. Taenzer Memorial Fund](#). The results of this program's inaugural year were impressive: Thirteen ambassadors organized entrepreneurship events in Bolivia, Brazil, Colombia, Ecuador, Mexico, Panama, Peru, and Uruguay.

"The program is beneficial because it connects entrepreneurs with industry professionals, fosters mentorship, helps young professionals build leadership skills, and creates opportunities for startup sponsorships," says Susana Lau, vice chair of [IEEE Entrepreneurship](#) in Latin America. "The program has also proven successful in attracting IEEE volunteers to serve as ambassadors and helping to support entrepreneurship and startup ventures." Lau, an IEEE senior member is a past president of the [IEEE Panama Section](#) and an active [IEEE Women in Engineering](#) volunteer.

A Professional Development Opportunity

People who participated in the Region 9 program say the experience was life-changing, both personally and professionally.

Pedro Jose Pineda, whose work was recognized with one of the region's two Top Ambassador Awards, says he's been able to "expand international collaborations and strengthen the innovation ecosystem in Latin America. It's more than an award," the IEEE member says. "It's an opportunity to create global impact from local action."

The region's other Top Ambassador recipient was Vitor Paiva of Natal, Brazil. He had the opportunity to attend this year's IEEE Rising Stars in Las Vegas, NV, USA, his first international experience outside of Brazil.

"I was proud to showcase Brazil's IEEE community while connecting with some of IEEE's most influential leaders," Paiva, a student at the Universidade Federal do Rio Grande do Norte, says. "This remarkable experience has opened new doors for my future career with IEEE, both nationally and globally."



From left to right: Susan Lau, Natasha Main, Ryan Ramkhelawan, and Julia Proto attending a pitch session for the competition in Chicago.

Expanding the Program

The ambassador program expanded to Region 10 (Asia Pacific) in 2025.

The IEEE Foundation invested in the Region 10 expansion by funding eight travel grants for the regional pitch competition winners to attend two conferences, the 2025 IEEE Region 10 Conference (TENCON 2025) and GITEX Global 2025, similar to the funding provided to Region 9 in 2024.

The ongoing expansion is a testament to the program's efforts, says Chris Wright, senior manager of programs and governance at IEEE Foundation. "I've had the pleasure of working on the grants for the IEEE Entrepreneurship Ambassador Program team over the years," Wright says, "and I am continually impressed by the team's dedication and the program's evolution."

To learn more about the [IEEE Entrepreneurship Ambassador Program](#) in your region or to apply to become an ambassador, visit entrepreneurship.ieee.org and search for your region. ■

This article is an edited excerpt of "[Entrepreneurship Program Brings Incubator Ideas to More Countries: Young professionals gain new technical and business skills](#)," published in The Institute on 5 December 2025.

10 Reasons You Need to Make a Valid Will

Are you among the 60 percent of Americans who don't have a valid will or estate plan? Here are 10 reasons this task is too important to delay!

1. If You Die Intestate, the Government Takes Over.

When you die without a will (intestate), the court will decide who gets what. It doesn't matter that you promised your classic car to your brother, or your house to your second wife; if it's not recorded in a valid will, the court makes the decision for you.

2. It's Not Just For Rich People.

No matter how much or how little you have, you should make a plan to distribute your assets after you pass. If you have no heirs, you can gift your assets to benefit a cause in which you believe. If you don't, the court will decide where your money goes.

3. It Settles Custody Disputes.

If you have children, you need to designate a legal guardian in case both parents/legal guardians die. If not, the court will decide for you.

4. It's a Source of Comfort.

Writing a valid will means you'll know your final wishes will be respected and the people and causes you care about will be looked after.

5. It Can Bring You and Your Spouse Closer.

Writing a will is a chance to reflect on your life together; the things you care about, the things you've accomplished, and the things you still hope to do.

6. It's a Way to Take Care of a Spouse, Partner, Child, or Grandchild.

Writing a will allows you to make provisions to care for a loved one after you're gone. This can include support for the special needs of children or grandchildren, especially if they face costly illnesses or disabilities.

7. It Settles Family Disputes.

If you designate who gets what in a legal will, "Aunt Peggy" can't argue with "Cousin Fred" over who gets Grandma's cherished china set and basket collection.

8. You'll Ease Your Family's Grief.

If you die without a will, your family will have to untangle your affairs, guess at any gift intentions, and spend a lot of time, money, and effort in probate court while the government settles your estate.

9. You'll Be Able To Choose an Executor.

If you don't have a will, the court will decide who is in charge of handling your final affairs. It won't matter if you had a loved one or a trusted family friend in mind, because it wasn't recorded in a legal document.

10. You Won't Lose Power Over Your Legacy.

Don't miss the chance to invest in your own legacy by designating a gift to support your favorite causes. By creating a will, you'll have the opportunity to have a big impact on the future of the IEEE Foundation, with no impact on your day-to-day cash flow. Additionally, everyone who includes the IEEE Foundation in their estate plan is welcome to join the Foundation's estate planning donor recognition group, the **IEEE Goldsmith Legacy League**.



The IEEE Foundation Can Help

Are you ready to create a valid will or estate plan? Want to learn more about the process? As you plan your estate affairs, consider the impact of including charities, such as the IEEE Foundation, as beneficiaries.

If you're interested in learning more about how your will can help fulfill your philanthropic goals, contact Danny DeLiberato, IEEE Foundation development officer, at +1 732.562.5446 or email at d.deliberato@ieee.org.

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The IEEE History Committee Presents Two Book Awards in 2025

The 2025 IEEE William and Joyce Middleton Electrical Engineering History Award

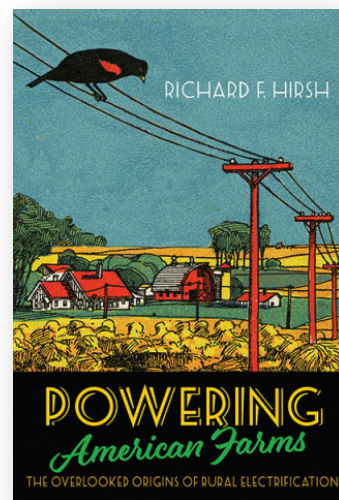


Established in 2014 by a gift from the estates of longtime IEEE leader William W. Middleton and his wife Joyce F. Middleton in the form of a bequest to the IEEE Foundation, the [IEEE William and Joyce Middleton Electrical Engineering History Award](#) annually recognizes the author of a book published within the previous three years on the history of an IEEE-related technology that both exemplifies exceptional scholarship and reaches beyond academic communities towards a broad public audience.

The IEEE William and Joyce Middleton Electrical Engineering History Award was given to Richard F. Hirsh for his 2022 book, *Powering American Farms: The Overlooked Origins of Rural Electrification*.

A professor of History of Technology and Science & Technology Studies at Virginia Polytechnic Institute and State University (Virginia Tech) in Blacksburg, VA, USA, author Richard Hirsh holds a master's degree in Physics and a Ph.D. in the History of Science from the University of Wisconsin-Madison. His book challenges popular, long-held narratives about the electrification of U.S. farms during the Depression era. By sharing previously unexamined evidence, he presents a more nuanced description of the relationship between utility companies and rural customers in the 1920s, 1930s, and beyond.

"My treatise confronts standard accounts of rural electrification, which criticize private electric utilities for neglecting farmers in the 1920s and placing the responsibility on the benevolent federal government during the New Deal in the 1930s," Hirsh said of his topic. "Instead, my research shows that some power company managers aimed to electrify farms in the 1920s and successfully quadrupled rural connections between 1923 and 1933. And even after the government entered the rural electrification business, private companies continued to expand their efforts, leading to almost universal service—provided by both public and private electricity suppliers—by the late 1950s. I'm very pleased that *Powering American Farms* received the Middleton Award," said Hirsh.



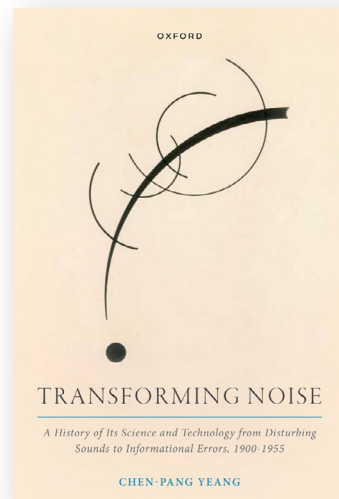
The Inaugural IEEE Emerson Pugh History of Technology Book Prize

A new book award was established thanks to a bequest from the estate of Emerson Pugh—former President of IEEE and the IEEE Foundation, Chair of the IEEE History Committee, and author of several technical history books—the [IEEE Emerson Pugh History of Technology Book Prize](#) recognizes a book published within the previous three years on the history of an IEEE-related technology that exemplifies exceptional scholarship and appeals to a technical audience.

The inaugural IEEE Emerson Pugh History of Technology Book Prize was awarded to Chen-Pang Yeang, Professor and Director of the Special Project on Scientific Instruments within the Institute for History and Philosophy of Science and Technology at the University of Toronto. Yeang's book, *Transforming Noise: A History of Its Science and Technology from Disturbing Sounds to Informational Errors, 1900-1955* (Oxford University Press) discusses how engineers and physicists worked to understand and control random fluctuations during the first half of the 20th century and how disruptions once regarded as "noise" ultimately evolved into the signals, information, and big data of the modern era.

"In today's data-rich and information-saturated world, noise is ubiquitous and omnipresent, from stock markets and election polls to genomic pathways and quantum computing, but less than a century ago, noise just meant disturbing sound," Yeang said of his award-winning book. "How and why did this transformation happen, and what were the significance and implications of this historical change? In *Transforming Noise*, I try to shed light on the process that turned noise from a sonic attribute to an informational concept, and on the development of worldviews, methods, and techniques that have helped scientists and technologists understand and tackle noise. It's my great honor that *Transforming Noise* has received the 2025 IEEE Emerson Pugh History of Technology Book Prize," continued Yeang.

Thanks to the generosity of the William and Joyce Middleton and Emerson Pugh estates, these annual recognitions are possible.



Learn more!

If you would like to learn more about how you can include the IEEE Foundation in your estate plans, scan the QR code.



IEEE Memorial Fund Honors Magnet Tech Pioneer Swarn Kalsi



The IEEE Foundation established the [EPICS in IEEE Dr. Swarn S. Kalsi Community of Projects Fund](#) in 2025 to support projects “designed to inspire multidisciplinary teams of engineering students to collaborate and engineer solutions to address local community needs.”

The [EPICS in IEEE](#) initiative provides opportunities for students to engage in service learning and collaborate proactively with engineering professionals and local community organizations to develop solutions that address local challenges.

The new fund was created by the family of IEEE Life Fellow Swarn S. Kalsi to honor his legacy as a pioneer of temperature-superconducting magnet technology. Kalsi died on 2 March 2025 at the age of 85.

He was a devoted IEEE volunteer, passionate about the importance of hands-on education and supporting up-and-coming engineers.

“Dad believed that education, especially an engineering degree, had the power to change lives,” Kalsi’s son, Sonny, says. “He was a lifelong teacher who cared deeply about all around him and wanted to share his knowledge.”

“Dad’s desire was for each individual to reach their full potential, and often said that ‘engineers build the future,’” says Kalsi’s daughter, Kiran. “In that way, the EPICS in IEEE program seemed like a natural way to honor him while supporting the next generation of engineers.”

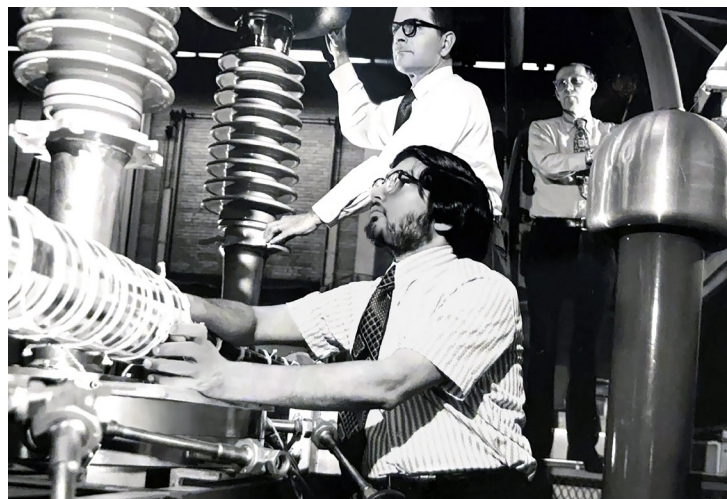
Keeping the Legacy Alive

The Kalsi family made the single largest pledge in the EPICS program’s history, according to Karen Galuchie, IEEE Foundation executive director.

Jamie Moesch, managing director of IEEE Educational Activities, is grateful, saying, “Thanks to the Kalsi family’s incredible generosity, we can provide long-term support for service-learning projects for years to come, further empowering the next generation of engineers to advance technology for humanity.”

Former Kalsi colleagues and mentees have also contributed to the fund. James Storey, a senior scientist at Robinson Research Institute in Lower Hutt, New Zealand, supports the fund, for example. He worked with Kalsi on a superconducting project. “Swarn was the team’s most valuable collaborator, informing our superconducting motor research programs for more than a decade,” Storey says. “I knew him as—besides being incredibly knowledgeable—a very kind, generous, and hospitable person. It was a true privilege to be able to learn from him.”

This article is an edited excerpt of the “[IEEE Memorial Fund Honors Magnet Tech Pioneer Swarn Kalsi: It Supports the EPICS in IEEE Program](#),” article published in The Institute on 16 October 2025.



IEEE Life Fellow Swarn S. Kalsi’s [forefront] work focused on designing and building superconducting magnets for motors and generators, power cables, and fault current limiters.

Establish a Memorial Fund

The IEEE Foundation partners with IEEE groups and the families of IEEE members to create memorial funds, which pay tribute to family members, friends, colleagues, teachers, professors, students, and others. This type of tribute honors someone special while supporting future generations of engineers and celebrating innovation.

“The creation of the new EPICS in IEEE Dr. Swarn S. Kalsi Community of Projects Fund is a beautiful example of how an IEEE member’s impact can extend well beyond their lifetime,” says Galuchie. “In this case, Kalsi’s family memorialized and supported his deep connection to IEEE and to the value of education by continuing his legacy through his professional home. Through the global, hands-on educational opportunities this program offers to help advance technology for the benefit of humanity, EPICS in IEEE was a perfect match for Kalsi’s passion, and we’re so grateful to the Kalsi family for their generous and enduring gift.” ■

Learn more!

If you are interested in learning more about memorial and tribute funds, visit www.ieeefoundation.org/ways-to-give/tribute-giving

For more information on the EPICS in IEEE Dr. Swarn S. Kalsi Community of Projects Fund or to donate to the initiative, scan the QR code:



IEEE Foundation Happenings

Congratulations to Karen Panetta, IEEE Foundation vice president, programs



We're proud to celebrate Karen Panetta on receiving two distinguished honors: the 2026 IEEE Mildred Dresselhaus Medal and the 2025 Robert S. Walleigh Distinguished Contributions to Engineering Professionalism Award from IEEE-USA. Together, these recognitions honor not only her technical excellence but also her enduring commitment to mentorship and education.

Congratulations to Tomy Sebastian, IEEE Foundation director



Tomy Sebastian was elected to the United States National Academy of Engineering (NAE). Election to the NAE is among the highest professional distinctions accorded to an engineer. Tomy was elected for his contributions to the design and development of automotive electrification systems.

Tomy joins fellow IEEE Foundation Directors Alex Acero, Philip Krein, John McDonald, Karen Panetta, and Sarah Rajala as an NAE member.

Congratulations to IEEE Foundation Director Sarah Spurgeon



At the IEEE November Meeting Series in New York, NY, USA, Sarah Spurgeon had the honor of being inducted into IEEE-Eta Kappa Nu (HKN) as a professional member. Candidates embody the core values of IEEE-HKN: outstanding scholarship, impeccable character, and a dedication to lifelong learning and service. Membership is based on a candidate's record of contributions to the field, demonstrated leadership, and community service.

Thank You for Supporting 2025 #IEEEGIVING TUESDAY



The IEEE Foundation is thrilled to announce the overwhelming success of the 2025 #IEEEGivingTuesday campaign, marking it as the most successful for the IEEE Foundation to date. More than 650 dedicated donors came together to generously contribute US\$233,000. Eighteen charitable programs received well-deserved incentive grants due to their high activity and engagement throughout the campaign. A special thank you to the IEEE Foundation Board for collectively donating US\$75,000 to establish a dollar-for-dollar match to support the Giving Tuesday campaign.



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