

# 2022 Neutrino



**American Nuclear Society**  
Savannah River Section

**February to July 2022 Edition**

**Web address: <http://local.ans.org/savriv/>**

## **Officers and Executive Committee**

Chair: Madeleine Waller

Vice Chair and Programs: Kevin O’Kula

Secretary: Tracy Stover

Treasurer: Amanda Szasz

Membership: Nuri Sinha

Publications: Phil Cupp

Admin: Diane Shelton

Retiree Liaison: Carl Fields

Vogle Liaison: Mike McCracken

CNTA Liaison: Mel Buckner

Outreach/Education: Graham Jones

Scholarship Co-Chairs: Selina Tavano and Ken Hofstetter

Young Member and Webmaster: Kiah Griffith

Past Co-Chairs: Tinh Tran / Greg Staack

# 2022 Neutrino

## Chair and Vice Messages

### Chair

Hello everyone,

Thank you for sticking with us through to summer of 2022! I am glad to say that our second PicNuke was a phenomenal success and I look forward to keeping this new tradition running. Going into the rest of the year we have some exciting milestones that will soon come to pass: we are currently judging for the Benjamin Memorial scholarship, planning more monthly general body meetings, looking into trivia for Nuclear Science week in October, and preparing for chapter elections in August. If you have a few extra hours to spare each month, we on the Executive Board would love to have you run for a position, so keep your eyes out for an email with that information! If you want to get more involved or have any suggestions for events going forward, feel free to give us a shout, too! Please contact Kevin O'Kula at [ans.savannahriver@gmail.com](mailto:ans.savannahriver@gmail.com). That said, thank you for your participation so far this year. Phil has put together another wonderful edition of the Neutrino to recap the highlights, and I hope that you'll enjoy looking through the memories or feel inspired to join in on new things. Stay safe and cool this summer!

Cheers,

Madeleine Waller

ANS-SR Section Chair 2021-2022



### Vice Chair

#### **ANS Savannah River Section – Let's Spell It Out**

The Savannah River Section of ANS is fortunate to be part of a region with a tremendous talent and a skillset pool that are unmatched, enjoys widespread public support of nuclear science and technology, provides government and commercial sector employment opportunities, and is supported with a wide array of world-class educational institutions. While ANS Savannah River Section (ANS SRS) is now in its 59th year and seems to be poised for going strong into its 60s, it needs you to reach its full

# 2022 Neutrino

## Chair's and Vice Messages (Cont'd)

potential. If you are new to the area, have been away for a period or on the sidelines, I encourage you to get involved with this Section. Why? Some of the many reasons to be part of the ANS SR Section can be itemized, but first allow me to ...

Acknowledge my predecessor's immense work over the past year. It is easy to tip my vice-chair's hat to the previous chair at the close of the 2021-2022 section year, and thank Madeleine Waller for her leadership over the last two years. I do wish her well in the commercial sector with Westinghouse outside of Pittsburgh. Madeleine handled her responsibilities first as Vice-Chair and then as Chair in 2020-2022 with a straightforward, low-key coolness, professionalism, and perseverance, that got things done on time with efficiency. Thankfully, in addition to being the immediate past chair and participating in our monthly EC meetings, Ms. Waller agreed to stay with us virtually by helping evaluate future Benjamin Scholarship applicants.

Next, recognize that the ANS National organization supports 19 Professional Divisions and a Young Members Group (<https://www.ans.org/communities/divisions/>). While joining National isn't necessary when you become a member locally, being a member at the National level gives you two free Division memberships, and the opportunity to network with your peers throughout the CSRA, the United States and the rest of the world. The ANS national and topical meetings provide opportunities to present your work in live, virtual, as well as hybrid scientific and technical forums at the highest level. ANS National also recognizes distinguished accomplishments of its members, and over the past two years, three of our members have been recognized with Landis and Levenson awards in Public Outreach and Education, and Nuclear Service, respectively.

Section activities, on the local scene, allow ANS SR members to hear from local and national technical leaders at a local restaurant or meeting facility without the joys of boarding a plane, getting the middle seat, and losing your luggage. There are opportunities to reach across generations and hear what SRP was like in the 1960s or how the early days of operation were at Vogtle Units 1 and 2. The local scene allows engagement with today's students and educators at ANS SR workshops and public gatherings such as Atoms in the Alley and S.E.E.D. where you can provide facts on aspects of nuclear energy as a sustainable, carbon-free energy source for all. As shown elsewhere in this Neutrino, we also like to enjoy the fellowship of friends and newcomers at events such as our PicNuke picnic and baseball game outing in North Augusta (GreenJackets). For those younger than 35 (literally or figuratively), our Young Professionals are an amazing group that drives long at Top Golf and BBQs the best in Southern style at our outside gatherings – See Graham Jones or Nuri Sinha to share your ideas.

Support, you ask? Yes, it is always accepted in the form of time, talent, and even treasure. We value your gifts of volunteer support in the manner that you are most comfortable and to the degree that is appropriate for you. Not everyone is able to speak easily in public, is effective as a “behind-the-scenes” advocate, or can write effectively to decision- and policy makers. However, collectively, we can do all of these things as a grassroots, technical section. As far as treasure goes, ANS SRS, thanks

# 2022 Neutrino

## Chair's and Vice Messages (Cont'd)

to the efforts of Jay Bilyeu and several others, is a 501(c)(3) charitable organization. So consider parting with that \$6 latte once a week and help us fund the next round of Benjamin Scholarships and other outreach endeavors.

Re-engage with your local section as we look forward to upcoming highlights in 2022-2023, such as:

- Major General Perry Smith (Ret.), speaking to ANS SR and CNTA in a presentation entitled, “The World in 2032: A Planner’s Perspective,” at the North Augusta Community Center (September 15, 2022). General Smith is a prolific author, op-ed writer, and acclaimed senior advisor to many in the media, both locally and nationally on matters on the world stage. You won’t want to miss this talk.
- ANS President, Steven Arndt, speaks to ANS SR in Aiken or North Augusta, (tentatively October or November) - Dr. Arndt took the helm at the conclusion of the ANS Annual Meeting this past June as its 68th President. He is a career veteran of the Nuclear Regulatory Commission (NRC) and looks to create a more visible, proactive ANS.
- The September 15th CSRA College Night, at the James Brown Arena in Augusta - This is the first in-person College Night since 2019 and draws upwards of 8,000 high school students, parents, friends, and educators to talk to professional societies such as ANS and colleges on the next steps in four-year college and technical college education. Please reach out to Graham Jones to find out how you can help support the ANS booth.
- Megawatts from Unit 3 at Plant Vogtle! - Current projections show Unit 3 to be going critical and power-producing in 2023. We will celebrate this accomplishment with one or more special events to be announced later in the year.
- Tenth Annual Benjamin Scholarship Awards – Beginning in 2014, ANS Savannah River has awarded over \$40,000 in scholarship funds in the memory of our mentor and friend Dick Benjamin to first-year STEM college students that graduate from CSRA high schools. The Awards in 2023 should be our biggest year yet to mark the 10th class of exceptional students. Reach out to Selina Tavano or Ken Hofstetter if you would like to evaluate applications and/or support the Scholarship financially. These are just a few of the upcoming opportunities for the 2022-2023 year. Others will be posted in the weeks ahead.

So, to reiterate, it’s our **ANS SR** Section, not mine not National’s. It’s your one-stop destination for career growth, networking, outreach, charitable-giving and information for all things in Nuclear Science and Technology. Please call, text, or email me or any of the Executive Committee to find out how you can be involved.

Kind regards,

Kevin O’Kula  
ANS SR Vice Chair  
(803.640.2572 or okula@comcast.net)



# 2022 Neutrino

## Technical Meetings

### February

“Westinghouse EnCore® Accident Tolerant Fuel and High Energy Program”

On February 24, Dr. Kallie Metzger, Ph.D., Manager of Accident Tolerant Fuels Technology, Westinghouse Electric Company presented an overview of the Westinghouse Encore© Accident Tolerant Fuel Program. This including research and development, licensing, and commercialization processes for implementation of new nuclear fuel products. With this innovation, Westinghouse intends to accelerate the traditional fuel licensing and qualification process. The meeting was held at Newberry Hall in Aiken.

Dr. Metzger is the Manager of Accident Tolerant Fuels Technology within Westinghouse™s Digital and Innovation Division. As a technical leader, she manages an interdisciplinary engineering team and develops programs to ensure the successful delivery of advanced nuclear fuels. She is a recognized industry technical leader in the area advanced and high burnup materials and serves in multiple advisory roles including: Deputy Chair of the Fuel Performance and Testing Technical Experts Group on extending High burnup in LWRs, Westinghouse representative for the Nuclear Energy and Modeling Simulation (NEAMS) Advanced Reactor and Light Water Reactor Industry Councils, Adjunct Professor at Boise State University, and past Chair of the Materials Science and Technology Division within the American Nuclear Society. As a South Carolina native, she earned her bachelors degree in physics and her masters and doctoral degrees in nuclear engineering from the University of South Carolina as a DOE-Sponsored Integrated University Program (IUP) Fellow. She worked at both Idaho and Savannah River National Laboratories prior to joining Westinghouse.



Dr. Metzger

# 2022 Neutrino

## Technical Meetings (cont'd)

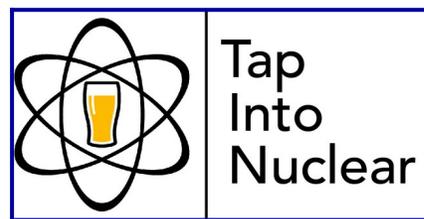


Aiken Tech students (students of ATC Faculty Member of the year of 2021-22 Aherial Polite)

## April

### Tap Into Nuclear (CNTA)

On April 21, the Citizens for Nuclear Technology Awareness (CNTA) kicked off the 2022 Tap Into Nuclear Series. The presentation was “Contract Changes & the Proposal Process” presented by Jeff Leita, Vice President, Business Development with Amentum. This event was held at the Café Scientifique in Aiken.



# 2022 Neutrino

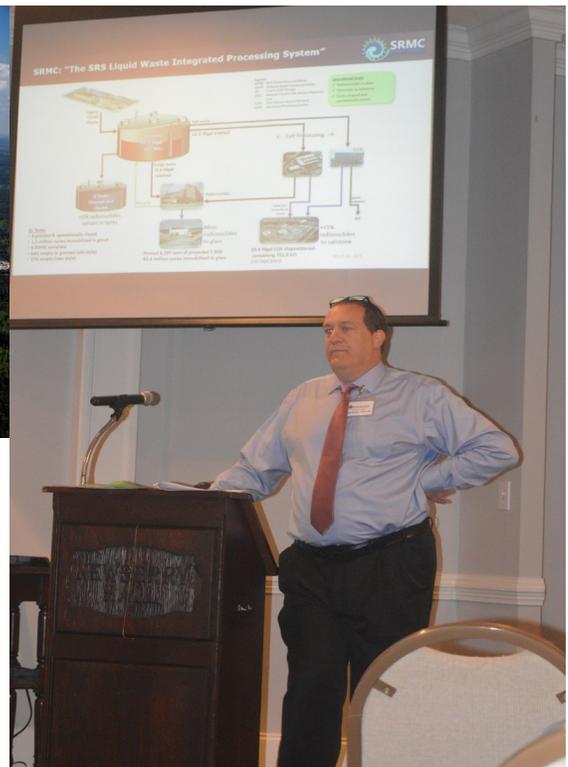
## Technical Meetings (cont'd)

### June

At Newberry Hall in Aiken June 9, Dr. Thomas D. Burns, discussed "SRMC: Path Forward for Liquid Waste Mission Completion". Dr. Burns serves as the Chief Engineer for Savannah River Mission Completion, LLC, (SRMC) which is conducting operations at the Savannah River Site (SRS). Dr. Burns' role is to provide solution-based engineering to support field execution and ensure SRMC success throughout the project life cycle. This is the fourth time that Dr. Burns has spoken to the local section on the topic of nuclear waste. SRMC is to provide a comprehensive risk-based methodology to the SRS legacy cleanup project, such as the dispositioning of radioactive liquid waste through the Salt Waste Processing Facility. The mission is to retrieve, process, treat and dispose of the 34 million gal of legacy tank waste, and to close the tanks and ancillary structures, as quickly, safely and efficiently as possible. SRMC is committed to partnering with the DOE to seamlessly and safely transform SRS liquid waste operations to an end state - driven culture of completion. All the facilities and processes are now in place to mitigate the risk of the legacy tank waste. The goal is to process waste at the site in 15 years.



The Savannah River Site



Dr. Burns

# 2022 Neutrino

## Outreach and Education

### Future City Resumes as a Virtual Event

**Note: updated from earlier edition with photo of winners**

After a pause in 2021, the Future City middle school competition resumed in 2022 as a virtual competition with teams being asked to design a futuristic city using the three principles of a circular economy: designing out waste and pollution, keeping products and materials in use and regenerating natural systems.



ANS Savannah River Section judges Graham Jones, Sid Keener and Kevin O’Kula evaluated all 19 teams with special emphasis on those with the Best Energy System. Final interviews were held on Saturday, January 22, 2022. Three of the 19 teams used or mentioned “nuclear” in their energy system planning.

The winner of the Best Energy System was a project entitled, “Purity” of the Merriwether Middle School of North Augusta, South Carolina. Their city used biofuels to provide a clean energy source for small household devices and powerful wind turbines to produce energy for homes and businesses. To minimize litter, Purity used biodegradable packaging and bioplastics.

Overall, the first place for the 2022 SC Regional Competition was McCracken Middle School of Spartanburg. They will advance to the Future City Competition National Finals in Washington, D.C. next month. Another Merriwether MS team took second place with their city project entitled “Amorado,” and the Dreams Imagination & Gift Development Program of Williston, South Carolina placed third.

“Every year I’m impressed with the hours of work that typically goes into each city,” said Taylor Rice, who works with the SRNS education outreach division and coordinates the regional competition. “I admire their dedication and resolve to work as a team under the helpful guidance of a teacher and mentor.”

# 2022 Neutrino

Each team of students was judged by teams of volunteers from professional societies including ANS SRS, STEM and design fields on deliverables. This included a 1,500-word essay, a scale model with a \$100 budget and a video presentation highlighting the team's creativity, ingenuity and communication skills. Use of recycled materials for the model was encouraged.



Final interviews were conducted in a seven-minute Zoom session with each judging team



2022 Future City Best Energy System Winners

# 2022 Neutrino

## Other Events

### The Second Annual PicNuke

For the second year in a row, about twenty-five ANS SRS members, family, and guests gathered at Boyd Pond Park in Aiken on Saturday, April 30th to enjoy an afternoon of BBQ and socializing. Each guest made the potluck happen by bringing their best side dish to go along with burgers and hot dogs, as well as all the fixings, prepared by Graham Jones and Raymond Garza. The pre-summer sunshine saw folks enjoying lawn games, interesting discussions, and a few walks along the water. The coordination team members including Kiah Griffin, Graham Jones, and Mandy Szasz would love to see you at next year's PicNuke!



The PicNuke Cake and The Grill Masters



The gathering of members, families and friends

# 2022 Neutrino

## GreenJackets Game

On July 29, twenty-seven persons attended a GreenJackets baseball game in North Augusta, SC. The GreenJackets hosted the Myrtle Beach Pelicans. The GreenJackets lost the game 5 to 2, but the local section had a great time talking to one another and enjoying the food and drink provided. There were discussions on making this an annual event. The first one thousand attendees to the game were given a replica of the Atlanta Braves World Championship ring. The GreenJackets are a farm team to the Atlanta team.



Future ANS member



# 2022 Neutrino

## **Benjamin Memorial Scholarships for the 2022-2023 Academic Year**

The Savannah River Section of the American Nuclear Society (ANS) awarded four Benjamin Memorial Awards to Central Savannah River Area students for their first year of their college study in a science, technology, engineering and mathematics (STEM) course of study. The Benjamin Scholarship students for this year are Jaden Lim of Grovetown High School, McKenzie Matthews of Lakeside High School, Luke Rhodes of Harlem High School, and Matthew She of Lakeside High School. The four students will be recognized in a Zoom recognition ceremony on Thursday evening, July 28, 2022.

### Scholarship Winners

The Benjamin Scholarships are given to help defray first-year college costs for the 2022-2023 academic year of study and are provided in the memory of its long-time member, Dr. Richard (Dick) Benjamin (1925-2013). The award is now in its ninth year and is for students expressing academic and career interests in a STEM field, and particularly those wishing to major in a field associated with nuclear science and technology.

The near-term plans of the Benjamin Award winners are in keeping with the STEM core areas intended for support. Jaden Lim (Grovetown High School) plans to pursue studies at Georgia Tech and is interested in artificial intelligence applications. He is initially majoring in Computer Science at Georgia Tech. McKenzie Matthews (Lakeside High School) is planning to attend the University of Georgia and looking at building a career in the environmental sciences. She plans to major in Environmental Engineering. Luke Rhodes (Harlem High School) is planning to attend Georgia Tech. He is interested in the aerospace area at many levels and plans to major in Aerospace Engineering. Matthew She (Lakeside High School) is also Georgia Tech bound. He plans to pursue a degree in Computer Science and focus on software engineering as an initial step in his career.

Awards to Mr. Lim, Ms. Matthews, and Mr. Rhodes were for \$1,000, while Mr. She received the top honor at \$2,000. This year's Scholarship judges were Madeleine Waller, Maeley Brown, Selina Tavano, Ken Hofstetter, and Kevin O'Kula.

### **Scholarship in memory of Dr. Richard Benjamin**

The ANS Savannah River Scholarship Awards are named in memory of Dr. Richard Benjamin. Dr. Benjamin was a mentor to many nuclear science and technology professionals in the Aiken-Augusta area for over four decades. He received his B.A. in Engineering from Lamar University, M.S. in Nuclear Engineering from Southern Methodist University, and earned his PhD in Nuclear Physics from the University of Texas in 1965. After a three-year post-doctoral study at the Swiss Federal

# 2022 Neutrino

## Benjamin Memorial Scholarships for the 2022-2023 Academic Year (Cont'd)

Institute of Technology, Dr. Benjamin came to the Aiken-Augusta area in 1968 with the acceptance of employment at the Savannah River Laboratory (now Savannah River National Laboratory). He worked in many technical areas during his Savannah River Site career, most notably the Reactor Physics, Atmospheric Technologies, and Advanced Planning Groups, followed by the Accelerator Production of Tritium Project.

During his long and illustrious ANS career, he was active with two of its divisions, the Fuel Cycle and Waste Management and Environmental Sciences Divisions, and served as a chair for each one at different times. In June 1992, Dr. Benjamin had the honor of representing ANS at the first United Nations Framework Convention on Climate Change held in Rio de Janeiro, Brazil. He served in many ways and held key offices with the Savannah River Section of ANS. Dr. Benjamin was co-director of the local Tasters Guild, a wine and food appreciation society, and was an avid supporter of the Augusta Opera and the Augusta Choral Society. He also enjoyed outdoor activities such as hunting and skiing, and helped found the Aiken Dove Club. He was a co-founder and proprietor of Wine World in North Augusta, where many ANS Savannah River Section Executive Committee meetings were held until its closing in 2019.



Figure 1. Dr. Richard (Dick) and Dick's wife, Sally Benjamin, circa early 2000s.

### American Nuclear Society (ANS)

ANS is a professional and technical society of approximately 10,000 engineers, scientists, education professionals and students worldwide that work to promote the awareness and understanding of applications of nuclear science and technology for the benefit of humankind. The ANS Savannah River Section is a 501(c) 3 organization under IRS guidelines. Donations to ANS are tax deductible as allowed by law.

# 2022 Neutrino

## Benjamin Memorial Scholarships for the 2022-2023 Academic Year (Cont'd)

On July 28, the section held virtual Award Presentation to the Benjamin Scholarship winners. Each winner discussed a fun fact, their present accomplishments and then their near term goals. This was the first time that all winners came from Columbia County, Georgia. In addition, each winner was given a T-Bonz restaurant gift card as a substitute of the traditional winners' dinner. Below are screen shots of the four winners.



McKenzie Matthews



Jaden Lim



Luke Rhodes



Matthew She

# 2022 Neutrino

## Breaking News

### **Historic Nuclear Regulatory Commission 103(g) finding marks a critical step leading up to Vogtle Unit 3 fuel load**

Georgia Power announced Wednesday, August 3, 2022, a historic milestone in the completion of Vogtle Unit 3 near Waynesboro, Ga. – the receipt of the 103(g) finding from the Nuclear Regulatory Commission (NRC). This finding was confirmed in an official letter received by Southern Nuclear and signifies that the new unit has been constructed and will be operated in conformance with the Combined License and NRC regulations. No further NRC findings are necessary in order for Southern Nuclear to load fuel or begin the startup sequence for the new unit.

"Today's finding by the NRC helps ensure we have met our commitment to building Vogtle 3 & 4 with the highest safety and quality standards," said Chris Womack, chairman, president and CEO of Georgia Power. "These new units remain a strong long-term investment for this state, and, once operating, are expected to provide customers with a reliable and resilient, clean, emission-free source of energy for the next 60 to 80 years. That's why we've been so committed to getting this project done right – it's about serving our customers today and for decades to come."

See link for full story –

YEA!!!

<https://www.augustachronicle.com/story/news/2022/08/03/plant-vogtle-unit-3-fuel-loading-authorized-nrc-nuclear-reactor-construction/10225849002/>



Vogtle Unit 1, 2, 3, and 4

# 2022 Neutrino

## **Future Events**

ANS/CNTA dinner with General Perry Smith North Augusta Community Center "The World in 2032: A Planner's Perspective"	September 15, 2022
CSRA College Night	September 15, 2022
Nuclear Science Week, with Project S.E.E.D.	October 1, 2022
Nuclear trivia event	To be determined