

2023-24 Neutrino 60th Anniversary Edition



American Nuclear Society
Savannah River Section

August 2023 to January 2024 Edition

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

Officers and Executive Committee

Chair: Michelle Johnson

Vice Chair: Bob Sindelar

Co Secretaries: Rob Fundak

Co-Treasurers: Amanda Szasz and Christian Sifuentes

Membership: Vacant

Publications: Phil Cupp

Admin: Diane Shelton

Retiree Liaison: Carl Fields

Vogtle Liaison: Mike McCracken

CNTA Liaison: Aherial Polite

Outreach/Education: Graham Jones

Scholarship: Mukesh Gupta

Young Member and Webmaster: James Deaton

Programs Co-Chairs: Rebecca Rice and Kevin O’Kula

Past Chair: Kevin O’Kula

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Chair Message

Chair

Dear ANS – Savannah River Section Members,

I want to express my sincere appreciation to our members and friends for their loyal support as we celebrate our sixtieth year of existence. I'm sure that when the Savannah River Section of ANS was founded in 1963, no one could have imagined how relevant and important we have become for those of us in the nuclear industry in the CSRA, and across the country. I've come to think of ANS as one very large, multi-national, best in class technical societies. Our section provides numerous opportunities to learn, teach, mentor, and share the latest in the nuclear industry. ANS enables us to advocate, brainstorm, give back to our communities, meet, network and socialize with friends, colleagues from around the CSRA, as well as from all over the country and the world.

I'm proud of our Section's successes over the last 60 years of existence, particularly in providing more opportunities for meaningful engagement of the members, and providing professional development and outreach opportunities. In this edition of the Neutrino, you can see that we are continuing these initiatives through technical meetings and community outreach activities like the CSRA College Night and USC- Aiken SEED Event.

One of the new initiatives for this year is to increase the number of members in the section with a New Membership Campaign coined "60 in 61". We want to get 60 new National ANS Members to celebrate our 60 years of existence. We are always looking for new members to participate in events and to join various committees in support of the ANS-SR Section mission. Under the current leadership of the current Executive Committee has completed so many successful initiatives, and we are excited to find the next crop of members who can continue bringing good ideas to the group!

Thank you, members, for your continued participation and enthusiasm in our professional community, and sponsors for your incredible support. Finally, I'd like to give a special shout-out of appreciation to our Executive Committee and to Diane Shelton, our Executive Administrator, for their tireless work on behalf of the ANS-SR, and to the ANS-SR Section for all the resources, guidance and support they provide each and every day.

Thank you all!

Michelle Johnson

ANS-SR Section 2023-2024 Chair



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Technical Meetings

October 2023

The local section visited the expanding Plant Vogtle site on October 6th. Eleven section members went to Vogtle in Burke County, GA for lunch and to get an update on Unit 4, the only unit in America presently under construction. Mike McCracken, Communications Coordinator for Southern Nuclear Company, was the host and guided the group around the site on a tour. The section had not toured the site in four years. This included an overview of nuclear energy, Southern Nuclear/Plant Vogtle, and the status of Units 1 and 2 (approximately 35 years of operation) and Units 3 and 4 (Unit 3 became the 93rd US operating nuclear plant July 31 and Unit 4 is expected to be commercially operational first quarter 2024). Included was a presentation with group discussion, viewing of models and exhibits, and then a perimeter driving tour of the site (which included stepping out of vans by the Unit 1 cooling tower and on Mt Vogtle where the group had an elevated view of Units 1 - 4 plus some of the Savannah River Site's facilities).



Section attendees with Vogtle Units in background
(not pictured Mike McCracken)

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Technical Meetings (contd)

November 2023

On November 29, the section celebrated its' 60th Anniversary. The meeting was held at Newberry Hall in Aiken, SC. The section charter was issued on November 21, 1963. Kevin O’Kula gave a presentation of the section’s history. One charter member, Rick Benton, was in attendance of the celebration. The Savannah River Section covers 46 counties in Georgia and South Carolina. Also at the meeting, Ken Petersen the 69th ANS president, gave his thoughts on the societies past, present and future. His presentation was entitled “Update on Nuclear and the American Nuclear Society”. There were forty two people in attendance.



Michelle Johnson
Present Section Chair



Kevin O’Kula
Past Section Chair



Ken Petersen
69th ANS President

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Technical Meetings (contd)

January 2024

This meeting featured Catherine Ramsey from the Savannah River National Laboratory (SRNL). An important aspect of nuclear and radioactive material management at DOE facilities is accountability. This point and related subject areas were discussed by Cathy. She is a Senior Engineer at SRNL and Nuclear Materials Management Primary Point of Contact for the Savannah River Site (SRS). Her presentation was the first ANS SRS dinner meeting in 2024 to an audience of 38 at Bobby's BBQ in Warrenton, SC.

Ms. Ramsey's presentation, entitled, "Foreign Obligation Management at SRS: Requirements and Methods for Bulk Material Processes," pointed out the SRS manages a large quantity of foreign obligated special nuclear material. The material was received as part of nonproliferation efforts to repatriate U.S. origin material that was loaned out as part of the Atoms for Peace Program. Cathy noted that increases in both nuclear weapons program and disposition activities at SRS has placed increased scrutiny on management of foreign obligated materials and has driven the need for a more robust and transparent management strategy. She summarized the improved framework used at SRS H Canyon that has enabled bulk processing and disposition of foreign obligated material while also providing increased transparency and traceability.

After her remarks on nuclear materials and before taking questions, Cathy recommended attendees consider the merits of participating in the Institute of Nuclear Materials Management (INMM). It is reestablishing its activities in this area after a short pause.

Ms. Ramsey has a B.S. in Nuclear Engineering and Radiological Sciences from the University of Michigan and is a Certified Knowledge Manager through the Knowledge Management Institute.



Catherine Ramsey

Institute of Nuclear Materials Management

- Vision: "Global peace, security, and prosperity through the responsible stewardship of nuclear and other radioactive materials"
- Technical Divisions:
 - Facility Operations
 - International Safeguards
 - Materials Control and Accountability
 - Nonproliferation and Arms Control
 - Nuclear Security and Physical Protection
 - Packaging, Transportation and Disposition Division
- Website: [Institute of Nuclear Materials Management \(inmm.org\)](https://www.inmm.org)



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Technical Meetings (contd)

Future Technical Meeting

The next ANS SRS technical meeting will be February 15, 2024. Professor Steven Biegalski will speak on one project of the Consortium for Enabling Technologies & Innovation (ETI). ETI is sponsored by NNSA with twelve national laboratories (including Savannah River National Laboratory) and fourteen university partners. ETI has three thrusts: 1) data science and autonomous solutions, 2) advanced manufacturing for nonproliferation, and 3) novel instrumentation and sensors. In Professor Biegalski's presentation entitled, *ETI: Signature Discovery within Additive Manufacturing*, he will focus on one project that cuts across all three thrust areas that has the main goal of identifying signatures from additive manufacturing. While advances in manufacturing technology enable the production of complicated physical objects with less effort and skill than traditional manufacturing, there is a concern that a proliferator could bypass export controls through the utilization of advanced manufacturing. A main goal of the project that is described in the presentation will show how signatures can be extracted from data collection to identify manufacturing methods and the objects being manufactured.

The venue for this meeting is Rio Cantina, 1049 Center Street (at SRP Park and across from the Crowne Plaza hotel) in North Augusta, SC. Registration and dinner orders will begin at 6 PM with the technical program starting at about 7:00 PM.

The speaker is Chair of Nuclear and Radiological Engineering and Medical Physics at Georgia Institute of Technology. Prior to joining Georgia Tech, Dr. Biegalski was a faculty member at The University of Texas at Austin for 15 years and held the position of Reactor Director for The University of Texas at Austin TRIGA reactor for over a decade. He is currently the Thrust 2 Advanced Manufacturing for Nonproliferation lead for ETI.

See the ANS SRS website and emails for more details on how to register.



Steven Biegalski

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Outreach and Education

CSRA College Night

The annual CSRA College Night was held at the James Brown arena on September 14, 2023. It is hosted by Savannah River Nuclear Solutions' Education Outreach Programs. Approximately 120 persons came by the ANS-SRS booth for information during the night. Graham Jones and Michelle Johnson manned the booth for the section.



Graham and Michelle

SEED 2023

The Ruth Patrick Science Education Center at the University of South Carolina Aiken (USC Aiken) hosted the 38th annual SEED STEM Festival on September 23rd. Students got up close with honeybees, petting an alligator, learning how to make a rain garden, investigating a carnivorous plant, driving a championship robot, or virtually traveling through outer space. Approximately 2086 people were in attendance.

The event celebrated innovations in the areas of STEM (science, technology, engineering, mathematics). Student groups, regional corporations, museums, professional organizations, government agencies, educators, and national labs joined forces to create and present engaging hands-on activities for guests of all ages.

This event each year to give young learners up close and personal interaction with real-world scientists, engineers, and other technical professionals. The goal is to increase awareness of the role STEM plays in society and that it can also be fun. We recognize that as a society we must continue to excite and engage families about STEM fields.

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Outreach and Education (contd)

Highlights of the 2023, 38th Annual SEED STEM Festival included:

- More than 60 hands-on exhibits and activities
- Exhibits from the Aiken County EMS, American Nuclear Society, Savannah River National Lab, SCDHEC, USC Aiken, Savannah River Nuclear Solutions, Southern Nuclear, and more
- Demonstrations of technologies and intriguing science including robotics, nuclear power, flight, biology, chemistry, neuroscience, biodiversity, and more

The local section setup displays of the mouse traps with ping pong balls. Visitors to the ANS SRS table enjoyed the display.

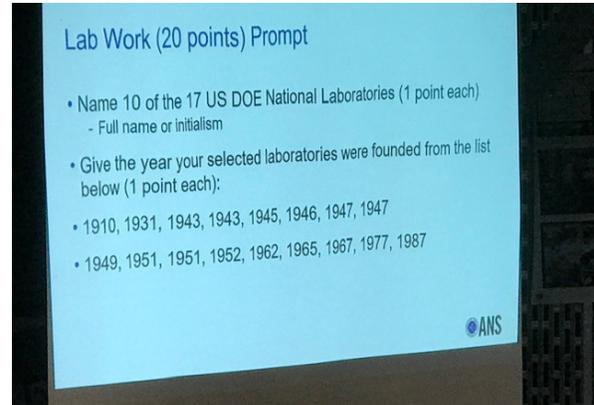


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Other Events

Nuclear Trivia

The local section sponsored a Nuclear Trivia event that was held on October 19. It was held at the Café Scientifique in Aiken, SC. There was a cash bar to support the Benjamin scholarship.



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Other Events (contd)

ANS President tours Plant Vogtle and the Savannah River Site

On November 29, Ken Petersen visited and toured Plant Vogtle. The main parts of the tour included the Unit 3 Control Room and the Turbine hall, the river intake, and the dry cast storage areas. The tour was conducted by Mike McCracken the section Vogtle Liaison and others on the tour were Richard Loftin and Phil Cupp (retired employees of Southern Nuclear). Units 1, 2 and 3 were at full power and Unit 4 is scheduled to go commercial in the first quarter of 2024.

On Thursday, November 30, President Petersen visited the Savannah River National Laboratory. SRNL led tours of its laboratory and large-scale nuclear material facilities, followed by driving tour of the Savannah River Site. Ken visited the SRNL radiological and large-scale process development facilities including the shielded cells and the Engineering Development Laboratory. The site tour included historic and present operating sites of M area (historic production reactor fuel manufacturing); K area (Pu materials storage); L area (DOE spent fuel storage); the SRNL Mobile Melt Consolidate facility; H-Canyon (fuel processing); H-Tank Farm (high level waste handling and storage); Tritium facilities; Salt Waste Processing Facility; the Salt Disposal Units; the Defense Waste Processing Facility; the Glass Waste Storage Buildings; and E-Area (radiological waste disposal). Lunch discussions were held with SRNL staff to focus on SRNL's leading work on processing and waste form development that could meet needs for advanced reactor fuel cycles.



Vogtle Units 3 and 4 in background



Dave DiPrete, Frank Pennebaker, Ken Petersen, and Bob Pierce at SRS

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Benjamin Memorial Scholarship



Savannah River Section, P.O. Box 7001, Aiken, SC 29804



<http://local.ans.org/savriv/>

2024 American Nuclear Society Savannah River Section ELEVENTH ANNUAL BENJAMIN MEMORIAL SCHOLARSHIP



The Benjamin Scholarship is a competitive financial award given in memory of Dr. Richard W. Benjamin towards the first year of a four-year Science, Technology, Engineering and Mathematics (STEM) College/University, or either year of a two-year Technical College degree program.

- **Scholarship Award amounts will be based on number & quality of applications.**
- **Seeking students with STEM career goal, potentially interested in a Nuclear Science and Technology career.**
- **Current CSRA graduating high school seniors or first-year technical college students are eligible.**
- **Application window : January 22 - April 29, 2024**
- **Required Application Materials and Evaluation Criteria (%):**
 1. Cover letter including name, address, evening phone number, current school, home email address and name of college or technical school to which the Benjamin Memorial Scholarship would be applied. If the school is uncertain, then name the current top choice. Also, at the end of the cover letter, add a one-sentence non-school related fun fact about yourself (10%).
 2. A one-page essay (300 words or less) on why a career in science, technology, engineering, and mathematics, and educational is the goal of the student; Highlight what you plan to pursue in college & potential career goals (40%)
 3. High school transcripts (seven (7) semesters in the case of current high school seniors); plus first-semester transcripts for applicants who are first-year technical college students, along with their entire high school transcript; (20%)
 4. Two (2) letters of recommendation from education institution or community organization individuals (e.g., teachers, coaches, service or religious organization leaders, etc.). Each recommendation is weighted 15%. (30%)
- Submit application materials by: 1) Email with attachments to: ans.savannahriver@gmail.com, or 2) U.S. mail to:
Benjamin Scholarship, ANS-Savannah River Section, P.O. Box 7001, Aiken, SC 29804
- **Scholarship Award(s) will be announced in July 2024.**

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Benjamin Memorial Scholarship (contd)

The ANS Savannah River Section sponsors a scholarship in memory of Dr. Richard Benjamin. The Benjamin Scholarships are given to help defray first-year college costs for an 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.

Dr. Benjamin was a mentor to many nuclear science and technology professionals in the Aiken-Augusta area for over four decades. He received his BA in Engineering from Lamar University, MS 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

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.



Dr. Richard (Dick) and his wife, Sally Benjamin, circa early 2000s.

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Benjamin Memorial Scholarship (contd)

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.

Donations can be sent to the following address and checks can be made out to ANS Savannah River Section.

ANS Savannah River Section
PO BOX 7001
Aiken, SC 29804

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Other Events

Greenjackets Game



On August 4, the local section met at the SRP Park in North Augusta, SC. There were 28 attendees at the Lawn Ace Lounge to watch the game. Attendees enjoyed hamburgers, hot dogs, BBQ and the fixings. The Greenjackets beat the Charleston Fireflies 6 to 2. It was also Scout night and the local Packs and Troops spent the night on the baseball field.



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Corporate Sponsorship

The section would like to thank the following companies their support of our endeavors:



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Plant Vogtle Status

The new construction at Plant Vogtle in Burke county is complete. Unit 3 has been in commercial operation since July of this year. Unit 4 has been loaded with fuel and is in the startup testing phase. A reactor coolant pump that was not performing as designed was replaced with the spare pump in November. Unit 4 should be in commercial operation in the first quarter of 2024. Unit 1 has been in commercial operation since 1987 and Unit 2 since 1989.



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Awards

Here is the award that was presented to our local section for 2023. Many thanks to the section leadership for 2023 – 24.

