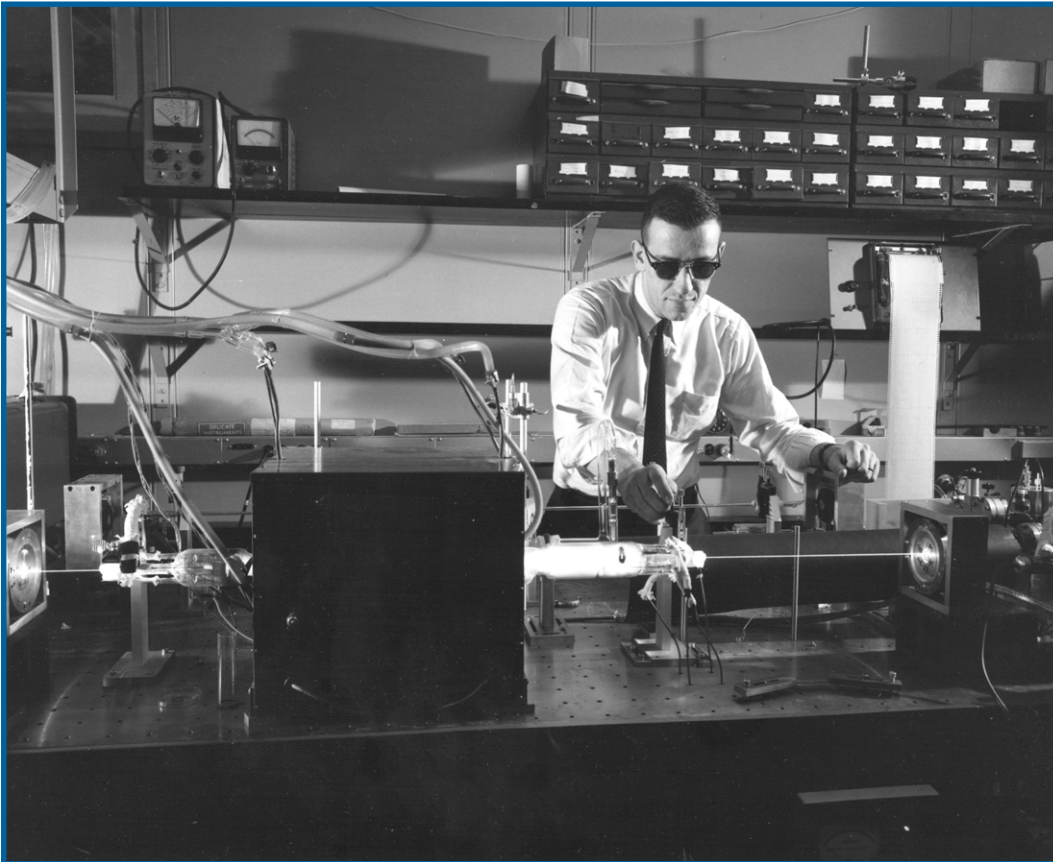


IEEE History Center

ISSUE 116, July 2021

THE PAST SPEAKS: THE HISTORY CENTER BEGINS ITS BIGGEST ORAL HISTORY PROJECT YET



The Oral History of Life Fellow Ed Labuda (shown here with an argon laser) is one of the many being collected by the History Center.

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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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Dr. Michael Geselowitz, Senior Director,
IEEE History Center

Greetings to all of our readers. I hope this note finds you and your families well. As the world slowly emerges from the COVID pandemic, I want to thank you for your continued support over a difficult year.

Like many other organizations, we have drawn some positive lessons from the challenges. As IEEE Milestone dedications turned into virtual events, sponsoring units found that they were reaching much larger audienc-

es than ever before. Although many members missed the intimacy and camaraderie of an in-person plaque unveiling, going forward we are going to encourage and support Milestone dedication sponsors to hold live events, but to stream them at the same time. It will be the best of both worlds.

I personally was concerned about conducting oral history interviews remotely. There is something about interviewer and interviewee being in the same room that seems to lead to a high comfort level. However, as

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: http://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://www.ieee.org/about/history-center/events.html>

Support for scholars:

Fellowship in the History of Electrical and Computing Technologies:
<https://www.ieee.org/about/history-center/fellowship.html>

Pugh Young Scholar in Residence:
<https://www.ieee.org/about/history-center/internship.html>

Middleton History Prize (awarded to a book in the history of technology):
<https://www.ieee.org/about/history-center/middleton-award.html>

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: 500-1200 words. Submit to ieee-history@ieee.org. Articles and letters to the editor may be edited for style or length.

time went on and everyone became more familiar with Zoom and other meeting platforms, I and the rest of the staff found that the interviews went very well. The Institute even featured one of our oral histories in their reporting on the tragic collapse of the Arecibo Observatory, an IEEE Milestone (<https://spectrum.ieee.org/the-institute/ieee-history/this-fatherandson-duo-was-essential-to-ionospheric-research-at-the-arecibo-observatory>). This knowledge and experience will help us immensely, as oral history is going to be a major focus of our activity for the remainder of 2021 (see page 4)

“All of our programs that you are used to reading about in our newsletters—Milestones, Oral Histories, Archives, the Engineering & Technology History Wiki—are going strong. Despite the pandemic, the staff of the IEEE History Center continues to work.”

IEEE Reach and the Engineering & Technology History Wiki, as on-line resources, held up particularly well during the pandemic (see pages 5 and 6). On area where we were held back was our plan to develop a traveling exhibit program. However, now that things are opening up, we look forward to focusing on this idea once again. The new IEEE L. Dennis Shapiro Collection Fund in the IEEE Found-

ation, focused on supporting our collection and processing of historical artifacts, should aid in this endeavor.

I hope to have even more exciting updates for you in our November issue. In the meanwhile, thanks again for you support, and stay safe.

IEEE VOLUNTEERS PRESERVING HISTORY: HOW HISTORY ACTIVITIES CAN BENEFIT THEIR SECTIONS OR SOCIETIES

In this section, we examine how history activities increase visibility, promote membership, and foster relations with industry

and academia. George Thomas looks back at how the Chicago Section planned and benefited from its centennial celebration.

IEEE CHICAGO SECTION CENTENNIAL CELEBRATION

By George Thomas, Chicago Section History Chair

The Chicago Section has the unique distinction among other IEEE sections of being the first section formed outside of AIEE headquarters. Being impractical for “western engineers” to make the long trip to New York to attend technical meetings, a petition by twenty-one Chicago-based engineers was sent to headquarters to hold local meetings. The petition was granted with the requirement that the meetings be held on the same day as New York’s with simultaneous reading of the same paper. On 21 March 1894 in Professor Wilbur Stine’s lecture room at the Armour Institute—predecessor to the Illinois Institute of Technology (IIT) and training ground of many Chicago area engineers including the current Chicago Section History Chair—the paper by Professor William Anthony of Cornell University entitled *“On the Effect of Heavy Gases in the Chamber of an Incandescent Lamp”* was read and discussed.

The ability to hold a local meeting of the Chicago AIEE members was partly attributed to the great success of the World’s Columbian Exposition in Chicago in 1893. It showcased the developments in electrical engineering to the world. The distribution and use of electrical power were evident at the Fair, providing illumination of the grounds, buildings, waterways, and—using searchlights—even the sky.

“The Chicago Section Centennial Celebration was an opportunity to engage the press, the public, academia, and industry in communicating the section’s long history of serving Chicago area Electrical and Electronics engineers.”

On 9 October 1893, one hundred years to the day from when the World’s Columbian Exposition dedicated Chicago Day, the Chicago Section hosted its black-tie Chicago Section Centennial Celebration at Chicago’s Museum of Science and Industry. The Museum of Science and Industry (MSI) has its own special connection to the World’s Columbian Exposition. Their building, originally

called the Fine Arts Building, was the only permanent structure at the fair.

The Chicago Section Centennial Celebration was an opportunity to engage the press, the public, academia, and industry in communicating the section’s long history of serving Chicago area Electrical and Electronics engineers.

The keynote speaker was John Hogan, Assistant Secretary of Commonwealth Edison, speaking on “Chicago Electrical Milestones.” Susan Eleuterio, Past Curator of the Building MSI Exhibit, spoke on the “Role of Electricity at the Fair.” Jon Van, Technology Editor, Chicago Tribune, was recognized for his literary contributions by Charles Alexander, Vice President, Professional Activities, IEEE. John Powers, Executive Director and General Manager, IEEE presented Len Cohen, Chicago Section Chairman “A Century of Achievements” award. After awards and dinner, attendees were able to tour many of the museum’s exhibits.

IEEE VOLUNTEERS PRESERVING HISTORY: HOW HISTORY ACTIVITIES CAN BENEFIT THEIR SECTIONS OR SOCIETIES

In organizing the Centennial Celebration, the Centennial Committee involved academia and industry in contributing to the publication of the Chicago Section Centennial Book. Thirty sponsors provided history articles and congratulations. Included in the publication were vintage articles from the Chicago Section newsletter *SCANFAX*—a publication originally from the Institute of Radio Engineers (IRE) in Chicago. Also included were: a list of the last one hundred section chairs, a short history of our founding, pictures from the World's Columbian

Exposition, and 1893 press clippings from *The Electrical World and Western Electrician*, some of which reported on our organizational efforts. Finally, there were pictures from one of our most successful Chicago Section events—the Chicago Section Centennial Celebration.

The IEEE History Center encourages IEEE societies and sections to benefit from historical activities by appointing History Activities Coordinators. For more information, please contact ieee-history@ieee.org

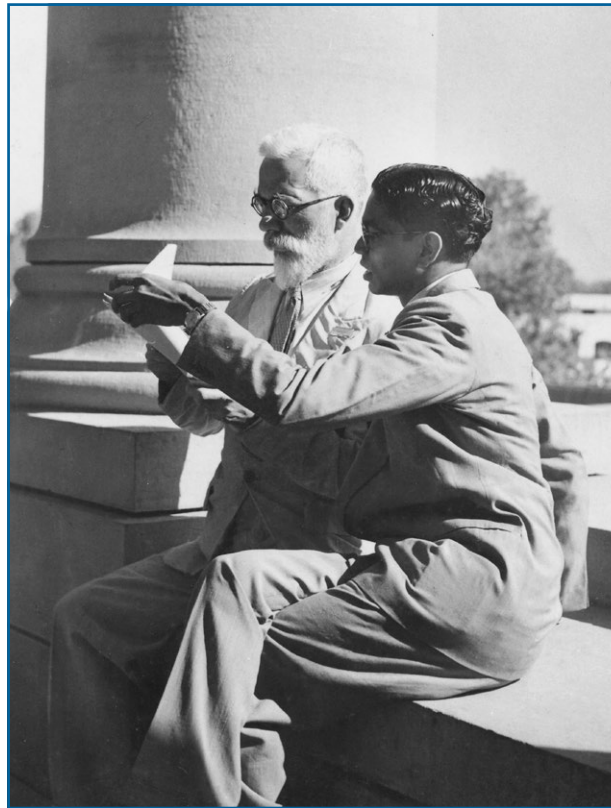
CENTER ACTIVITIES

HISTORY CENTER'S LIFE FELLOW ORAL HISTORY INITIATIVE

"Recently, the History Center launched a new oral history project, 'IEEE Life Fellows – Capturing Oral History.' IEEE's more than 3,200 Life Fellows have contributed to the world's body of knowledge in IEEE fields of interest, demonstrated a strong commitment to the profession, and achieved extraordinary accomplishments. They and their career experiences are a vital resource within IEEE."

As a major part of its mission, the IEEE History Center has collected nearly nine hundred oral histories, some of them originally conducted during the 1960s. More than six hundred full transcripts are posted on Engineering and Technology History Wiki (ETHW) (http://ethw.org/Oral-History:List_of_all_Oral_Histories). IEEE holds one of the largest and most significant oral history collections devoted to the history of technology, science, and engineering. These primary resources are used by students, historians, documentary film makers, journalists, as well as by IEEE members and staff.

Recently, the History Center launched a new oral history project, "IEEE Life Fellows – Capturing Oral History." IEEE's more than 3,200 Life Fellows have contributed to the world's body of knowledge in IEEE fields of interest, demonstrated a strong commitment to the profession, and achieved extraordinary accomplishments. They and their career experiences



C.R. Rao (foreground) who made major contributions in the field of statistical signal processing, is one of the many Life Fellows whose oral histories the History Center is collecting and preserving

are a vital resource within IEEE. The goal of the Life Fellows Oral History Project is to collect approximately two hundred and fifty oral histories (as well as first-hand histories) from Life Fellows by training them to conduct peer-to-peer interviews. This effort will collect the voices of esteemed IEEE members. The project is funded by a New Initiatives Committee grant. Jim Jefferies, 2018 IEEE President, is the Project Lead; and the Life Members Committee has a prominent advisory role.

In conjunction with this initiative, the History Center staff is also collecting interviews with Life Fellows associated with IEEE societies, technical councils, and various organizational units, including the Signal Processing Society, the Antennas and Propagation Society, the IEEE Council on Superconductivity, the IEEE Foundation as well as IEEE Past Presidents and IEEE Medal of Honor recipients.

This Life Fellows Oral History Project relies on support from volunteers, both as interviewers and interviewees. If your OU might

be interested in having volunteers trained in oral history, so that they can interview relevant Life Fellows, please contact Dr. Mary Ann Hellrigel at m.c.hellrigel@ieee.org. She is the Archivist and Institutional Historian at the History Center, and its oral history program manager. Please also contact Mary Ann to recommend a Life Fellow as a potential interviewee and for additional information.

THE WORLD OF COMPUTING ORAL HISTORIES AVAILABLE ON ETHW

The *World of Computing* is an oral history program that began in late 2020 and was organized by the History Committee of the IEEE Computer Society, and produced edited transcripts of interviews. They are online free of charge on the Engineering & Technology History Wiki at: https://ethw.org/Oral-History:World_of_Computing. The ETHW consortium is managed by the IEEE History Center <https://www.ieee.org/about/history-center/index.html>.

The *World of Computing* documents and celebrates the diversity of computing. It expects to add ten to fifteen oral histories each year. Examples of interviews that are currently available are with Dr. Miwako Doi, an IEEE Fellow who has made important contributions to robotics and document processing, and who describes her experiences being one of the first women working in professional engineering positions in Japan https://ethw.org/Oral-History:Miwako_Doi; Dr. Juan Gilbert, a distinguished professor and dean at the University of Florida, who discusses his activities as the most successful producer of African American PhDs in computer science https://ethw.org/Oral-History:Juan_Gilbert; and Dr. Clayton Lewis, a leader in the human-computer interaction field at IBM and the University of Colorado Boulder, who discusses his work



A bank of AN/UYN-43 computers at the Aegis Ballistic Missile Defense laboratory, Photo courtesy of the U.S. Navy

on technology and cognitive disability [https://ethw.org/Oral-History:Clayton_Lewis_\(Dec_2020\)](https://ethw.org/Oral-History:Clayton_Lewis_(Dec_2020)). Future interviews will include research and education leaders in computing, users, entrepreneurs, managers, and others who have an interesting story to tell about the world of computing.

ENGINEERING & TECHNOLOGY HISTORY WIKI SOFTWARE UPGRADE

The Engineering and Technology History Wiki (ETHW) <http://ethw.org> is now easier to use than ever because of the recently completed software upgrade. The latest version of MediaWiki, 1.35, comes with a variety of editing tools. Its new version of VisualEditor, allows a more user-friendly experience for creating richly formatted content.

The ETHW is one of the world's premier sites for the documentation, analysis, and explanation of the history of technology; the scientists, engineers and business people who made these technologies happen; and on the history of the organizations to which these men and women belonged. It is managed by the IEEE History Center on behalf of a consortium of eight engineering societies.

With one of the largest collections in the world of oral histories and first-person narratives pertaining to the history of engineering and technology, the ETHW platform allows for the permanent preservation of memoirs, documents, and photographs, as well as historical narratives of the engineering profession, its people and technologies.

A major component of the ETHW is that the wiki nature site allows for users to submit their experiences and knowledge directly to the site. To contribute to the ETHW, you can request an account by going to ethw.org/requestaccount - once you have an account, you can submit your memoirs, contribute to one of the more than 4,500 articles, or start one of your own, and people who just want to read the site's content can do so freely without creating an account.

ASSISTING TEACHERS, ACROSS DISCIPLINES, AND IMPACTING STUDENTS AROUND THE GLOBE

IEEE REACH, Pre-University Social Studies and STEM Teacher Webinars and Training

Pre-university teachers in the Social Studies and STEM disciplines are being inspired by the free IEEE REACH resources that situate technology and engineering in their social and humanist contexts. During two recent teacher webinars—the International Technology and Engineering Educator Association’s (ITEEA) annual conference, *Where Technology and Engineering Come to Life*, and the United States’ National Council for History Educators’ (NCHE) conference, *Place and Time*—teachers learned about the REACH program and left equipped with lesson plans, videos, and hands-on activities they could use immediately, either remotely or in the classroom. Chandra Porter, a STEM teacher in Atlanta, GA stated, “This is awesome! I can use this with my Paper Tower Activity.” “I’m excited to get into it,” exclaimed Lois MacMillan, a History teacher in Grants Pass, Oregon, “We’ve done a little of this, but your presentation blows this open for me.”

These teachers are not alone. In Africa, educators are also being inspired. Arising out of the co-branded REACH/UNESCO pilot program with continued support from the IEEE Africa Council and the IEEE Uganda Section, and delivered by Silver Bolt, a Uganda non-profit education organization, three educator training sessions were recently held. One training program, a UNESCO STEM workshop, with a goal to improve participation of girls in STEM, was supported by both the Uganda National Commission for UNESCO and IEEE. Key stakeholders from both UNESCO and the Uganda Ministry of Education participated in the training sessions. Those in attendance were enthusiastic about the program, which has created a significant interest to include REACH content, concepts, and methodology, in future curricular.

REACH continues to engage educators and inspire students via its mission to raise engineering awareness through the conduit of history. The program is assisting teachers across disciplines around the globe. In addition, it is now proving to provide a new STEM education pathway and is enhancing female participation in the discipline.

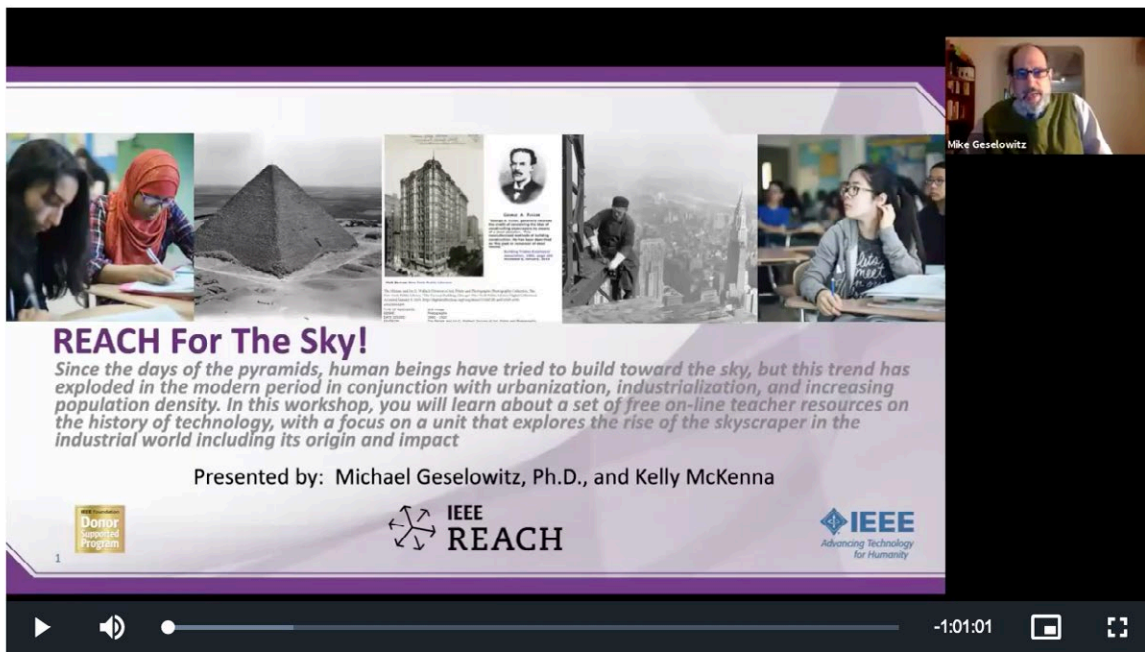
REACH for the Sky: Free IDM Resources on the Social History of the Skyscraper

Sunday April 11th, 10:45 - 11:45 AM EDT

Credits: 1.0

High School

Breakout Session



The screenshot shows a video player interface. The main content is a presentation slide with the following text:

REACH For The Sky!
Since the days of the pyramids, human beings have tried to build toward the sky, but this trend has exploded in the modern period in conjunction with urbanization, industrialization, and increasing population density. In this workshop, you will learn about a set of free on-line teacher resources on the history of technology, with a focus on a unit that explores the rise of the skyscraper in the industrial world including its origin and impact

Presented by: Michael Geselowitz, Ph.D., and Kelly McKenna

The slide includes several images: a woman and a girl studying, the Great Pyramids, a historical skyscraper, a portrait of a man, a construction worker, and a modern classroom. Logos for the Donor-Supported Program, IEEE REACH, and IEEE Advancing Technology for Humanity are visible at the bottom. A video feed of a speaker, Mike Geselowitz, is in the top right corner. The video player controls at the bottom show a play button, volume icon, progress bar, and a timestamp of -1:01:01.

SUSANNAH GLICKMAN IS 2021-2022 IEEE LIFE MEMBERS' FELLOW IN THE HISTORY OF ELECTRICAL AND COMPUTING TECHNOLOGY

Susannah Glickman is a PhD candidate in the American History track at Columbia University, New York City, U.S.A. She has a background in mathematics and anthropology, and works between the fields of science and technology studies and history, mixing archival and ethnographic methods. Specifically, she is interested in how institutions deal with the category of the future. Most of her research focuses on the history of quantum computation and information through the transformations in global American science that occurred at the end of the Cold War. She also writes about risk and uncertainty in other fields (for example, in history of economics) where those topics intersect theoretically with her interest in forecasting and speculative futures.



Before Columbia, she got her B.A. from Reed College (2015) in mathematics and anthropology. She worked as an RA at Harvard researching the history of biomarkers (2013-2016) and continued her thesis research (2015-2016) on quantum algorithms (specifically, on optimal queries for algorithms like the dihedral hidden subgroup problem) with her undergraduate advisor Jamie Pommersheim.

The Fellowship is funded by the IEEE Life Members' Committee, is given annually and supports one year of full-time graduate work or one year of post-doctoral research in the history of any of IEEE's designated fields of interest.

<https://www.ieee.org/about/history-center/fellowship.html>

TECH HISTORY ON THE WEB: STAFF FAVORITES

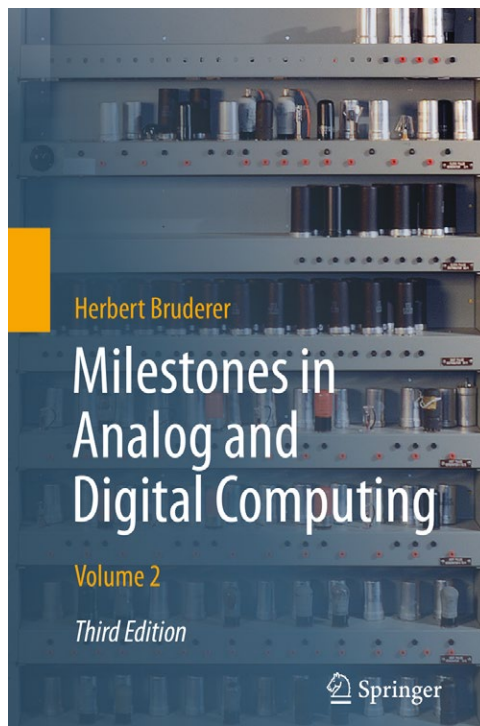
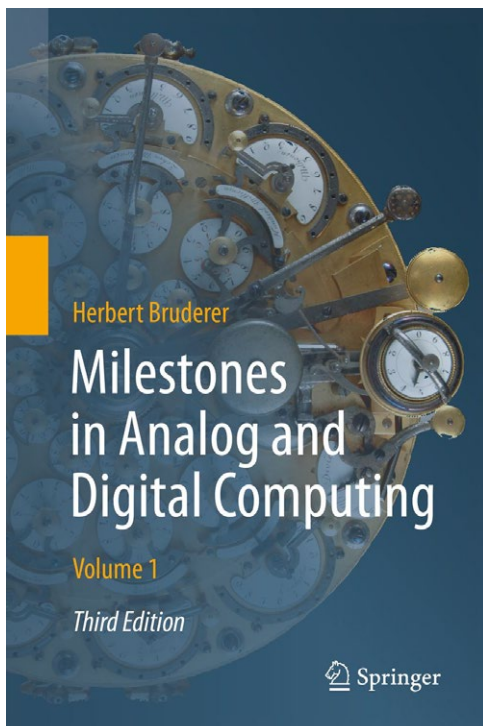
The BBC, or British Broadcasting Company, or "Beeb," is preparing for its centenary with a growing and engaging website dedicated to unpacking the *History of the BBC*: www.bbc.co.uk/historyofthebbc/. Curator Elinor Groom and historian Alban Webb illustrate brief articles with photos and document scans as well as clips from digitized oral and video histories, interviews, recordings, and programs going back nearly ninety years. Some content is not, alas, available in all IEEE Regions.

Thanks to Google Translate, websites and pages around the world are becoming more accessible to non-native readers. In the case of Alexander Popov, Saint-Petersburg Electrotechnical University ETU "LETI" has a "Museum Complex." This includes a series of well-illustrated pages on the history of the university, the life of Popov, and online tours of the museums of the university and his home and laboratory: <https://etu.ru/ru/muzej/>. It also includes an impressive collection of publications, but practical Google translation of PDFs awaits improved formatting of columns and inserts. However, Moisey Izrailevich Radovsky's more than four-hundred page biography of Popov, complete with references and illustrations, has been reformatted as an online text: <https://coollib.com/b/242981-moisey-izrailevich-radovskiy-aleksandr-popov>. The best available image of the Kronstadt Bulletin [*Кронштадтский вестник*] of 12 May 1895 (New Style), with its report on Popov's demonstration of his lightning detector and proposal of wireless communications was taken with a flash camera; this helps direct the reader to the report to the left of the flash: <https://radio.ru/wp-content/uploads/2020/06/Gazeta-Kronshtadtskii-vestnik-1895-goda.jpg>. The modern iteration of the gazette has an excellent photo of Popov and his family: <https://kronvestnik.ru/history/23435>.

The Computer History Museum (CHM) sometimes ac-

quires items which touch on aspects of technology in addition to computing. One of these is a thirteen-minute recording on 78-rpm discs of an episode of Radio Forum, a "weekly, informal discussion program" sponsored by the U.S Department of State. While the CHM was most interested in the interview with MIT's Norbert Weiner, just as his book *Cybernetics* was published in 1948, the discussion on the state of electronics has echoes today. To learn about the "electronics of the future," listen to Wiener and Benjamin Shackelford, president of the Institute of Radio Engineers (IRE), respond to questions at the IRE convention in New York City. Note the observation that mathematical logic was now one of the "essential tools" in communications engineering and prediction that "all but the higher decisions" will be made by machines in a "factory without employees." Electronic technologies had applications in biology and medicine; television techniques, e.g. scanning, were applicable to "many other sciences," while wireless facsimile transmission of newspaper pages anticipated the massive increases in global data transmission. Both men understood the international nature of electronic communications research and development, with the IRE's rising membership "in many countries of the world." <https://archive.computerhistory.org/resources/access/sound-recording/2016/03/102706617-04-01-acc.mp3>

Bill Burns continues to develop and add to his sites on historical technologies, most especially cable telegraphy, which has expanded in geographic coverage far beyond the domain name: <https://atlantic-cable.com/>. Among other resources, he also curates a superb collection of online primary sources: <https://lordsoflightning.com/index.htm>. Those researching subjects like genealogy will find his listings of digitized newspaper collections very useful.



Bruderer, Herbert *MILESTONES IN ANALOG AND DIGITAL COMPUTING, 2021*

Herbert Bruderer's two-volume, 2000-page history has now been translated into English. Illustrated with more than seven hundred images and more than one hundred and fifty tables, it also explores fields related to computing, such as scientific instruments, typewriters, and perforated tape controlled looms and automatons. Available from Springer Nature Switzerland AG, Cham, 3rd edition 2020, 2 volumes, 2113 pages, 715 illustrations, 151 tables, €409, <https://www.springer.com/de/book/9783030409739>

GIVING AND SUPPORT FOR IEEE HISTORY CENTER PROGRAMS

HARNESSING STRENGTH IN NUMBERS

"The critical function of the IEEE Foundation – or any charity -- is that it lets you help accomplish a goal that you could never achieve by yourself"

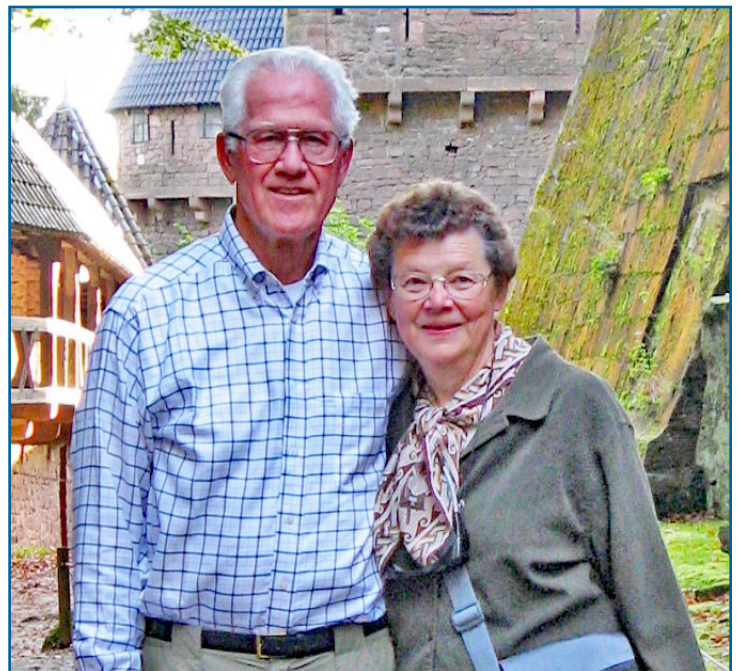
By Karen Kaufman,
IEEE Foundation

As a member of both the American Institute of Electrical Engineers (AIEE) and The Institute of Radio Engineers (IRE) – parent organizations which ultimately evolved into IEEE in

1963 -- Dr. Lyle Feisel has enjoyed the benefits of his IEEE affiliation for more than sixty years.

"The student branch gave us opportunities to socialize with faculty and other students and gain insight into the actual practice of engineering, and the networking and technical information I received were so helpful," he said. "The camaraderie and friendships that developed over the years are some of my fondest memories of being an IEEE member."

Dr. Feisel attributes his decision to donate to such IEEE initiatives as the IEEE Foundation Fund, IEEE History Center Fund, IEEE Life Members Fund, and IEEE Eta Kappa Nu Fund to "the recognition that there are many needs out there and that our contributions can help meet them," he said. "My wife and I have also included the IEEE Foundation in our estate plan because



Lyle and Dorothy Feisel

you can't take it with you, so why not have it used for something you believe in? The IEEE Foundation is a very efficient and effective charity that will make good use of any bequest."

“The critical function of the IEEE Foundation – or any charity -- is that it lets you help accomplish a goal that you could never achieve by yourself,” Dr. Feisel explained. “Acting alone, we could never put a girl through high school in Guatemala, teach a

class in New Jersey about the history of engineering, illuminate a light bulb in Haiti, or take a kid for a ride on a replica sailing ship. By giving to the IEEE Foundation and other charities,” he said, “we’re able to help do all of those things.”

DO YOU OWN A DONOR ADVISED FUND (DAF)? IEEE FOUNDATION IS EXCITED TO SHARE A WAY FOR YOUR MONEY TO GO FURTHER THAN EVER

Join the
#HalfMyDAF
Movement
and put your
money to work!

IEEE Foundation

Join the #HalfMyDAF Movement and put your money to work!

By Karen Kaufman, IEEE Foundation

Do you own a Donor Advised Fund (DAF)? IEEE Foundation is excited to share a way for your money to go further than ever – through the #HalfMyDAF matching-grant challenge. A DAF is a fantastic tool that connects donors and nonprofits to accomplish important work. Did you know that more than US\$140 billion just sits in Donor Advised Funds? Our goal is to inspire giving and put these unused funds to work! When generous donors, like you, put money into a DAF, they have taken the first step to making a difference in the world.

If you have already taken this step by setting up your DAF, and making charitable contributions to it, the IEEE Foundation wants to encourage you to move that money out of the fund and start working on projects that advance technology for the benefit of humanity.


#HalfMyDaf is an initiative to help DAF contributors take that vital next step--and increase the impact of your dollars.

Anyone who makes a donation to IEEE Life Members Fund of the IEEE Foundation and commits to donating half the balance from their DAF before 30 September 2021, allows IEEE Foundation to be nominated for a matching grant of up to US\$100,000. The more people who nominate IEEE Foundation, the better our chances of receiving the match.

By donating from a Donor Advised Fund, you inspire an engaged community and help us leverage your generosity to





enable IEEE programs that enhance technology access, literacy and education and support the IEEE professional community.

You can learn more about the #HalfMyDAF challenge at halfmydaf.com and nominate IEEE Foundation for a matching donation using this form: https://docs.google.com/forms/d/e/1FAIpQLSfqTZQLzcXSfIesehFV1UXUPwHEgg_fc7oIUt7kb-27EEc7Xw/viewform. Thank you for your support.

IEEE Foundation 

We have 30 million reasons to celebrate.

Realize your impact.

-  Energize
-  Engage
-  Educate
-  Illuminate

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 http://www.ieee.org/web/aboutus/history_center and more about the Engineering & Technology History Wiki (www.ethw.org)

FROM THE IEEE HISTORY CENTER PRESS

*SPRAGUE ELECTRIC: AN ELECTRONIC GIANT'S RISE,
FALL, AND LIFE AFTER DEATH*

by John L. Sprague

The rise of the Sprague Electric Company from a high-tech kitchen-table startup is representative of much of the U.S. electronics industry. Sprague Electric began in 1926 in the Quincy, Massachusetts kitchen of a young naval officer, Ensign Robert C. Sprague, and became a thriving manufacturer employing thousands of workers. Its broad product line of electronic components achieved international sales and a reputation for the highest quality. There were more than 50,000 Sprague components on every Apollo mission, and more than 25,000 aboard every Space Shuttle. The company later declined, went through a series of acquisitions, and eventually dissolved.

Sprague Electric provides a valuable business and technological history, a story of corporate success, and a cautionary tale of what to avoid. Told by company insider John Sprague, Sprague Electric gives the reader a front-row seat.

The Sprague Electric story reveals the value of investment in research and development, and also the effects of raw material supply chains on product lines. It is a story of a company's relations with the small New England mill town of North Adams, Massachusetts where its factories were located, and how labor relations – initially cordial— later soured. It is a story of how a vulnerable company weathered the stresses of the Great Depression and triumphed, only to be brought down by the recessions of the 1970s and 1980s.

It is a history of acquisitions, mergers, and spin-offs— some of them botched— and of the strategic and tactical mistakes that eventually caused the company to vanish. Yet, Sprague Electric's successor companies continue its legacy in the electronic components industry. Corporations formed from its different business units and operations are now located around the world. The principal manufacturing plant of Sprague Electric is now an acclaimed art museum.

Available from Amazon.com in hard copy and on Kindle.

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SPRAGUE ELECTRIC



An Electronic Giant's Rise, Fall, and Life after Death

John L. Sprague

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