NSAC LRP Workforce Development Proposals – Division of Nuclear Physics responses

HAIYAN GAO, BNL AND DUKE UNIVERSITY
NSAC Meeting, April 26, 2024

DNP: Chair-line, Secretary/Treasurer, Division Councilor and Executive Committee

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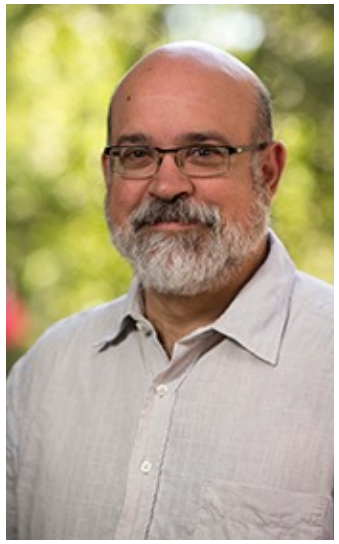
Michigan State, Chair



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-at-Large

Workforce Proposals

1. National outreach and education center for nuclear science
2. Continued investment in NSF REU, DOE SULI, CEU programs
3. Raise compensation for graduate researchers commensurate with cost of living – without contracting the workforce
4. Expand policy and resources to ensure a safe and respectful environment for everyone
   - Establish funding agency policies on areas such as medical and family leave
   - Support appropriate skills development and training at conferences and meetings, including mentoring workshops for new faculty
   - Establish community agreements at national laboratories
   - Provide resources to help establish and maintain enforceable CAs.
5. Consider work-life balance when organizing reviewing/panels.
6. Proposal review and panel training should account for differing teaching and service burdens (underrepresented groups, non-R1 institutions, HBCUs, etc). Recognize value of outreach and activities in support of equity and inclusion
7. Allocate administrative support for RENEW and other training grants.

We must draw on the talents of all in the nation to realize A New Era of Discovery.

Workforce Proposals

National outreach and education center for nuclear science

National Nuclear Physics Summer School (NNPSS)

July 15-26, 2024 at Indiana University, Bloomington

Jinfeng Liao, Walter Pettus (*chair*), W. Michael Snow, Scott Wissink

NNPSS Steering Committee 2023-2024

1. Nadia Fomin (expt, CHAIR)
2. Kate Scholberg (FS/exp)
3. Ramona Vogt (Theory)
4. Matt Sievert (EIC/Heavy Ion/Theory)
5. Nathaly Santiesteban (Jlab/exp)
6. Andrew Steiner (nuclear astrophy/theory)
7. Melina Avila (FRIB/exp)
8. Jean-Francois Paquet (heavy ion/theory)
9. Sanjay Reddy (NSF grant holder)

- Many summer schools organized by Nuclear Physics community: Hampton University Graduate Studies Program, EIC summer school; FRIB Theory Alliance summer school; Nuclear Science Summer School (MSU, undergraduate), PING (MUS, pre-college and undergraduate); Nuclear Theory topical collaborations organize summer schools,…
- Public outreach: https://mynuclearlife.com (Shelly Lesher)

My Journey as a Physicist Podcast (Huey-Wen Lin): https://sites.google.com/msu.edu/phy480905/home

- NuclearScienceFuture.org: Dean Lee, DNP chair plans to focus on communications/outreach (hub for resources)
- A virtual National outreach and education center for nuclear science

Workforce Proposals

Continued investment in NSF REU, DOE SULI, CEU programs

Director: Shelly Lesher

- Highly successful Conference Experience for Undergraduates (CEU) program since 1998
- NP community active in NSF REU program (TUNL, Texas A&M Cyclotron Institute REU, REU at MSU, More
- SULI at DOE Labs with NP program and facilities

Workforce Proposals

Raise compensation for graduate researchers commensurate with cost of living – without contracting the workforce

APS Advancing Physics

American Physical Society
1 Physics Ellipse
College Park, MD 20740

March 29, 2024

The Honorable Patty Murray
Chair
Committee on Appropriations
154 Russell

The Honorable Kay Granger
Chairwoman
Committee on Appropriations
2308 Rayburn

The Honorable Susan Collins
Vice Chair
Committee on Appropriations
413 Dirksen

The Honorable Rosa DeLauro
Ranking Member
Committee on Appropriations
2413 Rayburn

Dear Chair Murray, Chairwoman Granger, Vice Chair Collins, and Ranking Member DeLauro:

As President of the American Physical Society (APS), representing more than 50,000 physicists in universities, industry, and national laboratories, I am writing to reemphasize the importance of long-term, community-driven consensus reports in determining the most effective uses for federal science funding. APS strongly supports the process and purpose of these reports. As you consider future appropriations, we hope that you will continue to consider these documents as roadmaps for ensuring American scientific competitiveness.

These survey and prioritization activities, which typically operate on roughly decade-long cycles, have produced a new round of reports since the start of the 2020s. Community-led prioritization efforts such as those of the National Academies of Science, Engineering, and Medicine (NASEM) and the federal scientific advisory committees (FACAs) represent an important tool to inform appropriations for science, enabling us to pursue our most important scientific questions while also being responsible stewards of public funds. *Exploring the Quantum Universe: Pathways to Innovation and Discovery in Particle Physics* from the high energy physics community, *A New Era of Discovery* from the nuclear physics community, and *Pathways to Discovery in Astronomy and Astrophysics for the 2020s* from the astrophysics community are just a few examples of long-ranges plans published in recent years.

Many of the major programs, instruments, laboratories, and collaborations that enable physics research in the United States are primarily funded by the Department of Energy Office of Science, the National Science Foundation (NSF), and the National Aeronautics and Space Administration (NASA). To ensure that these federal investments reflect the national interest, a variety of physics sub-disciplines are charged with developing long-term strategic plans. APS members are involved at every level in these processes, performing a valuable service for their communities and for the U.S. research enterprise.

Each of these reports is the result of collaborative, democratic efforts, incorporating input from hundreds of physicists in each subfield. The expert panels leading the reports ensure that science is the prime motivator and develop a methodology of prioritization that identifies the most important research areas where substantial progress can be made.

For their decadal surveys, the National Academies organizes committees of experts in each field to incorporate input from their communities. These groups review their fields' recent accomplishments, identifying new opportunities, challenges, and compelling scientific questions. They provide recommendations for infrastructure and programs that secure U.S. leadership in a given research area or, where appropriate, enhance collaboration and coordination internationally. FACAs for areas of research including nuclear (NSAC), basic energy sciences (BESAC), fusion energy sciences (FESAC), and high energy physics (HEPAP), also carry out long-range plans. The resulting reports help inform appropriators, who can then make budgetary decisions knowing that the priorities put forward have the support of the full community in a given sub-discipline.

The suggestions of previous decadal surveys and long-range plans have pushed forward our understanding of the universe by leaps and bounds. These community-consensus projects have resulted in some of our most ambitious infrastructure and most important scientific achievements—from discovering gravitational waves and probing the subatomic realm, to pushing the frontiers of fusion energy and exploring the physical processes of biological life. Importantly, these explorations into fundamental questions have also resulted in cutting-edge applications for national security, medicine, and clean energy, as well as opportunities for STEM workforce development. The 2020 series of planning exercises builds on this heritage of success.

We appreciate the strong, bipartisan support that Congress has shown for fundamental physics research with annual appropriations to the federal science agencies over the years. I hope that you will view the careful consideration inherent in these community-consensus processes as due diligence from the physics community with respect to the resources granted to us. The exploration of fundamental physics and discovery of innovative applications thereof would not be possible without robust and sustained funding for federal science agencies.

Thank you for your time and consideration. If you have questions or would like to further discuss the reports outlined above, please do not hesitate to contact APS Director of Public Affairs Mark Elsesser (elsesser@aps.org; 202.846.8121).

Sincerely,

Young-Kee Kim

Young-Kee Kim
President, American Physical Society

While this is more for funding agencies to act, DNP can work with APS and NP community in letter writing campaign, NP day at the Hill, etc.

Example: APS President Young-Kee Kim's letter to Congressional Appropriators supporting community consensus prioritization activities like NSAC LRP P5

Workforce Proposals

Expand policy and resources to ensure a safe and respectful environment for everyone

- Establish funding agency policies on areas such as medical and family leave
- Support appropriate skills development and training at conferences and meetings, including mentoring workshops for new faculty
- Establish community agreements at national laboratories
- Provide resources to help establish and maintain enforceable CAs.

- ➢ Collaborate with APS and take advantage of APS resources for professional skills development and mentoring workshops for new faculty
- ➢ DNP: conference chair training (thanks to members: Roxanne Springer, Kate Scholberg, Matthias Schindler)
- ➢ DNP DEI committee, DNP Allies Program
- ➢ DNP members organized workshop and panel discussions on community agreements
- ➢ DOE Office of Science Facilities Directors discussed Code of Conduct at users' facilities in 2022 at a meeting organized by Dr. Harriet Kung's office, and Dr. Kung's office also did survey of all DOE SC uses' facilities in CoC, and many have CoC/community agreements
- ➢ DNP will work with APS and other units such as DPF to help establish and maintain enforceable CAs

Workforce Proposals

Consider work-life balance when organizing reviewing/panels.

What is Work-Life Balance?

- Work-life balance is the “sweet spot” where the priorities for a person’s career are in harmony with the demands of one's personal life
- This must consider a diverse work-force, and allow for individual differences as it relates to employees’ personal lives
- “It involves the minimization of work-related stress, and the establishing of a stable and sustainable way to work while maintaining health and general well-being” Work Life Balance - What it Means and Why it Matters (qualtrics.com)
- It helps maintain mental health, by reducing stress and the chance of burnout
- The result is happier employees, which in turn results in better productivity

(from BNL NPP Work-Life Balance focus group)

DNP can organize panel discussions at meetings to discuss Work-Life Balance
Work-life balance is important to attract and retain talent for our field