
Annual Fall Meeting of the Division of Nuclear Physics

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Annual Fall Meeting of the Division of Nuclear Physics

October 13-16, 2016

Vancouver, British Columbia, Canada

GENERAL INFORMATION

The Annual Fall Meeting of the Division of Nuclear Physics of the American Physical Society will be held 13-16 October 2016, at the Sheraton Vancouver Wall Centre in downtown Vancouver, Canada. Three associated workshops will be held starting Thursday morning, 13 October. The local host institution will be TRIUMF.

A plenary session will begin at 15:00 on 13 October and will feature four invited talks. On Friday through Sunday morning, the meeting will use the 'APS April meeting' format with two sessions each morning. On Friday and Saturday this will be followed by two sessions in the afternoon. Each session will be two hours long and can accommodate either three invited talks or 9 contributed talks. Mini-symposia will typically have one invited talk and up to six contributed talks during a session. There are no afternoon sessions on Sunday; however, there will be TRIUMF tours offered on Wednesday and Sunday afternoon.

The Sheraton Vancouver Wall Centre is the conference location for DNP16. The hotel is situated in the central district of downtown Vancouver. The address is 1088 Burrard Street, Vancouver, BC V6Z 2R9, Canada.

Further information about the conference, and an electronic version of the *Bulletin*, are available on the conference web site: <http://dnp2016.triumf.ca>. The *Bulletin* can also be located through the APS web site. There will be a DNP 2016 app available.

CODE OF CONDUCT FOR APS MEETINGS

It is the policy of the American Physical Society (APS) that all participants, including attendees, vendors, APS staff, volunteers, and all other stakeholders at APS meetings will conduct themselves in

a professional manner that is welcoming to all participants and free from any form of discrimination, harassment, or retaliation. Participants will treat each other with respect and consideration to create a collegial, inclusive, and professional environment at APS Meetings. Creating a supportive environment to enable scientific discourse at APS meetings is the responsibility of all participants.

Participants will avoid any inappropriate actions or statements based on individual characteristics such as age, race, ethnicity, sexual orientation, gender identity, gender expression, marital status, nationality, political affiliation, ability status, educational background, or any other characteristic protected by law. Disruptive or harassing behavior of any kind will not be tolerated. Harassment includes but is not limited to inappropriate or intimidating behavior and language, unwelcome jokes or comments, unwanted touching or attention, offensive images, photography without permission, and stalking.

Violations of this code of conduct policy should be reported to meeting organizers, APS staff, or the APS Director of Meetings. Sanctions may range from verbal warning, to ejection from the meeting without refund, to notifying appropriate authorities. Retaliation for complaints of inappropriate conduct will not be tolerated. If a participant observes inappropriate comments or actions and personal intervention seems appropriate and safe, they should be considerate of all parties before intervening.

MEETING MOBILE APP

DNP is pleased to offer the Meeting Mobile App for your phone or tablet. Abstracts and other program information will be available directly on your device. Enter this link into your mobile device browser to download the app:

go.aps.org/meetingapp.

WORKSHOPS

The Local Organizing Committee, under the direction of Jens Dilling, has organized three workshops. The workshops will begin on Thursday morning at 09:00. On-site registration is available starting at 08:00 on Thursday. Attendees who have pre-registered may pick up their badges at the registration desk in the Sheraton Vancouver Wall Centre on Thursday morning. The three morning workshops are:

New Frontiers in Low-Energy Nuclear Theory

SESSIONS 1WB AND 2WB

Sheraton Junior Ballrooms A&B

9:00 and 11:18 Thursday, 13 October

The workshop has been organized by Sonia Bacca, Jason Holt, and Petr Navratil.

Recent Atomic Physics for Nuclear Physics and Vice Versa

SESSIONS 1WC AND 2WC

Sheraton Junior Ballroom C

9:00 and 11:18 Thursday, 13 October

The workshop has been organized by John Behr and Ruediger Picker.

New Science Opportunities at RIB Facilities

SESSIONS 1WD AND 2WD

Sheraton Junior Ballroom D

9:00 and 11:18 Thursday, 13 October

The workshop has been organized by Martin Alcorta and Chris Ruiz.

Education Committee Workshop

The Loudest Duck: Moving Beyond Diversity *Sheraton Pavilion A/B*

12:45 – 14:45 Thursday, 13 October (Pre-registration required)

A workshop entitled “The Loudest Duck: Moving Beyond Diversity” has been organized by the Education Committee (thank you to Micha Kilburn) and will be led by Laura Liswood of Washington, DC, known for her energetic, engaging, and informative presentations. Her workshop is based on the Speaker’s book entitled “The Loudest Duck” published by Wiley & Sons. The workshop is sponsored by JINA Center for the Evolution of the Elements (Notre Dame) and the Division of Nucle-

ar Physics. The workshop fee of \$20.00 includes lunch and a copy of The Loudest Duck.

Communication & Negotiation Skills Workshop for Women

Sheraton TBA

12:45 – 14:00 Friday, 14 October (Pre-registration required)

This workshop is designed to provide women physics students and postdocs with the professional skills needed to effectively perform research, including: negotiating a position in academia, in industry or at a national lab, interacting positively on teams and with a mentor or advisor, thinking tactically, articulating goals, enhancing their personal presence, and developing alliances. Negotiation strategies and tactics that are useful for achieving professional goals will be discussed. This is a highly interactive workshop where participants are invited to bring examples of difficult professional situations to discuss. The \$8.00 workshop fee includes lunch.

PLENARY SESSION

The Plenary Session for the DNP fall meeting will be held on Thursday, 13 October, starting at 15:00.

Fundamental Symmetries in Nuclear Science

SESSION AA

Grand Ballroom

15:00 Thursday

The plenary session will feature four invited talks that will cover fundamental symmetries research that touches upon all of the DOE and NSF facilities as well as TRIUMF. The focus of the talks will be upon recent accomplishments and the exciting future directions in the sub field of fundamental symmetries. A coffee break will separate the first pair of talks from the second pair. The plenary session organizer, DNP Chair Gordon Cates will chair the plenary session.

Everyone is encouraged to attend. Following the plenary session there will be a reception in the Pavilion Ballroom.

PROGRAM DESCRIPTION

Invited Sessions

The invited sessions were arranged by the DNP Program Committee, chaired by Michael Thoennessen. There are eight invited speaker sessions, each of which will be in the Pavilion Ballroom D. One session was created by the DNP15 Local Organizing Committee, and one session is an Awards session featuring talks by the Mentoring Award winner and the Dissertation Award winner. Speakers nominated by the DNP membership and voted upon by the Program Committee have been distributed throughout the program in appropriate topic sessions. The invited sessions are:

Nuclear Physics Beyond the Standard Model

SESSION CB

8:30 AM Friday (*Pavilion Ballroom D*)

Determination of the Proton Radius: Recent Results

SESSION DB

10:30 AM Friday (*Pavilion Ballroom D*)

Rare Isotopes in Pure & Applied Nuclear Physics

SESSION FB

4 PM Friday (*Pavilion Ballroom D*)

Chirality & Vorticity in the Quark Gluon Plasma

SESSION HB

8:30 AM Saturday (*Pavilion Ballroom D*)

Recent Advances in Nuclear Physics Dedicated to Virginia R. Brown and Bunny C. Clark

SESSION JB

10:30 AM Saturday (*Pavilion Ballroom D*)

Awards Session

SESSION KB

2:00 PM Saturday (*Pavilion Ballroom D*)

Recent Insights on Shell Evolution in Nuclei

SESSION NB

8:30 AM Sunday (*Pavilion Ballroom D*)

Recent Advances in Hadron Resonances and Nuclei using Lattice Field Theory

SESSION PB

10:30 AM Sunday (*Pavilion Ballroom D*)

Mini Symposia

Twelve mini-symposia were organized by members of the DNP Program Committee. Each mini-symposium has a lead speaker to introduce the topic, so that the contributed papers, which follow, can cover the essential material without the need for an extended introduction. Several of the mini-symposia are divided into two or more sessions, which indicates the large number of abstracts submitted for those topics. The mini-symposia include:

Light Meson Spectroscopy: First Results from GlueX I

SESSION CC

8:30 AM Friday (*Junior Ballroom B*)

New Results from GRETINA I

SESSION CE

8:30 AM Friday (*Junior Ballroom D*)

Light Meson Spectroscopy: First Results from GlueX II

SESSION DC

10:30 AM Friday (*Junior Ballroom B*)

Opportunities in Underground Nuclear Physics I

SESSION DD

10:30 AM Friday (*Junior Ballroom C*)

New Results from GRETINA II

SESSION DE

10:30 AM Friday (*Junior Ballroom D*)

Hadronic Weak Interaction

SESSION DG

10:30 AM Friday (*Pavilion Ballroom B*)

Physics of Ultracold Neutron Sources I

SESSION DJ

10:30 AM Friday (*Junior Ballroom A*)

Light Meson Spectroscopy: First Results from GlueX III

SESSION FC

4:00 PM Friday (*Junior Ballroom B*)

Opportunities in Underground Nuclear Physics II

SESSION FD

4:00 PM Friday (Junior Ballroom C)

Cold Nuclear Matter from Fixed-Target Energies to the LHC I

SESSION FF

4:00 PM Friday (Pavilion Ballroom A)

Neutron and Nuclear Tests of CKM Unitarity I

SESSION FG

4:00 PM Friday (Pavilion Ballroom B)

Physics of Ultracold Neutron Sources II

SESSION FJ

4:00 PM Friday (Junior Ballroom A)

Neutron and Nuclear Tests of CKM Unitarity II

SESSION HG

8:30 AM Saturday (Pavilion Ballroom B)

Instrumentation for Physics Beyond the Standard Model IA

SESSION HH

8:30 AM Saturday (Pavilion Ballroom C)

Nuclear Astrophysics

SESSION HJ

8:30 AM Saturday (Junior Ballroom A)

Investigations of the Reactor Neutrino Anomalies I

SESSION JD

10:30 AM Saturday (Junior Ballroom C)

Cold Nuclear Matter from Fixed-Target Energies to the LHC II

SESSION JF

10:30 AM Saturday (Pavilion Ballroom A)

Electric Dipole Moments

SESSION JG

10:30 AM Saturday (Pavilion Ballroom B)

Investigations of the Reactor Neutrino Anomalies II

SESSION KD

2:00 PM Saturday (Junior Ballroom C)

Neutron and Nuclear Tests of CKM Unitarity III

SESSION KG

2:00 PM Saturday (Pavilion Ballroom B)

Instrumentation for Physics Beyond the Standard Model IIA

SESSION KH

2:00 PM Saturday (Pavilion Ballroom C)

Instrumentation for Physics Beyond the Standard Model IB

SESSION NH

8:30 AM Sunday (Pavilion Ballroom C)

Applications of Nuclear Physics I

SESSION NJ

8:30 AM Sunday (Junior Ballroom A)

Instrumentation for Physics Beyond the Standard Model IIB

SESSION PH

10:30 AM Sunday (Pavilion Ballroom C)

Applications of Nuclear Physics II

SESSION PJ

10:30 AM Sunday (Junior Ballroom A)

ADDITIONAL ACTIVITIES**Companions Get Together**

A companions' get together will be held in the Parksville room of the Sheraton Vancouver Wall Centre from 15:30 to 16:30 on Thursday, 13 October, in parallel with the plenary session. Registered companions are invited to join the Reception following the plenary session that will be held in the Pavilion Ballroom.

Receptions

A welcoming reception will be held from 18:30 to 20:00 on Thursday, 13 October, following the plenary session. The reception will be held in the Pavilion Ballroom. A cash bar will be available and light refreshments will be served. This provides an excellent

opportunity to see fellow members of the DNP, so please make sure that it is on your agenda.

In addition, a cash bar reception will be held in the Grand Ballroom Foyer prior to the banquet on Saturday evening, 15 October.

Public Talk

A public talk will be held in the Grand Ballroom of the Sheraton at 19:00 on Friday evening.

The doors will open at 18:30. The expected format will be approximately 50 minutes for the lecture, followed by 20-25 minutes for questions and audience discussion. The speaker will be Dr. Vaclav Smil, Distinguished Professor Emeritus at the University of Manitoba. The talk will be open to all meeting participants as well as members of the general public.

User Group Meetings

User group meetings will take place on Friday evening, 14 October. Details regarding starting times and room assignments will be available at the meeting.

Physical Review C and Physical Review Letters Drop-In

A drop-in reception to meet the editorial staff of *Physical Review C* and *Physical Review Letters* will be held on Friday, 14 October, from 14:00 to 15:30 in the Grand Ballroom of the Sheraton Vancouver Wall Centre in parallel with the CEU poster session in the same room. The journal editors will be available to answer questions and share concerns. Refreshments will be served. All attendees are welcome to stop by. Please pick up an invitation at the Registration Desk.

CEU16 Student Program

A tradition at the DNP Fall Meeting is a parallel set of activities for undergraduate students now organized by Shelly Leshner (University of Wisconsin -- La Crosse) as a component of the Conference Experience for Undergraduates (CEU) program. The goal of the CEU program is to provide a valuable conference experience for undergraduate students, who have conducted research in nuclear physics, by providing them an opportunity to present their research to the larger professional community and to one another. Additionally, the CEU program enables participating students to converse with faculty and senior scientists

from graduate institutions about graduate school opportunities. All Conference attendees are encouraged to find time to visit the undergraduate poster session that will be held on Friday afternoon at 14:00 in the Grand Ballroom.

Additional CEU activities will include nuclear physics seminars on Friday morning at 10:30 by Heather Crawford (LBNL) and Saturday morning at 10:15 by Kate Scholberg (Duke) in the Grand Ballroom, a tutorial about applying to graduate school at 09:45 on Saturday morning, and the traditional graduate school information fair on Saturday, from 12:30 - 13:45 also in the Grand Ballroom. The initial gathering of CEU students will be Friday morning at 10:00 in the Grand Ballroom, where plans for the conference will be outlined and important announcements made, followed by the first of the two seminars. After the morning seminar students will be able to place posters on the poster boards in the Grand Ballroom in preparation for the afternoon poster session. A CEU student social and reception is scheduled for Friday at 20:00 in Pavilion D. The CEU program is supported by the National Science Foundation, the Department of Energy (through the national labs), TRIUMF, and the Division of Nuclear Physics.

Business and Town Hall Meetings

The DNP Business Meeting will be held in the Grand Ballroom of the Convention Center at 16:00 on Saturday, 15 October. The meeting will include a summary of recent DNP actions, a preview of the 2017 APS April meeting in Washington, DC, and presentation of the DNP Mentoring Award and the DNP Distinguished Service Award.

A Town Hall meeting will follow the business meeting. There will be reports from the funding agencies and from NSAC. Following these reports, the meeting will be open to public comment on issues affecting the field.

Banquet

A banquet will be held in the Pavilion Ballroom of the Sheraton at 19:00 on Saturday evening. Tickets are available through the conference web site for an additional \$60 fee (\$75 for tickets purchased on site). The banquet speaker will be. The banquet will be preceded by a cash bar reception in the Pavilion Ballroom Foyer. The Bar will open at 18:30.

REGISTRATION

Attendees are encouraged to pre-register using the registration procedure provided on the conference web site. Meeting registration and hotel reservations are being handled by Complete Conference Coordinators, Inc.

On-site registration will begin at 08:00 on Thursday morning prior to the beginning of the Workshops. The registration desk will remain open throughout the meeting. Personnel will be available at the registration desk during the meeting to help provide information and other assistance. The desk will be closed at times during the lunch break.

THURSDAY 13 OCTOBER.....8:00AM – 5:30PM
 FRIDAY 14 OCTOBER8:00AM – 5:00PM
 SATURDAY 15 OCTOBER.....8:00AM – 5:00PM
 SUNDAY 16 OCTOBER.....8:00AM – 11:00AM

LOCAL ORGANIZING COMMITTEE

J. Dilling (Chair)
 J. Behr
 R. Picker
 G. Hackman
 J. Holt
 J. Thomson
 D. Giasson
 P. Navratil
 S. Bacca
 M. Alcorta
 C. Ruiz

CONFERENCE COORDINATOR

Details the meeting, including registration and hotel reservations, are being handled by

Complete Conference Coordinators, Inc.
 1260 Iroquois Ave., Suite 202
 Naperville, IL 60563
 Tel: 630-416-3030
 info@cccmeetings.com

SESSION CHAIR GUIDELINES

- Prior to the session, check the Program Changes Board in the registration area to see if any papers in the session you are chairing have been withdrawn.
- Arrive at the meeting room about 15 minutes prior to the start of the session and familiarize yourself with the controls for lights, microphones, A-V equipment and the timer. Technicians will be on hand to assist. If you encounter problems, you should immediately alert the staff at the Registration or Information Desk and/or the A-V specialist stationed near the meeting rooms.
- Start the session on time. Briefly introduce yourself, announce the first paper and author, and start the timer.
- Please adhere to the time schedule listed in the Bulletin, so that simultaneous sessions are as closely synchronized as possible. Many attendees move from session to session in order to hear specific papers. Note: any time used by the speaker and/or technicians to set up laptops for LCD (Powerpoint) presentations is deducted from the time allocated for the talk.
- The allotted time for contributed papers is 12 minutes; for invited papers—36 minutes. If you are chairing a session that includes both contributed and invited papers please be aware of the different times allocated for each and set the timer as follows:

CONTRIBUTED PAPERS: set timer for 8 minutes to give initial warning, then set the final bell to go off 2 minutes later. When this time is up, allow 2 additional minutes for questions relating to the paper, thank the speaker and promptly introduce the next paper and speaker.

INVITED PAPERS: set timer for 25 minutes for initial warning, and the final bell to ring 5 minutes later. Then set the timer for 6 additional minutes for questions from the audience. Explain the timing system to the audience prior to the start of the session, and as often during the session as you think necessary.
- The By-Laws of the Society request that speakers be asked to stop when their allotted time is up in a courteous but firm manner. Keep in mind that the session must end on time, and that the last speaker has just as much right to an audience as does the first speaker.

- Should a speaker fail to appear, you must wait 12 minutes before going on to the next speaker. At the end of the session, call again for the regularly scheduled paper, if time allows.
 - When two or more papers are submitted by an author, only one of these will be assigned a scheduled presentation time within that session. It is assumed that the first author listed in the abstract is the person who will present the paper at the meeting. A second abstract submitted by the same author is automatically assigned to a poster.
 - If any problems arise that you are unable to handle relative to successfully chairing the session, please inform the A-V tech in the room, or go immediately to the Registration desk to alert meeting staff.
4. Use: line graphs to show trends; bar graphs to compare magnitudes; pie graphs to demonstrate relative portions of a whole.
 5. If you require special A-V, don't wait until the last minute to request it as it may not be available. The cost of special audio-visual equipment is paid by the speaker.

SPEAKER GUIDELINES

Step back from the details of your research and think about what your audience might like to learn from your work. Keep it simple - remember, less is more.

Organization

Your talk should include:

1. Statement of hypothesis and purpose of the research
2. Description of methods of investigation
3. Inclusion of data collected and what was learned
4. Conclusions based on the data collected
5. Emphasis on significance and highlights of the research

Audio-Visuals

1. Supporting audio-visuals must be concise, uncluttered and readable from a distance
2. Audio-visuals should amplify your oral presentation, not duplicate it
3. Choose the medium that will optimally display your information - don't use words if a picture will convey it more clearly (graphs, tables, charts, etc.)

Delivery

1. Prepare notes that highlight the salient points of your talk.
2. Practice the delivery of your talk several times prior to your presentation along with your slide or transparency sequence being sure to fit your talk into the time allocated to you.
3. Use simple sentences; avoid jargon, highly specialized vocabulary and unfamiliar abbreviations.
4. Think about questions you might be asked about your work and be prepared with well-thought out answers, being mindful of the limited time for Q and A.

Check the on-line program on the APS web-site prior to the meeting to see what other papers will be presented in the session to which your paper has been assigned.

At the Meeting

1. Check the Corrigenda and the "Program Changes" Board to determine if there are any changes to the program that might relate to your presentation.
2. If possible, arrive at the room in which you are to give your presentation prior to the start of the session and introduce yourself to the program chair.
3. Use the lavalier microphone properly. The microphone must be placed no more than 6 inches below your chin. Often reported "microphone problems" are merely a matter of having the lapel microphone placed too far from the speaker's mouth.
4. Be prepared to stop when signaled by the Chair to do so.
5. Retrieve your presentation audio-visuals at the end of your talk.