DNP Newsletter No. 220

American Physical Society Division of Nuclear Physics

https://engage.aps.org/dnp/home

Chair Line

Chair	Chair-Elect	Vice-Chair	Secretary-Treasurer
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DNP 2024 WEBSITE:

https://web.mit.edu/dnp2024

submit an abstract here.

Upcoming Deadlines:

1 June 2024

Nominations due for:

- Hans A. Bethe Prize
- Tom W. Bonner Prize
- Herman Feshbach Prize
- Dissertation Award in Nuclear Physics

8 July 2024

- DNP 2024 Abstract Submission Deadline (17:00 ET)
- Nominations for DNP Elected Officers

The Division of Nuclear Physics home page is available at https://engage.aps.org/dnp/home. Information of interest to DNP members such as nominations, prizes, and committee memberships can be found there. The DNP newsletters are also posted online. Comments and suggestions are solicited and can be sent to Melina Avila at mavila@anl.gov.

I. DNP COMMITTEES

Executive Committee

- Dean Lee, Michigan State University, Chair (2025)
- Jim Napolitano, Temple University, Chair Elect (2025)
- Nadia Fomin, University of Tennessee Knoxville, Vice Chair (2025)
- Haiyan Gao, Duke University & BNL, Past Chair (2025)
- Ramona Vogt, Lawrence Livermore National Laboratory & UC Davis, Secretary-Treasurer (2025)

- John Wilkerson, University of North Carolina, Division Councilor (2025)
- Melina Avila, Argonne National Laboratory (2025)
- Lee Bernstein, Lawrence Berkeley National Laboratory & UC Berkeley (2026)
- Kelly Chipps, Oak Ridge National Laboratory (2026)
- Shelly Lesher, University of Wisconsin, La Crosse (2025)
- Daniel Phillips, Ohio University (2026)
- Kate Scholberg, Duke University (2025)
- Allison Zec, University of New Hampshire (2025)

2024 DNP Program Committee

- Jim Napolitano, Temple, Chair (2024)
- Nadia Fomin, University of Tennessee Knoxville, Vice Chair (2024)
- Dean Lee, MSU, Past Chair (2023)
- Haiyan Gao, Duke & BNL, Past Chair (2022)
- Ramona Vogt, LLNL/UC Davis, Sec.-Treas. (2024)
- Martha Constantinou, Temple, (2024)
- Jutta Escher, LLNL (2024)
- Vincente Giuseppe, ORNL (2024)
- Gabriel Orebi Gann, UC Berkeley (2024)
- Alexei Prokudin, Penn State Berks (2024)
- Claudia Ratti, Houston (2024)
- Betty (Manyee) Tsang, MSU (2024)
- Sergei Voloshin, Wayne State (2024)
- Dave Brown, BNL (2025)
- Jan Bernauer, Stony Brook (2025)
- Daniel Cebra, UC Davis (2025)
- Garth Huber, U Regina (2025)
- Kyle Leach, Colorado Mines (2025)
- Elise Novitski, U Washington (2025)
- Hendrik Schatz, Michigan State (2025)
- Nicole Vassh, TRIUMF (2025)

Other DNP committees will appear in the August Newsletter.

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II. CALL FOR NOMINATIONS FOR OFFI-CERS AND EXECUTIVE COMMITTEE (2024)

Terms of the officers and three members of the present Executive Committee will expire at the close of the regular meeting of the Division, to be held in conjunction with the APS 2025 April meeting. Dean Lee will become Past Chair, Jim Napolitano will become Chair, and Nadia Fomin will become Chair-Elect. Lee Bernstein, Kelly Chipps, and Daniel Phillips will remain members of the Executive Committee. A Vice-Chair, a Secretary-Treasurer, and four members of the Executive Committee are to be elected, three regular members and an early career member. The Secretary-Treasurer is eligible for re-election.

Nominations are online only. The nominations site will be available from 1 June until 8 July. (See the DNP home page for a link.) The DNP Bylaws require that a nominee proposed for a given office by not fewer than 2% of the members (about 50 nominations) shall be deemed nominated for that position. Nominees proposed by at least 20 members will be given strong consideration by the Nominating Committee.

DNP members should please exercise their right to nominate candidates for the upcoming DNP elections and then remember to vote in the elections. Some elections can be determined by small margins so every vote counts. It is important to vote!

III. NOMINATIONS FOR PRIZES AND AWARDS IN NUCLEAR PHYSICS

3.1. 2025 Hans A. Bethe Prize

This annual prize was established in 1996 by friends, students, and associates of Hans A. Bethe and announced at Bethe's 90th birthday celebration at Cornell. Previous prize winners are: J. Bahcall, E. E. Salpeter, I. Talmi, G. E. Brown, M. C. T. Wiescher, W. C. Haxton, S. E. Woosley, A. G. W. Cameron, J. R. Wilson, F. K. Thielemann, D. Arnett, C. Rolfs, C. J. Pethick, M. Peimbert and S. Torres-Peimbert, G. M. Fuller, K. L. Kratz, J Lattimer, V. Kalogera, S. L. Shapiro, K. A. Olive, K. Nomoto, F. Harrison, J. W. Truran, M. Prakash, F. Calaprice and J. R. Bond.

The purpose of the prize, which currently consists of \$10,000 and a certificate citing the recipient's contributions, is "To recognize outstanding work in theory, experiment, or observation in the areas of astrophysics, nuclear physics, nuclear astrophysics or closely related fields."

The award is to be made to one individual for outstanding accomplishments in these areas. No time limits are set on when the work was done.

Nominations remain active for three years. It is extremely helpful for the committee to receive additional letters of support that detail the contributions of the nominee and the impact these contributions have had on the field. It is also appropriate to submit material such as significant articles that might help the committee evaluate the nominee's contributions. While general statements concerning the value of the nominee's work are important, specific information defining what the nominee has contributed and how these contributions have impacted the field is needed.

For more details, see the APS Hans A. Bethe Prize website, for more details and submit nominations to https://www.aps.org/programs/honors/nomination.cfm. Submit the nomination, with all supporting material before 1 June 2024.

3.2. 2025 Tom W. Bonner Prize

This annual prize was established in 1964 as a memorial to Tom W. Bonner by his friends, students, and associates. Winners since 2002 are: J. D. Bowman, A. B. McDonald, G. F. Bertsch, R. J. Holt, J. C. Hardy and I. S. Towner, S. J. Freedman, A. M. Poskanzer, R. D. McKeown, S. C. Pieper and R. B. Wiringa, R. F. Casten, W. Nazarewicz, M. K. Moe, W. A. Zajc, M. Gyulassy and H. Weiman, I-Y. Lee, C. F. Perdrisat, B. M. Sherrill, B. V. Jacak, R. G. Milner, G. L. Greene, D. Hertzog, J.-C. Peng and W. Busza.

The purpose of this prize, which currently consists of \$10,000 and a certificate citing the recipient's contributions, is "To recognize and encourage outstanding experimental research in nuclear physics, including the development of a method, technique, or device that significantly contributes in a general way to nuclear physics research."

Nominations are open to physicists whose work in nuclear physics is primarily experimental. There are no time limitations on when the work was performed. The prize shall ordinarily be awarded to one person, but a prize may be shared among recipients when all the recipients have contributed to the same accomplishment(s).

Nominations remain active for three years. It is extremely helpful for the committee to receive additional letters of support that detail the contributions of the nominee and the impact these contributions have had on the field. It is also appropriate to submit material such as significant articles that might help us evaluate the nominee's contributions. While general statements concerning the value of the nominee's work are important, specific information that allows the committee to determine what the nominee has contributed and how these contributions have impacted the field are crucial.

For more details, see the APS Tom W. Bonner Prize website, for more details and submit nominations to https://www.aps.org/programs/honors/nomination.cfm. Submit the nomination, with all supporting material before 1 June 2024.

3.3. 2025 Herman Feshbach Prize

This prize was established in 2013 by friends, students, and associates of Herman Feshbach. Previous prize winners are: J. W. Negele, L. McLerran, X. Ji, J. A. Carlson,

E. Shuryak, B. R. Holstein, U. van Kolck, B. Mueller, D. Kaplan, M. J. Ramsey-Musolf and G. C. McLaughlin.

The purpose of the prize, which currently consists of \$10,000 and a certificate citing the recipients contributions, is "To recognize and encourage outstanding research in theoretical nuclear physics".

Nominations are open to physicists whose work in nuclear physics is primarily theoretical. There are no time limitations on when the work described in the citation was performed. The prize shall be awarded to one person, or it may be shared by up to and including three persons when all the recipients have contributed equally to the same accomplishment.

Nominations remain active for three years. It is extremely helpful for the committee to receive additional letters of support that detail the contributions of the nominee and the impact these contributions have had on the field. It is also appropriate to submit material such as significant articles that might help in evaluating the nominee's contribution. While general statements concerning the value of the nominee's work are useful, specific information helps the committee to determine what the nominee has contributed and how these contributions have impacted the field.

For more details, see the APS Herman Feshbach Prize website, for more details and submit nominations to https://www.aps.org/programs/honors/nomination.cfm. Submit the nomination, with all supporting material before 1 June 2024.

3.4. 2024 Dissertation Award

The annual award, which recognizes a recent Ph.D. in nuclear physics, was established in 1985 by members and friends of the Division of Nuclear Physics of the APS. Previous winners are: B. M. Sherrill and W. J. Burger, T. E. Cowan, M. J. Musolf, J. E. Koster, Z. Zhao, G. Schmid, Y. G. Kolomensky, E. Hawker, J. R. Arrington, D. Bardayan, J-W. Chen, K. Heeger, A. Steiner, A. Kurylov, L-B. Wang, K. Miknaitis and M. Djordjevic, N. Tolich and D. Choudhury, S. Clayton and Th. Banks, C. R. Hoffman, H. Song and M. Luzum, E. Mereghetti and P. Barbeau, G. Shen, K. Myers, M. P. Mendenhall, C. Shen, J. L. Ouellet, K. W. Brown and M. E. Caplan, G. Rich, I. Upsal and S. Li, J. Melendez, E. Holmbeck, A. Li, and A. Sorensen, and M. Heffernan and E. Rule.

The award consists of \$2500 and an allowance for travel to the annual Fall Meeting of the Division of Nuclear Physics of the American Physical Society at which the award will be presented.

Nominations are open to any person who has received a Ph.D. degree in experimental or theoretical nuclear physics from a North American university within the twoyear period preceding 1 June 2024.

For more details, see the APS Dissertation Award website, for more details and submit nominations to https://www.aps.org/programs/honors/nomination.cfm. Submit the nomination, with all supporting material, including a PDF file of the dissertation, a statement of the candidate's contribution to the research, and letters of support from physicists familiar with the candidate and the research before 1 June 2024.

IV. NSAC REPORT

Contributed by Gail Dodge, NSAC Chair

On December 1, 2023, NSAC received a charge from the Department of Energy Office of Science to evaluate the scientific importance and readiness for construction of projects over \$100 million in the next decade. The members of the subcommittee formed to address this charge were Christine Aidala (chair), Mike Carpenter, Vincenzo Cirigliano, Gail Dodge, Renee Fatemi, Krishna Kumar, Sherry Yennello, and Xiaochao Zheng. The subcommittee was guided by the 2023 long range plan for nuclear science: https://nuclearsciencefuture.org. Additional information regarding readiness for construction was requested and received. NSAC considered and accepted the subcommittee report at its meeting on April 26, 2024. The charge and the report can be found on the NSAC Reports website, here.

V. WHAT COLOR IS DEIB IN NUCLEAR PHYSICS? DNP-JPS SESSION, NOVEMBER 30, 2023

Contributed by Pablo Giuliani

Parallel to the way the nucleon stays together by the presence and interaction of all its quarks and gluons through the strong force, our scientific force can only be strong by an inclusive environment that allows all its members to thrive. In this session, we explored some of the current efforts, both in Japan and the US, for creating a welcoming and inclusive environment for everyone in the nuclear physics community.



The session featured four outstanding speakers: Yukie Maeda (University of Miyazaki), Kenta Itahashi (RIKEN), Evangeline J Downie (George Washington University), and Stephanie M Lyons (Pacific Northwest National Laboratory). The presentation topics included speaker's personal stories of successes and challenges in their careers; Diversity, Equity, Inclusion, and Belonging perspectives and initiatives in Japan and the US with a focus on gender identity; as well as data-based identifications of the current most pressing obstacles for creating a safe and welcoming environment for all, together with policies that could lead us to a more inclusive community. Each talk was followed by engaging discussions with the audience, which continued for the remainder of the conference, and that keep generating exchanges within the nuclear physics community.



VI. DNP 2024 FALL MEETING

The Annual Fall Meeting of the Division of Nuclear Physics of the American Physical Society is scheduled to be held in Boston, MA from 7 to 10 October at the Hilton Boston Park Plaza Hotel. All functions will be held at the hotel. For more information about the meeting, see mit.edu.

The program begins with 5 workshops in the morning of 7 October. The plenary session starts at 15:00 that afternoon. The general parallel sessions, including invited sessions and minisymposia begin in the morning of 8 October and continue through the afternoon of the 10th.

6.1. New DNP Sorting Category

The APS Division of Nuclear Physics is launching a new sorting category "Nuclear Science: The Next Generation" to provide APS members with a mechanism to submit abstracts that could fall at the intersection of basic and fundamental research and education. In collaboration with the Committee on Education, this new category will allow members to discuss nuclear physics topics through a broader lens, leveraging the diversity of its membership. This new category is listed as category 16.

6.2. DNP 2024 Program

The Plenary Sessions are organized by the 2024 DNP Chair, Dean Lee. While the 2023 NSAC Long Range Plan is now written, implementing that plan and shaping a vibrant future for nuclear science is an ongoing process that pushes forward the frontiers of scientific discovery, inspires the scientific community and the general public, broadens participation in the workforce, engages in emerging new technologies, and proposes bold new ideas and initiatives. This plenary session explores some future opportunities in nuclear science.

The Program Committee has organized 6 invited sessions and 12 minisymposia. A brief synopsis of all the sessions are given below.

Invited Sessions

BSM physics searches via decay recoil experiments The recoiling nucleus in various forms of radioactive decay can be a sensitive probe of new physics. In the past 10 years, this field has rapidly expanded through technical advances in experimental technology.

Early Results from FRIB The Facility for Rare Isotope Beams has started first experiments in Spring 2022. This session highlights some of the exciting new results from early FRIB experiments with rare isotopes at the limits of stability. The results span a broad range from novel nuclear structure phenomena near the proton drip line explored by precision experiments, measurements of the neutron rich nuclei in neutron star crusts, to the discovery of new isotopes and the limits of neutron stability.

Fission of Exotic Nuclei and Its Impact in Astrophysics Very exotic nuclei are involved in the rapid neutron capture process (r-process) responsible for the astrophysical production of the heaviest elements such as actinides. Present r-process calculations require large theoretical extrapolations of the relevant fission barriers and fission yields from current data, introducing significant uncertainties. Methods for studying the fission properties of nuclei have been developed with AT-TPC, with recent results for the fission barrier and fission asymmetry of ²⁰⁴At in the neutron-deficient "preactinide" region. Neutron-induced fission also plays an important role in the *r*-process, with the NIFFTE collaboration's fissionTPC at the Los Alamos Neutron Science Center making progress on precision measurements for neutron-induced fission cross sections, such as the 235 U(n,f)/ 6 Li(n,t) cross section ratio. Such measurements demonstrate significant new opportunities to extend and improve the present understanding of fission into regions of mass and charge outside currently studied actinides.

From Dense Baryonic Matter to the Quark-Gluon Plasma Understanding the phase diagram of QCD matter was the primary motivation of the Beam Energy Scan at RHIC. New theory and experimental results which will resolve key questions are now available.

Proton Electromagnetic and Gravitational Form Factors Form factors are a fundamental and elegant way to describe the structure of nucleons and nuclei. Their Fourier transform is closely related to the spatial distribution of electromagnetic and mechanical quantities like charge, mass and pressure, for both quarks and gluons in the nucleon. While previous investigations predominantly focused on the proton electromagnetic form factors leading to the determination of the charge and magnetization distributions, recent advances have started to unravel the gravitational form factors of quarks and gluons, where little was known. This session will bring to light the latest experimental results and latest calculations for both electromagnetic and gravitational form factors.

Lifting the Shadows: DEI Panel This session aims to create an open space to discuss the impact that disruptive behaviors – including sexual harassment and general mistreatment – have on the workforce, and to identify community-driven efforts we can adopt to better protect those that are most vulnerable. After the presentations the speakers and audience will engage in a panel discussion directly addressing these issues in an attempt to foster alliances, share ideas, and work together to lift the shadows disrupting our community.

Precision Measurement and Fundamental Symmetries Precision measurements of low-energy phenomena are becoming one of the main frontiers in the study of the violation of fundamental symmetries and the search for new physics beyond the Standard Model of particle physics. This session will provide an overview of some of the recent experimental and theoretical advances in the field, including studies on beta decay, measurements of symmetry-violating nuclear properties with molecules, and tests of gravity and fundamental symmetries using antimatter.

The award session will include talks by the Freedman Award Winner, the DNP Dissertation Award and Mentoring Award winners.

Minisymposia

In addition to the usual sorting categories, there are 12 minisymposia available for abstract submission. To submit a contributed talk to one of these categories, be sure to find the proper sorting category when submitting the abstract on the APS submissions website. The minisymposia are listed under sorting category 20.

Advances in Direct Measurements of Astrophysical Reactions Direct measurements of astrophysical reaction rates are the "gold standard" and ultimately required for reliable models of nucleosynthesis and stellar explosions. While extremely challenging, a broad range of novel instruments and techniques has emerged at stable and radioactive beam facilities in the US and abroad. These include new or upgraded underground laboratories, active target type detectors, advanced recoil separator systems, high intensity accelerators above ground, laser-induced plasmas, and novel detection systems. Experimental advances are also creating urgency in addressing long standing nuclear theory challenges such as electron screening and low energy effects at the interface of structure and reaction theory. This minisymposium will highlight recent results, in some cases first results with new instruments, current status of various development projects, and future perspectives. It will provide an important overview of the challenges and opportunities in experiment and theory and highlight the breadth of the various experimental approaches.

Applied Nuclear Physics Through inventions such as the medical X-ray, applications of nuclear physics have had an enormous impact on society. This minisymposium will showcase how applied nuclear physics research impacts problems in arms control, medicine, cargo security, and other fields. One of the goals of the minisymposium is to inspire students to use their scientific imagination to think about how their knowledge of nuclear physics can be used for the good of society.

BSM Physics and Neutrinos in Nuclear Astrophysics and Cosmology Between progress towards precision measurements of neutrino properties and the CMB, as well as the increased potential for multimessenger astrophysical events like supernovae to provide a new wealth of information, it is timely to get communities together to discuss interdisciplinary studies. This minisymposium will therefore explore the impact of beyond the standard model particle physics on the early universe as well as the astrophysical environments responsible for element formation.

Entanglement in Nuclear Physics: From Theory to Measurement An entangled system is one whose quantum state cannot be written as a simple product of constituent states. The detection of quantum entanglement can be used as a tool to probe the wave functions of quantum systems such as those relevant for nuclear physics. Quantum entanglement is also a key feature of quantum computing algorithms and quantum sensing technologies. This mini-symposium explores all aspects of quantum entanglement and its realization in nuclear physics.

Exploring New Frontiers: Advances in Heavy Element Research Cutting-edge experimental methods are reshaping our comprehension of heavy and superheavy elements, unveiling insights into their nuclear and chemical characteristics. As the community sets its sights on the potential discovery of more new elements, efforts are also focused on finding the island of stability and in reconsidering the structure of the Periodic Table. This mini-symposium will explore the current advances and future prospects in this dynamic field.

From Data to Discovery: How Machine Learning and Statistics are Fueling Understanding in Nuclear Physics Recent advances in cutting-edge machine learning and advanced statistical methods are transforming science across all disciplines. The lead speaker will discuss how these advances are fueling the understanding in nuclear physics and the role that opensource science and community-driven development plays in lowering the barrier for participation in the computational sciences. The speaker will also describe efforts to build inclusive online collaboration spaces and share resources for kickstarting the uptake of advanced scientific computing. All contributed speakers and the audience in the session will have the opportunity to collaborate and participate in this endeavor.

Next Generation Techniques for Fundamental Symmetries and Neutrinos This minisymposium welcomes all talks discussing emerging methods for tests of the symmetries of nature, precision measurements of fundamental constants, and the properties of the neutrino and their interactions. This includes new technologies related to detection and manipulation of exotic nuclei and atoms, as well as new concepts for measurement techniques and systems used to probe BSM phenomena.

Nuclear Data in the Cosmos Nuclear inputs are an important component of modeling astrophysical environments such as supernovae and neutron star mergers, and nuclear data is required for investigating all stages of their evolution. Data for reactions, decays, emission spectra, and isomer transitions are some examples of important ingredients needed to produce a realistic picture of astrophysical events. This minisymposium aims to highlight the key role of nuclear data in astrophysics calculations, as it influences the evolution of these complex astrophysical systems as well as their observables such as element formation, neutrino emission, gamma rays, and light curves.

Nuclear Physics from Multi-Messenger Data This minisymposium will report state-of-the-art results on the equation of state of dense matter, neutrino opacities, and other transport properties of dense matter, inferred from the comparison between theoretical models and data from nuclear physics, heavy-ion experiments, and multimessenger astronomy. Gravitational wave observations from LIGO and electromagnetic observations of neutron stars, in concert with experimental information from FRIB, are opening new pathways to probe strongly-interacting matter. Much recent activity, devoted to relate the features of multi-messenger data to the underlying phases of QCD matter, should be reported here.. Given the high level of activity in this field, we expect strong participation and a large number of abstract submissions, especially from collaborations like NP3M and MUSES.

Probing Deeper into Neutrinoless Double Beta Decay This session will highlight the exciting progress on current and future neutrinoless double beta decay experiments, along with ideas for reaching next-generation sensitivity. The nuclear physics community strongly supports current efforts to probe neutrinoless double beta decay at the ton scale with a half-life discovery sensitivity beyond 10^{28} yr. The recent emphasis on improving analysis techniques, advancing background rejection, optimizing detector readout and instrumentation schemes, and the use of machine learning push the physics reach of current and planned experiments, as well as opening the door for future searches beyond the ton scale.

Studies of Transversity in Hadron and Dihadron Production There has been enormous success in understanding transversity and extraction of the tensor charge via phenomenological analyses of the experimental data and via lattice QCD studies. RHIC has produced an impressive body of measurements related to single and di-hadron channels sensitive to transversity. The importance of these studies for nuclear physics as well as for BSM searches will be highlighted in this session.

The Future of EIC Beyond ePIC With EIC and ePIC going ahead full steam, the community needs to begin to consider extensions of the physics program and future upgrade paths of the accelerator and detector complex. On a shorter time scale, a second detector, complementary to ePIC, as a cross check and to extend the physics reach is highly desired. On a longer timescale, developing a high intensity, high energy muon-ion collider as an upgrade to the EIC facility would allow access to interesting kinematic regimes not probed by the EIC. The session will discuss the current state of design and physics cases for these future projects.

Workshops

When registering for the meeting, participants can select one workshop. Four of the workshops are based on the main physics components of the 2023 Long Range Plan. The fifth is developed by the DNP Education Committee and is on professional development.

Professional Development for Early-Career Scientists Navigating the transition from post-doctoral researcher to faculty/permanent staff member can be difficult and involves multiple career-affecting choices (e.g. about research directions, funding, hiring, service), many of them crucial for future success. There are also many things one needs to learn how to do that are not part of graduate student and post-doc training (e.g. research and funding strategy, building a research group, managing the teaching load, work-life balance). Junior scientists (*i.e.*, post-docs and pre-tenure faculty and staff) navigate these things better when they have supportive local mentors who help them deal with practical issues, set priorities, and provide reassurance. However, not all junior scientists are lucky enough to have that mentoring available at their institution. The goal of this workshop is to discuss these issues with junior scientists and begin to develop a network of senior colleagues they can lean on for advice beyond the workshop.

Nuclear Structure and Astrophysics The workshop will explore some of the frontiers of nuclear structure physics and nuclear astrophysics as well as intersections between these topics. New facilities, such as FRIB and GRETA, advances in theory, and ongoing experimental efforts will be discussed which are set to provide an exciting new era of discovery in the coming decade.

Precision Measurements and BSM Physics This workshop features precision measurements of neutrino mass and research into novel nuclear systems of significant interest for developing clocks, understanding properties of exotic nuclei, and searches for physics beyond the Standard Model.

QCD Towards the EIC The workshop presents some of the most significant research in QCD experiments from existing facilities, theory, and simulation, in the context of the future Electron Ion Collider (EIC). The organizers have specifically selected a diverse group of speakers with an emphasis on early career colleagues.

Search for Neutrinoless Double Beta Decay This workshop will present new experimental results, provide details on the status of future ton-scale experiments in the US, discuss new avenues for the implementation of AI/ML in data analysis, and present exciting theoretical work in the field.

6.3. Developing Early Career Physics Mentors Workshop

Mentoring of undergraduate students, graduate students, and postdoctoral researchers is an important part of any scientist's career. Research has shown that a good mentoring relationship can be one of the most important factors in determining students' persistence in graduate school and recruitment of underrepresented students in the STEMM community. Although the importance of mentorship is understood, very few faculty have ever participated in a mentor training program and few structured training events are provided, especially for academics early in their career.

An interactive workshop will take place on Sunday, October 6th, 2024 in Boston, MA with the aim to train young scientists (primarily assistant professors and new staff scientists) with the skills to mentor graduate and undergraduate students. The material used for the workshop has been developed by the Center for the Improvement of Mentored Experiences in Research (CIMER) and adapted with contributions by the American Physical Society to provide relatability to physicists. Drs. Shelly Lesher and Nadia Fomin, both trained in the CIMER curricula, will facilitate the workshop.

Please support and encourage early career scientists to attend. More information and an application can be found on the DNP meeting website. The application deadline is August 2, 2024.

6.4. Conference Experience for Undergraduates at DNP 2024

The 27th Annual Conference Experience for Undergraduates (CEU24) will take place in conjunction with the DNP 2024 Fall Meeting. The student application (poster abstract to APS (sorting category 17 and CEU application submitted) deadline is 2 August with decision letters expected late August. Undergraduate students can also submit oral presentations to the special sorting category 18: Undergraduate Research (also with the 2 August deadline) with or without application to the CEU. To help the CEU students navigate the conference experience, the program is looking for graduate students and postdocs to serve as undergraduate mentors during the conference. The CEU program and the DNP DEI Committee are working together to enhance this mentoring experience by providing training to mentors and additional programming at the DNP conference. A separate announcement will be forthcoming. CEU details can be found at https://www.uwlax.edu/ceu.

6.5. Gender Minorities in Science Social Event

We are excited to announce that the 10th anniversary of the Gender Minorities in Science Social (GeMSS) (formerly Women in Physics) will be held in conjunction with the Division of Nuclear Physics Fall Meeting 2024. This event is a working lunch that provides networking and mentoring opportunities for women and other gender minorities in nuclear physics. The speakers at the lunch will share their stories and advice for current and future generations of nuclear physicists. The event will be held on 7 October at 1:00 pm. Tickets can be purchased through the DNP conference registration. For questions and further information, please reach out to: thegemss@outlook.com.

6.6. Other Special Events

There will be an ice cream social for the graduate students.

The banquet speaker and any other special events will be announced when registration opens.

6.7. 2024 Meeting Venue, Registration and Hotel Reservations

APS will handle meeting registration and hotel reservations. A special rate has been negotiated at the Hilton Boston Park Plaza. Please consider booking at the hotel and doing so early to be sure to obtain the meeting price.

The registration fee, which includes the workshops and plenary session, and other meeting events, will be given on the meeting website when available. When registering, please note if you will attend a workshop.

The banquet, graduate student social, and the GeMSS lunch are separate events, with their own fees, on the registration website. Registration will open in early July.

VII. FUTURE MEETINGS

7.1. DNP Fall Meetings

The dates and locations for the 2025 DNP Fall Meeting and beyond are in the process of being determined. The 2025 meeting date and location will be announced in the August newsletter.

Meeting dates include the pre-meeting workshops, which are normally held in conjunction with the DNP Fall Meetings. These workshops, organized by the local organizing committee, have been a tradition at the DNP Fall Meetings since they began with the 1986 Vancouver meeting. All meeting attendees are welcome and encouraged to come. It has been the intention of the DNP Executive Committee that these "workshops" should have broad appeal, with introductory pedagogical talks for the benefit of those who have come primarily for the DNP meeting but want to take the opportunity to learn about a field important to the local community.

7.2. APS Spring Meetings

The dates for the 2025 April meeting is given below. The DNP prepares a program for these spring meetings as well, with invited sessions often organized jointly with other units. The meeting is an excellent opportunity to learn about new research and discoveries made by other units. The plenary session has often included Nobel laureates in physics. The DNP program committee also prepares mini-symposia for these meetings. The DNP prize sessions include talks by the Bethe, Bonner and Feshbach Prize winners. The DNP also holds a combined business meeting and town hall during the April meeting, with introduction of the new DNP Fellows and change of unit officers.

2025 16-21 March Anaheim, CA

Please note that the 2025 meeting is joint with the March meeting, hence the March dates. The meetings will be co-located to celebrate the International Year of Quantum. Expect joint sessions between the March and April units, a unique opportunity.

Similar to the 2024 meeting, the 2025 April meeting will include both an in person and a virtual component. The dates for the virtual component of the meeting have not yet been decided.

Any comments/suggestions regarding the April meeting should be sent to APS Director of Meetings, Hunter Clemens (clemens@aps.org).

VIII. OTHER FORTHCOMING MEETINGS

Meeting organizers who wish to have their meetings advertised in the DNP newsletter should contact the DNP Secretary-Treasurer.