



Your FCWMD Leadership Team

We all thank you for being a member of the ANS FCWMD. We look forward to meeting and working with you. Please don't hesitate to reach out to us with suggestions or if you'd like to get involved.

Officers

Jean-Francois (Jef)
Lucchini – Chair

Jared A. Johnson - Vice Chair

Maryanne Stasko –
Secretary /Treasurer

Stephanie H. Bruffey –
Technical Program Chair

Andrew Sowder — Immediate Past
Chair

Executive Committee (Terms Expiring)

Sven O. Bader (2021)

Bob Borrelli (2021)

Amanda Casella (2019)

Jack Law (2021)

Christina Legett (2019)

Fiona Rayment (2020)

Everett L Redmond II (2020)

Nicholas V. Smith (2020)

Ruth F. Weiner (2019)

Jinsuo Zhang (2019)

Visit our Website

fcwmd.ans.org

Contact us

fcwmd.ans.org/contact-us

A Message from the Officers

Dear FCWMD Members:

It is my great honor and privilege to serve the Division as the Chair for the next 12 months. My predecessor Andrew Sowder did a great job to coordinate the update of our Position Statements, to initiate the revision of our Bylaws, and to strengthen the communication between the Division and the different "partners" (Topical meetings organizers, ANS HQ, etc.), among many other things not always visible to the membership. Under my service, we will, of course, continue this work. Additionally, I will try to engage in more communication with you, our valued Division members, so you can appreciate all of what ANS FCWMD can do for you... Stay tuned!

Best regards,

Jef Lucchini

FCWMD Chair



Jef presenting plaque to Andrew



MISSION

The Fuel Cycle and Waste Management Division (FCWMD) is devoted to all aspects of the nuclear fuel cycle including waste management, worldwide. Division specific areas of interest and involvement include uranium conversion and enrichment; fuel fabrication, management (in-core and ex-core) and recycle; transportation; safeguards; high-level, low-level and mixed waste management and disposal; public policy and program management; decontamination and decommissioning environmental restoration; and excess weapons materials disposition.

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2018 J. Randall Scholarship

Katie Mummah
University of Wisconsin



Did you know?

This award is in honor of Dr. John D. Randall. It is awarded yearly to a “student pursuing graduate studies in the areas of science and engineering related to the nuclear fuel cycle and radioactive waste management.” Dr. Randall was the Deputy Commission and the Executive Director of the Low-Level Radioactive Waste Program for the state of New York, and was a professor of nuclear engineering at Texas A&M, where he directed the Nuclear Science Center from 1958 to 1983. He was a fellow of the ANS and a recipient of the Society’s Exceptional Service Award. During 1991-1992, Dr. Randall served as national chairman of the Society’s FCWMD and its Honors & Awards Committee.

FCWM-Sponsored Scholarships

Educating and supporting the development of the future workforce is critical to the continued growth of nuclear science and technology. Each year, the ANS awards numerous scholarships to college undergraduates and graduate students pursuing nuclear-related degrees. An important activity of the Fuel Cycle and Waste Management Division is sponsoring scholarships to acknowledge the contributions of our young members to the field. Currently, FCWMD is sponsoring two scholarships:

- **The J. Randall Scholarship**

Periodicity: Annually

Nomination Deadline: February 1

Presented: Usually at the ANS National Annual Meeting

- **The Michael Lineberry Memorial Scholarship**

This scholarship is to be established in memory of Michael Lineberry who passed away last year. Dr. Lineberry had previously served as Treasurer of ANS, and was a key member of the FCWMD Division.

Information on the FCWMD Scholarships can be found on the FCWMD website, under the “Scholarships” tab.

The 2018 John D. Randall Scholarship recipient was Katie Mummah, from the University of Wisconsin. For a complete list of past recipients of the John D.

Randall Scholarship, please visit:

<http://www.ans.org/honors/scholarships/recipients/>.

Supporting ANS scholarships

To help educate and train the next generation of the nuclear workforce, ANS members are encouraged to donate to the Society’s numerous scholarships. A description of each scholarship and a convenient online donation form, which allows donors to designate their contributions to support specific awards, are accessible at

www.ans.org/honors/scholarships/.

FCWMD Support in Action



Congratulations to our 2018 Student Conference FCWMD winners!

Ethan Manning - Ermannin@ncsu.edu

Loading Pattern Optimization with a Focus on Relative Fuel Risk for a Three-Loop Westinghouse PWR and Integral Fuel Burnable Absorbers

Andrew Hunter - andrewshb@vcu.edu

Development of an Experimental Routine for Electrochemical and Laser-Induced Breakdown Spectroscopy Composition Measurements of LiCl-KCl Eutectic Salts

2018 ANS Student Conference at a Glance

Attendance: 450, 70 professionals, 380 students **Panels:** 10 **Technical Workshops:** 5

Tours: 3 **Presentations:** 123 **Posters:** 50

Student Program Support - The Positive Impact We Bring

Dear Dr. Lucchini and the Fuel Cycle & Waste Management Division,

Today I received the grant to cover my ANS registration and travel for the conference this past June. I am profoundly grateful to your Division for contributing to the Student Program and making my attendance possible. I would not have been able to attend without your support.

This was my first ANS conference, and it has inspired my career and motivated my independent study in advanced reactors this summer. I look forward to many more. Please keep contributing to inspire the next generation of Nuclear Engineers and Scientists!

Thank you,

Ralph

Ralph Wiser

Mechanical Engineering, The University of Texas at Austin



November 11-15, 2018
Hilton Orlando Bonnet Creek
Orlando, FL

2018 ANS Winter meeting

The Division has a total of 9 sessions...

1. Fuel Cycle and Waste Management: General I
2. Progress in DOE's Nuclear Technology Research and Development Programs (P)
3. Fuel Cycle and Waste Management: General II
4. Transportation and Storage of Used Nuclear Fuel
5. Used Fuel and High-Level Waste Management – The Long and Winding Road (P)
6. Molten Salts in Nuclear Fuel Cycle Processes
7. Fuel Cycle Analysis
8. Grand Challenge of Closing the Fuel Cycle: Federal, Commercial, and/or Hybrid Ownership of a Recycling Facility? (P)
9. International Research Towards Key Improvements within the Closed Fuel Cycle (P)

... for you to attend!

Visit: <http://www.ansannual.org>

How to Propose Conference Sessions

Stephanie Bruffey of Oak Ridge National Laboratory is our Program Chair, and she welcomes your suggestions. Any member can propose, organize or chair a session at an ANS meeting, just follow the steps below. You have a great idea but don't want to chair the session? That's OK; we probably have another member willing to help out.

1. Write a title and a 100-word description about the intended session/topic. Specify if it will be a panel or paper session.

2. Submit the summary at the Program Committee meeting or send it to anyone on the leadership team to represent it for you. Sessions are decided on a year in advance. During the upcoming ANS Winter meeting, we will choose sessions for the 2019 Winter meeting .

3. Solicit experts to submit summaries by the deadline (usually about six months in advance) of the meeting in which the session will occur.

Did you know?

Among the 15 ANS Divisions that proposed sessions at the 2018 Annual meeting in Philadelphia, PA, your FCWM Division offered 10 sessions and 42 papers.

This is among the top four divisions supporting sessions!

Our last two national meetings were also very prolific: 11 sessions and 31 papers at the 2017 Winter meeting, 11 sessions and 48 papers at the 2017 Annual meeting .

2018 Winter Meeting Sunny Orlando Florida



Submit your Meeting Photos for inclusion
in the newsletter and on the website!



We would love to meet you! Please join us at
the Program or Division Meeting Sunday!

Check the program for time and location.

Upcoming Topical Meetings

ANTPC 2018 - Advances in Nuclear Nonproliferation Technology and Policy Conference

September 23-27, 2018 Wilmington, NC, <http://nnp.ans.org/>

PBNC 2018 - Pacific Basin Nuclear Conference

September 30 - November 5, 2018, San Francisco, CA , <http://pbnc.ans.org/>

IHLRWM 2019 - International High Level Radioactive Waste Man- agement

April 14-19, 2019, Knoxville, TN , <http://ans.org/meetings/ihlrwm>

GLOBAL/TOPFUEL 2019

September 22-27, 2019, Seattle, WA

Fun in Philly!

President's Reception - A time to socialize and network. Who knew Macaroni n Cheese could be so delicious!



Our New Fellow Jack Law!!
Congratulations Jack!



A Passionate High School Student Presents at the Annual ANS Meeting: Closing the nuclear fuel cycle: Molten salt reactors



Two years ago during my sophomore year, I joined the GT Research program at my high school. This program allows students to independently research whatever topic they choose from food to rocket science. I knew that I wanted to further explore engineering (I have been taking engineering classes since freshman year of HS), but I was not quite sure what type. I skimmed a list of various types of engineers, and nuclear sounded interesting. I began very broad and read news articles, blogs, and updates on new technology. Eventually, I came across a GEN IV reactor, the molten salt reactor (MSR). The idea seemed brilliant to me, and I wondered why the design hadn't been utilized since its creation in the 50s/60s. I decided that MSRs were my topic to research for the rest of the year. The program required students to read scholarly articles/journals, reach out to professionals, conduct interviews, collect original data, give presentations, create a product, and write a research paper. I received guidance from a professor at the University of Tennessee, Dr. Ondrej Chvala. I learned a great deal about nuclear energy in one year without formal education. While most students disliked their research topic by the end of the academic year, I wanted to learn more about nuclear.

Two years later, I decided to join the program again. While the first year's class was titled "Independent Research," this year I chose Intern/Mentor. I still had to complete the same assignments as the first class, but I also had to participate in an internship. I went into the class thinking I would never be able to have a nuclear-related internship as a high school student. Fortunately, my teacher found a nuclear engineering professor at the University of Maryland, Dr. Mohammad Modarres, who was willing to act as a mentor. We agreed that thorium molten salt reactors would be our topic for the year, and I began conducting research and reporting it back to him. He answered all of my questions and taught me so much about nuclear. He recommended submitting a paper to the American Nuclear Society. He said that it was a fifty-fifty chance that the paper would get accepted but that it was good experience. He revised my paper, and we submitted it. A few months later, I was presenting at the annual meeting and listening to some of the biggest figures in the nuclear industry.

To continue my education, I will study nuclear engineering at Texas A&M University this fall. I hope to further my research in MSRs as well.

Treasurer's Report

By Maryanne Stasko

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The second quarter financials were received from ANS Headquarters. FCWMD fund balance is \$67089.

The upcoming major 2018 expenditures are:

- Congressional Fellow support
- Student Conference support

The first quarter FCWMD opted to add approximately \$650 to the Randall Scholarship to cover a shortfall in earnings. This is required at times when the three-year rolling average calculation includes a lower than expected investment percentage.

A draft 2019 budget will be submitted in September to ANS Headquarters. As agreed upon by the Executive Committee, the financial support of Radwaste Magazine, in the form of subscriptions, was ended with the 2018 support.

The FCWMD financial health remains strong, thanks in part to the membership support of the topical meetings which we sponsor and co-sponsor.

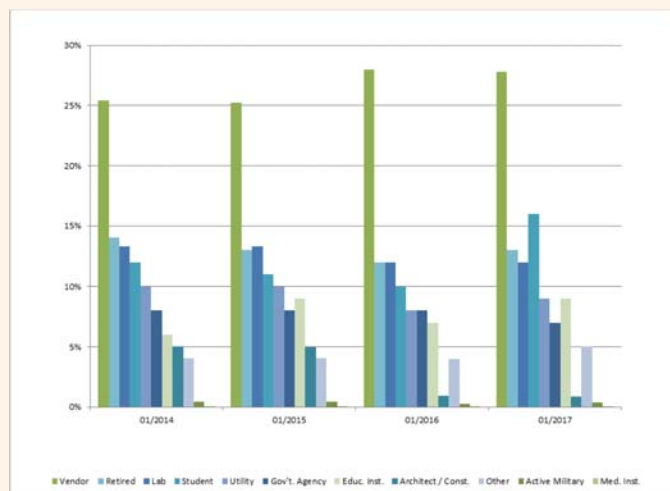
Thank you!

Membership

By Maryanne Stasko

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Membership numbers for FCWMD are produced at the end of the year. As a reminder, ANS includes two division affiliations with your annual membership. Over the past ten years, FCWMD has experienced a 2.1% decline in membership. The graph below shows the membership of FCWMD by industry since 2014. Consultants, Labs, Retired, and Students categories remain strong contributors.



American Nuclear Society
Fuel Cycle & Waste Management Division

September, 2018

Fuel Cycle and Waste Management Division
Newsletter

Maryanne Stasko, FCWMD Secretary

FCWMD website: <http://fcwmd.ans.org/>