



TO: Members of the *Division of Nuclear Physics, APS*
FROM: Ken Hicks, Ohio U. – Secretary-Treasurer, DNP

HIGHLIGHTED IN THIS NEWSLETTER:

- 2019 DNP Elections

Future Deadlines:

- **23 January 2019** — Voting in the DNP Election
- **1 March 2019** — Nominations for Mentoring or Service Awards
- **1 May 2019** — Nominations for DNP Fellows

The home page for the Division of Nuclear Physics is now available at "<http://dnp.aps.org>." Information of interest to DNP members – nominations, prizes, meeting deadlines, *etc.* are provided. Each DNP Newsletter is posted online. Comments and suggestions are solicited. Please send them to John R. Arrington at <johna@anl.gov>

1. 2019 DNP ELECTIONS

The terms of the officers and three members of the current Executive Committee will expire in April 2019. The installation of officers will take place at the DNP Business meeting in April 2019. David Dean will become Past-Chair, Robert Janssens will become Chair, and Krishna Kumar will become Chair-Elect. Baha Balantekin will remain as Division Councilor; his term as Divisional Councilor expires in April of 2022. Renee Fatemi, Spencer Klein, and Ramona Vogt will remain members of the Executive Committee. John Arrington, Rebecca Surman and Remco Zegers retire from the Executive Committee in April 2019. A Vice Chair, Secretary-Treasurer, and three members of the Executive Committee are to be elected. Executive Committee terms are 2 years, and the Secretary-Treasurer term is for 1 year.

This year's Nominating Committee consists of Rebecca Surman (Chair), Peter Jacob (Vice-Chair), Sebastian Kuhn, Catherine Deibel and William Louis. The candidates selected by the Nominating Committee and approved by the Executive Committee are:

Vice-Chair (one position):
Roxanne Springer (Duke)
Sherry Yennello (Texas A&M)

Secretary-Treasurer (one position):
Kenneth Hicks (Ohio U)

Executive Committee (three positions):
John Beacom (Ohio State)
Jeffrey Blackmon (LSU)
Nadia Fomin (UTK)
Douglas Higinbotham (JLab)
Julie Roche (Ohio U)
Alexander Saunders (LANL)

Candidate information and bios are given later in this newsletter.

2. 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 they generate: seminars, workshop contributions, APS meeting talks, conference talks/posters, etc.

3. 2018 DNP MENTORING AWARD

The 2018 recipient of the APS Division of Nuclear Physics Mentoring Award is Robert McKeown of Thomas Jefferson National Accelerator Facility. He received this award at the Business Meeting of HAW18 (the DNP 2018 meeting in Waikoloa, Hawaii). His citation reads:

"For his thoughtful and effective mentoring of graduate students, post-doctoral associates, and other young scientists, many of whom have gone on to become leaders in nuclear physics."

4. 2019 NUCLEAR PHYSICS DISSERTATION AWARD

The 2019 recipient of the Nuclear Physics Dissertation Award of the APS Division of Nuclear Physics is Grayson Rich at the University of North Carolina. His dissertation was written under the direction of Duke/TUNL faculty member Phil Barbeau. Rich presented a summary of his research at the Awards session of HAW18 (the DNP 2018 meeting in Waikoloa, Hawaii). His citation reads:

"For his outstanding contributions to the first observation of Coherent Elastic Neutrino Nucleus Scattering as a member of the COHERENT neutrino experiment at the Oak Ridge National Laboratory."

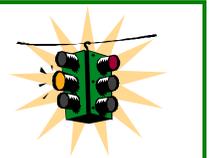
5. 2018 STUART JAY FREEDMAN AWARD

The 2018 recipient of the APS Division of Nuclear Physics Stuart Jay Freeman Award is Ania Kwiatkowski at TRIUMF. This is the first year that this award, for an outstanding early career experimentalist in nuclear physics, was presented at the Business Meeting of HAW18 (the DNP 2018 meeting in Waikoloa, Hawaii). Her citation reads:

"For outstanding and innovative contributions to precision mass measurements, commitment to mentoring of young researchers, and leadership in the low energy nuclear physics community."

INSIDE . . .

- **Prize and Award Recipients**
- **DNP Election: Candidate Biographies**
- **April APS meeting in Denver, CO**



6. 2019 BONNER PRIZE WINNER

Barbara V. Jacak of Lawrence Berkeley National Laboratory and the University of California, Berkeley, was named the recipient of the 2019 APS Tom W. Bonner Prize in Nuclear Physics. The prize will be awarded at the APS 2019 April meeting. Her citation reads:

"For her leadership in the discovery and characterization of the quark-gluon plasma, in particular for her contributions to the PHENIX experiment and its explorations of jets as probes."

7. 2019 FESHBACH PRIZE WINNER

Barry R. Holstein of the University of Massachusetts, Amherst, was named the recipient of the 2019 APS Herman Feshbach Prize in Theoretical Nuclear Physics. The prize will be awarded at the APS 2019 April meeting. His citation reads:

"For seminal theoretical studies of fundamental symmetries in nuclei, including radioactive nuclear decays, parity-violating nucleon-nucleon interactions, and chiral dynamics of mesons and baryons."

8. 2019 BETHE PRIZE WINNER

Ken'ichi Nomoto of the Kavli Institute for the Physics and Mathematics of the Universe at the University of Tokyo was named the recipient of the 2019 APS Hans A. Bethe Prize. His citation reads:

"For lasting contributions to our understanding of the nuclear astrophysics of the universe, including stellar evolution, the synthesis of new elements, the theory of core-collapse and thermonuclear supernovae, and gamma-ray bursts."

More information on these prizes can be found on the APS website.

9. NOMINATIONS FOR THE 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 or 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 under-represented 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 2019 award are due 1 March 2019 and should be sent to John F. Wilkerson, Department of Physics, University of North Carolina, Phillips Hall CB #3255, Chapel Hill, NC 27599-3255.

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.

The members of the 2019 DNP Mentoring Award selection committee are: John Wilkerson, Micha Kilburn, Tanja Horn, Simon Capstick and Bob McKeown.

10. NOMINATIONS FOR THE 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 2019 award are due 1 March 2019. 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. Duplicate nominations are not helpful. Nominations, should be sent to: David J. Dean, Physical Sciences Directorate, One Bethel Valley Road, P.O. Box 2008, MS-6230, Oak Ridge, TN 37831-6230.

11. FUTURE DNP FALL MEETINGS

The dates include the pre-meeting workshops, which are normally held in conjunction with the DNP Fall Meetings. Holding workshops at the DNP Fall Meetings is a tradition that began with the 1986 Vancouver meeting. All meeting attendees are welcome and encouraged to come. It has been the intention of the DNP Executive Committees 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 of specialty of the local community. Bill Briscoe of George Washington University will chair the local organizing committee.

2019	October 13-17	Crystal City, VA
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12. FUTURE APS SPRING MEETING INFORMATION

2019	April 13-16	Denver, CO
2020	April 18-21	Washington, DC
2021	April 17-20	Sacramento, CA

Any comments/suggestions should be sent to APS Meetings Manager, Terri Olsen (olsen@aps.org).

13. 2019 APS APRIL MEETING IN DENVER, CO

The APS April Meeting will be in Denver, CO. The meeting encapsulates the full range of physical scales, from "Quarks to the Cosmos (Q2C)" which is the meeting's theme. Research will be presented on topics from the 19 participating units including particle physics, nuclear physics, astrophysics, and gravitation. The public lecture will be given by Katie Freese, the George E. Uhlenbeck Professor of Physics at the University of Michigan.

The DNP Prize Session will be held on Monday, April 15, starting at 3:30 pm local time. The DNP Business Meeting will be held thereafter.

REGISTRATION: The early registration deadline is March 1, 2019.

HOTEL: Sheraton Denver Downtown Hotel. You must book your hotel online to obtain the APS special rate. Deadline: March 11, 2019.

14. DNP EDUCATION COMMITTEE REPORT

One measure of the growth of our field and the future nuclear workforce is the number of nuclear researchers who are currently advising graduate students towards a Ph.D. To this end, the DNP Education Committee has been tracking the number of nuclear tenure track faculty in the US at Ph.D. granting institutions since 2013. Through departmental websites and online CVs, we collect demographic information such as current institution and academic rank, and the institution, county and year of Ph.D. We also infer the subfield, theory/experiment, and gender from information publically available.

There are some limitations with this method of data collecting due to the lack of uniformity across department websites in content and organization. There is also not a clear definition of who is a nuclear researcher. Some reside in chemistry departments, and some research is on the edge between nuclear and high energy. In fact, many physics departments list high energy and nuclear faculty together under “particle physics” and we have to try to discern how each identifies based on the available information. While there are certainly error bars on the data and associated trends, this information can be made available to the nuclear community as needed for proposals, reports, white papers, *etc.* For further details, contact mkilburn@nd.edu

15. CANDIDATE BIOGRAPHIES

NOMINATIONS FOR VICE-CHAIR (choose 1)

ROXANNE SPRINGER - Professor at Duke University. She has a Ph.D. in theoretical physics from Caltech, and research interests in effective field theories of QCD and weak interactions. Most recently she has focused on parity violation and the implications of the large-number-of-colors limit of QCD on low-energy few-body observables. These results have an impact on choosing which future parity violating experiments to prioritize. She is an Associate Editor for Reviews of Modern Physics. She was in the chair line of the SESAPS (Southeastern Section of the APS) from 2010-2014, on the Executive Committee of the Division of Nuclear Physics (DNP) from 2015-2017, and currently serves on the APS DNP Harassment Prevention Committee. She is a Fellow of the APS and has served on the APS Committee for the Status of Women in Physics (CSWP) (as Vice-Chair in 2007), organized Site Visits, and continues to conduct Conversations Visits under CSWP auspices. She is chair of the advisory committee for implementing a Sloan Foundation grant to increase the number of under-represented minorities in nine Engineering and Natural Sciences graduate departments at Duke.

SHERRY YENNELLO - Regents Professor, Director of the Cyclotron Institute, and holder of the Bright Chair in Nuclear Science at Texas A&M University. Yennello also serves as Director of the Texas A&M Nuclear Solutions Institute and the NNSA Center for Excellence in Nuclear Training And University-based Research. Yennello joined the Texas A&M faculty in 1993 after serving as a postdoctoral fellow at Michigan State University (1991-92) and earning her Ph.D. from Indiana University in 1990. She served as a Nuclear Physics Program Director at the NSF (2000-02). Her research is in accelerator based heavy-ion reactions to study the dynamics and thermodynamics of

excited nuclear matter and elucidate the nuclear equation of state – particularly the density dependence of the symmetry term - which has implications for the formation of elements and other astrophysical processes. In addition to her formal service and leadership in the field, she is a passionate promoter of equity and access to education and professional advancement for all. Yennello has a history of service to the APS, chairing the Committee on the Status of Women in Physics and serving on the Nominating Committee. Yennello’s experience in DNP leadership includes the Executive Committee, the Program Committee, the Fellowship Committee, the Nominating Committee (chair), Education Committee (chair) and the Mentoring Award Committee. Additionally, Yennello chaired the Committee of Visitors for the DOE Office of Nuclear Physics and served on the NSF Committee of Visitors for the Physics Division. She has served on the NSAC Radioactive Ion Beam Task Force, Subcommittee on Education and the 2007 Long Range Plan Working Group. Yennello is a fellow of the American Physical Society (2005), the American Chemical Society (2011), and the American Association for the Advancement of Science (2013).

NOMINATIONS FOR SECRETARY-TREASURER (choose 1)

KENNETH HICKS – Professor of Physics, Ohio University, 1988 to present; Research Scientist, TRIUMF, 1985-1988; PhD in Nuclear Physics, University of Colorado, 1984; BS Physics (with honors), Indiana University. APS Fellow, 2004; Presidential Research Scholar at Ohio U., 2004. Other awards include the Graselli-Brown Teaching Award in the Natural Sciences (2011) and Fellowships from the Japan Atomic Energy Agency (2012 and 2016). He served a two-year term as a Program Director in Experimental Nuclear Physics at the National Science Foundation (2014-16), served two years as Chair of the CLAS Collaboration at the Thomas Jefferson National Accelerator Facility (2012-13). He is the 2019 DNP Secretary-Treasurer. His principle research area now is baryon spectroscopy, in particular the search for exotic baryons and mesons. He has co-organized several workshops, including three on joint US-Japan hadron physics projects, and has served on the Program Committee for the Topical Group on Hadron Physics. He has advised 16 PhD students at Ohio U, plus several PhD committees of students abroad.

NOMINATIONS FOR EXECUTIVE COMMITTEE (choose 3)

JOHN F. BEACOM — Professor of Physics, Professor of Astronomy, The Ohio State University, on the faculty since 2004. Henry L. Cox Professor, Arts and Sciences Distinguished Professor, and Director of the Center for Cosmology and AstroParticle Physics. Ph.D. 1997, University of Wisconsin (advisor Baha Balantekin). Examples of service to the DNP include: NNPS Steering Committee, 2003--2007 (Chair 2004--2005); Nominating Committee, 2004--2005; Program Committee, 2010--2012; Mentoring Award Committee, 2012--2013. Examples of other APS service include: Member of the APS “Task Force on the April Meeting,” 2006--2007; Chair line, Division of Astrophysics, 2012--2016 (Chair 2014--2015); Bethe Prize Committee, 2012--2015 (Chair 2014--2015); Member or Chair of several other DAP committees. Examples of other community service include: Divisional Associate Editor for Physical Review Letters, 2015--2021; LIGO Program Advisory Committee, 2018--2021; INT National Advisory Committee, 2019--2022; Program committees for numerous conferences. Research focus is theoretical nuclear and particle astrophysics, covering neutrinos, supernovae, and more, often in collaboration with experimentalists and observers.

JEFFREY C. BLACKMON — Russell B. Long Professor, Louisiana State University (LSU). B.S., Guilford College (1989); Ph.D., Univ. of North Carolina (UNC-CH, 1994); Postdoc, Oak Ridge National Lab

(ORNL) and UNC-CH (1995-1997); Staff Scientist, ORNL (1997-2007); Assoc. Prof., LSU (2007-2011); Prof., LSU (2011-pr). APS Nuclear Physics Program Committee (2003-2004), Holifield Radioactive Ion Beam Facility (HRIBF) Program Advisory Committee (2005-2010), National Superconducting Cyclotron Laboratory Users' Executive Committee (2007-2010, chair 2010), Facility for Rare Isotope Beams Users' Executive Committee (2008-2011), TRIUMF Subatomic Physics Experiment Evaluation Committee (SAP-EEC 2008-2011), National Nuclear Physics Summer School Steering Committee (2010-2013, chair 2012), NSF Committee of Visitors (2012, Nuclear Physics Subpanel Chair), Nuclear Science Advisory Committee (2011-2013), DOE Office of Nuclear Physics Committee of Visitors (2013 and 2016). APS Fellowship (2012). Research interests: nuclear astrophysics, studies with short-lived nuclei, reactions with neutrons, and development of nuclear instrumentation.

NADIA FOMIN — assistant 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 as well as NIST, where the aim is to study weak couplings between nucleons as well as to perform a precision measurement of the neutron lifetime and to look for physics beyond the Standard Model with beta-decay experiments. Additionally, Prof. Fomin continues to pursue her earlier 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. Her APS service includes the DNP program committee as well as the executive committee for the southeastern section of the APS (SESAPS), first as a member-at-large, followed by her election to the chair line. Prof. Fomin has strong interests in science outreach and promoting diversity in physics.

DOUGLAS W. HIGINBOTHAM — earned his B.S. in Physics from the College of William and Mary in 1992 and his Ph.D. in nuclear physics from the University of Virginia in 1999. He served as a postdoctoral research scientist at the Massachusetts Institute of Technology from 1999 to 2001. Douglas then joined Jefferson Lab in 2001, where he is a staff scientist and member of the Hall A and Hall C collaborations. His research program includes investigations into short range correlations of nuclear matter, the EMC effect, and a statistical examination of the proton radius. He has mentored over 42 students and postdoctoral research associates from colleges and universities around the world, regularly serves as a mentor for students through the summer SULI and REU research programs, and has mentored high school students through the Virginia Governor's school program. He has been recipient of DOE outstanding mentor awards and is co-PI for the long standing Jefferson Science Associates Junior Scientist Travel Support grant. Douglas is currently a member of the APS Committee on Careers & Professional Development.

JULIE ROCHE — professor of Physics at Ohio University. She received her Ph.D. from B. Pascal University (France) in 1998 for research on the polarizabilities of the proton with the Mainz Microtron accelerator in Germany. She came to the USA for postdoctoral work at JLab and joined Ohio University in 2006. Roche uses electron beams to study the internal structure of the nucleon via deep exclusive reactions:

she is a spokesperson for two JLab experiments that study Generalized Parton Distributions of the nucleon. Roche also explores physics beyond the Standard Model with parity violation processes. Her work is currently funded by the NSF. Roche has served on the executive committee of the Ohio Regional section of APS and the program committee of DNP. She was a member of a NSF panel review, a NSF Physics Division Committee of Visitors and a member of the Jefferson Science Associate graduate fellowship committee. She is currently the chair of the board of directors of the JLab User Organization.

ALEXANDER SAUNDERS — R&D Scientist, Subatomic Physics, Los Alamos National Lab. B.A. Physics, Williams College, 1990; Ph.D. Physics, University of Colorado, 1998. Fellow of American Physical Society (2015). TRIUMF Ultra-cold neutron source and EDM experiment External Advisory Committee (2013-18) and Conceptual Design Review Committee Chair (2018). North Carolina State University Ultra-cold neutron source external safety review committee (2011). Weapons Neutron Research facility Nuclear Physics Program Advisory Committee (2011-013). Project and Capability Lead for Los Alamos Proton Radiography User Facility (2013-18). Project and Capability Lead for Los Alamos Ultra-cold Neutron Facility (2004-10). Co-spokesperson for UCNA (2004-18) and UCtau (2012-17) experiments. Research interests: applications of particle physics to stockpile stewardship, especially charged particle radiography; fundamental experimental physics of weak interactions using ultra-cold and cold neutrons.

16. FUTURE MEETINGS

Organizers of future conferences should contact the DNP Secretary-Treasurer if they wish their conferences listed in DNP newsletters.

“SBF-APS São Paulo School of Advanced Science on Experimental Neutrino Physics”

3-14 December 2018, Campinas, Brazil

Contacts: Ettore Segreto

URL: <https://sites.google.com/site/spsasen/home>

Email: segreto@ifi.unicamp.br

“6th International Conference on Proton-Emitting Nuclei”

3-7 June 2019, East Lansing, MI

Contacts: Alex Brown

URL: <https://indico.fnal.gov/event/17151/>

Email: brown@nsl.msu.edu

“MENU-2019, the 15th International Conference on Meson-Nucleon Physics and the Structure of the Nucleon”

2-7 June 2019, Pittsburgh PA

Contacts: Curtis Meyer

URL: <https://events.mcs.cmu.edu/menu2019>

Email: cmeyer@cmu.edu

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