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Jon C. Taenzer Memorial Fund

Supporting Positive Initiatives Worldwide

Generosity can often have positive and far-reaching effects – and this has never been more clearly demonstrated than by the indelible impact the legacy of Jon C. Taenzer, through the Jon C. Taenzer Memorial Fund, is having on communities worldwide.

Established by the IEEE Foundation in 2019 thanks to a generous bequest from the Estate of Jon C. Taenzer – a renowned research engineer, senior scientist, electronics engineering inventor/patent holder, author, IEEE Life Senior Member and ***IEEE Goldsmith Legacy League*** member who passed in 2019 – this planned gift has been designated to support engineers in developing countries and fund breakthroughs in aids for the disabled.

Since 2019, the Jon C. Taenzer Memorial Fund has supported a total of eight dynamic initiatives, the most recent of which include the following:

- **IEEE HAC/SIGHT Taenzer Grant Program** – This partnership of IEEE's Humanitarian Activities Committee (HAC) and Special Interest Group on Humanitarian Technology (SIGHT) will support a three-year granting program dedicated to advancing technologies for the disabled in industrialized and developing countries and to supporting engineers in third-world countries.
- ***IEEE Spectrum* Fellowship Program** – This initiative involves the creation of a three-year IEEE *Spectrum* Disabled Writer Fellowship program to bring writing from disabled journalists and expert authors into *Spectrum* and help make *Spectrum* an authoritative and credible voice in this field.
- **IEEE Smart Village Solar-Powered Milling Program** – This project, which involves the installation of a solar-powered milling unit in the Democratic Republic of Congo for the production of flour, will positively impact lives and livelihoods by providing high-quality, low-cost flour to 500,000 people per month in the country's Bukavu-Goma region.
- **IEEE Smart Village Containerized Solar Bakery Program** – This project, which involves the introduction of solar-powered bakery technology in the Bukavu-Goma region of the Democratic Republic of Congo, will provide 500,000 people per month with access to high-quality, low-cost, and nutritionally-supplemented bread products.
- **EPICS in IEEE's Access and Abilities Competition** – In light of the fact that 15% of the world's population lives with disabilities, this competition challenges university students around the globe to use their engineering skills to help solve accessibility issues within their communities. *(Continued on page 2)*

IEEE-HKN Epsilon Xi Chapter student members adapt a battery-powered, ride-on toy car for a child with disabilities as part of the 'Go Baby Go' project.

'Go Baby Go' is a prime example of the type of projects EPICS in IEEE seeks to fund as part of the Access and Abilities Competition currently underway thanks to the bequest received from the Estate of Jon C. Taenzer.

Jon C. Taenzer Memorial Fund

Cover Story Continued

A BRIDGE TO A BETTER TOMORROW

Leaders of several of the aforementioned initiatives are excited to express their gratitude for the support they have received from the Jon C. Taenzer Memorial Fund and the far-reaching impact it will have:

"Providing financial support to the IEEE Smart Village program is an opportunity to make a difference in a remote community by improving the quality and standard of living through electricity, education, and entrepreneurship, and money donated to IEEE Smart Village through the IEEE Foundation is used to provide seed money to entrepreneurs whose efforts could potentially benefit millions of people," said John P. Nelson, P.E., President of IEEE Smart Village. As it relates to the new Flour Milling and Solar Bakery programs in the Democratic Republic of Congo, he added, "support from the Jon C. Taenzer Memorial Fund will be critical in this historic conflict zone, especially as the recent Russian-Ukrainian conflict has made food insecurity an even more urgent struggle than before."

Susan Hassler, Editor-in-Chief Emeritus of *IEEE Spectrum,* agreed that the support from the Jon C. Taenzer Memorial Fund will be transformative. "*Spectrum* has always strived to give its readers honest, insightful, and credible assessments of technological developments," she said. "With funding from the IEEE Foundation, *Spectrum* will be able to expand its coverage and analysis of emerging technologies intended to improve the lives of people with disabilities and become a center of excellence for people looking for the latest developments in assistive technology. Support from the Jon C. Taenzer Memorial Fund allows *Spectrum* to actively engage with the disabled writer community and shine a spotlight on the issues surrounding assistive technologies," confirmed Hassler, "and *Spectrum* is immensely grateful and lucky to have it!"

"Our strong partnership with the IEEE Foundation through the Jon C. Taenzer Memorial Fund will enable IEEE HAC/SIGHT to empower technologists around the globe to advance assistive technologies and build an inclusive future for disabled individuals worldwide," concurred Sampathkumar Veeraraghavan, Global Chair, IEEE Humanitarian Activities Committee (HAC). "Planned Gifts such as the Jon C. Taenzer Memorial Fund empower and nurture technologists and future leaders by providing them with invaluable opportunities to develop their leadership and technical skills, address global humanitarian challenges through technological innovations, and positively impact the global community at large."

"The IEEE Foundation is grateful to Jon Taenzer for leaving us such a generous bequest that we are turning into action across so many diverse and impactful initiatives being deployed across the globe," said Karen Galuchie, IEEE Foundation Executive Director. Learn how you too can leave a bequest to the IEEE Foundation to make your lasting impact at: ieeefoundation.org/how-to-give/tomorrow/trust-provision. ■

IEEE Smart Village

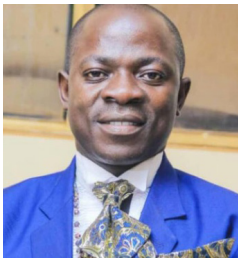
Supports Students to Create Global Solutions

IEEE Smart Village (ISV) delivers three interrelated and interdependent pillars - Energy, Education and Entrepreneurship - that empower off grid communities. Since 2015, the centerpiece of the ISV Education pillar is the scholarships offered to enable ISV related development practitioners to attend the Regis University Master of Development Practice (MDP) where they can go beyond technical skills, and gain a better understanding of how to execute sustainable community development. Over the years, more than 30 individuals from 16 countries have participated and their communities have benefited from the knowledge they gained.

IEEE smart village®
Power a Village, Empower Community

SAMANTHA NIYOYITA

Samantha, a second year MDP student, is an industrial engineer and aspiring community entrepreneur who wants to start a consulting firm that helps young entrepreneurs identify and address community challenges more effectively. She states, "MDP has given me the opportunity to work on real-world problems within established firms, allowing me to learn how to manage a project with various stakeholders with real-world implications. Learning and adjusting to new cultures, as well as adhering to unfamiliar local policies, are all regular project challenges. The ability to learn the tools to use in various phases of a project, as well as the exposure I will gain as a result of this program, will help me commercialize and succeed as an entrepreneur."



JOSEPH KAYONGA

Joseph, a second year MDP student, is an agribusiness development professional with over 13 years of experience in the agribusiness sector in Uganda and East Africa. He joined MDP Program upon joining Africa Development Promise, one of ISV's supported in-country energy developers, as Cooperative Technical Advisor and was later promoted to a Country Director's role, providing the overall leadership of the organization's agriculture and vocational programs to improve lives and livelihoods of rural women.

KANEKWA KACHINGA

Kanekwa, a second year MDP student, is the editor in chief of the IEEE Smart Village EmPower newsletter and CEO ISV Kuumba Smart Vision, Zambia involving the Gemstone Cutting and Polishing. Through the classes, she has applied concepts in the development of the project such as the importance of including women. The program has helped Kanekwa to better communicate using various tools with the women and girls and monitoring the project from inception. The diverse cultures and beliefs in the class have challenged her line of thought and helped understand how the two play an important role in development.

MERCY CHELANGAT K.

Mercy, a third year MDP student, is an electrical engineer who leverages emerging technologies to bring electricity, education and enterprise to underserved communities across Africa. She recently commissioned a solar microgrid water pumping system for drip irrigation in northern Kenya with the support of IEEE Smart Village. Mercy and her team work to improve the capacities of rural villages to be self-sufficient and use electricity to create sustainable micro-enterprises that have a long-lasting impact on local families and future generations. The Regis MDP course has been very instrumental in providing Mercy with the right skills needed to manage the projects successfully.

Mercy shares that "This is a lifetime opportunity for me to blend in my engineering skills with social and entrepreneurial skills. This is necessary in order to ethically conduct research at the field while at the same time adhering to the best of practices. For effective community development, there are certain aspects that need to be followed to ensure sustainability. I am glad to be receiving well-tailored lessons on the selected coursework." ■

REGIS UNIVERSITY

About the Regis University's Master of Development Practice (MDP)

Regis University is located in Denver, CO, USA. Its Master of Development Practice (MDP) is an innovative degree that contributes to the sustainability of our planet and to the health and well-being of communities worldwide. Classes use real-time video conferencing to bring students from around the world together to co-create truly global solutions to development challenges.

EPICS in IEEE Student Teams Tackling Environmental Sustainability Challenges

Every region of the world faces opportunities to improve environmental sustainability such as integrating renewable energy sources, creating potable water, reducing waste streams, and minimizing resource consumption. Given the importance of these challenges and the need for innovative solutions, EPICS in IEEE has successfully launched the EPICS in IEEE Environmental Competition thanks to the support of United Engineering Foundation (UEF).

Since the competition launch, the EPICS in IEEE has approved and funded ten team-based service learning projects from eight different US-based Institutions. From a litter-collecting robot for a local lake to nitrogen-sensing drones for understanding air quality, these projects provide hands-on learning and community engagement experiences crucial for professional skills development for secondary and university students.

All the projects are well underway and the students are learning and problem-solving as they advance their projects. EPICS in IEEE checked in with some of the teams to see what progress they are making.

HYDRATION STATION PROJECT (ARIZONA STATE UNIVERSITY, TEMPE, AZ, USA)

The Hydration Station project is expected to provide up to 2,050 homeless people with clean drinking water each month while eliminating as many as 1,000 plastic water bottles a week at the Human Services Campus, a non-profit serving adults experiencing homelessness in Phoenix, AZ, USA. The Station will contain two major components: A sanitation system that will clean the bottles with soap and a refilling system that will provide filtered water.

"The ability for the clients of the Human Services Campus to have their own reusable bottles not only helps the environment – it also helps give clients a sense of ownership and belonging," said Krickette Wetherington, Project Manager at the Action Nexus at Arizona State University Watts College of Public Service & Community Solutions, who serves as a liaison between the EPICS in IEEE team and the Human Services Campus. "It also allows for a level of independence and brings dignity to those who use their bottle versus having to ask each time they need water."

The city's homeless are far from the only ones benefiting from the EPICS in IEEE funded project. Storino, a Chemical engineering student and member of the Hydration Station Project team, said the project is helping his team develop vital skills beyond the classroom. "Communication and collaboration are the two main things that I've learned throughout EPICS," he said. "It has an engineering component to it and also an interpersonal component that involves interacting with stakeholders, your teammates – a whole network."

SPATIAL EXTENT MONITORING OF COASTAL SUNNY-DAY FLOODING PROJECT (NORTH CAROLINA STATE UNIVERSITY, RALEIGH, NC, USA)

This project includes six students from North Carolina State University (NCSU), along with 2 volunteers, who are tackling the tidal flooding challenges in their local community. Their solution focuses on providing the public with needed information, such as the spatial and potential impacts of tidal flooding, through further research and a self-powered camera.

On May 14th, the student team took a trip to Carolina Beach to deploy the first camera module prototype. On the way to the deployment site, the team had to take a detour as parts of Canal Drive were closed due to sunny day flooding. This unexpected opportunity allowed the team to see the phenomenon in person and how it impacts day-to-day life in the area.

Through this hands-on experience, the student team is learning invaluable lessons about negotiating product requirements, as well as the value of field testing on both small and large scales. With the results from this field trip, the project team will continue to refine their prototype to best meet the needs of the local community.

The first camera module prototype that the NC State Sunny-Day Flooding EPICS in IEEE team deployed at Carolina Beach.

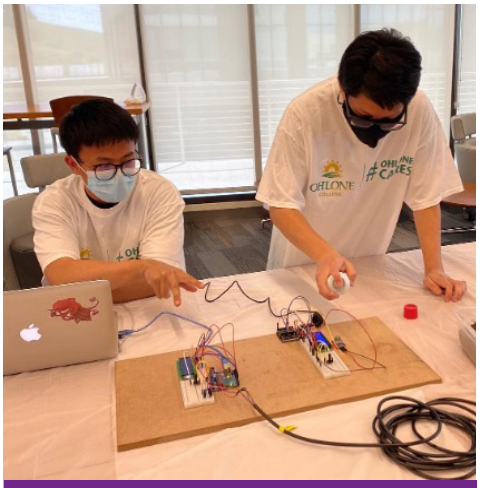
PROJECT DIANA (OHLONE COLLEGE, NEWARK, CA, USA)

Seven students of IEEE STEAM Club at Ohlone College have taken on the wide-scale goal of reducing harmful gasses to preserve both native and endangered species while improving biodiversity in the surrounding area. Project DIANA is in Phase One of a three-phase plan to battle this problem. Phase One includes research and data acquisition.

The Project DIANA student team is composed of computer science, robotics, and engineering students. "Working with a diverse team is beneficial because everyone is bringing in their different perspectives, it's been constrictive and informative," says Preyasi Shah, Co-manager of Project DIANA.

In the coming months, the team plans on switching focus to Phase Two. The goals are to launch the drone on a practice flight, successfully calibrate its sensors, and prepare the collected sensor data for future use and analysis.

The EPICS in IEEE Environmental competition will wrap up during the fourth quarter of 2022 and the committee is excited to see not only the results of the projects in the local communities but the impact on the engineering students. "The preliminary impact from the student teams already demonstrates an enriched student experience and the possibility for significant community impact," said Dr. Stephanie Gillespie, the 2022 EPICS in IEEE Chair. EPICS in IEEE would like to especially thank the UEF and the IEEE Foundation for supporting such a worthwhile competition. ■



Team members of Project DIANA working together to test sensors to be used in their prototype.

Celebrating Donors and the Students they Support during the IEEE Antennas & Propagation Society Symposium

Brilliant minds gathered from around the world for technical talks, exhibitions, workshops and demonstrations in the field of antennas and propagation and associated technical fields during the 2022 IEEE International Symposium on Antennas & Propagation held from 10 to 15 July in Denver, CO, USA. IEEE Foundation Senior Development Officer Michael Deering was there to celebrate the student beneficiaries of the IEEE AP-S C. J. Reddy Travel Grant for Graduate Students and the Raj Mittra Travel Grant and the donors who make the programs possible.

IEEE AP-S C. J. Reddy Travel Grant for Graduate Students, funded by C.J. Reddy, aims to help graduate students attend the annual Symposium and further their research work in the field of antennas and propagation. Six students were supported in 2022: Ali Alqaraghul (Northeastern University), Quoc Hung Dang (The University of Adelaide), Firas Dawod (South Dakota School of Mines), Audrey Evans (University of Wisconsin-Madison), Siddhartha Panigrahi (National Taiwan University), and Pavle Petrovic´ (University of Belgrade)."■

C.J. Reddy congratulates 2020 CJ Reddy Travel Grantee Clement Henry.

*The IEEE Foundation is proud to work with donors like C.J. Reddy and Raj Mitra to nurture the next generation of engineers, scientists and technologists. Both C.J. and Raj are Honored Philanthropists and members of the **IEEE Heritage Circle**, our cumulative giving donor recognition group.*

Raj Mittra congratulates Xingqi Zhang.

The Raj Mittra Travel Grant, funded by Raj Mittra, supports travel by one Ph.D. level scientist to attend the annual IEEE AP-S Symposium. The 2022 recipient is Dr. Xingqi Zhang. He is an Assistant Professor at the University College Dublin (UCD) in Dublin, Ireland.

Furthering the Field of Information Theory

In a well-received presentation to the IEEE North American School of Information Theory at the University of California at Los Angeles (UCLA) during August 2022, Elza Erkip, Ph.D., the Information Theory Society's esteemed 2022 Padovani Lecturer, discussed how information theory can be used to enhance privacy in the online world. But addressing solutions to this modern-day concern is just one of the ways in which the IEEE Fellow, 2018 IEEE Information Theory Society President, and Institute Professor in the Electrical and Computer Engineering Department at New York University's (NYU) Tandon School of Engineering hopes to continue impacting the field of information theory.

"I loved math as a kid – it was my favorite subject," shared Erkip, a native of Turkey who holds a B.S. in Electrical and Electronics Engineering from Middle East Technical University (Ankara, Turkey) and M.S. and Ph.D. degrees in Electrical Engineering from Stanford University (Stanford, CA, USA). "One of my older brothers is a math professor, the other is an industrial engineer, and my dad was a civil engineer, so we have a lot of math and engineering in our family," she said of an interest in information theory that was sparked during graduate school when she studied with leading information theorist and author Thomas Cover.

Since then, Dr. Erkip has amassed extensive recognition in the field, including receipt of the NSF CAREER award (2001), IEEE Communications Society WICE Outstanding Achievement Award (2016), IEEE Communications Society Communication Theory Technical Committee (CTTC) Technical Achievement Award (2018), and IEEE Communications Society Edwin Howard Armstrong Achievement Award (2021). Her recent designation as the 2022 Padovani Lecturer (based on a program established and funded by Dr. Roberto Padovani in 2009) recognizes her as an outstanding member of the information theory community and provided her the opportunity to deliver a lecture at one of the IEEE Information Theory Society's (ITSoc) Schools of Information Theory for the benefit of students and post-doctoral researchers.

Elza Erkip, IEEE Fellow and 2022 IEEE Information Theory Society Padovani Lecturer.

During her presentation, Dr. Erkip discussed the ease with which people's privacy can be compromised based on traces they leave when browsing the web. "I've been looking into this issue for a while and working to define and build measures that enable greater privacy," said Erkip, who used her presentation platform to highlight her activities in this area and how information theoretic tools can be used to better understand and address this practical problem.

For Dr. Erkip, being named the 2022 Padovani Lecturer truly comes full circle. "I've met Dr. Padovani on several occasions and he was so generous with his time and the funds to establish the Padovani Lecturer Program, for which I'm so grateful," she said. "Receiving this award from ITSoc, my intellectual home, and knowing how accomplished Dr. Padovani is in the field make this honor even more special." Padovani's generosity earned him an honorable place in the IEEE Heritage Circle, the IEEE Foundation's cumulative giving recognition group, at the Alexander Bell giving level.

Looking ahead, Dr. Erkip hopes to continue contributing to the field of information theory in indelible ways. Among other initiatives, she and colleagues at NYU "are working on an NSF-sponsored project designed to build future generations of wireless systems with security and privacy in mind," she said, "and we hope that it will garner interest among information theorists and wireless practitioners going forward."

She also hopes to inspire future generations of information theorists. "It was exciting to deliver my lecture to students at one of the biggest schools in Information Theory," Dr. Erkip said. "These students shape the future of the field and I hope that by sharing the importance of privacy-related issues, some will be intrigued by and motivated to address those challenges." ■

IEEE Life Members Program Launches New Website

IEEE Life members

IEEE's Life Members Committee is thrilled to announce the launch of its new website, life.ieee.org.

The new Life Members website showcases the impact donors make through programs, opportunities, and resources that keep Life Members connected. Features of the website include:

- Direction for how Members can become involved with the Life Member program
- News and events to keep Members and visitors current on program activities, including an archival access to Life Member newsletters
- Awards and recognition opportunities for Life Members and partnering organizations
- Volunteer resources in support of expanding the program's reach and impact globally

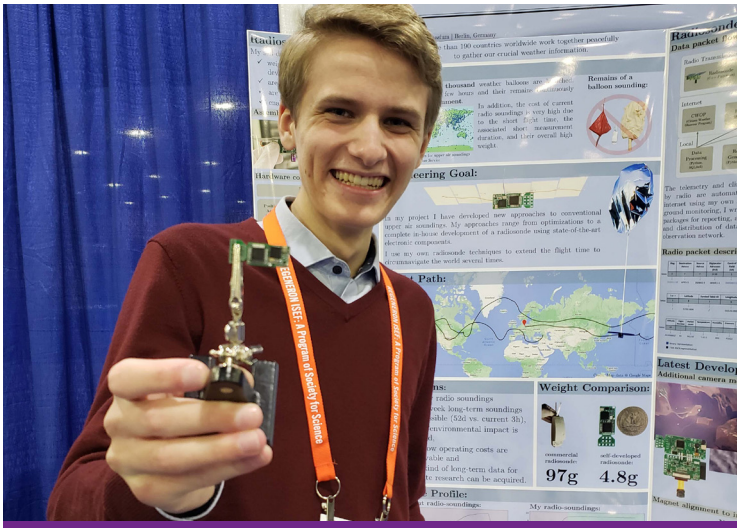
Sustainable Weather Balloon Wins Student a $10,000 Scholarship

Every day thousands of weather balloons are released all over the world, using radiosondes to measure pressure, relative humidity and temperature. These balloons aren't environmentally friendly. After a few hours in the air, a weather balloon bursts and its radiosonde falls to the ground via a parachute. Out of the 75,000 radiosondes launched every year in the United States, only 20 percent are found and returned, according to the National Weather Service. The cost of replacing them adds up.

Amon Schumann, a senior at the Robert-Havemann-Gymnasium school, in Berlin, Germany and winner of the 2022 IEEE Presidents' Scholarship, has invented eco-friendly and cost-effective solutions. Amon's radiosonde for weather balloons is equipped with a solar-powered battery and GPS.

Amon built a coin-size, solar-powered radiosonde that weighs 4.8 grams — far more compact than current models, which weigh about 96 g. The weather balloon he designed can stay in the air longer than traditional models as well. His Small Radiosondes on a Great Mission project was showcased in May at the Regeneron International Science and Engineering Fair held in Atlanta.

At a special awards ceremony, Amon was caught by surprise when it was announced that his project received the IEEE Presidents' Scholarship. The award was established by the IEEE Foundation to acknowledge a deserving student for a project that demonstrates an understanding of electrical or electronics engineering, computer science, or other IEEE field of interest. The scholarship is administered on behalf of IEEE Educational Activities and is payable over four years of undergraduate university study. Amon also received a complimentary IEEE student membership. Susan K. "Kathy" Land, the 2021 IEEE president, presented Amon with this year's scholarship. Amon says he plans to study electrical engineering at a technical university in Berlin, Germany. ■



Amon Schumann, 2022 IEEE Presidents' Scholarship recipient

Navya Ramakrishnan, 2022 second place recipient

This year's second-place recipient was Navya Ramakrishnan, a senior at Plano Senior High School, in Texas, USA. Her project titled "A Home Automation System for Neuromuscular Disorder Patients Using Brain-Computer Interface" uses a brain-computer interface to help those with paralysis and neuromuscular disorders do household tasks such as turning on a television. Ramakrishnan said she will be attending Harvard University, Cambridge, MA, USA this year to pursue a degree in computer science with a concentration in mind, brain, and behavior.

Adelle Jia Xin Yong, 2022 third place recipient

Adelle Jia Xin Yong, a junior at Westlake High School in Austin, Texas, USA was awarded third place for her Smart Leukemia Labs project. Her portable microscope and diagnostic tool accurately and quickly detects acute lymphoblastic leukemia.

Development of the website commenced in 2021 and was a collaborative effort. "For about a year, we conducted the painstaking process of reviewing all of our activities and reimagining a more intuitive and efficient way to connect our Members and the public to the million years of professional and life experiences that IEEE Life Members have to offer," according to Howard Wolfman, Chair of IEEE's Life Members Committee.

"In addition to improving connectivity and fellowship among our life members," Wolfman says, "we have begun taking bold, new measures to support the next generation of innovators." Throughout this year and next, he says, the Life Members Committee will collaborate with the IEEE Foundation to raise funds to support leadership-development events and opportunities for IEEE's student members. ■

IEEE Student Members Tackle Public Policy Topics in Washington, DC

Each year, IEEE-USA selects up to three outstanding IEEE student members with a keen interest in public policy to participate in the nine-week program in Washington, D.C, USA called Washington Internships for Students of Engineering (WISE). Students discover how government officials make decisions on complex technological issues, while also learning how engineers and scientists can contribute to the legislative process and regulatory decision-making. Each WISE intern researches a public policy topic of their choosing, experiences meetings with policymakers and Federal agencies, and prepares a policy paper, which they present.

Meet Kevin Guan and McKenzy Heavlin who were selected as the 2022 IEEE-USA WISE interns.

KEVIN GUAN

Kevin Guan is a rising senior at the University of California, Irvine (UCI). He is an electrical engineering major with a specialization in Semiconductors and Optoelectronics as well as a concentration in Digital Signal Processing. He is also an undergraduate researcher working on IGZO Thin Film Transistors. A member of UCI's IEEE-HKN Chapter, he will serve as its President this coming year. He is interested in going to graduate school where he will continue working on the intersection of technology and policy.

Kevin Guan

Kevin focused his research on "Right to Repair" and how public policy recommendations may help change the trajectory of the industrial complex. His main focus was on how supporting secondary markets for electronics can help reduce the negative externalities associated with producing electronics at scale.

He says of the experience,"WISE is one of those rare opportunities that encourages you to explore your palate for social change and your vision of where technology should lead us. There's no shortage of talent in DC where new connections are always around the corner."

MCKENZY HEAVLIN

McKenzy Heavlin, originally from Spruce Pine, NC, USA is a master's student at North Carolina State University (NC State) in Raleigh, NC, USA studying electrical engineering. He received his B.S. in electrical engineering with a minor in mathematics from NC State in May 2022. Following the completion of his master's degree, McKenzy plans on pursuing his P.h.D in electrical engineering with a focus on industrial controls and robotics. On campus, McKenzy has served in numerous leadership roles most notably as a two term Student Body President and as Student Body Vice President and joined NC State's IEEE student branch during his sophomore year.


McKenzy Heavlin

As a WISE intern, McKenzy focused on cybersecurity of the electric grid and proposed policy solutions to solve the challenges associated with distribution infrastructure security. Thanks to his WISE experience, McKenzy is eager to stay involved with engineering public policy in his future career and looks forward to being an active member of IEEE.

He shared that: "The WISE program was extremely beneficial in helping me understand the next steps of my education and career while showcasing the numerous ways engineers can influence government policies. As I continue to explore the intersection of engineering and policy, I will remember the program as foundational to my interest and success."

Annually, the IEEE-USA WISE interns are funded by a three way partnership between the IEEE Life Members Committee, IEEE Technical Activities and IEEE-USA via the IEEE Student Public Policy Fund of the IEEE Foundation. ■

Students with a Passion for Engineering History

Donations to the IEEE Foundation enable, among other initiatives, IEEE programs that support and encourage the next generation of innovators. Two donor-supported programs that benefit the student, IEEE and those interested in the history of technology are, *The IEEE Elizabeth & Emerson Pugh Young Scholar in Residence and The IEEE Life Member History Fellowship.*

The IEEE Elizabeth & Emerson Pugh Young Scholar in Residence program, enabled by a generous donation from its namesakes, provides research experience for students in the history of technology and engineering, while enlisting the help of promising scholars for the History Center's projects.

The 2022 Pugh Visiting Scholar is Konstantinos Konstantis, a doctoral candidate in the History of Technology at the Department of History and Philosophy of Science, National and Kapodistrian University of Athens (NKUA), Athens, Greece. Konstantis graduated from the School of Electrical and Computer Engineering of the National Technical University of Athens. Konstantis' work is driven by the belief that artificial intelligence ethics cannot be adequately studied without the inclusion of an integration of science, technology and society.

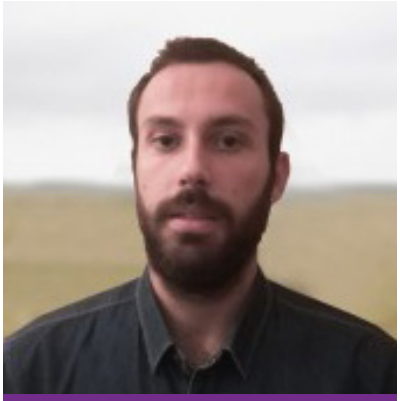
His doctoral dissertation titled, "Contextualizing the Emergence of Engineering Ethics," investigates the emergence, development and crystallization of the field of engineering ethics. Specifically, it aims at the reconceptualization of the ethical concerns that this emergence has produced, and, mainly, at the formulation of a framework within which these concerns can be addressed. It is no surprise that Konstantis will research ethics in engineering during his time with the IEEE History Center.

"I believe that being accepted as The Elizabeth & Emerson Pugh Young Scholar in Residence at the IEEE History Center [will] be ideal at this stage of my research. [It] will provide me with the necessary resources to advance in my doctoral research in the best possible environment. It is essential and necessary for my research to take advantage of a variety of primary resources of the IEEE History Center. It is my intention to focus on engineering-related material from the 1970s to the present, because it is when the first articles on engineering ethics appeared," said Konstantis when applying for the position.

The IEEE Life Member History Fellowship was established in 1977 and has been presented since 1978. The IEEE History and Life Members Committees worked together to establish it, and it is administered by the IEEE History Center. Thank you to the generous donors who support the IEEE Life Members Fund of the IEEE Foundation, which makes this fellowship possible.

David E. Dunning is the 2022-2023 IEEE Life Member History Fellowship and 45th recipient of this prestigious history of technology fellowship. Dunning holds a Ph.D. in History of Science from Princeton University, Princeton, NJ, USA. He is a Postdoctoral Research Associate at the University of Oxford, Oxford, United Kingdom and in 2022–23 will be affiliated with the University of Pennsylvania, Philadelphia, PA, USA as a Lecturer in the Integrated Studies Program.

Dunning is a historian of science, mathematics and computing in modern Europe and North America. His research explores the material and social dimensions of abstract knowledge. He is launching a project that explores the early history of programming languages in tandem with conceptions of language more broadly, investigating how different visions of human language shaped and were shaped by the evolution of programming practices. ■



Konstantinos Konstantis,
2022 IEEE Elizabeth & Emerson Pugh Young Scholar

David E. Dunnin,
2022-2023 IEEE Life Member History Fellowship

Like Mother, Like Daughter

Paving the Way for Women in Engineering

Frances Hugle was a pioneering engineer who started several companies in Silicon Valley. Linda Hugle, her daughter, was an educator and understood the importance of education and tried to help young people pursue their dreams. Working with IEEE Women in Engineering and the IEEE Foundation, Linda helped to establish the IEEE Frances B. Hugle Scholarship to memorialize the impact her mother had on the engineering community while simultaneously benefiting aspiring engineers who happen to be women.

Upon her death in 2019, Linda Hugle bequeathed a portion of her individual retirement account to grow the impact of the IEEE Frances B. Hugle Scholarship qualifying her for membership in the ***IEEE Goldsmith Legacy League***, IEEE's legacy giving donor recognition group. The Hugle Scholarship, administered by IEEE Women in Engineering, provides money for budding female engineers to pursue higher education. Every year, up to two female IEEE student members are awarded a US $2,500 scholarship. The recipients must have completed at least two years of undergraduate study in an engineering curriculum at an ABET-accredited university in the United States.

Since awarding the scholarship to its first recipient in 2018, four students have benefitted. The 2020 awardee, IEEE Graduate Student Member Olivia Figueira, said she planned to "engage with organizations such as IEEE and IEEE WIE in the future to further widen participation in engineering, as was one of Frances B. Hugle's goals."

Through Linda's philanthropic support of IEEE, she ensured her mother's #IEEELegacy and helped to nurture the next generation of women engineers and technologists.

ABOUT THE IEEE GOLDSMITH LEGACY LEAGUE

IEEE Goldsmith Legacy League celebrates the elite group of legacy giving donors who are *Forever Generous*. Named for two of the IEEE Foundation's largest estate giving donors – Gertrude and Alfred Goldsmith – Goldsmith members ensure a strong, healthy future for the IEEE Foundation for generations to come.

There are many ways to show your support. It is never too early or too late to start. As you create or update your estate plan, consider the role IEEE has played in your life and the IEEE legacy you want to leave. If you are interested in joining the ***Goldsmith Legacy League***, the IEEE Foundation team can assist you. Call +1 732 565 5446 or email Daniel DeLiberato at d.deliberato@ieee.org. ■

IEEE Women in Engineering WIE

Linda Hugle and her mother Francis

IEEE Foundation Board Happenings

Karen Panetta, Stephen Phillips and Tomy Sebastian will be joining the IEEE Foundation Board beginning in January 2023. Join us in welcoming them.

Karen Panetta **Stephen Phillips** **Tomy Sebastian**

Sarah Rajala, IEEE Foundation Vice President, Development, and John McDonald, IEEE Foundation 50th Anniversary Celebration Committee Chair, were formally inducted into the US National Academy of Engineering (NAE) at the NAE Annual Meeting in Washington DC on 2 October 2022. Join us in congratulating them on this incredible distinction!

Sarah Rajala and John McDonald, *IEEE Foundation Directors and 2022 Inductees to the US National Academy of Engineering*

The IEEE Foundation Board unanimously selected David Green as an IEEE Foundation Director Emeritus in recognition of his extraordinary contributions to the IEEE Foundation. Join us in congratulating Dave and thanking him for all he does everyday for IEEE and its Foundation. ■

David Green *named an IEEE Foundation Director Emeritus*

Ways You Give

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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.

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IEEE Foundation

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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