

# **2023 Annual Report**

## **Friends of Oak Ridge National Laboratory**

### **February 2024**

The officers and board of directors of the Friends of Oak Ridge National Laboratory are pleased to report on the activities of FORNL for 2023.

The mission of FORNL is to provide:

- Monthly meetings so co-workers and retirees can socialize and learn about current ORNL activities.
- Community-wide presentations and events for the public that showcase ORNL's outstanding scientific and technological achievements and awards, as well as special scientific and technological topics of national interest.
- Online and printed newspaper publicity on upcoming ORNL talks to FORNL and coverage of the talks of public interest.
- Knowledgeable volunteers for DOE-sponsored bus tours and related activities at the American Museum of Science and Energy, K-25 History Center, and Manhattan Project National Historical Park located at the Children's Museum of Oak Ridge, and
- STEM outreach, advice, and financial support to area students, a science fair, and science bowl.

**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.**

FORNL's primary activity of hosting monthly Luncheon Lecture meetings held at noon on the second Tuesday of each month (except in December) continued in 2023. The meetings are free and open to the public. The hybrid meetings attended by in-house, and guests logged into our internet Zoom session were held in the UT Resources Center located in downtown Oak Ridge. These highly successful meetings frequently attracted up to about 100 attendees, a total participation level greater than the in-person only meetings held before the COVID lockdown. However, our live attendance in 2023 ranged from 35% to 50% of the total attendance as shown below in a January 10, 2023, photograph.



The UT Resource Center (combined rooms 173 A and B), our meeting venue for decades, is an ideal location for holding hybrid Zoom meetings. To record and share video and sound of a FORNL lecture at the highest 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. Amplified computer audio feeds speakers installed throughout the room and amplified speech from the live audience can be heard throughout the room and for Zoom attendees. The setup was described fully in our 2022 Annual Report.

In 2023, we did not restart the pre-COVID lunchtime option that had allowed attendees to purchase lunch with varied menu choices because in-house attendance at the hybrid lectures was still unpredictable. A new lunch option will be tried in 2024 to determine if food and increased guest interaction time can increase the in-house attendance at the Resource Center.

FORNL had outstanding Luncheon Lecture speakers this year. We highlighted ORNL's core competencies by hosting ten monthly public science and technology lectures delivered from January through November that were delivered by seven distinguished speakers on ORNL's current staff and three outstanding former ORNL staff researchers. Although achievement of the diversity, equity and inclusion goal is not a mission focus for FORNL, we seek to give public exposure to STEM researchers from under-represented populations and show diversity in STEM via the mix of speakers for our community lectures and monthly programs. During 2023, one of our two community lecture speakers and two of our ten monthly lunch lecture program speakers were women. We held only ten "monthly" events because one scheduled speaker cancelled due to illness, and we normally skip December.

For example, Georgia (Gina) Tourassi, Ph.D., then director of the National Center for Computational Sciences and the Oak Ridge Leadership Computing Facility, in the ORNL Computing and Computational Sciences Directorate, discussed *Extreme Scale Data Analytics and AI at the Oak Ridge Leadership Computing Facility* in the February lecture, and Bruce A. Moyer, Ph.D., ORNL, presented *Past and Present ORNL Successes in Separation Science and Technology* at the August hybrid meeting. These and other talks were highly attended and received coverage in *The Oak Ridger*.



**Georgia Tourassi**



**Bruce Moyer**

A complete listing of the 2023 topics, speakers, and web links to articles by Carolyn Krause covering the talks that were published in *The Oak Ridger* is displayed on pages 10 and 11. Each of the recorded lectures was uploaded to and later viewed an average of 64 times (40-110 views) on the “Friends of ORNL” YouTube channel in 2023. Lecture videos are available for public viewing by clicking on “Past Talks” found near the upper left area of the [www.fornl.org](http://www.fornl.org) homepage. Ellen Smith, Robert Compton, Syd Ball, Fred Peretz, and Carolyn Krause, who serve on FORNL’s Lecture Program Committee researched and selected most of the speakers approved by the board. Vice President Ellen Smith was most helpful in chairing the lecture committee, introducing some speakers, and co-hosting some hybrid meetings. Morgan L. McCorkle, ORNL Science and Technology Media Manager, also assisted in obtaining several luncheon speakers in 2023. David Fields and Steve Overbury also co-hosted and managed Zoom hybrid lunch lecture audiences. The FORNL board also recognizes the efforts of Bill Cabage at ORNL, who includes FORNL lecture information in announcements displayed on ORNL’s internal news web page.

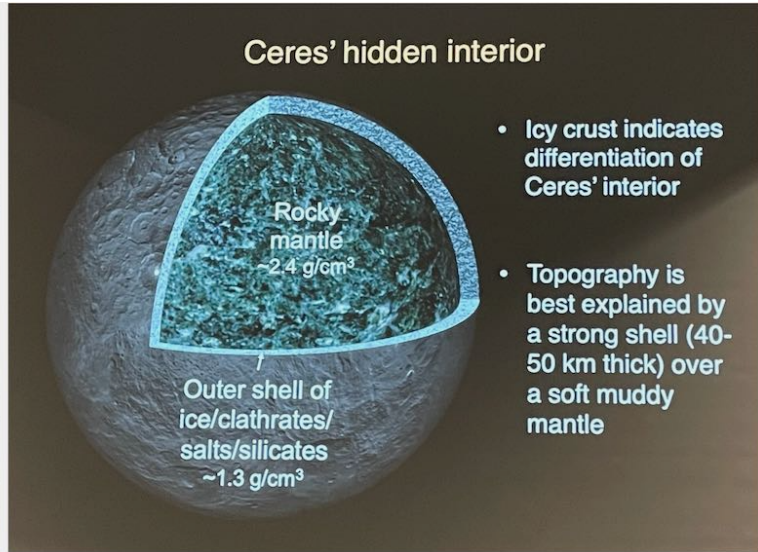
Inherent opportunities offered by a hybrid meeting and meeting observations suggest that our in-person attendance may never overwhelm the internet attendance at our hybrid meetings. The hybrid format restores the intimate social environment that many of our members desire, while allowing and expanding our program choices to other members and guests who prefer virtual attendance. Also, speakers can make a presentation in person or virtually. The virtual attendance option is now allowing members and guests

who don't live in the Knoxville area or have a physical disability to attend our meetings. FORNL members who have moved from our area, as well as other people in the country who are interested in ORNL research, can and regularly attend our lectures virtually. Talented speakers from around the country or world can now present talks without the expense of traveling to Oak Ridge.

FORNL also arranged two in-person evening events for the Annual Dick Smyser Community Lecture Series this year, the first since the start of the COVID shutdown in March 2020. This series, which is in its 25<sup>th</sup> year, offers free lectures on a wide range of topics of interest to the local community. The late Dick Smyser 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. Judy Dodd Catering provided hors d'oeuvres and non-alcoholic beverages at receptions held in the lobby of each venue before the lectures. Annual financial assistance from UT-Battelle enabled this lecture series to continue.

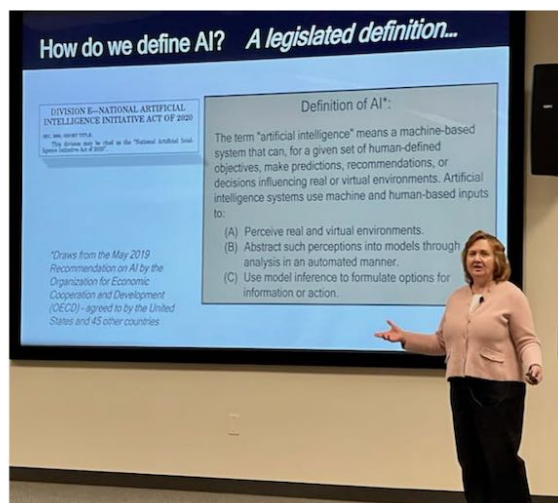
The first community event on March 20, held on the Roane State Community College campus in Oak Ridge, featured Dr. Harry (Hap) McSween, Chancellor's Professor Emeritus of the UTK Department of Earth and Planetary Sciences and NASA researcher, who discussed "*Asteroid Exploration by the Dawn Spacecraft*." ORION, an amateur science and astronomy club centered in Oak Ridge, co-sponsored the event by scheduling the venue and providing coverage on Zoom for this lecture. We thank Bob Compton, David Fields, and Kent Williams on the Community Lecture Committee for arranging for the lecture and providing a microphone to audience members asking questions. David Fields, ORION vice president and FORNL board member, introduced the speaker, and Kent Williams arranged for the food and drinks during the reception. We are indebted to the Roane State management for providing the venue free of charge. The combined in-person and Zoom attendance exceeded 100 people.

Dr. McSween explained that asteroids are leftover planetary raw materials, and their compositions and structures provide basic constraints on planet formation. Two of the largest bodies in the asteroid belt, Vesta and Ceres (both recognized by astronomers more than two centuries ago), have been explored recently by the Dawn spacecraft mission. Vesta is the parent body of more than a thousand meteorites, and comparison of these samples with visible/near-infrared and gamma-ray/neutron spectra obtained by Dawn as it orbited Vesta allowed mapping of lavas on the surface and the deeper mantle exposed within large impact basins. Dawn also revealed some surprises, such as the presence of water on Vesta delivered by foreign objects. Precise tracking of Dawn's orbit allowed a model of Vesta's interior, which is dominated by a massive iron core. Unlike Vesta, Ceres contains large amounts of ice, as well as alteration minerals formed by interaction of minerals with liquid water. Although no meteorites are recognized to have come from Ceres, its composition is much like carbonaceous chondrites, but more pervasively altered. Surprisingly, Ceres hosts cryovolcanoes that erupt brines, probably in the present day, and organic compounds have been found as well. Models of Ceres' interior indicate a soft, muddy mantle and a rigid crust of ice, silicates, and salts. The Dawn mission, combined with analyses of extraterrestrial samples, is transforming these bodies from astronomical points of light into worlds shaped by more-or-less familiar geologic processes.



The second community event on October 26, held in the Zach Wamp Auditorium at the Y-12 New Hope Center, featured Dr. Lynne Parker, Associate Vice Chancellor and Director of the Artificial Intelligence (AI) Tennessee Initiative at UTK, who spoke on “*AI Unveiled: Exploring Key Questions about our AI-Driven World.*” The venue could not provide recording or Zoom internet services for this lecture. The lecture was attended by 125 people who were pleased to interact with their past ORNL colleagues before and after the lecture. We are indebted to Carolyn Krause and Kent Williams on the Community Lecture Committee for arranging for the lecture and food service, respectively, and for additional execution assistance provided by member Dr. Lee Riedinger, who introduced the speaker. Members Jim Golden, Jack Graham, and the staff assigned to us at the Y-12 New Hope Center also provided audio-visual support.

Dr. Parker’s talk explored pivotal questions around AI and its impacts in our rapidly evolving world, such as: *Will AI take my job? How can I prepare for the AI-driven workplace? What are the ethical implications of AI? How will AI be used to improve our lives? Will AI be used for malicious purposes? Will countries have AI armies in the future? How can we ensure that AI does not lead to a dystopian future? What does the future of AI look like? And what should we do about this here at home in Tennessee?* In addressing these questions, she considered how AI is transforming the job market and implications for education and workforce development and examined the role of AI in addressing pressing global challenges. She explored how to harness the full potential of AI while addressing concerns about privacy and discrimination and discussed the challenges of making AI transparent and understandable, to help ensure trust and accountability. Geopolitical and ethical implications of AI-driven militaries, and speculation on the limits to what AI can achieve and the prospects that lie ahead in the ever-evolving landscape of AI technology were discussed. Finally, she noted steps we can take here in Tennessee to be ready for this new AI-driven world.



Carolyn Krause continued to write and disseminate articles announcing all our lectures and write feature articles about them for *The Oak Ridger*. The articles summarized outstanding research at ORNL and other institutions for the public. A speaker title and web link listing for Carolyn's 2023 feature articles published in *The Oak Ridger* appears on pages 10 and 11. She also updates the "ORNL News" section of the [www.fornl.org](http://www.fornl.org) website with a condensed version of and links to the latest news releases in the "News" section of the [www.ornl.gov](http://www.ornl.gov) website. FORNL is very grateful for her continuing generous contributions.

FORNL continued a presence on Facebook to better disseminate our organization's offerings, particularly the monthly and future community lectures that are open to the public. Ellen Smith posted announcements and managed the page, which highlights our presence in the community.

FORNL members continued to volunteer their time as docents at the American Museum of Science and Energy (AMSE) and as guides for the DOE bus tours that originate at AMSE. Their greeting of and interaction with visitors enhance museum guest experiences. The 2023 DOE bus tours started on April 13 and ended on November 17, and they were held on Mondays, Thursdays, and Fridays. Each tour departed the American Museum of Science and Energy and made stops at K-25, the ORNL Visitor Center where the wall mural inside is used to discuss the lab's history, and the Y-12 New Hope Center. This year, 17 guides were trained as either lead or guide assistants. These three-hour tours costing \$15 (or a lower price for some visitor categories) could be reserved on the AMSE website. Tour participation was close to fully subscribed during 2023. More guests have taken an interest in the Manhattan Project with the release of the Oppenheimer film this fall. More than 25,000 people from all 50 states have taken this tour since its inception in 1996. Board members Al Ekkebus and Fred Peretz kept the board informed about ORNL and DOE bus tours, volunteer needs, and other museum activities.

Several FORNL members also served as greeters and knowledgeable docents at the new K-25 History Center and the Manhattan Project Visitor Center located at the Children's Museum of Oak Ridge. The FORNL board continues to ask our members to volunteer at these museums, at ORNL, and on the DOE bus tours because each location is short on volunteers. Board members Fred Peretz and Bob Compton were particularly helpful promoting these outreach activities.

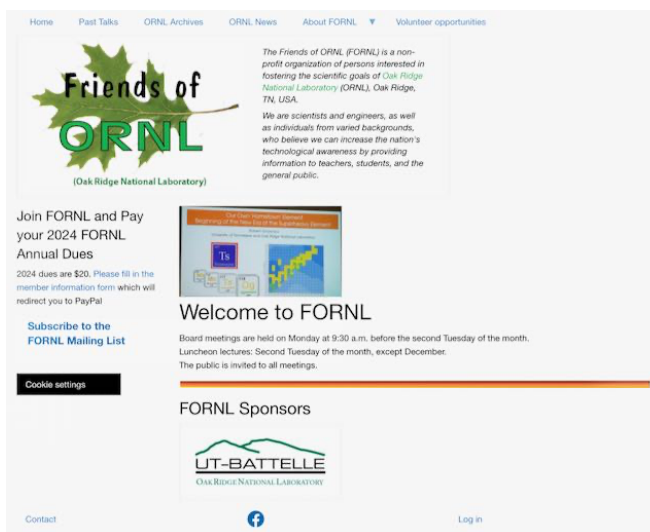
FORNL participated in the annual ORNL Benefits and Wellness Fair on October 19, 2023, when Herb Krause and Gloria Caton electronically displayed information and discussed the missions of FORNL with employees and several on-site DOE employees. We also demonstrated use of the forn1.org website and showed visitors how to view our past online lectures. We learned that some ORNL employees already visit forn1.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.



The FORNL board recognizes Katy Brown at ORNL who helped us communicate with ORNL’s management and learn their needs. We hope the ORNL laboratory director can give a “state of the laboratory” address open to the public during an evening Community Lecture in 2024. This event has been frequently requested by FORNL members. We have learned that ORNL plans to resume the *Eugene P. Wigner Distinguished Lecture Series in Science, Technology, and Policy* that promotes dialogue between Oak Ridge researchers and managers and renowned leaders in science, industry, and government. These invited lecturers bring distinct perspectives to the lab’s community of scientists and engineers, whose scientific discoveries and technological breakthroughs target some of the world’s most pressing problems. Many of our members have enjoyed attending these and other live onsite lectures in the past using the annual ORNL guest badges issued to paid FORNL members who want one. Many FORNL members hope that ORNL will resume issuing guest badges to our members as the ORNL campus continues to open to the public. We also learned that the retirement packets that the Human Resources Division issues to retirees no longer include information about activities for ORNL retirees such as classes hosted by the Oak Ridge Institute for Continued Learning, information about Friends of ORNL, etc. The FORNL board believes that these packets were beneficial to retirees and FORNL in the past.

In annual business, we thank the 2023 Nominating Committee (NC) that was skillfully run by Carolyn Krause with the help of board members Syd Ball and Steve Overbury and non-board members Richard Davis and Ronnie Bogard. They recommended re-election of Dave Mullins and Ellen Smith to serve their third consecutive two-year term and Ray Garrett to serve his second two-year term starting in 2024. The NC also recommended two new candidates: Kathy Gant, a past three-term board member, and Alan Lowe, director of the American Museum of Science and Energy and K-25 History Center, to serve their first two-year term to replace Al Ekkebus and Herb Krause. FORNL members will be asked to approve this slate at the FORNL annual meeting on February 13, 2024. The board thanks members of the NC and retiring board members Al Ekkebus and Herb Krause for their elected board service.

During 2021, FORNL transitioned to an updated and informative website ([www.fornl.org](http://www.fornl.org)) to keep members apprised of upcoming events and of scientific and technical news released by ORNL, as well as to easily allow visitors to access virtually the lectures presented at our meetings. Jim Rome's continuing diligent maintenance of the website's secure internet infrastructure that has expanded capabilities now allows board members to easily update the site's information contents. A popular selection on the site is the list of recorded lectures found under "Past Talks." The viewer 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. Lectures since May 2021 are available. The website also provides convenient links to "ORNL News," *Treasures from the Archives* (ORNL historical articles) and expanded information about FORNL and its operations. Although our website is also a gateway to FORNL email capabilities provided by MailChimp, and the member email list is managed by software on [fornl.org](http://fornl.org), we now send emails to the membership using a FORNL MailChimp paid account that allows up to three named board members to originate messages. In 2024 we plan to open a similar paid FORNL [zoom.com](https://zoom.us) account that allows up to three named board member users to run hybrid lecture meetings and perform other business.



In 2023, FORNL's paid membership rose to 103 (from 86) including 55 life members, a level close to pre-COVID levels. FORNL membership is open to anyone, including retirees from ORNL and the interested public. More than 270 people who are interested in ORNL and its welfare have registered to receive our email announcements, and an average of 140 opened our MailChimp messages this year (52% of 270). The Friends of ORNL account on Facebook has 313 followers now. Community members also attend the Luncheon Lecture series, and some participate in our brief pre-lecture social time and business meeting that promotes important community outreach activities.

FORNL is supported by financial contributions from UT-Battelle, annual member dues of \$20 and lifetime membership dues of \$200, as well as charitable gifts, in that order. FORNL also receives much smaller, matched donations from corporations (such as Apple Computer) that use Benevity Causes as a platform for employee giving. We are grateful to the East Tennessee Economic Council (ETEC) for continuing to allow us to hold monthly lunch lectures at no cost at the University of Tennessee Resource Center at 1201 Oak Ridge Turnpike; we returned to this newly renovated room with high-tech amenities in May 2022. We also appreciate the significant in-kind contributions of *The Oak Ridger* in publishing announcements and articles covering FORNL lectures that are written by Carolyn Krause.

We continue to use our income to support STEM student activities in addition to other Oak Ridge area activities discussed throughout this report. For example, FORNL provided \$1000 to support the annual Tennessee Science Bowl (TSB) managed by the Oak Ridge Institute for Science and Education (ORISE). The TSB is claimed to be the largest in the country and Jim Rome represented FORNL at their banquet this year where 500 students attended. We were able to support the Southern Appalachian Science and Engineering Fair (SASEF) hosted by the University of Tennessee at the \$1000 level, too. In the past, several FORNL members participated in SASEF's monthly "Virtual Science Club," a forum that educates teachers, mentors, and middle school and high school students on scientific topics, too. Herb Krause, Fred Peretz and other board members continue to encourage our members to volunteer in these STEM outreach events and other new service opportunities suggested by other board members.

Overall, FORNL's missions (stated on page 1) continued to contribute strongly to ORNL's stated Corporate Giving areas in the Public Tours and Educational Support categories (defined in [www.ornl.gov/community](http://www.ornl.gov/community)) during 2023 and FORNL members greatly appreciate the continued financial support from UT-Battelle. Without it, we could not continue robust execution of our community lectures and the expanding support of STEM activities noted above. 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 accomplishments recompense ORNL/UT-Battelle bountifully!

FORNL's financial responsibility is maintained continually by fastidious financial accounting and annual corporate registration with both the State of Tennessee and the IRS as a 501(c)(3) nonprofit, charitable organization. During 2023 our treasurer, David Mullins, applied for and obtained our sales tax waiver from the State of Tennessee, which can be used to avoid paying sales tax on our purchases. The diligent efforts of Treasurer and Membership Committee Chair David Mullins, Secretary Fred Peretz, and Kent Williams kept all FORNL business records and annually required legal documents up to date.

## Friends of ORNL

### 2023 Luncheon and Community Lecture Speakers with Links to Published Articles

11/14/23 James A. Rome, retired ORNL researcher and fornl.org web master, *How to Keep Your Computer (and You) Safe*. (Hybrid Zoom meeting)

**Local expert tells how to keep your computer safe**

<https://www.oakridger.com/story/news/local/2023/11/30/local-expert-tells-how-to-keep-your-computer-personal-info-safe/71653129007/>

10/26/23 Dr. Lynne Parker, Associate Vice Chancellor and Director of the Artificial Intelligence (AI) Tennessee Initiative at UTK, *AI Unveiled: Exploring Key Questions about our AI-Driven World*. (25<sup>th</sup> Annual Dick Smyser Community Lecture Series at the Zach Wamp Auditorium at the Y-12 New Hope Center with food service. In-person meeting only.

**Preparing to train Tennessee's AI-ready workforce**

<https://www.oakridger.com/story/news/local/2023/11/08/preparing-to-train-an-ai-ready-workforce-in-tennessee/71477098007/>

10/10/23 Phillip B. Snyder, Interim Director of ORNL's Fusion Energy Division, *The US Fusion Energy Program and ORNL's Role*. (Hybrid Zoom meeting)

**Oak Ridge could get fusion power plant**

<https://www.oakridger.com/story/lifestyle/clubs/2023/11/28/oak-ridge-pilot-plant-for-fusion-electricity-possible-in-2030s/71608762007/>

9/12/23 Kirk Sorensen, Fluor Energy Inc., Huntsville, Alabama, *Thorium Molten-Salt Reactors and the Challenge of Affordable Nuclear Energy*. (Hybrid Zoom meeting)

**ORNL molten salt concept could lead to "smartphone" of reactors**

[https://www.oakridger.com/story/news/local/2023/10/02/ornl-molten-salt-concept-could-lead-to-smartphone-of-reactors/70990790007/?itm\\_medium=recirc&itm\\_source=taboola&itm\\_campaign=internal&itm\\_content=BelowHomepageFeed-FeedRedesign](https://www.oakridger.com/story/news/local/2023/10/02/ornl-molten-salt-concept-could-lead-to-smartphone-of-reactors/70990790007/?itm_medium=recirc&itm_source=taboola&itm_campaign=internal&itm_content=BelowHomepageFeed-FeedRedesign)

8/8/23 Bruce A. Moyer, ORNL, *Past and Present ORNL Successes in Separation Science and Technology*. (Hybrid Zoom meeting)

**How chemical separations successes helped make ORNL world-class**

[https://www.oakridger.com/story/news/local/2023/09/10/how-success-in-chemical-separations-helped-make-ornl-world-class/70785521007/?itm\\_medium=recirc&itm\\_source=taboola&itm\\_campaign=internal&itm\\_content=BelowArticleFeed-FeedRedesign](https://www.oakridger.com/story/news/local/2023/09/10/how-success-in-chemical-separations-helped-make-ornl-world-class/70785521007/?itm_medium=recirc&itm_source=taboola&itm_campaign=internal&itm_content=BelowArticleFeed-FeedRedesign)

7-11-23 Robert F. Peacher, ORNL and Consultant, Strata-G LLC, Knoxville, TN, *Radioisotope Processing Facility (RPF), ORNL's Planned Facility Designed to Meet Growing Demand for Radioisotopes*. (Hybrid Zoom meeting)

**Planned ORNL facility to meet growing demand for medical radioisotopes**

<https://www.oakridger.com/story/news/local/2023/08/02/ornl-facility-to-meet-growing-u-s-demand-for-medical-radioisotopes/70505642007/>

6/2023 Tony Mezzacappa, UTK Dept of Physics and Astronomy, *Gravitational waves from core collapse supernovae*. **Cancelled due to speaker illness.**

5/2023 Ken Tobin, ORAU Chief Research and University Partnerships Officer, *35 Years of Science & Technology Research and Leadership at ORNL and ORAU*. (Hybrid Zoom meeting)

**Saving eyesight and silicon chips are ORNL researcher's legacies**

<https://www.oakridger.com/story/news/local/2023/06/05/silicon-chips-and-saving-peoples-eyesights-are-or-researchers-legacy/70278145007/>

4/2023 David L. McCollum, Mobility and Energy Transitions Analysis (META) Group at ORNL, *Science and Society: Working Together for a Nature-Inclusive Energy Transition* (Hybrid Zoom meeting)

**ORNL focuses on “net zero” game changers to slow earth's warming**

<https://www.oakridger.com/story/news/local/2023/04/20/ornl-lab-focuses-on-net-zero-game-changers-to-slow-earths-warming/70130304007/>

3/2023 Harry (Hap) McSween, UTK Department of Earth and Planetary Sciences, *Asteroid Exploration by the Dawn Spacecraft*.

**(25<sup>th</sup> Annual Dick Smyser Community Lecture Series co-sponsored with ORION at Oak Ridge Roane State with food service. Hybrid meeting with Zoom was provided by ORION.)**

**Planetary geoscientist: How two starlike points of light became geological worlds**

[https://www.oakridger.com/story/news/local/2023/04/04/how-two-star-like-points-of-light-became-geological-worlds/70076520007/?fbclid=IwAR30znKMC\\_XSAIGfyZhAd12Q10iX9wyv89otajjuo5djGH9iLd2uFXqDx7M](https://www.oakridger.com/story/news/local/2023/04/04/how-two-star-like-points-of-light-became-geological-worlds/70076520007/?fbclid=IwAR30znKMC_XSAIGfyZhAd12Q10iX9wyv89otajjuo5djGH9iLd2uFXqDx7M)

3/2023 Joan Bienvenue, UT- Oak Ridge Innovation Institute Executive Director and Vice Provost: *UT-ORII: Aligning ORNL & UT's resources to prepare future STEM talent* (Hybrid Zoom meeting)

**Strengthening the area pipeline for STEM talent**

<https://www.oakridger.com/story/news/local/2023/04/19/ut-orii-strengthening-area-pipeline-for-stem-talent/70123628007/>

2/2023 Georgia (Gina) Tourassi, Ph.D., Director of the National Center for Computational Sciences and the Oak Ridge Leadership Computing Facility, in the ORNL Computing and Computational Sciences Directorate: *Extreme Scale Data Analytics and AI at the Oak Ridge Leadership Computing Facility* (Hybrid Zoom meeting)

**ORNL leader: AI enables scientific advances**

<https://www.oakridger.com/story/news/local/2023/03/22/ai-intriguing-or-extremely-threatening/70032591007/>

1/2023 Adam M. Guss, Biosciences Division, Center for Bioenergy Innovation, ORNL: *Synthetic biology for production of sustainable fuels and chemicals from renewable or waste carbon* (Hybrid Zoom meeting)

**ORNL synthetic biology expert targets plastics**

<https://www.oakridger.com/story/news/local/2023/02/01/oak-ridge-lab-synthetic-biology-expert-targets-plastics/69847333007/?fbclid=IwAR1u5A2zCRNdHXuibnRPCOJicFFxLqTCUbqAi26wZTa-ERq7YFR0ggR85Ws>

The FORNL Board of Directors, Adjunct Board Members and the ORNL Liaison meet once a month on Zoom to plan and prepare for FORNL activities.



**Screen shot of a typical board of directors Zoom meeting.**

**(Left to right and top to bottom)**

**Kent Williams  
Al Ekkebus  
Bob Compton  
Ray Garrett**

**Herb Krause  
Syd Ball  
David Mullins  
Ellen Smith**

**Fred Peretz  
Carolyn Krause  
James Rome  
Steve Overbury**

**FORNL Officers March 2023 – March 2024**

President	Herbert Krause
Vice President	Ellen Smith
Secretary	Fred Peretz
Treasurer	David Mullins

**Board of Directors**

Syd Ball	Herbert Krause
Al Ekkebus	David Mullins
David Fields	Steve Overbury
Ray Garrett	Fred Peretz
Carolyn Krause	Ellen Smith

**Adjunct Board Members**

Robert Compton	James Rushton
Connor Matthews	Kent Williams
James Rome	

**ORNL Liaison** - Katy Brown

**Webmaster** - James Rome

**FORNL Members Who Will Be Missed**

<b>Virginia Coleman 2019</b>	<b>John Munro 8/14/23</b>
<b>Charles Congdon 2/10/2019</b>	<b>John Preston 2/9/2023</b>
<b>Charles Crume 10/18/2021</b>	<b>Victor Tennery 11/10/2019</b>
<b>Fred Haywood 4/19/2023</b>	

For the FORNL Board,  
Herbert F. Krause, FORNL President

