

Chair Line

Chair	Chair-Elect	Vice-Chair	Secretary-Treasurer
Haiyan Gao hgao@duke.edu	Dean Lee leed@frib.msu.edu	Jim Napolitano tuf43817@temple.edu	Ramona Vogt vogt2@llnl.gov

HIGHLIGHTED IN THIS NEWSLETTER:

- 2023 DNP Elections

Future Deadlines:

- **26 November - 1 December 2023** DNP-JPS Hawaii Meeting
- **15 December 2023:** Deadline to vote in the DNP Election
- **5 January 2024:** Deadline for APS April meeting abstract submission
- **mid February 2024:** Early registration deadline for APS April meeting
- **1 March 2024:** Nomination Deadline for Mentoring and Service Awards
- **1 May 2024:** Deadline for Nominations of APS Fellows from DNP
- **1 May 2024:** Nomination Deadline for Freedman Award

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. 2023 DNP ELECTIONS

The terms of the officers and four members of the current Executive Committee will expire in April 2024. The installation of officers will take place at the DNP Business Meeting in April 2024. Haiyan Gao will become Past-Chair, Dean Lee will become Chair, and Jim Napolitano will become Chair-Elect. Melina Avila, Shelly Leshner and Kate Scholberg will remain members of the Executive Committee in 2024. In April 2024, Senta V. Greene will retire as Past-Chair and Paul Guèye, Huey-Wen Lin, Christine Natrass and Agnieszka Sorensen will retire from the Executive

Committee. A Vice Chair and four members of the Executive Committee (one Early Career member) are to be elected. Regular Executive Committee terms are two years while the Early Career member serves one year. This year's Nominating Committee consists of Mike Strickland (Chair), John Arrington (Vice Chair), Leah Broussard, Renee Fatemi, and Huey-Wen Lin. The candidates selected by the Nominating Committee and approved by the Executive Committee are:

Vice-Chair (one position):

Nadia Fomin (University of Tennessee, Knoxville)
Paul Guèye (Michigan State University)

Executive Committee (three positions)

Lee Bernstein (University of California, Berkeley and Lawrence Berkeley National Laboratory)
Kelly Chipps (Oak Ridge National Laboratory)
Dipangkar Dutta (Mississippi State University)
Zhongbo Kang (University of California, Los Angeles)
Kyle Leach (Colorado School of Mines and FRIB affiliate faculty)
Daniel Phillips (Ohio University)
Sevil Salur (Rutgers University)
Carol Scarlett (Florida A&M University)

Executive Committee Early Career (one position)
Farid Salazar Wong (Lawrence Berkeley National Laboratory and University of California, Los Angeles)
Allison Zec (University of New Hampshire)

Candidate bios and statements are given later in this newsletter.

All DNP members with an email address registered with the APS should receive an email inviting them to vote electronically. If you do not have a registered email address or the email to your address bounces, you can opt to receive paper ballot package by post. If you prefer a paper ballot package, please contact SBS Support at (866) 909-3549 or by email at support@directvote.net.

II. ACKNOWLEDGE YOUR SPONSORING AGENCY

Given the importance of agency sponsorship in fostering nuclear physics research, we urge DNP members to

acknowledge their agency sponsors in any talk or publication such as seminars, workshop contributions, APS meeting talks, and other conference talks/posters.

III. 2023 DNP-JPS MEETING POSTER



FIG. 1: This poster was designed when HAWAII23 was scheduled to be held in Maui. It depicts the nene (Hawaiian goose), the state bird of Hawaii, looking out from Puukukui Mountain at dusk toward the beach around the original venue of HAWAII23. The plants surrounding the nene are greenswords, which are endemic to Maui and the island on the opposite shore, lit up by the setting sun, Lanai. The sparkling waves on the left side of the ocean were added after the wildfire as a gesture of sincere condolences to the victims in Lahaina and a wish for a speedy recovery. Poster design: Mayuko Sasaki (toinoki).

IV. NSAC LONG RANGE PLAN UPDATE

From Gail Dodge, NSAC Chair: On October 4, 2023, the Nuclear Science Advisory Committee (NSAC) voted unanimously to accept the new Long Range Plan, titled A New Era of Discovery: the 2023 Long Range Plan for Nuclear Science. Adoption of the plan follows a process that started with a charge to NSAC from DOE

and NSF in July 2022. The DNP organized three town hall meetings, culminating in the submission of community white papers. Additional collaborations and topical groups submitted white papers as well. The Long Range Plan, white papers, and other materials can be found at NuclearScienceFuture.org. Gail Dodge (NSAC chair) delivered a webinar for the community about the recommendations in the plan on October 6, 2023. A recording of that webinar is available on the website. A robust plan of rollout activities is planned or underway, including an advocacy day in Washington DC on November 8 and a plenary talk by Gail at the DNP-JPS fall meeting in Hawaii.

V. DNP PRIZE AND AWARD WINNERS

5.1. 2023 DNP Mentoring Award

The 2023 recipient of the APS Division of Nuclear Physics Mentoring Award is Charles Horowitz of the Indiana University. He will give a talk in the DNP 2023 Awards Session. His citation reads:

“For selfless mentorship and support for students and postdocs over four decades and outstanding mentorship of early career scientists from historically underrepresented groups in physics.”

5.2. 2023 Nuclear Physics Dissertation Award

The 2023 recipients of the APS Division of Nuclear Physics Dissertation Award are Matthew Heffernan, McGill University and Evan Rule, University of California, Berkeley. Matthew’s dissertation was carried out at McGill University under the guidance of advisor Prof. Charles Gale. Evan’s dissertation was granted by the University of California, Berkeley. His dissertation was supervised by Prof. Wick Haxton. Matthew and Evan will present their work at the DNP 23 Awards Session. Matthew’s citation reads:

“For the application of state-of-the-art Bayesian analysis techniques in the determination of transport coefficients of strongly interacting matter, and for first-time investigations of multistage simulation approaches in heavy-ion collisions with statistical learning methods.”

Evan’s citation reads:

“For the timely development of a flexible and fully general effective theory of muon-to-electron conversion. The formulation establishes an interface between the nuclear and particle physics components of this process that will encourage coordination between the two communities.”

5.3. 2023 DNP Distinguished Service Award

The 2023 recipient of the APS Division of Nuclear Physics Distinguished Service Award is Roxanne Springer of Duke University. This award will be announced at the DNP 23 Business Meeting. Her citation reads:

“For rich and passionate efforts to advocate and improve Diversity, Equity and Inclusion (DEI) for DNP members and beyond, especially those from marginalized groups, including steering the DNP Allies program, helping broaden the Allies Program to other APS Units, co-founding the DNP DEI committee, and making DNP session chair training a best practice.”

5.4. 2023 Stuart Jay Freedman Award

The 2023 recipient of the APS Division of Nuclear Physics Stuart Jay Freedman Award is Elise Novitsky of the University of Washington. Elise gave a talk in the DNP 23 Awards Session. Her citation reads:

“For the development and analysis of the Cyclotron Radiation Emission Spectroscopy method and its application to the measurement of neutrino mass.”

5.5. 2024 Bethe Prize Winner

John Richard Bond of the University of Toronto is the recipient of the 2024 APS Hans A. Bethe Prize. The prize will be awarded at the APS 2024 April meeting. His citation reads:

“For developing conceptual and quantitative tools that have enabled cosmologists to measure the geometry, content, and age of the universe.”

5.6. 2024 Bonner Prize Winner

Wit Busza of the Massachusetts Institute of Technology is the recipient of the 2024 APS Tom W. Bonner Prize. The prize will be awarded at the APS 2024 April meeting. His citation reads:

“For pioneering work on multi-particle production in proton-nucleus and nucleus-nucleus collisions, including the discovery of participant scaling, and for the conception and leadership of the PHOBOS experiment.”

5.7. 2024 Feshbach Prize Winner

Gail McLaughlin of North Carolina State University is the recipient of the 2024 APS Herman Feshbach Prize. The prize will be awarded at the APS 2024 April meeting. Her citation reads:

“For seminal contributions to the study of neutrinos in explosive systems and for elucidating the profound impact of this microphysics on the synthesis of elements.”

VI. UPCOMING DNP AWARD NOMINATIONS

6.1. DNP Mentoring Award

Nominations are sought for the Division of Nuclear Physics Mentoring Award. This APS Unit Award is intended to recognize Division of Nuclear Physics members who have had an exceptional impact as mentors of nuclear scientists and students. This mentoring could be through teaching, research or science-related activities. Examples of contributions of individuals who could be candidates for this award:

- Exceptional mentoring of early career nuclear scientists;
- Sustained commitment to mentoring early career nuclear scientists from traditionally underrepresented backgrounds;
- Leadership in developing nuclear science research and career development activities, such as centers for nuclear science research for undergraduates, or conference experiences for students, or summer schools for nuclear science students.

Early career nuclear scientists include undergraduate and graduate students, postdoctoral scholars, and nuclear science professionals early in their careers, such as assistant professors or assistant scientists.

Nominations for the 2024 award are due 1 March 2024 and should be sent to Haiyan Gao hgao@duke.edu.

Nomination packets should consist of at least 3 but not more than 4 letters supporting the nomination and a brief bio sketch of the candidate. At least two of the letters should be submitted by individuals who have benefited from the mentoring experience. Nominees shall be members of the DNP. There are no time limitations on contributions that can be recognized by this award. Nominations will be active for three years.

6.2. DNP Distinguished Service Award

Nominations are sought for the DNP’s Distinguished Service Award. This APS Unit Award is intended to recognize those who have made substantial and extensive contributions to the nuclear physics community through the activities of the DNP. The award will consist of a certificate with the citation specified by the selection committee. Nominees should be active or emeritus members of the DNP. There are no time limitations on contributions that can be recognized by this award. Nominations will remain active for three years. The award need not to be given each year. No more than two recipients

will be selected in a given year. The selection committee will consist of the DNP Chair, Chair-Elect, Vice-Chair, Past-Chair, and Secretary-Treasurer. The DNP Chair will serve as the chair of the selection committee.

Nominations for the 2024 award are due March 1, 2024 and awarded at the fall DNP meeting. Nominations should be limited to a one-page description of the candidate's contributions to nuclear physics through the DNP, plus an optional listing of positions held, major committee memberships, and the like.

Nominations should be sent to Haiyan Gao, hgao@duke.edu.

VII. FUTURE MEETINGS

7.1. DNP Fall Meetings

The dates and locations for the future DNP Fall Meetings are given below. The Hawaii meeting with the JPS is in 2023. Because the 2021 meeting was virtual, the 2024 meeting will be in Boston.

2024 6-10 October Boston, MA

The 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 next two April meetings are 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.

2024 3-6 April Sacramento, CA

Any comments/suggestions regarding the April meet-

ing should be sent to APS Director of Meetings, Hunter Clemens (clemens@aps.org).

7.2.1. 2024 APS April Meeting

The APS is currently planning for an all in-person event in Sacramento, CA, 6-9 April 2024 with a concurrent virtual meeting. The in person part of the meeting will be held at the Sacramento Convention Center, Sacramento, CA.

The April meeting encapsulates the full range of physical scales, from “Quarks to the Cosmos”. Research will be presented by speakers from the 20 participating units including particle physics, nuclear physics, astrophysics, and gravitation.

The in-person meeting will include the award sessions, invited sessions, mini-symposia, and contributed sessions. All sessions will be recorded and posted online for virtual (and in person) participants to watch for 90 days after the meeting. The virtual meeting will include virtual presentations in (primarily) contributed sessions, although some more general, keynote-style talks are planned. In person participants can also join the virtual meeting. Participants submitting abstracts must decide, by the end of the abstract submission deadline, whether they will attend in person or remotely. Once the submission deadline has passed, it will no longer be possible to change the attendance type.

For more information on the meeting and the benefits of both types of participation, go to the APS April meeting website: <https://april.aps.org>.

Abstracts: The submission deadline is 5 January 2024.

Registration: The early registration deadline will be in February 2024.

Booking: The deadline for booking at the APS rate will be announced soon.

VIII. CANDIDATE STATEMENTS AND BIOGRAPHIES

NOMINATIONS FOR VICE-CHAIR (vote for 1)

NADIA FOMIN:

Statement: The Division of Nuclear Physics has enjoyed excellent leadership in my time as a member and has been identified as a leader in the APS in a number of aspects, such as the pioneering Allies program for our meetings. I would like to continue the successful efforts of my predecessors to keep our community vibrant and engaged as well as improve access for some segments of our membership. The graduate students primarily experience the APS through our meetings and our journals.

However, those students without sufficient travel funding can end up missing out on vital community and professional interactions as well as broadening their nuclear physics horizons. I would like to explore ways for the DNP to provide support for these students to attend our national meetings and become engaged in the community. We know that early career physicists often have to choose between family obligations and travel. As a community, we can resolve to help them with targeted meeting support and allow them to fully participate in the community. I am passionate about removing barriers to improving representation in physics. The work must be done on multiple fronts, including changing the existing physics culture, as it serves a historically small and homogeneous community, and being told “this is just how it is, it’s not personal” does not make new members feel welcome. In addition, we have to actively mentor young physicists at every level (from student to faculty members), to continually develop and reinforce their sense of belonging and physics identities. I have given two examples of how improving engagement and access can be solved with money. I am also very interested in hearing from the younger DNP members if the organization is serving their needs and what they would like to see in the future.

Bio: Nadia Fomin is a professor at the University of Tennessee in Knoxville, where she pursues a program in experimental nuclear physics. Her research includes experiments in fundamental neutron physics, carried out at the SNS in ORNL, where the aim is looking for Physics Beyond the Standard Model with beta-decay experiments as well as look into the origin of the matter/anti-matter asymmetry. Additionally, Dr. Fomin pursues a research program in medium-energy nuclear physics work focused on studies of nuclear structure using high energy electrons, specifically on short range correlations (SRC) and scaling in nuclei, working at Jefferson Lab. She has served in the chair line of SESAPS, and is currently serving as the APS Councilor, elected by SESAPS. Additionally, she has served on the EC of the DNP as a member-at-large and several associated committees, including the NNPS steering committee, that she currently chairs.

PAUL GUÈYE:

Statement: I am deeply honored, humble and grateful for the possibility to become the Vice Chair of the American Physical Society Division of Nuclear Physics. I believe that my experience summarized in this statement provides me with the right foundation to be an effective Vice Chair working with the APS/DNP leadership for the nuclear physics community. We all follow very different paths in

life throughout our journeys to becoming successful professionals, regardless where we eventually end up. My doctoral advisor provided me with an opportunity to be involved in one of the last nuclear physics scattering experiments using electrons and positrons at the then Linear Accelerator of Saclay in France which eventually made this subfield to become my passion. This interest was solidified during my postdoctoral years at Hampton University and Thomas Jefferson National Accelerator Facility in the United States, and nowadays with a unique opportunity through the Facility for Rare Isotope Beams to contribute to the discoveries and understanding of isotopes in uncharted regimes of the nuclear chart. Each path has provided unique insights into the outstanding work of many people working as a team to have unprecedented impacts on our knowledge and quest to get deeper understanding of the nuclear matter, to providing opportunities for the next generation and have impactful contributions to society. The aforementioned, combined with my experience as a former chair of a physics department, past president of a professional physics society (e.g., National Society of Black Physicists) and chairing or being a member of many committees for over two decades within the physics and education communities, inside and outside academia, has provided me with a broad knowledge to connecting people from different backgrounds as well as enabling meaningful initiatives. This can only happen if we have a very strong supportive and respectful nuclear physics community that also ensures that every voice counts.

Bio: Prof. Paul Guèye received his BS and MS in Physics and Chemistry from the University Cheikh Anta Diop (Dakar, Senegal), and his Ph.D. in Nuclear Physics from the University of Clermont-Ferrand II (Aubière, France). His thesis focused on electron/positron scattering experiments at the CEA Saclay linear accelerator to probe higher order corrections to the Born Approximation using carbon and lead nuclei. He then joined the nuclear physics group of Hampton University (Hampton, Virginia, USA) as a postdoc and was part of the first sets of experiments conducted at the U.S. Department of Energy funded Thomas Jefferson National Accelerator Facility (Newport News, Virginia, USA). Prof. Guèye joined the MoNA Collaboration in 2013 to study extreme neutron rich nuclei through low energy nuclear physics experiments at the Facility for Rare Isotope Beams/National Superconducting Cyclotron Laboratory (East Lansing, Michigan, USA). He was the Chair of the HU Physics Department from 2015-2018 and joined MSU in the Fall 2018.

Some of his accomplishments include the validation of the effective momentum approximation in

electron scattering, development of the Jefferson Lab/Hall C arc energy drift correction tool for its nuclear physics program, facilitating the start of the strangeness program and enabling a proof-of-principle experiment to create polarized positrons both at Jefferson Lab, development of a silicon-beryllium segmented and gas electron multiplier based targets at FRIB, and several other ongoing developments such as a Čerenkov detector, spin physics and $e\pm$ scattering for rare isotope science. Prof. Guèye also holds several patents for scintillating fiber-based detectors for medical applications that lead to commercially available systems.

Prof. Guèye has been and is still actively engaged in various national and international organizations such as: Chair of the Liaison Committee for Under-Represented Minorities of the American Institute of Physics, President and Chair of the Nuclear and Particle Physics Section of the National Society of Black Physicists, Executive Director of the MoNA Collaboration, Strategic Programs for Innovations in Undergraduate Physics of the American Association of Physics Teachers, Founder and Chair of the Minority Sub-Committee of the American Association for Physicists in Medicine, member of the American Physical Society Division of Nuclear Physics Executive Committee and co-convenor of the African Strategy for Fundamental and Applied Physics amongst others. Prof. Guèye was recognized by President Barack Obama in 2015 for some of his work in broadening participation in nuclear science and is the recipient of the 2022 APS Edward A. Bouchet award.

NOMINATIONS FOR EXECUTIVE COMMITTEE (vote for 3)

LEE BERNSTEIN:

Statement: My career at DOE NNSA and Office of Science laboratories as well as academia have afforded me the opportunity to see the importance of nuclear physics to society. Similarly, my experiences as a first generation college student from a poor family have given me a firsthand appreciation of how a science education can foster equity and provide career opportunities to members of underserved communities. Recently, I have grown increasingly concerned that political and discretionary spending pressures are overshadowing the importance of both the science we do and the workforce that we train. If elected to the APS DNP Executive Committee, I will draw on the knowledge I have gained over my career, and from my colleagues in the science and engineering communities to inform the public of the great and valuable work that we do to make the case for its continued support. As a former PTA president and treasurer (which is a LOT harder than nuclear physics!), I understand the effort that

goes into running a volunteer organization, and I will work tirelessly to help give the APS and its members a bright future.

Bio: Lee A. Bernstein earned his Ph.D. in Nuclear Physics from Rutgers University in 1994. He spent the first 22 years of his career at Lawrence Livermore National Laboratory as a staff scientist where he ran research programs in high-spin nuclear structure and low energy nuclear reactions, receiving the DOE Defense Programs Award in 2001. In 2007 Lee helped to establish the nuclear diagnostics group at the National Ignition Facility (NIF), receiving the LLNL Director's Science and Technology Award along with awards for outstanding staff and post-doctoral mentorship and external leadership. In 2015, he was elected to be a Fellow of the American Physical Society Division of Nuclear Physics, "For work developing novel methods of determining neutron-nucleus cross sections via high-resolution gamma-ray spectroscopy, the early development of surrogate ratio method, and the study of nuclear processes in high energy density plasmas at NIF".

In 2016, Lee moved to Lawrence Berkeley National Laboratory (LBNL) and the University of California – Berkeley where he formed a new joint nuclear data group whose purpose is to identify and address the nuclear data needs of the applied and basic nuclear science and engineering community while training the next generation of scientists and engineers in the process. Lee has published more than 200 peer-reviewed articles in a diverse range of journals including Physical Review, Nuclear Science and Engineering, the Physics of Plasmas, the European Journal of Physics, Nuclear Data Sheets and the Annual Review of Nuclear and Particle Physics. He has mentored nearly four dozen post-doctoral and graduate students throughout the course of his career. In 2021, he accepted a joint appointment as an Associate Professor in the Nuclear Engineering department at the University of California Berkeley and Staff Scientist in the Nuclear Science Division at LBNL.

Most recently, Lee served as a member of the DOE/NSF Nuclear Science Advisory Committee where he chaired a subcommittee charged with providing recommendations for maintaining effective stewardship of nuclear data and identifying and prioritizing the most compelling opportunities to enhance and advance NP stewardship of nuclear data and the impact if those opportunities can be realized. Lee lives in Berkeley, CA and is the father to two adult children.

KELLY CHIPPS:

Statement: I have been a member of the APS Division of Nuclear Physics since beginning my PhD, and it

has remained tremendously important to my day-to-day research. The DNP conference is an annual highlight, and one of the best ways to hear about the new and exciting work that people are doing. DNP, and the nuclear physics field in general, has been a part of trailblazing new initiatives, from the Allies program to the Conference Experience for Undergraduates. If elected to serve as a Member-at-Large of the DNP Executive Committee, I would work to see what new initiatives we can adopt and what new voices we haven't yet heard, allowing us to remain a model for other fields and APS Divisions and to serve the next generation of nuclear physicists.

Bio: Dr. Kelly Chipps is a research staff member in the Physics Division at Oak Ridge National Laboratory. Her research focus is on direct and indirect study of nuclear reactions critical to our understanding of extreme astrophysical environments, specifically measurements with the world's highest density gas jet target (JENSA). She received her PhD from the Colorado School of Mines and has worked at several universities in the US and abroad prior to her current position at ORNL. She has previously served on the DNP Program Committee and as an Executive Committee member in the Forum on Physics and Society. She currently serves on NSAC.

DIPANGKAR DUTTA:

Statement: I am honored to be considered for this position on the DNP Executive Committee. The DNP has been my home in the APS for about 30 years. During these times of big transition in our field, the DNP has a critical role in bringing together the entire community to effectively communicate the breadth and depth of the activities of the field and the richness of its impact. The DNP must also serve as a coherent messenger of the diverse concerns of the large NP community. As an active member somewhat outside of the mainstream, if elected, I would highlight some of the concerns of members from undervalued corners of the NP community.

Despite the tremendous effort in outreach and public engagement activities, the need for such activities keeps growing and seems to get ever more critical. I believe that these efforts can be made more impactful through appropriate training and by broadening participation. I hope to promote broader and more effective participation with validated training resources, enabling a more meaningful communication of DNP activities and science.

Bio: Dipangkar Dutta is a Professor of Physics at Mississippi State University (MSU). His research focuses on precision measurements of fundamental properties of nucleons at intermediate energies.

The bulk of his research is carried out at Jefferson Lab, and some of his most recent work includes precision measurement of the proton charge radius, a high-precision search for color transparency in nuclei, and an experiment probing charge symmetry violation in the quark distributions of nucleons.

He received a B.Tech degree from the Indian Institute of Technology, Bombay (1992) and a Ph.D. from Northwestern University (1999). He was a post-doctoral associate at the Massachusetts Institute of Technology (1999-2002) and a research faculty at Duke University (2003-2006). During his time at MSU, Dipangkar has mentored over a dozen graduate students and several post-doctoral scholars. He routinely involves undergraduate students in his research program enhancing their educational experience. He has mentored over 25 undergraduate students in his lab many of whom have won numerous research awards including the Goldwater Award and Fulbright Fellowship. In 2021 Dipangkar won the Southeastern Conference (SEC) Faculty Achievement Award.

Dipangkar has served on the Jefferson Lab User Group Board of Directors, where during his term as an outreach director, he doubled and then tripled the user participation in the Nuclear Physics Day on the Hill, a Congressional outreach event. He has organized and has been actively involved in numerous outreach activities at MSU and in the local community. He initiated a bridge program with local HBCUs to help enhance and broaden participation in the physics graduate program. He is a member of the MSU team that was recently selected to be part of the inaugural class of the American Physical Society Inclusion, Diversity, and Equity Alliance (APS-IDEA).

ZHONGBO KANG:

Statement: The APS Division of Nuclear Physics (DNP) serves as a home for physicists committed to discovering, exploring, and understanding all forms of nuclear matter. It has provided us with a platform to bolster scientific dialogue and foster collaborations. The realm of Nuclear Physics is vast, encompassing five dynamic and interconnected subfields: cold and hot QCD, nuclear structure and reactions, nuclear astrophysics, and fundamental symmetries and neutrinos. Given this expansive scope, I believe it's imperative for our community to develop in a holistic and inclusive manner, welcoming nuclear physicists from diverse backgrounds and all stages of their careers, including undergraduates. If honored with the role of Member at Large for the DNP Executive Committee, I pledge to prioritize creating a more inclusive environment, supporting emerging scientists, and effectively communicating nuclear physics research

to the public. Drawing from my experience as the director of the UCLA-APS Physics Ph.D. Bridge Program, I am particularly keen on increasing the involvement of underrepresented groups across all levels. I am dedicated to opening more avenues for young scientists to understand diverse career trajectories, both within academia and in the industry. Moreover, I envision strengthening ties between the physical education community and the wider nuclear physics community to optimize outreach efforts to K-12 students.

Bio: Zhongbo Kang is an associate professor in the Department of Physics and Astronomy at the University of California, Los Angeles (UCLA). He earned his Ph.D. in Theoretical Nuclear Physics from Iowa State University in 2009. Following this, he became a postdoctoral research associate at the RIKEN BNL Research Center at Brookhaven National Laboratory from 2009 to 2012. He then joined Los Alamos National Laboratory, initially as a Director’s postdoctoral fellow, later as a J. Robert Oppenheimer Fellow, and subsequently as a staff scientist until 2016. That year, he transitioned to UCLA to embark on his professorship. Zhongbo’s research centers on perturbative Quantum Chromodynamics (QCD) and strong interactions, with applications in high-energy nuclear and particle physics. His theoretical pursuits closely align with experimental programs at Jefferson Lab, the Relativistic Heavy Ion Collider, the Large Hadron Collider, and the future Electron-Ion Collider. Zhongbo has won a National Science Foundation’s early CAREER award and the Abelson Prize for Teaching Excellence at UCLA.

KYLE LEACH:

Statement: I have been a member of both the APS and DNP for 15 years and am excited at the possibility of moving into a formal role within the division as a Member-at-Large. I am a strong advocate for our community and division and will continue to work towards strengthening the DNP and our role within the APS. I appreciate the recommendation from the DNP nomination committee and look forward to serving in this important role for our division.

Bio: Kyle is an experimental low-energy nuclear physicist primarily focused on precision tests of the Standard Model via weak nuclear decay. He received his PhD from the University of Guelph (Canada) in 2013 performing one- and two-neutron transfer reactions relevant to fundamental symmetry tests on Zn and Fe isotopes at TU Munich (Germany). Following his PhD, Kyle joined the TITAN ion trap group at TRIUMF (Canada) as a postdoctoral fellow from 2013-2015 performing in-trap decay spectroscopy studies using highly charged radioactive ions. In 2015 Kyle joined the Physics faculty at

the Colorado School of Mines as an Assistant Professor. He is currently an Associate Professor in the Department of Physics with joint appointments in Nuclear Engineering and Quantum Engineering. Kyle also holds an affiliate faculty position at the Facility for Rare Isotope Beams (FRIB) at Michigan State University.

Kyle’s research program is broad and spans the range of experimental tools from ion traps to low-energy reactions. At the moment, his group’s primary focus is the implementation of superconducting sensing technology to nuclear science for short-lived isotopes through a new subfield of “rare-isotope-doped superconductors” they are developing. Kyle is the PI of both the BeEST (Beryllium Electron-capture in Superconducting Tunnel junctions) and SALER (Superconducting Array for Low-Energy Radiation) experiments, and the Spokesperson of the international BeEST collaboration. Kyle is also involved in the search for neutrinoless double beta decay in ^{136}Xe at the ton-scale with nEXO, and a member of the collaboration board. His research program has been recognized with several distinctions, including the FRIB Visiting Scholar Award (2019), DOE Early Career Award (2020), and being named a Gordon and Betty Moore Foundation Experimental Physics Investigator (2022).

Kyle has been a member of the APS since 2006 and is heavily involved in service for the U.S. and international nuclear science community. He was elected Chair of the TRIUMF User Group Executive Committee (TUEC) in 2015, and served as Chair-Elect (2016), Chair (2017), and Past-Chair (2018). In this role, Kyle also served as an ex-officio member on the Canadian federal Advisory Committee on TRIUMF (ACOT) and a member of TRIUMF’s 5 year plan (2020-2025) steering committee. He is currently a member of the U.S. NSAC Long Range Plan committee. From 2016 – 2021 Kyle was also the Head of Graduate Admissions in the Department of Physics at the Colorado School of Mines and is currently a member of the institutional Research Advisory Board.

DANIEL PHILLIPS:

Statement: We do nuclear physics research not only for the joy of discovery, but also because we are raising up the next generation of scientists, and delivering insights that will be the basis of technologies that can make people’s lives better. The range of activities undertaken by the US nuclear physics community is inspiring. But that breadth means that the DNP has a crucial role to play in articulating the things that unite us and ensuring we work together. My experience with the Long-Range Planning process over the last year has me more convinced than

ever that Nuclear Physics has a bright future. It showed me how many hard-working, talented, and community-minded people there are in our field. I want to work with the Executive Committee to harness that energy and ensure we continue building a community that does forefront science, includes and respects all its members, and is excellent at mentoring and education.

Bio: Daniel Phillips grew up in Adelaide, Australia and studied for his Bachelors' and Doctoral Degrees at the Flinders University of South Australia. After stints as a post-doctoral researcher at the University of Maryland and the University of Washington he took a position as an assistant professor at Ohio University in 2000. He became an associate professor there in 2004 and a full professor in 2009.

Phillips is a nuclear theorist with a strong interest in uncertainty quantification. He is the Principal Investigator of the multi-institutional "Bayesian Analysis of Nuclear Dynamics" (BAND) collaboration, funded by the NSF CSSI program, the goal of which is to facilitate principled Uncertainty Quantification in nuclear physics. He is also interested in systems near the neutron and proton drip lines, where we have used effective field theory (EFT) to examine both neutron and proton halos. His interest in EFTs dates back to the late-1990s, when he started using Chiral EFT to confront and interpret experimental data on electron and Compton scattering from few-body nuclei. Phillips is the author of over 100 refereed publications. He was named a Fellow of the APS in 2009, and an Outstanding Referee for Physical Review and Physical Review Letters in 2014.

He served as director of Ohio University's Institute of Nuclear and Particle Physics from 2014-2020. He was in the Chair line of the APS Few-body Topical Group from 2012-6 and chaired the Institute of Nuclear Theory Advisory Committee in 2015 & 2016. He was a member of the Nuclear Science Advisory Committee from 2016-9 and recently served in the Director line of the FRIB Theory Alliance, taking on the role of Director in 2022.

SEVIL SALUR:

Statement: Sevil Salur eagerly looks forward to the possibility of joining the Division of Nuclear Physics Executive Committee, aiming to bring her decades-long engagement in nuclear physics research, particularly in heavy ion collisions, to the table. Her goal is to foster meaningful discussions, promote productive collaborations, and guide the division toward innovative explorations. She is deeply committed to enhancing the diversity of perspectives within the field and is equally dedicated to mentorship. Prof. Salur's strong belief in the potential of emerging facilities, such as the EIC,

underscores her determination to shape a dynamic and promising future for nuclear physics, where she envisions a host of discoveries in collaboration with both new and established partners.

Bio: Sevil Salur is a Professor in the Department of Physics & Astronomy at Rutgers, the State University of New Jersey. Her research centers on utilizing high transverse momentum probes as diagnostic tools to glean insights into the properties of quark-gluon plasma formed during heavy ion collisions at RHIC and LHC. Prior to joining Rutgers in 2011, she made notable contributions as a researcher at UC Davis, Lawrence Berkeley National Laboratory, and Yale University. With a bachelor's degree in Physics from U.C Berkeley and a Ph.D. from Yale University, her specialization was resonance production at RHIC energies using STAR experiment data. Prof. Salur's prowess is recognized through continuous National Science Foundation grant support, including an NSF CAREER Award, since 2011.

Prof. Salur's cutting-edge research engagement extended from her involvement in the ALICE collaboration to later participation in the CMS collaboration at LHC following her Ph.D. She assumed the role of elected chair for the RHIC/AGS Executive Users Committee and actively participated in multiple committees within the EIC Users Group and various scientific collaborations. A significant achievement is her introduction of a RHIC/AGS Merit award during her tenure as a member of the RHIC/AGS Executive Users Committee. This award celebrates the accomplishments of young professionals within her field, exemplifying her dedication to nurturing emerging talents.

Beyond her scientific accomplishments, Prof. Salur's influence extends to organizing significant conferences. She took the lead in coordinating the inaugural sPHENIX collaboration meeting and served as the chair for APS Conferences for Undergraduate Women in Physics (CUWiP) at Rutgers, with events in 2015 and 2022 transitioning online due to the pandemic, as well as at Princeton in 2017 as a member. Her leadership in organizing the Hot Quarks meetings, which empowers young members of the relativistic heavy ion community, further underscores her dedication to fostering growth. Mentoring over 20 students and earning two teaching awards from Rutgers University, she exemplifies her commitment to nurturing the next generation and cultivating a collaborative knowledge-sharing environment for young physicists.

CAROL SCARLETT:

Statement: I am keenly interested in being a Member at Large for the DNP Executive member where I believe my background in Nuclear Physics coupled

with my service on APS' Committee on Minorities as well as the Forum on Diversity would allow me to make a significant contribution. In this role, I would be able to further connect with the DNP community to best understand how APS meets the needs of its members. As a professor who has been devoted to improving diversity and equity for students, I see a potential role on the Executive Committee as an opportunity for me to assist with the mission of DNP to fully utilize the nation's talent to advance nuclear science.

Bio: I have worked to develop experimentation and experimental methods to uncover the source of observed Dark Matter (DM) in the galaxies. My work has centered on development of an apparatus sensitive enough to detect a long theorized DM candidate, the axion. What is unique about axions as Dark Matter, first proposed and discussed in works of Peccei, Quinn, Weinberg and Wilczek, these particles would simultaneously explain why neutrons lack an electric dipole moment (EDM), known as the strong CP problem as well as providing the needed gravity for galaxies to form. More recently, with the help of Dr. Ephraim Fischbach, I have begun to explore whether or not the process of aligning the EDM could lead to a baryon number dependent force also known as the fifth force. With the ongoing studies of DM physics, these light, weakly interacting, and long-lived particles have emerged as one of the top candidates for explaining the observations of star rotation and enhanced gravitational lensing in the Universe. Scientists now believe that axions will play an important role in the evolution of stars by providing an additional cooling mechanism due to mixing with photons in external magnetic fields via the Primakoff coupling. It is of great scientific importance to find a signature for the presence of such particles, as evident by the many experimental and theoretical ideas and proposals being discussed, as well as the Department of Energy (DOE) Office of Science's ten year plan for scientific infrastructure across the US.

Like with other experiments, my initial efforts to conduct Axion searches focused on the utilization of photonic beams propagating through a material vacuum, filled only with a strong magnetic field, designed to observe optical deflection and rotation as evidence of the theorized Primakoff coupling. In such experiments, the Primakoff mechanism makes the space birefringent, giving a preferred axis defined by the directions of the magnetic fields and magnetic gradient. Through those efforts and with an eye towards modernizing these "cavity search" techniques, I came to rethink the role of birefringence in material systems. This process led to the development of techniques for quantum generation

of optical noise with applications in numerous areas of computer and information sciences. In fact, I now hold a number of patents for the use of multiple layers of birefringent materials to induce photonic random walking. At the time of writing this research interest report, I am currently on Sabbatical at Argonne National Laboratory's (ANL's) as part of the Chain Reaction Innovation (CRI) program and the Duality Accelerator working on a microchip to use photonics to produce random numbers. This proves that experimentation in one area of science can result in discoveries and inventions in other areas. This latter work is synergistic with several of the University's Quantum Computing efforts.

More recently, I have focused attention on finding Primakoff couplings in the nuclear sector. My background in nuclear physics has led me to propose that some heavy metals in the nuclear "valley of stability," e.g. ^{222}Rn , may already be showing evidence for couplings to exotic matter. Already controversial for its diurnal and annual variations, ^{222}Rn may be the perfect nuclei for observing minute DM influences. Along with several collaborators, we have proposed that these nuclei may show oscillations in their decay rates due to oscillations in background DM fields induced by solar photons coupling through the solar and earth's magnetic field. I collaborate with other faculty at Purdue, Ball State, Coastal College of Georgia and Industry, who are exploring this mechanism for detecting DM and the implications that go along with enhancement in nuclear decays.

*NOMINATIONS FOR EARLY CAREER MEMBER
(vote for 1)*

FARID SALAZAR WONG:

Statement: Leveraging my prior roles as a co-organizer for the Nuclear Theory seminar at UCLA, the Heavy-Ion Tea seminar at LBL, and my experience as an application coordinator for the Rising Research Seminar Series, I have actively engaged with diverse groups of early career scientists and their research. My commitment to these roles has been to provide platforms for my peers to showcase their work. Joining the DNP Executive Committee would allow me to communicate their needs and concerns. Furthermore, I look forward to learning how the Nuclear Physics community operates on a larger scale.

Bio: I am a joint postdoctoral researcher at the Nuclear Science Division at the Lawrence Berkeley National Laboratory and the Nuclear Theory Group at the University of California Los Angeles. I obtained my Ph.D. at Stony Brook University and conducted my doctoral research at Brookhaven National Laboratory. Previously, I pursued a double major in

Physics and Mathematics at Florida International University.

My primary research interest is understanding hadronic matter via high-energy scattering. I employ novel perturbative and semi-classical methods in Quantum Chromodynamics (QCD), with emphasis on high-energy effective field theories to derive and compute cross-sections for many processes that can be studied in existing and future collider facilities. I am fascinated by the possibility of the discovery and characterization of a new regime of matter dominated by a highly occupied and saturated system of gluons.

I am an active proponent of diversity and inclusion in STEM fields. To this end, I have been a mentor in the high school Women in Science and Engineering program at Stony Brook University. More recently, I had the chance to supervise several undergraduate students at UCLA, including a Cal-Bridge scholar. I am also one of the co-founders of the Rising Research Seminar Series hosted by the Institute of Nuclear Theory, where I serve as an application coordinator.

ALLISON ZEC:

Statement: My name is Allison Zec and I am currently a postdoc at the University of New Hampshire. I am an experimental physicist and part of the Jefferson Lab community who has collaborated in different experiments. My current research is focused on developing solid tensor-polarized targets for future experiments of nuclear structure. I am running for this position because I am fiercely devoted to the work of the DNP and to the growing field of nuclear physics. I have served as a junior career representative on the DNP DEI committee seeking to advance the DNP's commitment to equity and to the advancement of marginalized scientists everywhere. I have also helped steward an open community for transgender and non-binary physicists for the past several years. If elected, I will be a strong voice for early-career physicists as well as young and developing scientists and students. I will also serve to compassionately advocate for equity for scientists from marginalized or underrepresented groups.

Bio: Allison Zec began her career in physics at her high school in Medford, Massachusetts, where she was inspired by a physics teacher to participate in particle detection experiments. She did her undergraduate work at the University of Massachusetts - Amherst, where she participated in the DARKSIDE dark matter detection collaboration. She undertook a summer of research in 2014 at the Gran Sasso National Lab in Italy. She graduated in 2015 with a B.S. in physics and a B.A. in computer science and headed for a PhD program in physics at the University of Virginia (UVA).

At UVA she joined the group of Professor Kent Paschke and set to work on the PREX-II and CREX collaborations at Jefferson Lab. From 2016 onwards she participated in the development, deployment and running of the experiments. She moved to work at Jefferson Lab in 2019 for the run periods of both experiments which successfully ran and published results in 2021 and 2022 for PREX-II and CREX respectively. Her work on the Jefferson Lab Hall A Compton Polarimeter and her dissertation on the data collected from the polarimeter won her the 2022 JSA Thesis Prize. While at UVA she also was awarded the Department of Energy Office of Science Graduate Student Research award for the 2019 cycle.

After completing her PhD work in 2022, she joined the University of New Hampshire polarized target group as a postdoctoral researcher, where she remains today. Her current research is focused on developing solid tensor-polarized deuterated targets for future experiments testing nuclear spin structure at Jefferson Lab. Outside of physics, Allison enjoys the outdoors including hiking, swimming, boating, and cycling. She plays guitar, and is an avid campaigner for transgender rights, representation and recognition in physics as well as beyond.

IX. OTHER FORTHCOMING MEETINGS

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