IEEE History Center

ISSUE 130, March 2026

More than three hundred and fifty books and more than 3,000 documents, Beck's collection documents the history of electrical utilities. See article page 4.

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IEEE History Center

The newsletter reports on the activities of the IEEE History Center and on new resources and projects in electrical and computer history. It is published three times each year—once in hard copy (July) and twice electronically (March and November) by the IEEE History Center.

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SIGNALS FROM THE DIRECTOR

Michael N. Geselowitz
Senior Director, IEEE History Center

Welcome to our first newsletter of 2026. Last year was another banner one for the IEEE History Center and our partners, the IEEE History Committee. And things didn't stop there. After the November issue went to press, the History Committee received the funding to establish a second book prize to recognize a book each year that is more technical than the Middleton Award winner. This new prize is the IEEE Emerson Pugh History of Technology Book Prize **https://history.ieee.org/programs/fellowships-prizes/ieee-emerson-pugh-history-of-technology-book-prize/** (see page 3). Emerson Pugh, a past president of IEEE, past president of the IEEE Foundation, and past chair of the IEEE History Center is the largest benefactor in the history of the IEEE History Center. This final gift was a bequest; Emerson passed away in December 2024.

In November 2025, the IEEE Global Museum presented at the IEEE Board Series in New York City, IEEE REACH participated in the

HOW CAN THE HISTORY CENTER HELP YOU?

A Handy Guide to Some of Our Programs and Contacts

Engineering & Technology History Wiki: **https://ethw.org/Main_Page**

List of dedicated IEEE Milestones: **https://ethw.org/Milestones:List_of_Milestones**

How to Propose an IEEE Milestone:
https://ieeemilestones.ethw.org/Milestone_Guidelines_and_How_to_Propose_a_Milestone

Milestone proposals in process: **http://ieeemilestones.ethw.org/Milestones_Status_Report**

Oral History Collection: **https://ethw.org/Oral-History:List_of_all_Oral_Histories**

REACH Program (free online materials for teaching the history of technology): **https://reach.ieee.org/**

History Events Calendar: **https://history.ieee.org/news-events/events/**

Support for scholars:

Fellowship in the History of Electrical and Computing Technologies:
https://history.ieee.org/programs/fellowships-prizes/ieee-life-members-fellowship-in-electrical-history/

Pugh Young Scholar in Residence:
https://history.ieee.org/programs/fellowships-prizes/pugh-young-scholar-in-residence/

Middleton History Prize (awarded to a book in the history of technology): **https://history.ieee.org/programs/fellowships-prizes/ieee-william-and-joyce-middleton-electrical-engineering-history-award/**

WAYS YOU CAN HELP HISTORY

As you read this newsletter, you will see the many success stories of the IEEE History Center and the ways it nurtures the heritage of the profession. As successful as the Center is, it relies on the support and contributions—financial, intellectual, and time and effort—of many people. We ask you to help further our work by:

Proposing an IEEE Milestone—Milestones recognize significant achievements in technology **ieeemilestones.org**

Contributing a First-Hand History—Written and oral histories help us chronicle important innovators and innovations **http://ethw.org/create**

Authoring an article for the ETHW—The Engineering and Technology History Wiki (ETHW) is an authoritative collection of historical information about technology's contributions to society **ethw.org/create**

Supporting the History Center's mission with a donation.

However you can help, it is always deeply appreciated.

NEWSLETTER SUBMISSION BOX

The IEEE History Center Newsletter welcomes submissions of letters to the editor, as well as articles for its **Reminiscences** and **Relic Hunting** departments. "Reminiscences" are accounts of history of a technology from the point of view of someone who worked in the technical area or was closely connected to someone who did. They may be narrated either in the first person or third person. "Relic Hunting" are accounts of finding or tracking down tangible pieces of electrical history in interesting or unsuspected places (in situ and still operating is of particular interest). Length: 500–1210 words. Submit to **ieee-history@ieee.org**. Articles and letters to the editor may be edited for style or length.

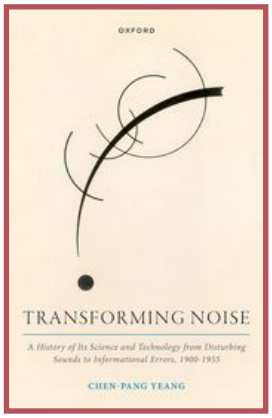
2025 mEducation Global Symposium (see page 5). In the latter part of 2025, eleven more IEEE Milestones were dedicated (including a seven-way event at Nokia Bell Labs). On the technical side, the Engineering & Technology History Wiki (**www.ethw.org**) was migrated to a new hosting service that will enable us to better serve its users.

We are not slowing down in 2026. In just the first month, REACH participated in the 2026 Future of Education Technology Conference. As this issue is going to press, REACH is planning a workshop in South Africa for mid-February. The History Center is partnering with the United States Patent and Trademark Office on a commemoration of the 150th anniversary of Bell's U.S. telephone patent in early March. The two major IEEE traveling exhibits, "Unseen Signals: Howard Armstrong and the Radio Revolution" and "Microchips that Shook the World," are opening at new venues in February (see page 5). And two more Milestone dedications are scheduled for the first quarter of 2026. Look for full reporting on these and other exciting activities in the July 2026 issue of our newsletter.

On that note, I want to describe one more development at the end of 2025. On the staff organization side, the IEEE History Center was moved from Corporate Activities to IEEE Conferences, Events and Experiences. This change does not alter the IEEE History Committee's reporting to the IEEE Board of Directors, but it shows that leadership recognizes that history is a valuable part of telling IEEE's story. In our new CEE role, the History Center will have more resources for the promotion side of its mission to preserve, research and promote the history of IEEE, its members, and their fields of interest. For example, I expect this newsletter to evolve to a new form better inform our various audiences about our programs and projects. In whatever form the newsletter takes, I hope you will continue to stay informed of these activities, and that we will continue to earn your generous philanthropic support. As always, thank you.

HISTORY COMMITTEE AND VOLUNTEER ACTIVITIES

IEEE EMERSON PUGH HISTORY OF TECHNOLOGY BOOK PRIZE ESTABLISHED



Thanks to a bequest from former IEEE President and long-time supporter of the IEEE History Center, Emerson Pugh, as well as additional funding from the IEEE Foundation, IEEE has established the IEEE Emerson Pugh History of Technology Book Prize. The Pugh Book Prize recognizes a recent book (published in the previous three years) on the history of an IEEE-related technology that exemplifies exceptional scholarship and appeals to a technical audience.

The IEEE History Committee chose *Transforming Noise: A History of its Science and Technology from Disturbing Sounds and Information Errors, 1900-1955* (2023, Oxford University Press) by Chen-Pang Yeang as the winner of the 2025 Emerson Pugh History of Technology Book Prize. **https://history.ieee.org/programs/fellowships-prizes/ieee-emerson-pugh-history-of-technology-book-prize/**

The Pugh Book Prize will be a companion to the IEEE William and Joyce Middleton Electrical Engineering History award, which recognizes a book that both exemplifies exceptional scholarship and reaches beyond academic communities toward a broad public audience. It will be endowed from the Emerson Pugh bequest to the IEEE Foundation.

Christopher Wright, Senior Manager - Programs & Governance, IEEE Foundation reported that the Foundation Board had approved the additional funding to match an additional gift from the Pugh family needed to bring the endowment up to the level needed to fund a $2,500.00 prize per annum.

"Your contributions to the **IEEE History Center Fund** preserve the heritage of the profession and its contributions to humanity.

We invite you to find out more about the Center and its programs at **https://history.ieee.org** and more about the Engineering & Technology History Wiki **www.ethw.org** "

ARCHIVES AND LIBRARY UPDATE – BILL BECK COLLECTION ACCESSIONED AND CATALOGGED

William "Bill" Otto Beck, (6 Oct 1945 - 10 Nov 2024) was a corporate historian, business reporter and weekly newspaperman. Inspired by the success of his book *Northern Lights, An Illustrated History* (1986) he co-founded the Lakeside Writers' Group in 1988 with his wife Elizabeth (Betty) Bates. At Lakeside Writers' Group, he wrote more than one hundred corporate and institutional histories over the course of more than thirty years, chiefly of American utility companies. Amongst energy historians, Beck is well-known for *PP&L: 75 Years of Powering the Future. An Illustrated History of Pennsylvania Power & Light Co.* (1995).

An avid book collector, Beck donated his book and research file collection to the IEEE History Center in 2020. Comprising more than three hundred and fifty books and more than 3,000 documents, Beck's collection forms the basis of the newly created Utilities Collection, which documents the history of electrical utilities in the United States. In this collection, hundreds of individual utility companies are documented through ephemera, photographs, newspaper clippings and articles. Materials in the book collection complement the research files, with many of the books focusing on the histories of electrical utility companies. Corporations like Pennsylvania Power & Light (PP&L), Minnesota Power, Potomac Electric Power Company (PEPCO) are well represented, as are numerous corporations from the American Mid-west.

In addition to the published books, several items are rare or unpublished, including oral histories from corporations like PEPCO, Northwestern Public Service Company, Pennsylvania Power and Light, Superior Water, Light and Power Co, MDU Resources, Minnesota Power. Also included is a three-volume set of primary documents from the Hartford Electric Light Company and a bound collection of Iowa Public Service Company employee newsletters.

This material has been catalogued in the IEEE History Center's database for easy retrieval and access. Although the IEEE History Center does not lend its material, the IEEE History Center does make its resources available to visiting scholars who are conducting research. To access the material in the Utilities Collection, other material donated by Bill Beck, or any of the History Center's other library and subject file holdings, please make an appointment by emailing ieee-history@ieee.org

NEW ORAL HISTORIES ON ETHW

The Engineering and Technology History Wiki (ETHW) is a MediaWiki-based website that is run by a consortium of major engineering societies. It houses one of the largest oral history collections related to the history of engineering and technology in the world. Recently posted are two oral histories conducted by the IEEE History Center:

Maria A. Stuchly, IEEE Life Fellow, "for contributions to the understanding of interactions of electro-magnetic fields with biological systems, and the development of effective protection standards." She published more than one hundred and ninety articles and contributed to more than three hundred papers at scientific conferences. She was active in other professional organizations, serving as president of the Bioelectromagnetics Society, 1986-1987, and vice president of the International Union of Radio Science (URSI) in 1996.

Ramutis Zakarevicius, IEEE Life Senior Member, was faculty for thirty-two years at University of New South Wales, served as IEEE Australian Section Chair 1979-1981, founding Chair of the IEEE NSW Communications and Signal Processing Chapter 1986-1988, and IEEE New South Wales Section Historian

The other engineering societies who partner with IEEE on the ETHW also have active oral history programs, the following new oral history was conducted by AIME, the American Institute of Mining, Metallurgical and Petroleum Engineers:

Corale L. Brierley, who published with more than ninety technical publications and held five patents, and is internationally recognized for a long career: 1999 recipient of the NMIMT Alumni Association's Distinguished Achievement Award; the 2008 recipient of AIME's James Douglas Gold Medal Award; the 2011 recipient of the SME's Milton E. Wadsworth Award; the 2014 co-recipient (with James A. Brierley) of the American Mining Hall of Fame Medal of Merit for transformative contributions to the mining industry; the 2018 recipient of the NMIMT President's Medal; and the 2023 recipient of the TMS Extraction & Processing Division's Distinguished Lecturer Award.

To view these, and the other oral histories on the ETHW, please visit: **http://ethw.org/oh**

GLOBAL MUSEUM UPDATE

The new year brings our traveling exhibits to two new venues. *Microchips that Shook the World* recently relaunched on 18 January at the National Museum of Industrial History in Betlehem, PA, USA, and *Unseen Signals* made its Midwest debut at the Pavek Museum of Electronic Communication in St. Louis Park, Minnesota, on 6 February.

Strict print deadlines prevent us from featuring the special opening event at the Pavek until the May newsletter. Instead, we present one notable Global Museum event of 2025 not yet shared with Newsletter readers: the "Making Connections" exhibit on the history of wireless communications. We created this exhibit for two IEEE meetings in Canada: first, the IEEE

Attendees at the Antennas and Propagation Society Conference View the Global Museum exhibits.

International Conference on Communications (ICC), held in Montreal between 8 and 12 June; and second, the International IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting (AP-S/URSI), held in Ottawa between 13 and 18 July.

Our most extensive and ambitious IEEE conference exhibit to date, "Making Connections" featured historical interpretation and rich archival imagery on satellite and microwave communications, the rise of radio broadcasting, and graphical methods in radio and radar engineering. Nokia Bell Labs provided generous artifact loans, including a quarter-size replica of the Telstar satellite and a traveling wave tube amplifier developed by John Pierce.

Each exhibit at the two conferences had its own distinct highlight. We were joined at ICC by staff of the Musée des Ondes Emile Berliner, who enhanced our artifact displays with examples of Canadian communications technologies, including a scale model of an "Anik C/D" satellite. Anik, meaning "brother" in Inuktitut, is a series of geostationary communications satellites built from 1972 by Hughes Aircraft company for Telesat Canada that enabled the first direct-to-home broadcasting service.

Thanks to the generosity of Ronald Smeltzer, a New Jersey antique book collector, at APS-URSI we were able to display a copy of the second edition of Maxwell's *Treatise on Electricity and Magnetism* (1881). This proved a hit not only with the conference delegates, who gathered around it during the many breaks between sessions, but with the event staff as well, who caught on to the book's significance.

All the interpretation presented as part the "Making Connections" exhibit—including panels on the writing of Maxwell's Treatise and the development of Maxwell's theory in the 1880s by a group of committed "Maxwellians" —is available on the IEEE History website at **https://history.ieee.org/programs/ieee-global-museum/interpretive-banners/**.

TEMPLES AT PAESTUM: CUTTING-EDGE TECHNOLOGY PRESERVING ANCIENT TREASURES

By Robert Colburn, IEEE History Center Research Coordinator

The temples at Paestum, Italy (circa BCE 480) are among the best-preserved temples of the ancient Mediterranean world. Poseidonia ("Poseidonville" later "Paestum") was a major, and very wealthy, seaport in the Greek part of Italy, approximately sixty kilometres south of modern Naples. The port eventually silted up in Roman times, and Paestum was abandoned, leaving us a magnificent Greco-Roman city. (Only about one tenth of which has been excavated.) Unlike at Pompeii or Herculaneum to the north, one can wander the streets of Paestum free from any sense of tragedy. Although pumice from the Versuvian eruption has been found at Paestum, archeological evidence suggests the damage was limited to the collapse of awnings and a few light structures under the weight.

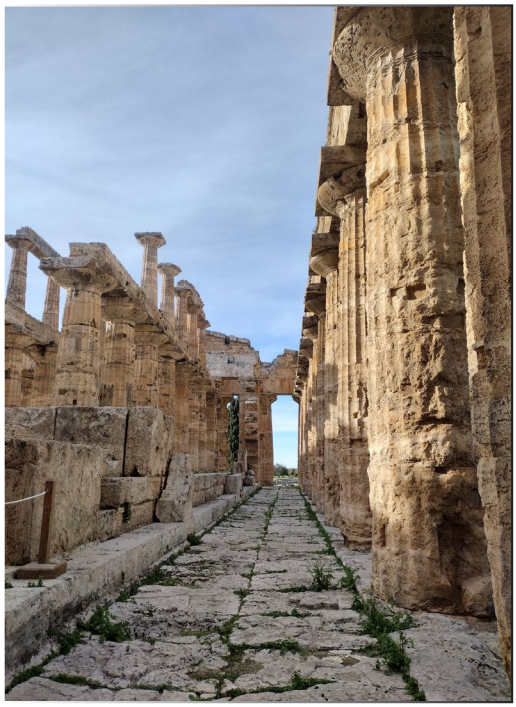
My visit to Paestum was full of wonders on many levels, one of which is that IEEE-related technologies are helping to preserve these magnificent treasures. The temple known usually as the temple of Poseidon/Neptune (but which archeological evidence now shows more likely to have been dedicated to Hera) is protected by an innovative system of high-sensitivity large-band sensors developed at the University of Salerno's Department of Civil Engineering. Fourteen real-time accelerometers positioned in the temple and on the surrounding ground monitor sub-millimeter scale movement of the stonework, whether caused by earthquake, wind deflection, temperature variation, nearby road and railroad traffic, and even the footsteps of tourists.

Poseidon ("Earthshaker") would no doubt smile in approval at this.

The informational plaque at the corner of the temple explains, *"Since March 2021, the temple of Neptune…has had a seismic monitoring system…developed as part of research into gravitational waves. These sensors have been positioned at the top of the temple and along its foundation in order to measure each single movement of the ancient structure in real time."*

Meanwhile, up the coast at Pompeii, synthetic aperture radar measurements taken from satellites are monitoring the angles of the walls of the buildings, to warn of likelihood of collapse. Unfortunately, the lack of adequate resources for structural stabilization makes this still an all-too-frequent occurrence.

The Gravity Wave Antenna at Pisa, Italy, Livingston, Louisiana, U.S.A. and Richland, Washington, U.S.A. **https://ethw.org/Milestones:Gravitational-Wave_Antenna,_1972-1989**, and Synthetic Aperture Radar **https://ethw.org/Milestones:First_Digitally_Processed_Image_from_a_Spaceborne_Synthetic_Aperture_Radar,_1978** in Richmond, British Columbia, Canada are IEEE Milestones.



Multiple IEEE Technologies Help Preserve this Ancient Temple. Photos courtesy of author

UPDATE ON THE IEEE ORAL HISTORY PROGRAM AND COLLECTION

The IEEE History Center conducts life-story interviews with leading engineers, scientists and technologists, and the IEEE Archives has one of the largest oral history collections in IEEE related fields of interest, currently more than nine hundred. "Lightly edited" transcripts are posted on Engineering and Technology History Wiki and the records and transcripts are preserved in the IEEE Archives. IEEE Oral History Collection. The Engineering and Technology History Wiki aims to build the premier oral history collection of engineers and technologists in the world; it also hosts oral histories from partner societies which include AIAA, AIChE, AIME, ASHRAE, ASCE, ASME, IEEE, SPE and SWE.

In 2028, IEEE will realign its regions; what are currently Region 1 and Region 2 will become the new Region 2. To preserve the history of both Regions 1 and 2, Hellrigel is working with Region 1 Director, Charles Rubenstein, and Region 2 Director, Felicia Reinhart, together with a small cadre of volunteers trained as oral historians—including Sreeram (Ram) Dhurjaty, Ron Brown, David Fillion, and Marc Apter—on a project to collect the oral histories of past Region 1 and Region 2 Directors. This is a multi-year project which will start in 2026.

In addition, an IEEE Women in Engineering oral history project is in preliminary planning stages and Hellrigel is working with IEEE History Committee members Winnie Ye (WIE Chair) and Bozenna Pasik-Duncan, WIE volunteers, and IEEE WIE staff.

These projects are possible only with the help of IEEE volunteers. IEEE Members can actively participate in the effort to preserve the history of IEEE by becoming trained oral historians via the IEEE History Center's peer-to-peer program. Mary Ann Hellrigel, Ph.D., manager of the oral history program offers a live training webinar via WebEx (stage one), and then works one-on-one with trainees. The live training session has been offered annually in October in conjunction with IEEE Day and IEEE History month-long activities. If you have any questions regarding either the IEEE Oral History Collection or the training program, please email: m.c.hellrigel@ieee.org.

TECH HISTORY BY OUR SISTER SOCIETIES

ICOHTEC LAUNCHES UPDATED WEBSITE AND ENHANCED MONTHLY NEWSLETTER TO BETTER SERVE THE HISTORY OF TECHNOLOGY COMMUNITY:

The International Committee for the History of Technology (ICOHTEC) has recently upgraded its website (**https://www.icohtec.org/**) to support researchers and scholars working in the history of technology and the history of science and technology. The updated site introduces clearer navigation for news and announcements, improved integration with ICOHTEC's monthly newsletter, and streamlined information on events, initiatives, and opportunities relevant to the community. The website now serves as a central hub for the latest Association news, including key developments, initiatives, events, and other items of current interest to the international history of technology community.

The monthly ICOHTEC newsletter (**https://www.icohtec.org/w-publications/**) highlights recent academic news and announcements such as calls for papers, job and fellowship opportunities, new publications, book reviews, and related content of scholarly interest.

Community members are warmly invited to contribute. Suggestions for news items, calls for papers, or academic job opportunities may be sent to Simone Fari (fari@ugr.es) or Anna Batzeli (abatzeli@he.duth.gr). ICOHTEC also welcomes short blog-style essays (up to 800 words), project descriptions, reflections, conference reports, and similar contributions for the newsletter. Submissions are accepted in all official ICOHTEC languages: English, French, German, Russian, and Spanish.

To be added to the newsletter distribution list, please contact: abatzeli@he.duth.gr

IEEE SWISS COMPUTING HISTORY CONFERENCE AND EXHIBITION

In the second half of the 20th century, Switzerland was on the forefront of information technology developments. At the ETH (*Eidgenössische Technische Hochschule*, or Federal Institute of Technology) in Zurich, Professor Eduard Stiefel founded the Institute for Applied Mathematics in 1948. After leasing the Zuse Z4 relay computer in 1950, this department developed the ERMETH (*Elektronische Rechenmaschine der ETH*, or Electronic Calculating Machine of the ETH) computer with vacuum tubes and germanium diodes. It performed mathematical and engineering calculations from 1956 until 1963. Later, under the leadership of Professor Niklaus Wirth, the ETH focused on programming languages (ALGOL, Pascal, Modula, Oberon) and high-performance graphical workstations (Lilith, Ceres).

At the EPF (*École Polytechnique Fédérale*, or Federal School of Technology) in Lausanne, Professor Jean-Daniel Nicoud and his team of students first developed transistor-based calculators. With the first microprocessors, his microcomputer laboratory, LAMI (*LAboratoire de Micro-Informatique*) built successive generations of SMAKY (SMArt KeYboard) personal computers, demonstrating state-of-the-art performance. The team pioneered computer graphics, local area networks (LANs), multiprocessing, real time computing, and user-friendly peripherals. These machines were primarily sold for educational purposes. Many software applications and games were developed.

The Swiss industry developed computers for specific industrial applications. Güttinger and Contraves built computers for cartography, defense, and accounting. After Bobst Graphics stopped its phototypesetting project, Daniel Borel created Logitech in Silicon Valley and Switzerland. The success of the computer mice they manufactured enabled the growth of the company. They managed the business cycles by controlling production costs while maintaining quality. Anton Gunzinger's Supercomputing Systems AG developed the Gigabooster machine and then specialized in the networking of high-performance computer clusters. Digital Logic, founded by Felix Kunz, was successful worldwide with industrial embedded IBM-compatible personal computers.

Jean-Daniel Nicoud approached the IEEE Switzerland Life Members to prepare a conference and an exhibition at Enter Technikwelt Solothurn. His intention was to bring together the engineers who developed these technologies and to preserve historical traces of their contributions.

The event took place on the weekend of 8-9 November 2025, in parallel with the Vintage Computer Festival (VCF), organized by the Vintage Computer Club, Zurich. The very large available space of the Enter Technikwelt museum allowed for multiple parallel activities. The exhibitors of the VCF demonstrated their hardware and software on rows of tables and a flea market was organized. IEEE had a temporary exhibition of Swiss computers mirroring the conferences that took place in two parallel tracks.

Enter Technikwelt, VCF, and IEEE organizers worked together for the success of this gathering. About 1000 people joined the event for one or two days. The presenters and attendees greatly appreciated this opportunity to share their experiences of the recent past. Historians shared their studies about the World Wide Web debut at CERN and about their research on video games developed in Switzerland. Conference presentations in English, German, or French, with slides in English, were recorded and edited. They can be found at **https://www.youtube.com/@VCFCH**.

Photo credit: Enter Technikwelt Solothurn / Kim Hüppin

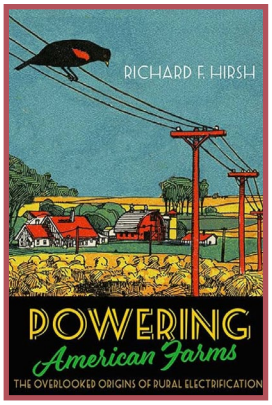
THE IEEE HISTORY COMMITTEE PRESENTS TWO BOOK PRIZES IN 2025

by Jessica Arkel, IEEE Foundation

The IEEE History Committee proudly presented the following two IEEE History Center Book Prizes for 2025. The 2025 Middleton Award and the new Pugh Award recognized books on the historic electrification of U.S. farms a century ago, as well as the transformation of signal "noise" into data and information

The "IEEE William and Joyce Middleton Electrical Engineering History Award" was awarded to author Richard F. Hirsh for his 2022 book, *Powering American Farms: The Overlooked Origins of Rural Electrification*. The inaugural "IEEE Emerson Pugh History of Technology Book Prize" was awarded to author Chen-Pang Yeang for his 2023 book, *Transforming Noise: A History of Its Science and Technology from Disturbing Sounds to Informational Errors, 1900-1955*.

The 2025 IEEE William and Joyce Middleton Electrical Engineering History Award was 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*.

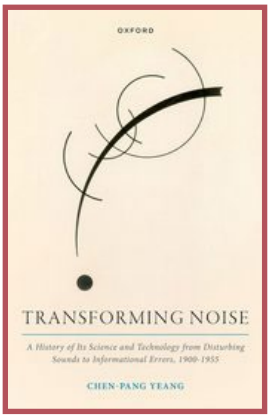


Richard F. Hirsh is a professor of History of Technology and Science & Technology Studies at Virginia Polytechnic Institute and State University (Virginia Tech) in Blacksburg, VA, U.S.A. He holds a master's degree in Physics and a Ph.D. in the History of Science from the University of Wisconsin-Madison. 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, who also authored the 1999 book *Power Loss: The Origins of Deregulation and Restructuring in the American Electric Utility System*, of the 2025 honor. "The recognition affirms my belief that the book's revisionist interpretation of rural electrification history remains relevant to both scholars and the general public."

In a new book prize established as a bequest from the estate of Emerson Pugh -- former President of both the IEEE and IEEE Foundation, Chair of the IEEE History Committee, and author of several technical history books himself -- 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 2025 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, who also authored *Probing the Sky with Radio Waves* in 2015. "This award is a recognition of my attempt to write a book on an interdisciplinary subject with historical and technical depths."

Thanks to the generosity of the William and Joyce Middleton and Emerson Pugh estates, these recognitions are possible. If you would like to learn more about how you can include the IEEE Foundation in your estate plans, visit **https://www.ieeefoundation.org/ways-to-give/wills-and-trust/**

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