

2025 Annual Report

Friends of Oak Ridge National Laboratory

The officers and board of directors of the Friends of Oak Ridge National Laboratory (FORNL) are pleased to report on the activities of FORNL for 2025.

FORNL is a nonprofit organization of persons interested in fostering the scientific goals of Oak Ridge National Laboratory (ORNL). We are scientists and engineers, as well as individuals from varied backgrounds, who believe we can increase awareness of the nation's advances in science and technology by providing information to teachers, students, and the general public.

In support of our mission goals, we provide:

- Monthly meetings during which co-workers, retirees, and other interested persons can network with one another and learn from speakers about current ORNL activities
- Periodic community-wide presentations and events for the public that showcase ORNL's outstanding scientific and technological achievements and awards or educate the community about special scientific and technological topics of national interest
- Online and printed newspaper articles about the content of monthly FORNL programs and community lectures, as well as news releases announcing the upcoming FORNL talks
- Knowledgeable volunteers for DOE-sponsored bus tours and related activities at the American Museum of Science and Energy, K-25 Atomic History Center, and Manhattan Project National Historical Park (located at the Children's Museum of Oak Ridge)
- STEM outreach, advice, and financial support to area students, a regional science fair, and the DOE-sponsored Tennessee Science Bowl

Luncheon Lectures

FORNL's primary activity of hosting monthly Luncheon Lecture meetings at noon on the second Tuesday of each month (except in December) continued in 2025. These meetings are free and open to the public and are conducted as hybrid meetings. Lectures are typically presented in person in the UT Resources Center in downtown Oak Ridge and made available on the Internet via Zoom. The option of virtual attendance enables participation by individuals who live outside the local area (including former ORNL staff), are not physically able to travel, or cannot leave their workplaces long enough to travel to our meetings. Our hybrid meetings frequently attracted up to about 100 attendees, a total participation level greater than our typical attendance before the COVID lockdown, when we met only in person.

FORNL had outstanding Luncheon Lecture speakers this year. We hosted monthly public science and technology lectures in the months of January through November (we normally skip December). This year eight of these lectures were presented by distinguished speakers on ORNL's current staff; two were by retired ORNL researchers, one of whom has become a high-school educator; and one was by a veteran journalist with a focus on nuclear energy technology and policy. The lecture topics spanned a wide variety of ORNL research areas. The ten men and one woman who spoke represented a range of personal circumstances and career situations, including individuals who originally came from outside the U.S., and

career stages ranging from mid-career to post-retirement. Speakers were recruited by FORNL board members. Below are a list of speakers and their topics with hyperlinks to webpages containing announcements of their talks and links to their videos or presentation materials, and a list of hyperlinks to news media coverage of each lecture.

FORNL Luncheon Lectures for 2025

January 14, 2025 – Dr. Warren Grice, Quantum Information Science Section, Computational Sciences and Engineering, ORNL. “Quantum Information Science at ORNL and the Quantum Revolution,” <https://fornl.org/node/791>

February 11, 2025 – Dr. Robert Hettich, Corporate Fellow, Leader of the Bioanalytical Mass Spectrometry Group, Biosciences Division, ORNL. “Characterizing the functional activities of microorganisms in the human gut: a new way to think about ‘health’ vs. ‘disease’,” <https://fornl.org/node/794>

March 11, 2025 – Dr. Stephen Jesse, Distinguished Scientist and Head of the Nanomaterials Characterizations Section, Center for Nanophase Materials Sciences, ORNL. “Building Materials and Devices with Atomic Precision: Perils and Promise,” <https://fornl.org/node/801>

April 8, 2025 – Joshua New, Distinguished R&D Staff Member, Grid-Interactive Controls Group, Electrification and Energy Infrastructure Division, ORNL, “An energy model of every U.S. building: Science and business uses,” <https://fornl.org/node/812>

May 13, 2025 – Dr. Mark A. Buckner, leader of innovative STEM education and workforce development and founder and lead instructor of Wildcat Manufacturing at Oak Ridge High School, “Empowering the Next Generation of Innovators: How Oak Ridge's Educational Ecosystem Is Preparing Students for Manhattan Project 2.0 and Beyond”, <https://fornl.org/node/814>

June 10, 2025 - Dr. Thomas E. Potok, former head of the Data and AI Systems Section, Computer Science and Mathematics Division, ORNL, “Insights into Next Generation Artificial Intelligence”, <https://fornl.org/node/818>

July 8, 2025 – Dr. Shih-Chieh Kao, Distinguished R&D Staff and Group Leader of the Water Resource Science and Engineering Group, Environmental Sciences Division, ORNL, and Program Manager for the ORNL Water Power Program, “Advancing Capabilities for Hydrodynamic Modeling of Flooding – How Far Can We Go?” <https://fornl.org/node/819>

August 12, 2025 – Chris Bryan, Leader of the Radioisotope Production Engineering and Analysis Section, Radioisotope Science and Technology Division, ORNL, “High Flux Isotope Reactor: 60 Years of Highlights and New Plans for Key Upgrades”, <https://fornl.org/node/836>

September 9, 2025 – Dr. Carrie Eckert, Synthetic Biology Group Leader at Oak Ridge National Laboratory and Chief Science Officer, Center for Bioenergy Innovation (CBI), Department of Energy Office of Science Bioenergy Research Center, “The Role of Synthetic Biology in the Realization of the Bioeconomy,” <https://fornl.org/node/837>

October 14, 2025 – Matthew L. Wald, former reporter for The New York Times on nuclear energy and electric technologies, now a writer and communications consultant specializing in nuclear technology and policy, “Nuclear Energy in the Age of Artisanal Energy Policy”, <https://fornl.org/node/839>

November 11, 2025 –Jeremy T. Busby, Associate Laboratory Director for the Isotope Science and Enrichment Directorate (ISED), ORNL, “Isotopes: Vital to U.S. Success”, <https://fornl.org/node/840>

Newspaper Coverage Generated by FORNL Luncheon Lectures in 2025

January	https://www.oakridger.com/story/news/local/2025/01/09/hear-how-oak-ridge-national-lab-could-advance-the-new-quantum-revolution/77551378007/ https://www.oakridger.com/story/news/local/2025/03/07/quantum-technology-advances-hype-or-reality/81785745007/
February	https://www.oakridger.com/story/news/healthcare/2025/02/07/probing-gut-microbiome-is-topic-of-feb-11-talk-at-friends-of-ornl/78208743007/ https://www.oakridger.com/story/news/local/2025/03/30/revelations-from-oak-ridge-national-laboratory-on-the-gut-microbiome/82691239007/ https://www.oakridger.com/story/lifestyle/health-fitness/2025/03/30/are-probiotics-good-for-the-gut/82691580007/
March	https://www.oakridger.com/story/lifestyle/clubs/2025/03/07/learn-how-writing-with-atoms-improves-materials-at-friends-of-ornl/81781239007/ https://www.oakridger.com/story/news/local/2025/07/24/ornl-scientist-talks-on-atomic-building-blocks-for-quantum-computers/83784222007/
April	https://www.oakridger.com/story/lifestyle/clubs/2025/04/04/total-u-s-building-energy-use-topic-of-friends-of-ornl-talk-april-8/82866166007/ https://www.oakridger.com/story/news/local/2025/07/07/modeling-buildings-energy-use-could-help-lower-electric-bills/83784074007/
May	https://www.oakridger.com/story/lifestyle/2025/05/09/fornl-preparing-students-for-a-future-of-ai-advanced-manufacturing/83515042007/ https://www.oakridger.com/story/news/local/2025/11/13/students-to-statues-the-amazing-products-of-wildcat-manufacturing/87128181007/
June	https://www.oakridger.com/story/lifestyle/2025/06/09/next-generation-ai-is-topic-of-june-10s-friends-of-ornl-talk/84055442007/ https://www.oakridger.com/story/news/local/2025/07/25/ornl-is-leading-ai-frontier-in-science-local-expert-says/84531310007/
July	https://www.oakridger.com/story/lifestyle/2025/07/02/simulating-floods-is-the-topic-at-friends-of-ornl-talk-on-july-8/84423733007/ https://www.oakridger.com/story/weather/2025/12/03/understanding-flood-risks-advanced-by-ornl-supercomputer-tool/87317978007/
August	https://www.oakridger.com/story/news/local/2025/08/11/friends-of-ornl-to-hear-about-future-plans-for-60-year-old-hfir/85607393007/ https://www.oakridger.com/story/news/local/2025/08/22/happy-birthday-hfir-high-flux-isotope-reactor-in-oak-ridge-turns-60/85742073007/
September	https://www.oakridger.com/story/news/local/2025/09/08/oak-ridge-talk-to-focus-on-using-synthetic-biology-to-produce-products/85936942007/ https://www.oakridger.com/story/news/local/2025/11/19/can-microbes-thrive-under-industrial-conditions-to-make-biofuel/87317927007/
October	https://www.oakridger.com/story/news/local/2025/10/10/former-new-york-times-reporter-to-speak-on-nuclear-energy-policy/86580323007/ https://www.oakridger.com/story/news/local/2025/10/20/speaker-as-power-demands-rise-nuclear-startups-arent-ready-to-deliver/86734462007/
November	https://www.oakridger.com/story/news/local/2025/11/06/fornl-talk-set-on-how-oak-ridge-labs-isotope-production-benefits-us/87063846007/ https://www.oakridger.com/story/news/local/2026/06/17/why-ornl-isotope-production-is-so-important-to-the-u-s/90557205007/

The UT Resource Center (combined rooms 173 A and B), our luncheon meeting venue for decades, is an ideal location for holding hybrid meetings. We are fortunate that the University of Tennessee and the East Tennessee Economic Council allow us to use this facility at no cost. To record and share video and sound of

a FORNL lecture at high quality, we use a Logitech Brio Stream HDR 4K webcam directed at the speaker that is connected to a Macintosh Pro laptop logged into a Zoom Pro account on the internet. The lecturer's PowerPoint presentation can be executed from this computer or from the speaker's laptop logged in at the podium or a remote location. The high-quality Epson projector installed in the room projects the speaker and PowerPoint images seen by Zoom attendees onto a 10-foot-wide screen for the live audience. In-room amplification helps in-person attendees hear the presentations. The setup was described fully in our 2022 Annual Report. The hybrid arrangement does increase our requirements for volunteer management of the technical arrangements for the presentations. Herb Krause has led the technical efforts, supported by a volunteer tech team that in 2025 frequently included Steve Overbury.

In 2025 we continued an arrangement initiated in 2024 that gives in-person luncheon lecture attendees an opportunity to purchase lunch. This had been suspended during the COVID pandemic, and new arrangements had to be established. We offer a light lunch of half-sandwiches from Panera Bread, augmented by a variety of bagged chips, cookies, and canned and bottled beverages purchased from a local supermarket. Attendees are asked to donate \$10 for lunch, which covers the cost of the food and drink. Ellen Smith has been the primary volunteer for food arrangements. In 2025 we also continued presenting FORNL coffee mugs to our speakers as a token of appreciation, thanks to the initiative of Steve Overbury, who has acquired a supply of mugs, stores them, and brings them to the meetings.



Attendees at a FORNL Luncheon Lecture in the UT Resource Center.

Dick Smyser Community Lectures

The Dick Smyser Community Lecture Series is an occasional series conducted by FORNL that offers free public programs on a wide range of topics of interest to the local community. Its name honors the late Dick Smyser, who was founding editor of *The Oak Ridger* newspaper, president of the Associated Press

Managing Editors Association from 1973 to 1974, president of the American Society of Newspaper Editors from 1984 to 1985, and a community leader for many years. He also had a strong love of science and news about ORNL research. FORNL engages Judy Dodd Catering to provide hors d'oeuvres and non-alcoholic beverages at receptions held in the lobby of each venue before the community lectures. Annual financial assistance from UT-Battelle has enabled this lecture series to continue.

In 2025 FORNL attempted to arrange two evening events for the general public in Dick Smyser Community Lecture series. Multiple topics were considered. A plan for a community forum on local and regional workforce education activities related to new nuclear industry that is coming to Oak Ridge did not come to fruition due to conflicts and coordination issues with Nuclear Science Week in October 2025 and with other public communication efforts that appeared to be covering the same topic.

The other planned community lecture was to be a “State of the Laboratory” lecture by ORNL Director Stephen Streiffer, continuing a longstanding tradition of “State of the Laboratory” lectures by Oak Ridge National Laboratory directors that we resumed in 2024. Our plans for a lecture in the fall of 2025, about one year after the previous lecture in November 2024, had to be put on hold due to the government shutdown at the beginning of the FY 2026 federal fiscal year. We did succeed in scheduling and hosting a “State of the Laboratory” lecture in May 2026.

FORNL Interactions With ORNL

As an organization of persons interested in fostering the scientific goals of ORNL and providing information to the community, it is important that FORNL has continuing two-way interaction with ORNL.

In 2025 ORNL continued its practice of providing a community liaison for FORNL. The liaison participates in our board meetings (when available) and helps us communicate with ORNL’s management and learn their needs. This arrangement is a great asset to FORNL. Annette Brun filled this role in the first 3 months of 2025, but left ORNL in April. Since then, Katy Brown resumed her earlier role in this position. We much appreciated both women’s attention to FORNL as our liaison.

In 2025 ORNL continued the practice, resumed in 2024 after an extended hiatus, of including a Friends of ORNL information sheet in the packets provided to new retirees. The FORNL information sheet is illustrated below (on the following page). The FORNL board believes that these packets are beneficial to retirees and FORNL, and we are glad that new retirees can learn about FORNL from these information sheets.

As we had done previously, FORNL was participated in the annual ORNL Benefits and Wellness Fair in October 2025. Herb Krause, Kathy Gant, and Gloria Caton participated. They distributed about 48 FORNL information sheets, demonstrated the FORNL.org website and other electronic information, and discussed the missions of FORNL with employees. Some ORNL employees view FORNL luncheon lectures via Zoom or visit FORNL.org to view our past lecture talks. The fair allows us to interact personally with ORNL employees and attract new FORNL members, particularly those considering retirement.

Before the pandemic, ORNL issued year-long guest badges to paid members of FORNL who had retired from ORNL. This enabled members to visit ORNL to attend lectures, meet with colleagues, or use the library. FORNL members are disappointed that there are no plans to reinstate this practice. There has been particular interest in having badged access to lectures in the *Eugene P. Wigner Distinguished Lecture Series in Science, Technology, and Policy*, which promotes dialogue between Oak Ridge researchers and

JOIN

Friends of ORNL



SUPPORT SCIENCE EDUCATION

- Monthly lunch lectures on topics related to ORNL science and engineering
- Evening Community Lectures on topics of interest to the wider community
- Volunteer connections with Oak Ridge museums and tours, including the Manhattan Project National Historical Park and the American Museum of Science and Energy
- Support and volunteer opportunities with local schools and science fairs
- Opportunities for ORNL retirees to interact with active research staff and other retirees
- Opportunities for the general public to get an inside view of ORNL research and engineering activities

Learn more at www.fornl.org, or come to one of our monthly lunch lectures held the second Tuesday of each month (except December) at noon at 1201 Oak Ridge Turnpike, Oak Ridge, TN.

(Or check out our website for instructions to log in via Zoom)

All talks open to the public (but membership is appreciated)



www.fornl.org





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managers and renowned leaders in science, industry, and government. One such lecture was held in July 2024, and Annette Brun arranged for single-event visitor badges for members to attend. We appreciated that opportunity, and FORNL continues to hope for increased site access for our members in the future.

Volunteer Engagement and STEM Education Support

Several FORNL members continued to volunteer their time as docents at the American Museum of Science and Energy (AMSE) and K-25 Atomic History Center, guides for the very popular DOE bus tours that originate at AMSE, or greeters for the Manhattan Project National Historic Park visitor center at the Children's Museum of Oak Ridge. By greeting visitors and talking with them about Oak Ridge science and history, their presence enhances museum guest experiences. In 2025 the three-hour DOE bus tours started at AMSE and made stops at the K-25 Atomic History Center, ORNL Visitor Center history center and supercomputer viewing area, and Y-12 New Hope Center. Volunteer bus-tour guides receive training and may serve as lead guides or tour assistants. Board members Fred Peretz (who left the board in March) and Alan Lowe (executive director of AMSE and the K-25 Atomic History Center), together with our ORNL liaison, kept the FORNL board informed about ORNL and DOE bus tours, volunteer needs, and other

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museum activities and encouraged FORNL members and lecture attendees to become volunteers. FORNL member interest in these and other volunteer assignments seems to have waned for reasons not fully known.

The FORNL board explored opportunities for FORNL volunteers to support STEM education activities in area schools and alerted members regarding opportunities to mentor prospective college students through tnAchieves (www.tnachieves.org) and related programs such as Tennessee Promise.

FORNL continued its practice of providing financial support to major STEM student activities in our area by making donations of \$1000 each to support the annual Tennessee Science Bowl (TSB) managed by the Oak Ridge Institute for Science and Education (ORISE) and the annual Southern Appalachian Science and Engineering Fair (SASEF) hosted by the University of Tennessee.

News Media Outreach

FORNL extends the reach of its public lecture programs through high-quality news media reports published in print and online by *The Oak Ridger*, Oak Ridge's daily newspaper. Board member Carolyn Krause, a professional journalist and science writer, continued to provide announcements of all FORNL lectures and later wrote and contributed one or more feature articles about each lecture. Her feature articles summarizing outstanding research at ORNL and other institutions, which were checked by the speakers or the sponsoring institutions before publication, and typically appeared both online and on the front page of the print newspaper, create additional public visibility for Oak Ridge science and for FORNL's activities. Occasionally one of these articles is picked up and republished by other news outlets.

The table on page 3 of this report lists hyperlinks to most of the extensive local newspaper coverage that appeared as a result of Carolyn's efforts to document FORNL activities in 2025.

Organization Business

Friends of ORNL is a membership organization and is registered with both the State of Tennessee and the IRS as a 501(c)(3) nonprofit, charitable organization. FORNL membership is open to anyone, including retirees from ORNL and the interested public. Member dues are \$20 per year or \$200 for lifetime membership. As of the end of 2025 FORNL had 96 paid members in total (down from 107 a year earlier), including 56 life members and 40 annual members. More than 350 people, including FORNL members and others who are interested in FORNL or ORNL, are registered to receive our email announcements, and an average of 32% opened our email messages this year. The Friends of ORNL page on Facebook is claimed to have over 400 "followers" in the United States. Our reach also includes some individuals in the community who occasionally attend the Luncheon Lecture series and network with members during our brief pre-lecture social time.

The organization is led by a ten-member board of directors whose members are elected to two-year terms and may serve no more than three consecutive terms. The organization's four officers are board members appointed to their officer positions by the board. The board meets once a month to plan and prepare for FORNL activities. The ORNL liaison and FORNL volunteers identified as "Adjunct" board members are also invited to participate in board meetings. In 2025 most board meetings were conducted via Zoom. David Fields and Fred Peretz concluded their service on the board in early 2025 and the seats they vacated were filled by Gloria Caton and Roger Macklin. Officers and board members for 2025 are listed below.

FORNL Officers March 2025 – March 2026

President	Ellen Smith
Vice President	Steve Overbury
Secretary	Alan Lowe
Treasurer	David Mullins

Board of Directors

Syd Ball	Alan Lowe
Gloria Caton	Roger Macklin
Kathy Gant	David Mullins
Ray Garrett	Steve Overbury
Carolyn Krause	Ellen Smith

Adjunct Board Members

Herb Krause	James Rushton
Connor Matthews	Kent Williams
James Rome	

ORNL Liaison – Annette Brun / Katy Brown

Webmaster - James Rome

FORNL is financed by community grant donations from UT-Battelle, member dues, and other charitable gifts, in that order. Gifts include small anonymous donations matched by corporations (such as Apple Computer) that use Benevity Causes or the American Online Giving Foundation as a platform for employee giving. We also receive and are grateful for in-kind assistance from the East Tennessee Economic Council (ETEC), which continues to give us no-cost space to hold our monthly lunch lectures at the University of Tennessee Resource Center at 1201 Oak Ridge Turnpike, and from the American Museum of Science and Energy and Roane State Community College, which provided venues at no cost for our Community Lectures in 2024 and we hope will do so again in the future. We further appreciate the in-kind contributions of *The Oak Ridger* in publishing Carolyn Krause's announcements and articles covering FORNL lectures.

FORNL's finances were overseen by treasurer David Mullins, who keeps close watch over our accounts, takes care of annual financial reporting to the state and federal governments, and also maintains our membership records as volunteer membership chair. The diligent efforts of Treasurer and Membership Committee Chair David Mullins, Secretary Alan Lowe, and board adjunct Kent Williams kept all FORNL business records and annually required legal documents up to date. Kent Williams is appreciated for maintaining our annual corporate registration with the state of Tennessee.

The Friends of ORNL website at www.fornl.org (home page illustrated) is a key element in our internal and external communications. It provides general organization information, hosts announcements of upcoming events and Zoom links for virtual attendees at our lectures, and provides access to scientific and technical news released by ORNL. Jim Rome designed the site and maintains it, with particular attention to internet security. The design enables board members to easily update the site's information contents.

Announcements of FORNL monthly meetings and other activities are sent to interested persons via email, using a MailChimp software and an email list maintained on the FORNL website. FORNL members and others can sign up for email using a utility on the website. FORNL's paid MailChimp account allows up to three named board members to originate messages.

A popular selection on the website is the "Past Talks" section that gives access to recordings of FORNL's past lectures dating back to May 2021. Site visitors can read the talk abstract and the speaker's biographical sketch by clicking on the talk title and/or be linked to the talk that was uploaded to the "Friends of ORNL" YouTube channel. The "ORNL News" section of the [FORNL](http://www.fornl.org) website is regularly updated by Carolyn Krause with a condensed version of and links to the latest news releases in the "News" section of the www.ornl.gov public website. Website visitors can also find convenient links to *Treasures from the Archives* (ORNL historical articles) and expanded information about FORNL and its operations.

The screenshot shows the homepage of the Friends of ORNL website. At the top is a navigation bar with links: Home, Past Talks, ORNL Archives, ORNL News, About FORNL, and Volunteer opportunities. Below the navigation bar is a large blue banner with the text "Friends of ORNL" in white. To the right of the banner is a small text box that reads: "The Friends of ORNL (FORNL) is a non-profit organization of persons interested in fostering the scientific goals of Oak Ridge National Laboratory (ORNL), Oak Ridge, TN, USA. We are scientists and engineers, as well as individuals from varied backgrounds, who believe we can increase the nation's technological awareness by providing information to teachers, students, and the general public." Below the banner is a section titled "Join FORNL and Pay your 2025 FORNL Annual Dues". It states: "2025 dues are \$20. Please fill in the member information form which will redirect you to PayPal." Below this is a link to "Subscribe to the FORNL Mailing List" and a "Cookie settings" button. Below the text is a photo of a group of people sitting around a table in a meeting. Below the photo is the text "Welcome to FORNL" and a paragraph: "Board meetings are held on Monday at 9:30 a.m. before the second Tuesday of the month. Luncheon lectures: Second Tuesday of the month, except December. The public is invited to all meetings." Below this is a section titled "FORNL Sponsors" with a logo for "UT-BATTELLE OAK RIDGE NATIONAL LABORATORY". At the bottom of the page are links for "Contact", a Facebook icon, and "Log in".

FORNL also maintains a page on Facebook at www.facebook.com/FriendsofORNL/ to enhance awareness of our organization and its activities, particularly the monthly luncheon lectures and community lectures. Ellen Smith posted announcements and managed the page.

FORNL has access to two paid Zoom accounts to support its activities, including Herb Krause's personal account that he provides for FORNL events and an additional account that is used for board business.

In annual business, we thank the 2024 Nominating Committee, convened by Alan Lowe and also including board members Kathy Gant and Fred Peretz and non-board members Kent Williams and Ronnie Bogard. The committee's recommendations were for re-election of board members Syd Ball and Carolyn Krause for their third consecutive two-year terms; re-election of Steve Overbury for his second consecutive two-year term; and election of Gloria Caton, a past three-term board member, and Roger Macklin to serve their first two-year terms, filling board seats vacated by David Fields and Fred Peretz. The new board began its service in March 2025. We thank David Fields and Fred Peretz for their service up to that date.

Overall, FORNL's activities in 2025 continued to contribute strongly to UT-Battelle's stated Corporate Giving areas in the categories of Public Awareness and STEM Education. FORNL members greatly appreciate the continued financial support from UT-Battelle which enabled our community lectures and support for STEM activities. During the year we acknowledge UT-Battelle as the sponsor of the Community Lecture Series in programs, on our website, and in announcements. We believe FORNL's efforts recompense UT-Battelle bountifully!

For the FORNL Board

Ellen D. Smith, Past President, Friends of ORNL

June 2026

Remembering FORNL Members (Current and Past) We Lost in 2025

Murray Rosenthal 12/15/2025