



Points of Interest:

- CNTA Turns 30
- Education Committee Updates
- Communications Committee Updates
- Young Professionals Committee Updates
- 2021 Teller Lecture
- Distinguished Scientist Award
- Nuclear Service Award
- Up & Atoms
- SRR thanks CNTA for "timely" support
- North Wind busy in Aiken & beyond
- 2021 Don Orth Award Recipient
- NNSA Administrator visits SRS
- BVVXT continues to build nuclear medicine business
- Thank you CNTA members & volunteers
- Plutonium downblending at SRS's K Area
- Secretary of Energy virtually visits SRNL
- Amentum establishes the Memorial Leo H. Said Scholarship at Uof SC Aiken
- DOE authorizes use of second saltstone disposal unit at SRS
- CNTA Committee Descriptions
- CSRA 'virtual' college night exceeds expectations
- Plant Vogtle Update
- Technical apprenticeship program launching careers at SRS
- 2022-2023 CNTA Membership Form
- Thanks to our Business Members
- Mission of CNTA
- How YOU Can Help
- CNTA Calendar of Events



Update from our Executive Director

At the beginning of 2021, I did not think I would be writing in the fall about yet another challenging year. But, despite the difficulties, we at CNTA are thankful that we were able to continue much of our outreach and education activities.

In 2021, CNTA awarded over \$10,000 in scholarships to high school and college students. We also awarded three \$500 Educator Grants to middle and high school teachers for innovative activities in their classrooms.

We continued to support STEM education by participating in virtual and in-person events. A special thanks to our volunteers for remaining flexible and always providing the support we need.

We held seven "Up and Atoms" with all but one held in-person. We also conducted four "Tap into Nuclear" young professional mentoring events including a night at an Augusta Green Jackets game.

On the fundraising front, we held the Oyster Roast/Low Country Boil at the Palmetto Golf Club. The event, hosted by our Young Professionals Committee, raised funds to offset membership fees for young professionals to join CNTA and mentoring events and educational outreach. We also resumed the annual Teller Lecture with some slight tweaks to the event. We welcome comments on the changes – both good and bad! We were able to hold both events safely thanks to the support of our volunteers and the cooperation of the participants. Thanks to all!

We also published the Nuclear Science Week insert in the *Aiken Standard*. I personally think this is our best one yet and thank our new Communications Committee Chair, Lindsey MonBarren, for her leadership and editing skills!

During this season of thanks, we are especially thankful for our CNTA members and friends who support the organization. I would like to personally thank our outgoing Board Chair, Daren Timmons, and outgoing Board Members Matt McCoy and Carol Jantzen. Your support has been tremendous and you will be missed.

Happy Holidays!
Jim

CNTA Turns 30

In 1991, a handful of citizens and a few companies in the Central Savannah River Area of South Carolina and Georgia banded together to form a nonprofit, grassroots organization that would be pro-nuclear and proud of it.

Out of that passion, Citizens for Nuclear Technology Awareness (CNTA) was born. And it is unlike any other organization in the area.

CNTA carries out educational programs to provide factual information about the benefits and risks of nuclear technologies. The organization has published hundreds of news articles, opinion pieces and guest columns over the past three decades and has taught thousands of students nuclear fundamentals. CNTA has also provided over \$175,000 in scholarships and grants to local students and presented to hundreds of community groups.

While continuing its mission to educate, CNTA has expanded its role in the last decade to include young professional mentoring and networking opportunities. The organization has an active group of young professionals today who fundraise to pay for free memberships to anyone under 40 and organize events to help build a community of engaged and educated young people.

The faces, names, and technology have changed over 30 years, but CNTA is steadfast in its commitment to be the voice of truth on nuclear matters. To be a part of CNTA is to be a part of the future of nuclear technology. The group and its members remain dedicated to sharing the positives, correcting the negatives, and addressing the fears about nuclear. As one of the founding members, Fred Davison (who the Distinguished Scientist Award is now named after) said, "Make no mistake. Public understanding and public support go hand in hand. If we are ever to have public support of nuclear technologies, we must have public understanding."

Education Committee Updates

CNTA Members Support Furman University Teacher Workshop



For the past several summers, Jon Guy and Bill Wabbersen have supported a workshop at the Furman University Science Plus Institute. The workshop is used as a professional development class for South Carolina teachers. Greenville County schools (GCS) runs these classes through the Roper Mountain Science Center.

The class taught by Jon and Bill is an element of a chemistry class for high school teachers. The leads are Elizabeth Gordon, a professor at Furman University, and Chynthia Siddons, a high school chemistry teacher at South Point High School in Rock Hill, SC. For the past 10 years, Elizabeth has had a passion for teaching nuclear science at Furman. She teaches a fall course each year focused on nuclear science that includes discussion related to power, medicine, and weapons. Chynthia attended the workshop that Jon and Bill presented in 2019 and has incorporated nuclear topics into her chemistry classes.

Teachers from Title I or underserved schools are given preference for the workshop. This year, there were 13 teachers in attendance from high schools all across South Carolina. Many of the teachers were first-time chemistry teachers and they were able to take equipment and materials from the workshop back to their schools for use during the school year.

During the workshop the following topics were presented with a focus on hands-on activities:

- Atomic Fundamentals (using the marble gold-foil experiment)
- Journey to the Center of the Atom (using the Isotope Discovery Kit)
- Basics of Radiation (using the cookie analogy)
- Half-life (using m&ms)
- Radioactive Decay Chains (using the Advanced Isotope Discovery Kit)
- Fission (using the new fissioning cookies activity)
- Fission fragment/Spent Fuel discussion (using the new fission fragment activity)
- ALARA discussion (including a time, distance, and shielding activity)
- Energy discussion
- Nuclear Science in SC
- Savannah River Site introduction



The workshop was a very full day, and the reception from the teachers was great. There were excellent discussions about the teachers' understanding and misconceptions of nuclear. Many of the teachers remarked that they and their students were very tired of computer screens and they welcomed the chance to engage again with these in class demonstrations!

Selena Cheadle

Aiken Technical College

CNTA Scholarship

Dear Dr. James Marra,

My name is Selena Cheadle, and I would like to extend my gratitude for choosing me for the CNTA scholarship. I am honored to be able to use this generosity to continue my studies for the radiological protection technology degree at Aiken Technical College.

I returned to Aiken Technical College after raising my children. Following this degree path has been a dream of mine from childhood. My goal is to become a third generation SRS worker. I am passionate about protecting workers and the environment from radiation and contamination.

Your generosity and belief in my abilities are very meaningful to me and the completion of my degree path. I look forward to graduating in a year, and I have you to thank for helping me along the way.

Fall 2021 ATC Nuclear Scholarship Awarded

CNTA awards a \$500 scholarship each semester to a deserving second-year student in a nuclear related program at Aiken Technical College. This fall's winner is Selena Cheadle from North Augusta. Your support of CNTA helps us fund this scholarship, so included here is her thank you.

She will be recognized at the December 8th Up & Atom.

CNTA Volunteers turn out for S.E.E.D. at UofSC Aiken

Over a dozen CNTA volunteers helped oversee CNTA's exhibit at UofSC Aiken's fall SEED (Science Education Enrichment Day). CNTA is always a proud sponsor of this fall outreach event.

One of the most popular booths of the event included the "wheel of candy" where attendees had to answer a question correctly to receive candy. Other interactive displays at the booth included Geiger counters with various activities, and an interactive on power loads (base vs peak). This annual event had over 2,500 attendees and a good time was had by all!



CNTA Again Presents Popular Center for Lifelong Learning Class

By Jim Tisaranni

CNTA presented three well received classes as part of the University of South Carolina Aiken Center for Lifelong Learning program. The attendees provided positive feedback concerning the quality, professionalism, and information they received about the neighboring SRS facility. All considered that these presentations were vital to the community knowledge base of the environmental hazards and how well they were measured and maintained.

Course specifics were as follows:

SRS and the Environment – The Savannah River Site (SRS) has supported the defense of the nation for 70 years. The myriad missions at the site are well documented; but less is known about the stewardship of the environment at the site. In this three-part class, attendees learned about: environmental monitoring efforts, past and present ecological studies at the site, and examples of environmental cleanup technologies that have been developed and used at SRS and around the world.

- **Class 1:** The SRS Environmental Monitoring Program – this class provided an overview of the environmental monitoring activities that occur at the site and across the Central Savannah River Area, including recent results of these studies and historical data.
- **Class 2:** Ecology at SRS – this class provided a historical review of ecology work at the site, from the pioneering work of Dr. Eugene Odum and Dr. Ruth Patrick to current research efforts and outreach initiatives.
- **Class 3:** Environmental Science and Technology – the Savannah River National Laboratory has been at the forefront in the development of environmental remediation and cleanup technologies. These efforts have facilitated the stewardship of the environment at SRS, as well as supporting environmental cleanup needs around the world.



Tim Jannik of SRNL presenting on the SRS Environmental Program. Tim tragically passed away this past summer. CNTA honors his memory.

In 2022, CNTA will present another class titled: "SRS – Support to the Nation and Regional Economic Engine." The three class format will provide a broad overview of SRS including economic impact, support to the nation and overview of the prime contractors.

2021 Robert Maher Memorial Scholarship Winner Announced

Citizens for Nuclear Technology Awareness (CNTA) and Savannah River Remediation (SRR) announced Kennesaw State University (KSU) student Alisa Machiwalla as the winner of the 2021 Robert Maher Memorial Scholarship.

The scholarship is sponsored by SRR, the liquid waste contractor for the U.S. Department of Energy at the Savannah River Site (SRS).

Machiwalla, who is from Marietta, Georgia, is pursuing a bachelor's degree in mechanical engineering with a minor in nuclear engineering. CNTA Executive Director Jim Marra said CNTA is proud to award this \$5,000 scholarship to such an ambitious, enthusiastic, and deserving student.



"Alisa has a great passion to pursue nuclear research and grow her knowledge and experience in the field," Marra said. "All these go-getter qualities make Alisa the ideal candidate to award this scholarship. No doubt she will be an exemplary addition to the nuclear industry."

Her career aspiration is to find solutions to issues that involve clean, sustainable nuclear energy. She also hopes to be involved in the research, design, and implementation of innovative technology, such as the cost-competitive Generation IV reactors or the implementation of small modular reactor technologies.

In the Spring of 2019, she joined Southern Nuclear as an engineering co-op student, completing three rotations with the company, first in the monitoring and diagnostic center at the corporate office and second/third at Plant Vogtle. She has also interned with Enercon in the Next Era and Entergy groups, where she supported engineers to provide upgrade designs for their nuclear plants.

"With the knowledge that I have gained through my experience, I understand now more than ever that with plants closing around the country, nuclear needs to become cost-competitive in the market to meet the demand for clean and reliable energy," Machiwalla said. "I strive to help ensure this future."

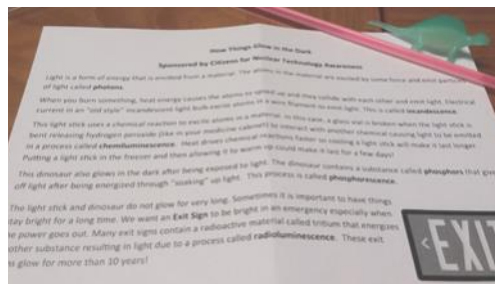
She plans to continue assisting in nuclear research at KSU and complete the Nuclear Engineering Minor Program.

At KSU, she serves as the American Nuclear Society Kennesaw chapter president.

Ms. Machiwalla and family attended the 2021 Oyster Roast & Low Country Boil on October 16th, where she was recognized by Ken Wells of SRR. The award was also highlighted at the 2021 Teller Lecture.

The Robert Maher Memorial Scholarship is a joint project of CNTA and SRR. Maher, Vice President and General Manager for Strategic Mission Development at SRS, passed away in 2002 after a 48-year career at the Site. A visionary with a broad view of the Site's potential, Maher helped shape SRS. The annual scholarship was established in Maher's memory to support students pursuing science and engineering degrees in preparation for careers in the nuclear field. Details on the scholarship can be found at: <https://cntaware.org/maher-memorial-scholarship/>.

CNTA Volunteers create STEM KITS for Williston DIG STEM Festival



With the support of BSRA/SRNL, CNTA volunteers created over 400 STEM (science, technology, engineering, and math) Kits for the DIG (Dreams, Imagination, and Gift) STEM Drive-In festival in Williston in September. Two different kits and accompanying videos were created and donated to the drive-in STEM festival.

The first focused on the mechanical properties of different items students would recognize. The second featured a glow stick and glow-in-the dark dinosaur and discussed the different ways things can glow including phosphorescence and radioluminescence.

2022 Educator Grants Program & Essay Contest Go Live

Both the 2022 Essay Contest & Educator Grants Program are back for 2022! Launched during Nuclear Science Week (Oct 17-23), Essay Contest entries are due February 28, 2022, while the Educator Grants Program entries are due January 31, 2022. No major changes were made to the requirements for the Educator Grants. Spread the word to area teachers that want help with STEM activities funding! Details and the application packet are available at: <https://cntaware.org/educator-grants-program/>.

The Essay Contest for 2022 will include \$1,000 awards (up to 3) and \$500 awards (up to 5). Juniors and seniors in the Central Savannah River Area (CSRA) have four topics to choose from this year. They are:

- This past year has seen much progress toward sustained fusion power ... discuss the progress and remaining roadblocks.
- Discuss the use of nuclear technology in space exploration (past, present, and future).
- Discuss the importance of isotopes in today's medicine and the U.S. dependence on foreign supply.
- Discuss how electricity generated from nuclear power versus fossil fuels can impact global warming.

Details, and the application packet are available at: <https://cntaware.org/high-school-essay-contest/>.

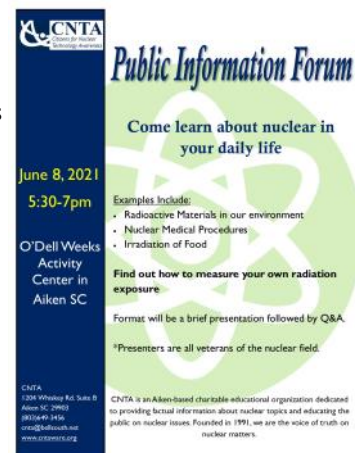
The Education Committee will be looking for volunteers to judge the essays and educator grant applications! A call for volunteers will go out in January, but if you know you want to help, let us know now!

CNTA Holds Public Information Forum

CNTA was approached this spring by some concerned citizens who did not know about the Savannah River Site, did not understand daily exposure to radiation, and had concerns due to mis-information. In response, CNTA hosted a public information forum at O'Dell Weeks in June.

The program provided a broad overview of radiation in the world, how nuclear energy is vital to reducing carbon emissions, how SRS ensures environmental safety, etc. Attendees of the event said they felt much safer being a neighbor of SRS, and did not disagree with nuclear energy anymore. One attendee even said "I never knew nuclear technology was used in medicine. I have so much to learn! Thank you!"

This forum continued CNTA's outreach efforts to educate the public. In addition to yearly lifelong learning classes at UofSC Aiken, CNTA has presented to realtor groups and civic organizations such as Rotary and Sertoma clubs. If anyone knows of interest from community groups, please let us know. We have numerous volunteers on the ready to speak on a variety of topics!



DOE Minority Serving Institutions Summer Courses

In 2019, this summer program was hosted by the University of South Carolina Aiken. In 2020 and 2021, the classes went virtual, but CNTA volunteers still taught two courses.

Course 1 focused on robotics and was taught by CNTA volunteer Frank Heckendorn. This course focused on application of commercial robotic and remote handling technologies to solve real world problems. Virtual teaching provided significant challenges for this course as the in-person version includes hands-on labs and robotic development activities. However, Frank was able to reach the students through videos and kits delivered personally to the students.

Course 2 was titled Research Methods in Environmental Management but was more aptly called "what I wish I'd learned in school about being an engineer." This course provided instruction of experimental planning and safety assessments, risk assessment practices, research proposals and negotiations, and project management principles. The course emphasized writing and oral communications in assignments and a final project. Paul Ebel, Ken Stephens, and Jim Marra team taught this course.

A comment received from one student summed things up best: "I enjoyed the classes very much. The material taught is usually learned with experience. But, now having an idea of these topics, I feel better prepared for the field in general. I can look back at these classes and apply what I have learned."

Communications Committee Updates

Committee Welcomes New Chair





CNTA's Communications Committee has a new chairperson! SRNS' Lindsey MonBarren has taken over this committee from longtime chair Dean Campbell (SRR). Many thanks to Dean for his years of service on this committee and welcome to Lindsey!




This fall the committee has put together one of the best Nuclear Science Week Inserts we've seen. The full insert is available online (QR code above) and CNTA has copies in the office. Thank you to Lindsey who edited the insert and the many contributors!



The committee has written dozens of newsletters and put together a CNTA advert for inclusion in *the Aiken Standard's* special "Giving Back" insert due out in December.

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Citizens for Nuclear Technology Awareness

CNTA is a local 501(c)3 non-profit grassroots organization of individuals, families, and businesses dedicated to raising the level of awareness of nuclear technology initiatives.

CNTA has awarded over \$175,000 to hundreds of local students, teachers, and schools.


Help us support STEM EDUCATION by donating today!

Educator Grant Program
The grants program is an opportunity to support local teachers in their classrooms and give them the resources to develop projects or enhance their student's experience with science and technology. Awards of \$500 available.

High School Essay Contest
Area high school students have a chance to win up to \$1,000 scholarship. CNTA awards between three and six students per year.

Maher Memorial Scholarship
\$5,000 award given annually to a college student who demonstrates outstanding academic achievement in a nuclear science/engineering related field.

Aiken Technical College Scholarship
The \$500 scholarships are awarded to deserving second-year students enrolled in a nuclear program at Aiken Technical College.



The communications committee also oversees CNTA's online presence.

As a snapshot, during the month of October CNTA had:

- 906 Facebook hits
- 853 Tweet impressions & 241 profile visits
- 1,500 page views on our website- 287 for the Teller Lecture, 199 for the High School Essay Contest, and 163 for the Oyster Roast

Young Professionals Committee Updates

A Night of Oysters, Music and Fun Raises Funds for CNTA Young Professionals

The Citizens for Nuclear Technology Awareness (CNTA) Young Professionals Committee recently held their annual oyster roast and low country boil event fundraiser at Palmetto Golf Club, raising more than \$10,000 for CNTA activities.

“The fall young professionals event is a fun networking and socializing event that raises much needed funds for CNTA’s young professionals programs. Without these funds CNTA couldn’t afford to offer free membership to those under 40.”- Jim Marra

Proceeds from the event are used to recruit young professionals under 40 to join CNTA by funding free memberships and events like the Tap into Nuclear series. Due to the Covid-19 pandemic, attendance was limited this year and tickets were not available to the general public.

The evening included live music by Keith Gregory, raffles, and oysters and a low country boil from JC’s Seafood in Aiken. Savannah River Remediation (SRR), the liquid waste contractor at the Savannah River Site, was the platinum sponsor.

At the event, SRR Chief Engineer Ken Wells recognized the 2021 Robert Maher Memorial Scholarship winner. This scholarship is sponsored by SRR and is presented annually by CNTA to a college student pursuing nuclear as their career. This year’s winner was Alisa Machiwalla, who is pursuing a bachelor’s degree in mechanical engineering with a minor in nuclear engineering at Kennesaw State University.

Gold sponsors of the event included Bechtel, Savannah River Nuclear Solutions, and Southern Nuclear. Silver sponsors were the Savannah River Site Community Reuse Organization, and the Applied Research Center. Bronze sponsors included Atkins, Centerra, Emerson ASCO, Jason Crane of Edward Jones, Merrick, North Wind Group, Battelle Savannah River Alliance/Savannah River National Laboratory, and Security Federal.


CNTA’s young professionals committee intends to host a similar event in 2022. They need volunteers to help organize it! If you’d like to help, contact cnta@bellsouth.net!

Tap Into Nuclear

The Tap into Nuclear young professionals development series held two in-person events this summer before taking a hiatus during the fall.



The topic “Starting your own business and consulting within the nuclear field” was the focus at the June 17, 2021, Tap into Nuclear. Model Performance founder Jeremy O’Donnell & CNTA’s Vice-Chair Steve Sheetz shared their experience with, and answered questions from the attendees.




CNTA's Night at the Ballpark

Date: Thursday, July 8th 7:05 pm
Location: SRP Park
RSVP: cnta@bellsouth.net BEFORE July 1st

Attendance is **FREE** for members + 1 person
Tickets are limited
Additional tickets for \$9 each
Remember: If you are under 40 its FREE to join CNTA!! Details at: <https://www.cnta.org/individual-membership>

Promotions that night can be found at: <https://www.cnta.org/individual-membership>
Parking information at: <https://www.cnta.org/individual-membership>



On July 8th the Tap into Nuclear committee organized a “Night at the Ballpark” for CNTA members. While the weather wasn’t great, the roughly 30 attendees enjoyed a night of networking and time at the park!

To wrap up 2021, the committee is planning a mixer with the focus on “Servant Leadership & Giving Back.” This event is sponsored by HII-Nuclear and will be held December 9th at Café Scientifique in Aiken. Details are available on the website.



The Tap Into Nuclear Committee needs assistance in 2022. Help organize and promote networking and professional development opportunities! For more information, contact cnta@bellsouth.net.

2021 Teller Lecture

After having to cancel the 2020 lecture, CNTA changed the look of the Teller Lecture in 2021. The 30th Annual Edward Teller Lecture and Banquet was held on Thursday, October 28, 2021, 6:30 p.m. at the Amentum Performing Arts Center in downtown Aiken. The Lecture was followed by a dinner reception across the street at Newberry Hall.

CNTA sponsors the annual Edward Teller Lecture and Banquet as a public outreach event. The event is named in honor of the famed nuclear pioneer who played a key role in advancing nuclear science during the Second World War.

Our distinguished guest speaker was Dr. Brent Park. Dr. Park is a physicist, a retired national laboratory executive, and a former Deputy Administrator for Defense Nuclear Nonproliferation at the National Nuclear Security Administration (DOE/NNSA). Prior to joining DOE/NNSA, Dr. Brent retired from Oak Ridge National Laboratory (ORNL) where he led and managed the science-to-application efforts for national security programs. Before ORNL, Dr. Brent was the director of NNSA's Remote Sensing Laboratory, where he led efforts to advance and field cutting-edge diagnostics and communications instruments in support of counterterrorism and radiological incident response for the nation.



*Jim Marra presents Dr. Park with a gift bag of CNTA swag following the 2021 lecture.
Photo Credit- Colin Demarest*



View from the theater as Dr. Park speaks. Seated from left are: Dr. Timmons, CNTA's Board Chair, Dr. Marra, CNTA's Executive Director, & Dr. Reigel, CNTA's Education Committee Chair

Several award and scholarship winners were recognized at the event. These include the Fred C. Davidson Distinguished Scientist Award, the Nuclear Service Award, the Robert Maher Memorial Scholarship, the Aiken Technical College Scholarship, the CNTA High School Essay Contest scholarship winners, and Educator Grant recipients.

Dr. Edward Teller was a native of Hungary and came to the United States, as did many other Jewish scientists escaping from Nazi Germany. During the Manhattan Project, Dr. Teller was a central figure in the design and production of nuclear weapons and nuclear weapons materials. Though Dr. Teller was the "father of the hydrogen bomb" and convinced President Truman of its need to counter Soviet advances, he nevertheless considered the teaching of theoretical physics as his primary occupation. President George W. Bush presented him with the Presidential Medal of Freedom in July 2003. Dr. Teller died at his home in California in September 2003 at age 95.

Dr. Teller presented a public lecture in Augusta, GA in 1992 and consented to CNTA naming its annual lecture and banquet in his honor. The Annual Edward Teller Lecture and Banquet is CNTA's largest community outreach program. The audience primarily consists of community leaders, elected officials, and nuclear professionals. High school and college students also attend courtesy of corporate and collegiate donations.

In 2021, four different groups of college students attended the lecture. They included students from UofSC Aiken, Aiken Technical College, Augusta University, and UofSC Salkehatchie! Several of these students spent hours discussing career paths and life goals with CNTA members at the post-event reception.

The redesigned event garnered positive reviews from attendees and we hope to host the 2022 Teller Lecture in a similar format!

Several articles were written about the keynote speaker's address. CNTA's press coverage is documented and can be found at: <https://cntaware.org/in-the-press/>.

Many thanks to our sponsors: Platinum– Amentum, Savannah River Nuclear Solutions; Gold– Applied Research Center, Bechtel, Southern Nuclear-Plant Vogtle; Silver– Centerra, SRS Community Reuse Organization, Hill-Nuclear; Corporate– Model Performance Group, Savannah River Remediation; Non-Profit– Aiken Technical College, SRSCRO-Nuclear Workforce Initiative.



*Dr. Park and Sharon Marra (SRNL) talk before the lecture.
Photo Credit- Colin Demarest*

2021 Distinguished Scientist Award Winner

Citizens for Nuclear Technology Awareness (CNTA) is pleased to announce that the winner of the 2021 Fred C. Davison Distinguished Scientist Award is Dr. Theodore (Ted) Besmann. This prestigious award was announced on October 28, 2021, at the 30th Annual Teller Lecture and Banquet held in Aiken, SC.

Dr. Besmann is Professor and SmartState Chair, and Director of the General Atomics Center of Economic Excellence, in the Nuclear Engineering Program at the University of South Carolina (UofSC). He is currently the Deputy Director of the “Center for Hierarchical Waste Forms” Energy Frontiers Research Center (EFRC) for the U.S. Department of Energy. He advises students in the Mechanical Engineering and Nuclear Engineering graduate programs and is an adjunct faculty member in Chemical Engineering.



Dr. Besmann received his B.E. in Chemical Engineering at New York University in 1970, his M.S. in Nuclear Engineering from Iowa State University in 1971, and his Ph.D. in Nuclear Engineering from Pennsylvania State University in 1976. From 1975 to 1985 he was a member of the Chemical Technology Division development staff at the Oak Ridge National Laboratory (ORNL), and, from 1985 to 2014, the head of the Surface Processing and Mechanics Group in the Materials Science and Technology Division at ORNL. From 2011 to 2014, he was a Full Professor in Nuclear Engineering at the University of Tennessee – ORNL, and has been on the faculty at UofSC from 2014 to the present.

Dr. Besmann is noted for his groundbreaking research in the modeling of nuclear fuels and other materials. His name is attached to the “Lindemer-Besmann” model for uranium oxide fuels, and his numerous publications have accumulated over 5,000 citations. These publications include over 160 refereed journal and proceedings papers, six book chapters, and the co-authorship of *A Desirable Energy Future*. He holds six patents and is the Associate Editor of the *Journal of the American Ceramic Society*.

Dr. Besmann is the former Chair of the Materials Research Society Government Affairs Committee, the former Vice President for Corporate Relations in the American Ceramic Society, the current Chair of the OECD Nuclear Energy Agency “Expert Group on Multi-scale Modelling of Fuels and Structural Materials,” and the current Vice-Chair to the OECD Nuclear Energy Agency program on “Thermodynamics of Advanced Fuels International Database.” He is the recipient of the D.T. Rankin Award in 2016, the ORNL/UT-Battelle Distinguished Engineer Award in 2010, and a Fellow of the American Nuclear Society in 2010.

“The impact of his results is exceptional, as demonstrated by the continuous, increasing number of citations of his work,” said Dr. Marius Stan, Senior Scientist and Program Leader at the Argonne National Laboratory. “His generosity in sharing scientific expertise and his willingness to help the younger generation of nuclear scientists is remarkable and adds to the impact of his work.”

“Professor Besmann is greatly admired for excellent teaching and mentorship; leadership of the SmartState Center and the EFRC; and for collegiality, balance, and valuable perspective among our faculty,” said former UofSC President Robert L. Caslen, Jr.

The Distinguished Scientist Award is presented annually to recognize regional scientists and engineers who have made exceptional lifetime scientific achievements. The award is in honor of Dr. Fred C. Davison who was Chairman of CNTA's Board of Directors from 1994 until his death in 2004.

Davison was President of the University of Georgia for 19 years where he encouraged math and science education and managed the doubling of graduate enrollment. Davison was also President and Chief Executive Officer of the National Science Center Foundation, President of the Georgia-Carolina Boy Scouts Council, an elder at Reid Memorial Presbyterian Church, and an active Rotarian.



Committee Chair Dr. Jantzen presents the 2021 award (a glass bowl) to Dr. Besmann at the Teller Lecture.
Photo Credit- Colin Demarest

2021 Nuclear Service Award Winner



Citizens for Nuclear Technology Awareness (CNTA) is pleased to announce that the winner of the 2021 Nuclear Service Award is Dr. Melvin (Mel) Buckner. This prestigious award was announced on October 28, 2021, at the 30th Annual Teller Lecture and Banquet held in Aiken, SC.

Dr. Buckner enjoyed a distinguished career at the Savannah River National Laboratory (SRNL) for over three decades. He received his B.S., M.S., and Ph.D. in Nuclear Engineering from the University of Tennessee. He is noted for his expertise and leadership in nuclear fuel cycle related technologies, including safety and physics analysis methods for heavy water reactors, the establishment of advanced computer systems, the accelerator production of tritium and nuclear hydrogen production, and educational efforts in nuclear science, engineering, and technology. He produced more than 65 publications on diverse topics ranging from nuclear hydrogen production and plutonium disposition to nonproliferation policy and waste management.

Dr. Buckner's impactful leadership was felt on numerous programs and initiatives at the Savannah River Site. These included the K Reactor Restart, the Tritium Source Program including the Accelerator Production of Tritium Project and the Commercial Light Water Reactor Program, the Plutonium Disposition Program, the Nuclear Energy Research Initiative Project, and the Nuclear Hydrogen Initiative. Dr. Buckner was also the Program Manager for SRNL University Relations and Nuclear Programs.

After his retirement from SRNL, Dr. Buckner was an Adjunct Professor of Nuclear Engineering at the University of South Carolina from 2006 to 2012. He led the formation of the Southeastern Universities Reactors Institute for Science and Education (SUNRISE), consulted with SRNL, and served on the Savannah River Nuclear Solutions transition team in 2008. He continues to share his knowledge with the public as an independent nuclear columnist for the Augusta Chronicle and The State newspapers.

Dr. Buckner is an active member of CNTA and the American Nuclear Society (ANS). He was chairman of the CNTA Education Committee, co-founder of the Southeastern Summer Nuclear Institute, member of the Speakers' Bureau, and a former member of the CNTA Board of Directors. He has served on the ANS Board of Directors, served as Chairman of the ANS President's Special Committee on Nuclear Nonproliferation, and received an ANS Presidential Citation for his contributions to the Society's nonproliferation focus. Dr. Buckner's work on nonproliferation issues is highlighted by his preparation of relevant ANS Position Statements and related features in Nuclear News.

"It is long overdue and fitting that this year's award recognizes Mel's lifetime achievements in applying nuclear technology, advancing education in nuclear technology, increasing public awareness of the benefits of nuclear technology and in promoting and defending the safe and effective use of nuclear technology," said Kevin O'Kula, ANS Savannah River Section Program and Scholarship Chair.

"Dr. Buckner has committed his professional and retired career to the advancement of the nuclear industry as well as nuclear education," said Marissa Reigel, R&D Execution Manager for Actinide Materials Science and Technology at SRNL. "Mel has made a lasting impact on nuclear technology and education both in the CSRA and nationally."

The Nuclear Service Award is presented annually to recognize accomplishments in applying nuclear technology, advancing education in nuclear technology, increasing public awareness of the benefits of nuclear technology, and in promoting and defending the safe and effective use of nuclear technology.

CNTA plans to recognize Dr. Buckner at its 30th Anniversary Party on November 30, 2021.



Committee Chair Dr. Paul Cloessner discusses the award during the 2021 Teller Lecture. Photo Credit- Colin Demarest

Up & Atoms

- **June 23, 2021**– “Workforce Development– Short-term, Long-Term, and Beyond” Dr. Forest Mahan, President, Aiken Technical College
- **July 21, 2021**– “SRR’s Success at the Savannah River Site” Philip Breidenbach, President & Project Manager for Savannah River Remediation
- **August 25, 2021**– “SRNL Update and Future Direction” Dr. Vahid Majidi, President of Battelle Savannah River Alliance, LLC (BSRA) and Laboratory Director for SRNL
- **October 13, 2021**– “Amentum-Solution Provider to the U.S. Government” Tom Foster, Senior Vice President & Chief Operating Officer, Nuclear & Environmental for Amentum

UPCOMING– December 8, 2021- “Seventy Years of Ecological Research– The History and Mission of UGA’s Savannah River Ecology Lab” Dr. Olin (Gene) Rhodes, Director of the Savannah River Ecology Laboratory



Savannah River Remediation Thanks Citizens for Nuclear Technology Awareness for "Timely" Support

Savannah River Remediation (SRR), the liquid waste contractor at Savannah River Site (SRS), presented a special gift to the Citizens for Nuclear Technology Awareness (CNTA) for its years of support.

SRR President and Project Manager Phil Breidenbach presented a Rosewood mantel clock as a gesture of appreciation for the organization’s role in presenting positive and accurate information about nuclear technology to the public. The clock is inscribed, "Your support has always been timely."

"We owe so much to CNTA for performing a valuable mission throughout the entire community," said Breidenbach. "CNTA provides educators and others with information and materials on the value of nuclear technology with respect to our health, economy, environment, and national security. We are truly grateful for the support CNTA has given this community, and this memento is our way of saying 'thank you.'"

CNTA and its volunteers provide the public with factual, objective information on nuclear subjects, while also providing opportunities for its members' personal and professional growth. The organization also offers memberships to businesses and individuals interested in supporting awareness of services like those performed by SRR. SRR also has been active in its support of CNTA through involvement and sponsorship.

CNTA Executive Director Dr. James Marra accepted the clock on behalf of the organization and its members, thanking Breidenbach for the support the company has shown through the years.

"We could never provide our current level of education and awareness in this community without the support of businesses like SRR," Marra said. "We know the significance of SRS and SRR to this entire region. Our mission is to help others understand the importance of SRR’s mission, and we are grateful for the opportunity to work together."



Citizens for Nuclear Technology Awareness Executive Director Dr. James Marra (left) accepts the presentation of a Rosewood mantel clock from SRR President and Project Manager Phil Breidenbach during the monthly CNTA meeting.

North Wind Busy in Aiken and Beyond

Submitted by North Wind Group

Earlier this year, North Wind was awarded a \$50-million contract by the Department of Energy (DOE) to design and build the Advanced Manufacturing Collaborative (AMC), a research center for nuclear cleanup at the University of South Carolina Aiken, located about 20 miles from the Savannah River Site.

North Wind, no stranger to DOE or South Carolina, established an office in Greenville in 2005 and Aiken in 2014. They've been reaching out to local small business representatives for partnering opportunities, placing job ads, attending job fairs, and plan to partner with colleges in and around the Aiken area to staff their projects.

"North Wind has been working in and around Aiken, S.C. since 2010, and we are thrilled to support DOE EM and the Savannah River National Laboratory with such an important project to design and construct this state-of-the-art facility," North Wind Group President and CEO Chris Leichtweis said. "Last year, North Wind merged with LBYD Engineers, which will provide engineering expertise on the project," Leichtweis added.

North Wind has provided continuous environmental support services at the site through SRNS since 2014, often working directly with the Lab on task orders. North Wind also holds Prime DOE contracts with the Transuranic Waste Processing Center in Oak Ridge, Tennessee, the Portsmouth Site in Ohio, and the Energy Technology and Engineering Center within the Santa Susana Field Laboratory in California.

North Wind is actively seeking talent to fill key positions all over the country as well as in Aiken, as they've seen significant growth in the last several years. To view or apply for current career opportunities, visit: <https://northwindgrp.com/careers/>

North Wind provides services across its primary business lines of engineering, construction, environmental services, facilities operation and infrastructure, and IT/cyber enterprise management. North Wind is part of a multi-company enterprise, employing more than 2,200 professionals at 40 offices across the continental U.S. and throughout the Indo-Pacific Rim region. Headquartered in Idaho Falls, Idaho, North Wind is a wholly owned subsidiary of Cook Inlet Region, Inc., an Alaska Native corporation.

For more information, visit the North Wind website at www.northwindgrp.com.

SRNL Names Dr. James Klein as 2021 Don Orth Award Recipient

Submitted by Savannah River National Laboratory



Savannah River National Laboratory selected Dr. James (Jim) Klein as the recipient of the laboratory's 2021 Donald Orth Lifetime Achievement Award, the highest honor given by the laboratory for technical excellence and leadership.

Dr. Klein was chosen because of his expertise and leadership in tritium process science and technology, for which he is recognized across the Department of Energy (DOE) and National Nuclear Security Administration (NNSA).

In his 34-year career at SRNL, Dr. Klein was instrumental in leading research and development activities and life-cycle support for tritium system and facility design, start-up, operations, and decommissioning. Among his many accomplishments, Dr. Klein led the implementation of the tritium In-Bed Accountability (Calorimetry) technique for large metal hydride beds, which is now the internationally accepted measurement method for this technology.

The Orth Award is the highest honor given by the laboratory for technical excellence and leadership. Established in 1993, the award was named for the late Dr. Donald Orth, who retired from SRNL in 1992 after a distinguished 41-year career. The award was established to honor an individual "who by character and leadership best exemplifies Dr. Orth's character and contributions."

NNSA Administrator and Deputy Visit SRS

Submitted by Savannah River Nuclear Solutions

When NNSA Administrator Jill Hruby and Principal Deputy Administrator Frank Rose visited SRS in November, they saw a site that lives up to one of the Administrator's imperatives: Deliver. "I don't have to tell you about delivering," Administrator Hruby told a livestreamed all-hands meeting with SRNS and NNSA employees. "You understand, and we appreciate all you've done." She made clear that she – and the nation – are relying on the Site to continue that tradition, as SRS moves forward with building the new plutonium pit mission and continues fulfilling its other important NNSA missions.

Wherever in the NNSA complex Administrator Hruby travels, she carries the message about the three priorities – innovate, collaborate, and deliver. "If I could have a fourth word, I would choose 'accelerate,'" she added. "Not only do we have to deliver, we have to deliver well and relatively quickly."

She expressed great pride in the way SRS personnel have embodied those priorities in carrying out NNSA missions. This included praise for the Savannah River Tritium Enterprise's record-breaking year, the accomplishments in surplus plutonium disposition, and SRS' status as the one NNSA site that has maintained normal operations throughout the COVID-19 pandemic. In particular, she noted collaboration by the team preparing for the new Savannah River Plutonium Processing Facility, for working so closely with Los Alamos and Lawrence Livermore national laboratories to reach production as quickly as possible.

"I can't tell you enough what a flagship program this is, and how we need to be all in together on this," she said of SRPPF. "It's a big project by any standard. It's a big deal for our nation and really important that we deliver. It's an exciting time to be part of this program."



NNSA Principal Deputy Administrator Frank Rose, U.S. Rep. Joe Wilson and DOE Under Secretary for Nuclear Security & Administrator of the National Nuclear Security Administration Jill Hruby prepare to tour the Savannah River Plutonium Processing Facility.



NNSA Administrator Jill Hruby (right) and Principal Deputy Administrator Frank Rose (left, back to camera) talk informally with early-career personnel from SRNS and the local NNSA offices, including Harlee Moss of SRPPF Engineering and Ami Burke of Savannah River Tritium Enterprise.

Administrator Hruby and Deputy Administrator Rose spent their day at SRS touring the Tritium facilities and the future SRPPF, learning first-hand about current activities and future plans, and engaging in frank discussions about the importance of SRS' delivery on its missions. U.S. Rep. Joe Wilson joined her for the SRPPF tour.

On Twitter, Administrator Hruby shared her pleasure with the time she spent at SRS. "From having lunch with early-career high performers at SRS to sharing my vision and new priorities with the SRS workforce during an All Hands meeting – my day touring this NNSA site just kept getting better and better," she said.

BWXT Continues to Build Nuclear Medicine Business

Submitted by BWXT

BWXT Technologies, Inc. (BWXT) has been a member of the Savannah River Site community for 30 years, supporting important and diverse U.S. Department of Energy missions. Beyond SRS, BWXT is also pioneering innovative nuclear solutions to help diagnose and treat disease.

In 2018, BWXT announced a patent-pending neutron capture process designed to produce molybdenum-99 (Mo-99), the parent isotope of technetium-99m (Tc-99m), which is used globally in more than 40 million medical procedures each year to diagnose conditions like cancer and heart disease. In addition, BWXT Medical Ltd. recently announced that it has entered into a new long-term, mutually exclusive agreement to manufacture TheraSphere™ Y-90 Glass Microspheres for Boston Scientific, a leading global medical device company.

Developed for the treatment of patients with hepatocellular carcinoma, TheraSphere treatment is comprised of millions of glass microspheres containing radioactive Yttrium-90, which are delivered directly to liver tumors via catheter and result in minimal exposure to surrounding healthy tissue.

Under the terms of the agreement, BWXT Medical will invest to automate its production process and thereby significantly increase capacity and dependability to support a growing global demand for TheraSphere.



BWXT Medical also entered into an agreement with Bayer AG to develop Actinium-225 (Ac-225) supply and further partnering opportunities on finished products as both companies broaden their respective commercialization strategies for targeted radionuclide therapies (TRTs) and other innovative products.

Ac-225 is a highly powerful radioisotope used in targeted alpha therapies (TATs), an emerging class of radionuclide therapy for various tumors with a high unmet medical need, delivering alpha radiation directly to tumors either via its bone-seeking properties (radium-223) or by combining alpha radionuclides such as Ac-225 with specific tumor-seeking targeting vectors.

One final note: BWXT is a proud member of Citizens for Nuclear Technology Awareness and salutes your 30-year anniversary!

THANK YOU CNTA MEMBERS & VOLUNTEERS!

CNTA is a grassroots organization, which means “we” are the members, supporters, & volunteers. CNTA does not exist without the membership and CNTA could not function without our volunteers.



Dozens of volunteers have helped with events and education outreach activities, and hundreds of you have donated your time to our different committees. No matter your time or knowledge level, CNTA can use your help!

Our organization is strong after 30 years because of your commitment to the importance of speaking the truth on nuclear matters. To each and every one of you— we see you and we say THANK YOU!

Plutonium Downblending moves to four-shift glovebox operations at SRS's K Area

Submitted by Savannah River Nuclear Solutions

K Area Plutonium Downblend work at the Savannah River Site has recently moved from two- to four-shift glovebox operations to advance the Department of Energy's mission of removing plutonium from South Carolina.

"Moving from two- to four-shift glovebox operations increases our Plutonium downblending rates through our existing glovebox," said Maxwell Smith, K Area Deputy Operations Manager for SRS management and operating contractor Savannah River Nuclear Solutions (SRNS). "Along with the total of 48 operators needed to fill the four shifts, we have put a team of support personnel in place and are managing a pipeline program of 10 employees to fill positions as needed from attrition. Many of those pipeline employees are a part of the Apprenticeship program in place with Aiken Technical College. We are also looking into expanding the Apprenticeship program to other local technical colleges, providing us with more resources to fill our pipeline."

Moving to four-shifts is just a part of the overall optimization activities in the K Area Complex. Last year, the facility completed an optimization project to add efficiencies to the K Area Interim Surveillance (KIS) glovebox, where downblending is currently occurring. The KIS glovebox is a stainless-steel containment enclosure that is approximately 15 feet long and three feet wide. The glovebox contains safety glass panels and fitted gloveports to allow radioactive materials handling, and isolates workers from associated hazards.

Additionally, construction has recently completed on a storage and shipping pad for interim storage of downblended materials before they are shipped out of South Carolina for permanent disposal.

"The fact that we were able to train employees, prepare, and initiate the additional shifts ahead of schedule was an impressive feat given the COVID-19 pandemic and the associated reduction of on-site staffing and social distancing requirements," said SRNS K Area Complex Facility Manager Lee Sims. "We attribute much of this success to the veteran operators on staff who have worked diligently to make sure the newer operators are trained, prepared and ready to work safely."

"We know that just initiating four-shift glovebox operations is not the end of the journey" Smith said. "Continuing training, mentorship and growth of experience are required to ensure the continued safe and successful operation of the program."



SRS's K Area Complex

Plutonium Downblend, also referred to as Dilute and Dispose, is the process of mixing plutonium oxide with a multicomponent adulterant to produce a mixture that is more secure (not usable for nuclear weapons). This mixture enables DOE to meet requirements for shipping plutonium to an out-of-state repository for disposition (i.e., the Waste Isolation Pilot Plant in New Mexico).

"Initiating four-shift glovebox operations helps further our nation's nonproliferation objectives," said Virginia Kay, Director, Office of Material Disposition, National Nuclear Security Administration. "We are committed to removing excess plutonium from South Carolina by safely disposing of this material, and achieving this milestone is demonstrative of progress toward that objective. We are pleased that SRNS was able to initiate the additional shifts ahead of schedule, even when faced with the challenges presented by the pandemic."

Secretary of Energy Granholm Virtually Visits SRNL

Submitted by Savannah River National Laboratory

SRNL had the pleasure of hosting a virtual town hall and visit by Secretary of Energy Jennifer Granholm.

During the town hall, which was open to all SRNL employees, Secretary Granholm touched on the DOE and the president's commitment and plans for growing national laboratory capabilities and capacities as global leaders in science, technology and innovation. She then thanked employees for their diligence and hard work during the pandemic to continue working to meet DOE missions. She also expressed her gratitude for SRNL employees receiving COVID-19 vaccinations and recognized SRNL's 96 percent vaccination rate before taking some questions from SRNL employees.

Secretary Granholm then participated in a more intimate virtual meeting with Lab Director Dr. Vahid Majidi, associate lab directors, and chosen SRNL employees that highlighted work being done in the DOE mission areas of Environmental and Legacy Management, Global Security, Weapons Technology, and Science, Engineering and Energy.

The virtual meeting then had Deputy Director Sue Clark highlighting work being done in securing the future of SRNL through Laboratory Directed Research and Development, SRNL post docs and SRNL's leadership of the Minority Serving Institution Partnership Program. Deputy Director Sharon Marra followed by highlighting SRNL's extensive work in STEM outreach and community service.



Secretary of Energy Jennifer Granholm during her virtual visit with SRNL.

Dr. Majidi ended the virtual meeting by further explaining how the work being done at SRNL demonstrates SRNL's model of Simultaneous Excellence, where SRNL focuses on the three pillars of Excellence in Science and Technology, Excellence in Community Service, and Excellence in Laboratory Operations. Dr. Majidi then thanked Secretary Granholm for taking the time to learn more about SRNL and invited her to visit SRNL personally.

Amentum Establishes the Memorial Leo H. Sain Scholarship at the University of South Carolina Aiken

Submitted by Amentum & UofSC Aiken

During the CNTA breakfast on Wednesday, October 13, Tom Foster (C.O.O. Amentum Nuclear & Environment Unit) presented a gift to establish a scholarship at the University of South Carolina Aiken in memory of Mr. Leo H. Sain.



Pictured from left to right: Tom Foster, C.O.O. Amentum Nuclear & Environmental Unit, Dr. Daniel Heimmermann, UofSC Aiken Chancellor, and Dr. Daren Timmons, UofSC Aiken provost and CNTA Board of Directors Chair

Mr. Sain was a leader in the nuclear industry, and his career took many paths. He served as President of Washington Safety Management Solutions, President of Washington Safety Solutions, President of Washington Savannah River Company, CEO/President of UCOR, and D&D/Waste Management Sector lead within Nuclear & Environment for Amentum.

"As a mentor to many of the nuclear industry's current presidents, it is befitting that Amentum starts the first mechanical engineering scholarship in honor and memory of Leo," stated a representative from Amentum Nuclear & Environment Unit. Dr. Heimmermann, chancellor at the University of South Carolina Aiken, added, "This generous donation from Amentum will benefit engineering students for future generations."

DOE Authorizes Use of Second Saltstone Disposal Unit at Savannah River Site

Submitted by Savannah River Remediation

The Department of Energy – Environmental Management (DOE-EM) has authorized the use of a second mega-volume saltstone disposal unit (SDU) at Savannah River Site (SRS) after the project was completed ahead of schedule and under cost.

Savannah River Remediation (SRR), EM's liquid waste contractor at SRS, received Critical Decision-4 for Saltstone Disposal Unit (SDU) 7, marking the final step in the approval process before beginning operations. SDU 7 will receive decontaminated salt solution (DSS) treated at the Salt Waste Processing Facility (SWPF) and Saltstone Production Facility (SPF). SDU 7 is scheduled to receive its first grout in this fiscal year, which began October 1.

Salt waste at SRS is decontaminated at SWPF through processes that remove radioactive isotopes, including cesium, strontium, and actinides. The treated solution is then sent to the SPF, where it is mixed with dry materials known as slag and fly ash to form a grout. The grout is pumped to the above-ground SDUs, where it hardens to form saltstone.

Mega-volume SDU design and construction is based on the first successful mega-volume SDU, SDU 6, which began operating in August 2017. SDUs 6 and 7 each have a 32-million-gallon capacity. SRR is also making progress on the next mega-sized SDUs. Construction is ongoing at SDU 8 and 9. DOE-EM authorized construction of SDUs 10, 11, and 12 to begin last month.

"The safe completion of the SDU 7 project ahead of schedule and under cost, combined with the approval to construct the last three SDUs, facilitates completion of the mission to remove and treat all remaining high-level waste stored in South Carolina," SDU Federal Project Director Shayne Farrell said.

Building the SDUs at an accelerated rate benefits the liquid waste program at SRS, according to SRR Chief Operating Officer and Deputy Project Manager Mark Schmitz.

"Constructing saltstone disposal units concurrently optimizes crews and resources used on the adjacent structures, ultimately cutting costs for the program," Schmitz said. "Saving money on such a large and critical component of the liquid waste system is a win for Savannah River Remediation, DOE, and especially for the taxpayers."



Savannah River Remediation, DOE-Environmental Management's liquid waste contractor at the Savannah River Site, has received authorization to move forward with Saltstone Disposal Unit projects to support the Salt Waste Processing Facility.

CNTA COMMITTEE DESCRIPTIONS

Detailed information on ALL of our committees available at: <https://cntaware.org/committees/>

Communications Committee

The Communications Committee is responsible for ensuring accurate and timely information to the media, stakeholders, and the public and to reflect the goals and objectives of CNTA.

Education Committee

The goal of the Education Committee is to educate the public on the benefits, uses, and truths of nuclear technology. This is done through several initiatives: "Bringing Nuclear into the Classroom," Nuclear Blitz teach-ins, Lifelong Learning Academy teaching, and awarding the many scholarships and awards to students and teachers.

Young Professionals Committee

The purpose of the Young Professionals Committee is to recruit and engage young professional members by providing them with mentorship and professional development opportunities as well as raising money to make membership free for those under 40.

CSRA “Virtual” College Night Exceeds Expectations in Online Attendance

Submitted by Savannah River Nuclear Solutions

Another important milestone was recently reached with the success of this year’s CSRA “Virtual” College Night. This annual event normally fills the James Brown Arena, in Augusta, Georgia; but this year, SRNS used a website app to provide area students with access to more than 100 college recruiters.

“Since 1993, over 100,000 high school students and parents from the greater Aiken-Augusta area have attended CSRA College Night,” said Gladys Moore, Savannah River Nuclear Solutions (SRNS) Education Outreach and CSRA College Night Chairperson. “The pandemic has caused us to be innovative in our use of available resources to reach the same college reps and students as in the past. Moving from a huge face-to-face event to a totally online event was quite a challenge; however, it all worked out wonderfully.”

Over the years, more than \$300,000 in scholarships have been offered to past student attendees of CSRA College Night. “The generosity of our scholarship sponsors and much appreciated help from volunteers are major reasons why this event is so popular,” said Moore.

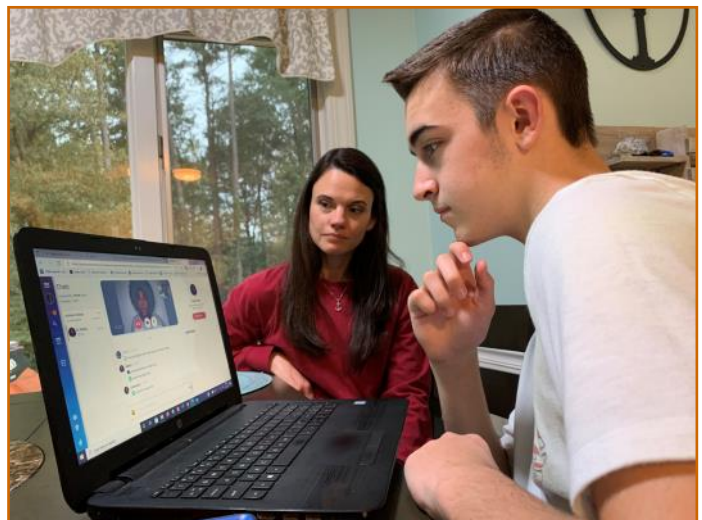
This year’s event featured recruiters from nearly 80 colleges and universities with more than 600 students in attendance. Throughout the evening, scholarships – each worth \$1,000 – were awarded to 15 students.

“The CSRA community provides a tremendous amount of support, both financially and with in-kind donations of service,” said Francine Burroughs who manages SRNS Workforce Services Operations and Education Outreach Program. “The community partnerships that have been forged through participation in this event allow our College Night committee to provide more resources for the students and parents each year.”

“It’s rewarding to see so many students having the opportunity to meet with college representatives of their choice, knowing this night could have a significant impact on their post high school education,” said Moore.

Moore acknowledged the contributions made by the members of the CSRA College Night Committee who put in many hours of work each year. “They understand the impact this event has financially for a significant percentage of our attending students. College Night can help reduce the number of planned college visits for students, potentially saving them thousands in travel costs,” she said.

CSRA College Night is sponsored by the U.S. Department of Energy-Savannah River Operations Office, Savannah River Nuclear Solutions, SRP Federal Credit Union and iHeart Media.



South Aiken High School and Aiken Scholars Program student Jay Saxon discusses the merits of attending Andrew College with Admissions Officer Alexis Young as his mother, Mindy Noe, listens in during this year’s virtual CSRA College Night.

Plant Vogtle Unit 3 projected in service during third quarter 2022, Unit 4 in second quarter 2023

Submitted by Southern Nuclear– Plant Vogtle

Georgia Power currently projects a Unit 3 in-service date in the third quarter of 2022 and a Unit 4 in-service date in the second quarter of 2023. The additional time is needed to address continued construction challenges and to allow for the comprehensive testing necessary to ensure quality and safety standards are fully met.

Unit 3 fuel load could occur as early as the first quarter 2022, but a fuel load date as late as May 2022 should support a third quarter 2022 in-service date.

"As we've said from the beginning of this project, we are going to build these units the right way, without compromising safety and quality to achieve a schedule deadline," said Chris Womack, chairman, president and CEO of Georgia Power. "We have endured and overcome some extraordinary circumstances building the first new nuclear units in the U.S. in more than 30 years. Despite these challenges, progress at the site has been steady and evident."

The new Vogtle units are an essential part of Georgia Power's commitment to deliver safe, clean, reliable and affordable energy, and are expected to provide customers with a reliable, carbon-free energy source for the next 60 to 80 years.

Progress continues to be made towards Unit 3 fuel load following the successful completion of hot functional testing this summer. Unit 3 direct construction is 99% complete, with the total Vogtle 3 & 4 expansion project approximately 95% complete.

Once operating, the two new units at Plant Vogtle will be able to power more than 500,000 homes and businesses. A diverse fuel mix, including nuclear, is essential to maintaining a reliable and affordable energy infrastructure that attracts new investment, supports economic growth and creates jobs.

With more than 7,000 workers on site, and more than 800 permanent jobs available once the units begin operating, Vogtle 3 & 4 is currently the largest jobs-producing construction project in the state of Georgia.

Photos Highlight Progress

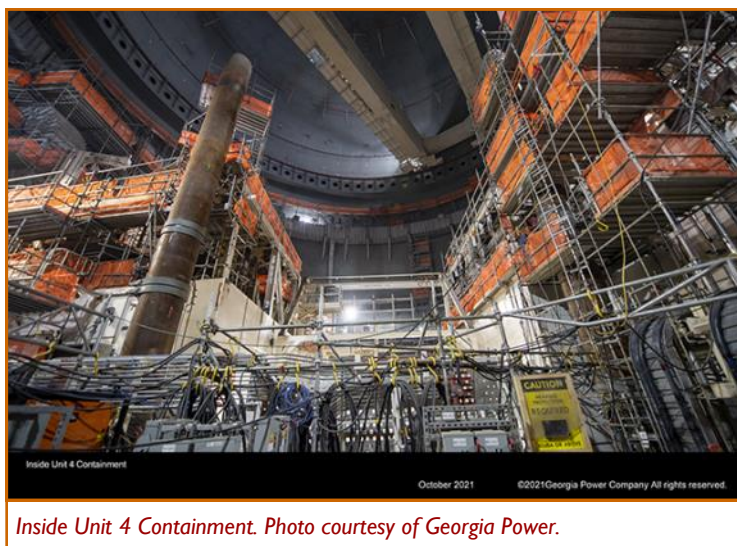
Follow the progress being made at the site of the nation's first new nuclear units in more than 30 years through the [Plant Vogtle 3 & 4 Online Photo Gallery](#) and [Georgia Power's YouTube channel](#).

About Georgia Power

Georgia Power is the largest electric subsidiary of Southern Company (NYSE: SO), America's premier energy company. Value, Reliability, Customer Service and Stewardship are the cornerstones of the company's promise to 2.6 million customers in all but four of Georgia's 159 counties. Committed to delivering clean, safe, reliable and affordable energy at rates below the national average, Georgia Power maintains a diverse, innovative generation mix that includes nuclear, coal and natural gas, as well as renewables such as solar, hydroelectric and wind. Georgia Power focuses on delivering world-class service to its customers every day and the company is recognized by J.D. Power as an industry leader in customer satisfaction. For more information, visit www.GeorgiaPower.com and connect with the company on Facebook ([Facebook.com/GeorgiaPower](https://www.facebook.com/GeorgiaPower)), Twitter ([Twitter.com/GeorgiaPower](https://twitter.com/GeorgiaPower)) and Instagram ([Instagram.com/ga_power/](https://www.instagram.com/ga_power/)).

Cautionary Note Regarding Forward-Looking Statements

Certain information contained in this release is forward-looking information based on current expectations and plans that involve risks and uncertainties. Forward-looking information includes, among other things, statements concerning the expected schedule for completion of construction and start-up of Plant Vogtle Units 3 and 4, including expected timing of fuel load, expected job creation and rate impacts, and carbon emissions reduction goals. Georgia Power cautions that there are certain factors that can cause actual results to differ materially from the forward-looking information that has been provided. The reader is cautioned not to put undue reliance on this forward-looking information, which is not a guarantee of future performance and is subject to a number of uncertainties and other factors, many of which are outside the control of Georgia Power; accordingly, there can be no assurance that such suggested results will be realized. The following factors, in addition to those discussed in Georgia Power's Annual Report on Form 10-K for the year ended December 31, 2019, Quarterly Reports on Form 10-Q for the quarters ended March 31, 2020, June 30, 2020, and September 30, 2020, and subsequent securities filings, could cause actual results to differ materially from management expectations as suggested by such forward-looking information: the potential effects of the continued COVID-19 pandemic, including, but not limited to, extended disruptions to supply chains and further reduced labor availability and productivity, which could have a variety of adverse impacts, including a negative impact on the ability to develop, construct, and operate facilities, including, but not limited to, Plant Vogtle Units 3 and 4; the ability to control costs and avoid cost and schedule overruns during the development, construction, and operation of facilities or other projects, including Plant Vogtle Units 3 and 4, which includes components based on new technology that only within the last few years began initial operation in the global nuclear industry at this scale, and including changes in labor costs, availability and productivity, challenges with management of contractors or vendors, subcontractor performance, adverse weather conditions, shortages, delays, increased costs, or inconsistent quality of equipment, materials, and labor; contractor or supplier delay, delays due to judicial or regulatory action, nonperformance under construction, operating, or other agreements, operational readiness, including specialized operator training and required site safety programs, engineering or design problems, design and other licensing-based compliance matters, including, for nuclear units, the timely submittal by Southern Nuclear of the Inspections, Tests, Analyses, and Acceptance Criteria documentation for each unit and the related reviews and approvals by the NRC necessary to support NRC authorization to load fuel, challenges with start-up activities, including major equipment failure, or system integration, and/or operational performance; the ability to overcome or mitigate the current challenges at Plant Vogtle Units 3 and 4, including, but not limited to, those related to COVID-19, that could further impact the cost and schedule for the project; legal proceedings and regulatory approvals and actions related to construction projects, such as Plant Vogtle Units 3 and 4, including Public Service Commission approvals and NRC actions; under certain specified circumstances, a decision by holders of more than 10% of the ownership interests of Plant Vogtle Units 3 and 4 not to proceed with construction and the ability of other Vogtle owners to tender a portion of their ownership interests to Georgia Power following certain construction cost increases; the ability to construct facilities in accordance with the requirements of permits and licenses (including satisfaction of NRC requirements), to satisfy any environmental performance standards and the requirements of tax credits and other incentives, and to integrate facilities into the Southern Company system upon completion of construction; the inherent risks involved in operating and constructing nuclear generating facilities; the ability of counterparties of Georgia Power to make payments as and when due and to perform as required; the direct or indirect effect on Georgia Power's business resulting from cyber intrusion or physical attack and the threat of physical attacks; catastrophic events such as fires, earthquakes, explosions, floods, tornadoes, hurricanes and other storms, droughts, pandemic health events or other similar occurrences; and the direct or indirect effects on Georgia Power's business resulting from incidents affecting the U.S. electric grid or operation of generating or storage resources. Georgia Power expressly disclaims any obligation to update any forward-looking information.



Inside Unit 4 Containment. Photo courtesy of Georgia Power.

Technical Apprenticeship Program Launching Careers at the Savannah River Site

Submitted by Savannah River Remediation

A new partnership at the Savannah River Site (SRS) is opening doors for individuals seeking technical education for careers with liquid waste contractor Savannah River Remediation (SRR).

SRR's training department is partnering with Aiken Technical College (ATC) and Apprenticeship Carolina to fill some of its over 40 operator positions in the next year. The Operator Apprenticeship Program will employ individuals for paid training at SRS who are enrolled in ATC's [Nuclear Fundamentals Certificate program](#). In addition, SRR is collaborating with ATC to train all new operator hires through ATC's nuclear fundamentals courses who are not in the apprenticeship program. Using external education resources like ATC for training gives opportunities for SRR to redirect its resources toward other parts of its mission.

Candidates are now applying through SRR for the positions and in parallel are registering at ATC, which is required by December 17, 2021. The program will begin in January 2022.

To perform operator-related work toward SRR's mission, apprentices will learn chemistry, physics, engineering, and radiation fundamentals while participating in SRS regulatory courses, facility training, and other requirements. Between the certificate program and apprenticeship, student-employees will complete requirements for consideration as full-service employees within seven months.

SRR President and Project Manager Phil Breidenbach said the success of the new apprenticeship program launch is a testament to continuous improvement, an SRR core value.

"SRR's training department shoulders a broad mission, which now includes recruiting individuals who would be a good fit at SRR," Breidenbach said. "We want employees who are motivated to perform safe and meaningful work for EM's liquid waste mission at SRS. Creating this opportunity will yield those workers."



Savannah River Remediation employee Josh Osteen operates remote equipment for canister operations at the Defense Waste Processing Facility.

ATC President Dr. Forest Mahan said such partnerships help area residents gain employable skills and better prepare for careers in technical fields.

"This partnership provides area residents with a unique opportunity to develop knowledge and skills that will help them be successful in their future careers," Mahan said. "They will learn about the theory behind industry practices while working with experts in the field to implement their knowledge in real-time. The experience they will gain will be invaluable."

SRR operators are needed at the [Defense Waste Processing Facility](#), [Saltstone Production Facility](#), [H and F Tank Farms](#), and the [Effluent Treatment Facility](#). Dependent on the facility, operators will ensure facility equipment is safely functioning, conduct material transfers, and perform data analysis, among other tasks.

All interested candidates can apply for the apprenticeship program through SRR's website here: <http://www.srrremediation.com/index.html>. For more information about the Nuclear Fundamentals program, visit <https://www.atc.edu/Study/Programs-of-Study/Technical-and-Continuing-Education/Nuclear-Fundamentals>.

SRR is a team of companies led by Amementum with partners Bechtel National, Jacobs, and BWX Technologies, Inc. Critical subcontractors for the contract are Orano, Atkins, and Amementum N&E Technical Services.



2022-2023 MEMBERSHIP FORM

CIRCLE ONE: NEW RENEWAL

<input type="checkbox"/> MEMBER PLUS—\$250 BENEFACTOR benefits PLUS recognition in printed CNTA materials and at events.	NAME:	
	EMPLOYER:	
	HOME ADDRESS:	
	CITY/STATE/ZIP CODE:	
	PHONE/CELL #:	
	EMAIL ADDRESSES: (YOU CAN HAVE NOTICES SENT TO HOME AND/OR WORK)	
		Email is our main means of communication! Be sure to include us on your change of address list if you make any changes to your contact information.
	REFERRED BY: (Name & email address if known)	
<input type="checkbox"/> BENEFACTOR—\$125.00 Members receive one Teller Lecture banquet ticket, one ticket to the private Speaker's Reception, invitations to all events, quarterly newsletters and free members' mixers.	VOLUNTEER OPPORTUNITIES: We are seeking volunteers to serve on our committees. If interested, please mark below which committee you are willing to volunteer for: COMMUNICATIONS: _____ EDUCATION: _____ YOUNG PROFESSIONALS: _____ TEACHER WORKSHOPS: _____ GOLF COMMITTEE: _____ GOLF TOURNAMENT: _____ MEMBERSHIP: _____ SPEAKER'S BUREAU: _____ ENDOWMENT FUND: I would like additional information on how to gift to the CNTA Endowment Fund _____	
<input type="checkbox"/> PATRON—\$70.00 Members receive invitations to all events, quarterly newsletters and free members' mixers.		
<input type="checkbox"/> SUSTAINING—\$35.00 Members receive invitations to all events, quarterly newsletters and free members' mixers.		
<input type="checkbox"/> Young Professional (Under 40) & Student FREE Membership! Same as Sustaining. Free membership for one year! (Can be renewed) Sign up to be a YP Committee Member →		
Your support makes all the difference! Help us continue to be the Voice of Truth on Nuclear Matters!		
To Pay by Check or Cash: Mail to address listed below. To Pay by Credit Card: Pay online at our website, or complete the form below then email this form to us at cnta@bellsouth.net . (financial information will be stored and destroyed appropriately)		
CNTA, 1204 Whiskey Road, Suite B, Aiken SC 29803 Phone: 803-649-3456; Email: office@cntaware.org Website: www.cntaware.org		

You can renew your membership for 2022 NOW and have a year added to your current expiration date! Complete this and mail it back with payment or renew easily online!

Young Professionals under 40 renew for free!

Thank You Business Members!

DIAMOND

SAVANNAH RIVER NUCLEAR SOLUTIONS

PLATINUM

SAVANNAH RIVER REMEDIATION



GOLD

ARTHUR RICH
CENTERRA-SRS
FLUOR



SILVER

HUNTINGTON INGALLS INDUSTRIES
JACOBS

BRONZE

APPLIED RESERCH CENTER (ARC)

ATKINS

BECHTEL

BWX TECHNOLOGIES INC.

NORTH WIND GROUP

ORANO

SOUTHERN NUCLEAR- PLANT

VOGTLE

BUSINESS

AVANTECH LLC

ECONOMIC DEVELOPMENT PARTNERSHIP

EDGEWATER ASSOCIATES

IONEX RESEARCH CORPORATION

MUNNS ADVISEMENT

SECURITY FEDERAL BANK

SRS COMMUNITY REUSE ORGANIZATION

WASEYABEK FEDERAL SERVICES

Thank you to our Members Plus!

Jeff Allender
Jason Armstrong
Sandra Devoe Bland
Kim Cauthen
Paul Cloessner
Eddie Estochen
Jack Goldenberg

Charles Hansen
Lyddie Hansen
Jeff Leita
David Little
Chris Noah
Sharon Rickman
Wayne Rickman

Ed Sadowski
Mark Schmitz
Steve Sheetz
Robert Sindelar
Tammy Taylor
Craig Williamson
Clint Wolfe
Virginia Wolfe

Mission of CNTA

Citizens for Nuclear Technology Awareness, Inc., is an education and advocacy group promoting the safe and effective use of nuclear power, nuclear research and nuclear medicine.

We provide education, networking, and a voice of understanding from a technical perspective in a world often influenced by **inaccurate and unwarranted fear**.

CNTA membership encompasses individuals, families, and businesses who support the use of nuclear science and technology for many applications, including: energy, national security, nuclear medicine and diagnostics, and industrial applications.

BOARD OF DIRECTORS

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MEMBERSHIP INFORMATION

BUSINESS MEMBERSHIP OPTIONS

Platinum: \$10,000 or more

Gold: \$5,000—\$9,999

Silver: \$2,500—\$4,999

Bronze: \$1,000—\$2,4999

Business Member: \$500 to \$999

INDIVIDUAL MEMBERSHIP OPTIONS

Member Plus— \$250.00 or more

Benefactor—\$125.00

Patron—\$70.00

Sustaining—\$35.00

Young Professional — Free for 1 year

Membership Information is available online at:

<http://cntaware.org/join-us/>

All membership levels include invitations to breakfasts/dinners, other events, quarterly newsletters and opinion letters/editorials. Benefactor and Member Plus also receive one free private reception ticket and one free Teller Lecture banquet ticket when dues are current.

YOUR DUES SUPPORT PUBLIC OUTREACH

Federal ID# 57-0953103



1204 Whiskey Rd, Suite B
Aiken SC 29803

Phone: 803-649-3456

Fax: 803-649-3860

E-mail: CNTA@bellsouth.net

Visit Us At:
www.cntaware.org
Facebook: CNTAware



HOW YOU CAN HELP

CNTA as a charitable non-profit organization can ALWAYS use help.

Opportunities include:

- Donate Items for Raffles/Auctions
 - Donate to Our Community Gift Card Program!
 - Donate to CNTA as a charitable non-profit (<https://cntaware.org/about-us/>)
- Volunteer your time
 - Get involved with a CNTA Committee (*descriptions on pg. 17*)
 - Help the CNTA Education Committee revamp our education outreach to comply with social distancing
 - Help CNTA expand their reach on social media
 - Volunteer to help in our Office (there is always work to be done there!)
 - Be an event-specific volunteer
 - Be an educational committee contest judge!
- Sponsor a 2022 Event or Education Outreach!

For information email Allison at office@cntaware.org

CNTA CALENDAR OF EVENTS

December 8, 2021- Up & Atom- SREL Celebrates 70 years. 7:30am at Newberry Hall in Aiken SC.

December 9, 2021- Tap into Nuclear. "Servant Leadership & Giving Back." Speaker- Mark Davis. Sponsored by HII. 5:30-7:30pm. Café Scientifique in Aiken SC.

May 6, 2022- 20th Annual CNTA Charity Golf Tournament! Shotgun start at 8:30am. Held at Houndslake Country Club in Aiken SC.

UPDATE Your Membership for 2022 NOW and NEVER HAVE TO WORRY!

2022 membership available at:

<https://cntaware.org/join-us/>

Thank you to our members, sponsors, donors, volunteers, and community partners for making 2021 a year to remember!