



Reactor Physics

Professional Division

Officers

Shane Stimpson – Chair
sgstimpson@bwxt.com

Abdalla Abou-Jaoude – Vice-Chair
abdalla.aboujaoude@inl.gov

Ben Collins – Treasurer
ben@veracitynuclear.com

Ben Betzler – Secretary
ben@radiantnuclear.com

Get Involved

Reactor Physics Division Executive
 and Program Committee Meeting

Sunday, November 17th
 2:00 – 4:00 pm Eastern

[Teams Link](#)

Zander Room

Renaissance Orlando at Seaworld

We hope to see you there!

A Message from the Chair

It certainly is a great time to be in the nuclear field, especially with all of the recent, exciting news with regards to new partnerships and plans for deployment of reactors. At the National meeting back in June, there was a lot of buzz about data centers/AI and the power demands that were being projected out over the next 10-20 years. Even with that, I have been surprised at

how quickly things have been moving, but with the announcements from Microsoft/Constellation to restart TMI Unit 1, Google/Kairos to deploy 500 MWs, and Amazon/X-Energy to deploy 5 GWs in support of data center power demands, we are in unprecedented times. And that's really only considering the domestic, commercial plans for new nuclear, as there has also been a considerable uptick in interest for nuclear in defense applications, as well. This is exactly the pace we need to be going for the US to maintain a leadership role in the nuclear field.

Going into 2025, we are having a lot of discussions within RPD on how to best improve the value that the division can provide to its members and increase engagement with students to provide better networking across academia, labs, and industry. This is an exciting time for the entire industry, and we need to capitalize on this increased enthusiasm to strengthen the division. I look forward to seeing many of you at the upcoming meeting in Orlando, and if you have any suggestions for division improvement, don't hesitate to email me or join in on the discussions at the Executive and Program Committee meetings at the conference.

Thank you,
 Shane Stimpson, RPD Chair



Introducing RPD's New Program Chair

Dr. Zeyun Wu is Associate Professor of Nuclear Engineering at Virginia Commonwealth University (VCU) and directs the computational reactor physics research group at VCU.



Dr. Wu's research interests encompass reactor physics, advanced reactor design, computational methods, uncertainty and sensitivity analysis, advanced data analytics and machine learning. Since he joins VCU as a faculty member in August 2017, Dr. Wu has been leading and co-leading about ten US DOE sponsored R&D projects in various advanced reactor design and analysis, including sodium fast reactor (SFR), molten salt reactor (MSR), and pebble-bed type high-temperature gas-cooled reactor (PB-HTGR). Dr. Wu has published over 110 technical journal articles, conference papers and ANS summaries based on this research.

Executive Committee

(Terms Expiring June 2025)

Nicolas Stauff
nstauff@anl.gov
 Brendan M. Kochunas
bkochuna@umich.edu
 Stephanie A. Kempf
sakempfne@gmail.com
 Massimilo Fratoni
maxfratoni@berkeley.edu

(Terms Expiring June 2026)

Zeyun Wu
zwu@vcu.edu
 Eva Davidson
davidson@ornl.gov
 Vincent Laboure
Vincent.Laboure@inl.gov
 Stefano Terlizzi
Stefano.Terlizzi@inl.gov
 Ishita Trivedi
Ishita.Trivedi@inl.gov

(Terms Expiring June 2027)

Joshua Peterson-Droogh
jpeterson-droogh@northstarm.com
 Adam Nelson
nelson.adam@gmail.com
 Matt Krecicki
makrecicki@bwxt.com
 Zach Prince
zprince@terrapower.com
 Dan Kotlyar
dan.kotlyar@me.gatech.edu

Dr. Wu takes multiple leading positions in different ANS committees. He serves as Executive Committee Members for the Reactor Physics Division (RPD) and Mathematics & Computation Division (MCD). Dr. Wu also serves as technical reviewers for over 15 scientific journals in the field of nuclear engineering and works as Assistant and Associate Editors for two established journals. Dr. Wu earned a Ph.D. degree in Nuclear Engineering from Texas A&M University.

Upcoming RPD Program Committee and Executive Committee Meetings

The next RPD Program Committee and Executive Committee Meetings will be held back-to-back on Sunday, November 17th at 2:00pm ET in the Zander Room at Renaissance Orlando at Seaworld. A [Teams Link](#) was sent out with calendar invites with a passcode. We hope to see you there!

Honors and Awards

Eugene P. Wigner Reactor Physicist Award

RPD members are invited to submit nominations for the Eugene P. Wigner Reactor Physicist Award. The deadline for nominations is April 1st, 2025, and nomination forms and a list of past winners are available through the ANS Headquarters.

Early Career Reactor Physicist Award

This award is intended to honor the contributions of reactor physicists who at the time of nomination are thirty-nine years of age or younger. We are now in the process of reviewing the submittals for this Award.

Dimitrios Cokinos
RPD Honors & Awards Committee Chair

Scholarships

The reactor physics division is excited to announce a new graduate scholarship program, the Massimo Salvatores Memoriam Graduate Scholarship (3500\$) honoring the legacy and contributions of Dr. Salvatores. This new scholarship will be offered alongside the other two scholarships administered by the division: the Rudi Stamm'ler undergraduate scholarship (3500\$), and 2) the Allan Henry / Paul Greebler graduate scholarship (5000\$). Please encourage all deserving students pursuing research in the field of reactor physics to apply. The application deadline is February 1st, 2025 and application forms can be found at <https://www.ans.org/scholarships/>.

Benoit Forget
RPD Scholarship Chair

Program Committee

At the upcoming 2024 ANS winter Conference, RPD will feature nine technical sessions for a total of 44 presentations. RPD will also feature five special topical panel sessions. As usual this only is made possible because of the hard work of the Program Committee members and the organizers of panels, regular and special sessions. Especially kudos for those over 200 ad hoc external RPD summary reviewers. The special panel sessions sponsored by RPD for the 2024 ANS winter meeting are as follows:

- “Advanced Reactor Demonstration Program (ARDP) Status and Updates,” chaired by Dr. Abdalla Abou-Jaoude on Monday, November 18, 1:00–2:45 PM EST
- “Molten Chloride Reactor Experiment (MCRE) Project Update,” chaired by Dr. Nicholas V. Smith on Monday, November 18, 3:15–5:00 PM EST
- “Microreactor Testing Planned for the National Reactor Innovation Center’s DOME Facility,” chaired by Dr. Bradley Tomer on Tuesday, November 19, 10:00–11:45 AM EST
- “MARVEL Development Status,” chaired by Dr. John H. Jackson on Tuesday, November 19, 3:15–5:00 PM EST
- “Progress in Advanced Research Reactor Development and Deployment,” chaired by Dr. Pavel V. Tsvetkov on Wednesday, November 20, 10:00–11:45 AM EST

Meanwhile, the call for papers for the 2025 ANS Annual Conference (which will be held on June 15–18 at Chicago, IL) is already posted out and summaries are due Friday, February 7th. No extension will be allowed.

During the 2024 ANS winter conference, the RPD Program Committee (PC) and Executive committee (EC) will hold a joint meeting on Sunday, November 17, 2:00–4:00PM EST with the meeting location and meeting mode to be determined. The meeting is open, and everyone is welcome to attend. At this time, we will discuss the responsibilities of PC and EC members, as well as the technical session interests for the future ANS meetings. We are seeking to expand the membership of the program committee. If you are interested in contributing to

the activities of the division, want to sponsor special sessions, or want to bring new ideas, please reach out.

Zeyun Wu
RPD Program Committee Chair

Treasurer's Report

RPD started 2024 with a balance of \$80,440. From Jan 1 to September 30, the division brought in \$1,593 in revenues from membership dues. Additionally, the PHYSOR24 conference brought in \$8,544 to RPD. During the same time, the division spent around \$273 on awards (namely the RPD Early Career Reactor Physicist Awards), \$3,500 in student support for the ANS Student Conference and \$12,848 to fund the Massimo Salvatores Memoriam Graduate Scholarship. To date, the budget is in a \$6,484 deficit leaving a balance of \$73,956. Despite the deficit this year stemming from one time contribution to the Salvatores Scholarship, the RPD finances are still in reasonably good health. The RPD financial health would not be possible without your contributions. Please take a few minutes to renew your membership by the end of this calendar year.

Ben Collins
RPD Treasurer

Reactor Physics Standards

Highlights of the activities of ANS-19, Reactor Physics Standards Subcommittee, are summarized below.

ANS-19.1 "Nuclear Data Sets for Reactor Design"

This standard has been reaffirmed in 2024 thus extending its validity for a five-year period. Thus, making it possible to revise the standard. Experts interested in joining the ANS-19.1 Working Group, should contact ANS Standards HQ.

ANS-19.3, "Steady State Neutronics Calculations for the Analysis of Power Reactors"

A major revision of this standard has been completed in the last five years. A decision on

whether to revise is expected to be made in the next year or two. The standard covers the principal areas of power reactor design.

ANS-19.3.4, "Determination of the Thermal Energy Deposition Rates in Nuclear Reactors"

This standard was revised in the last few years and is not expected to be undergo another revision for the time being. It is hoped that the next revision will include new and advanced reactors.

ANS-19.5, "Requirements for Reference Reactor Physics Measurements"

A newly reorganized Working Group is reviewing the existing standard in order to establish the extent of revision that will be required. Data obtained from critical and subcritical sources including non-multiplying media are being considered and used in the verification of nuclear design and analysis methods.

ANS-19.6.1, "Reload Startup Physics Tests for Pressurized Water Reactors"

This standard provides guidance and criteria following a refueling or other core configuration for which nuclear design calculations are required. The goal for this standard is to ensure that the operating characteristics of the core are consistent with the calculated results.

ANS-19.10, "Methods for Determining Neutron Fluence in BWR and PWR Pressure Vessel and Reactor Internals"

This standard provides criteria for the performance and validation of the calculations required for the prediction of fast neutron pressure vessel and reactor internals. ANS-19.10 is now in the process of being voted on.

ANS-19.13, "Initial Fuel Loading and Startup Physics Tests for FOAK Advanced Reactors"

This new standard has been created in relatively short time and has already been published as a new American Standard

Dimitrios Cokinos
RPD Standards Committee Chair

List of Upcoming Conferences

- 2024 ANS Winter Conference and Expo
November 17-21, 2024
Orlando, FL USA
- M&C 2025
April 27-30, 2025
Denver, CO USA
- 2025 ANS Annual Conference
June 15-18, 2025
Chicago, IL USA
- ANFM 2025
July 20-23, 2025
Clearwater Beach, FL USA

Paper Submissions for M&C 2025

[Paper submission](#) has been extended to November 15th—this is the final deadline. Please finalize your submissions!

The International Conference on Mathematics and Computational Methods Applied to Nuclear Science and Engineering (M&C 2025) is part of a series of topical meetings organized by the Mathematics and Computation Division of the American Nuclear Society. M&C conferences, held every two years, represent a series of international forums organized and sponsored to bring together worldwide expertise related to nuclear science or technology, including mathematical and computational methods, numerical analysis, computer codes, computer architectures, and benchmarks for computationally solving problems in all disciplines encompassed by the Society.