

April 2019 DPF Newsletter

Dear DPF members,

Please find below the monthly DPF newsletter for April 2019. This newsletter will be archived on the DPF website.

If you would like an announcement included in the May newsletter, to be sent out around May 15th, please contact the DPF Secretary/Treasurer. Please keep requests to 300 words and submit them by the **10th of the month** for consideration.

Mirjam Cvetič, Secretary/Treasurer, cvetic@physics.upenn.edu

Rick Van Kooten, Member-at-Large, rvankoot@indiana.edu

Elizabeth Worcester, Member-at-Large, etw@bnl.gov

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DPF Activities at April APS Meeting, Denver

April 2019

Thank you to all who participated in the DPF Grand Slam at the APS meeting in Denver and congratulations to the winners: Vetri Velan (UC Berkeley), Bei Zhou (Ohio State U.), Guanying Zhu (Ohio State U.)



Grand Slam Speakers



Grand Slam winners (left to right)
Priscilla Cushman – DPF Chair
Guanying Zhu
Vetri Velan
Bei Zhou
Young-Kee Kim – DPF Chair-elect



A number of early career members had the opportunity to meet with representatives of physics funding agencies for some useful discussions.

ASTRO 2020

April 17, 2019

On Wednesday, April 17, from 2:00 – 3:00 p.m. ET, the co-chairs of the Astronomy and Astrophysics Decadal Survey (Astro 2020) will be holding a town hall webinar hosted by the National Academy of Sciences. The co-chairs, Fiona Harrison and Rob Kennicutt, will discuss plans for Astro 2020 and take questions from the community. Please see <https://mailchi.mp/nas/town-hall-webinar-april-17-2019> for more details and to register.

Sincerely,

Joshua Frieman, DAP Chair

2019 Phenomenology Symposium (PHENO 2019)

May 6-8, 2019

Dear Colleagues,

The 2019 Phenomenology Symposium (PHENO 2019) will take place at the University of Pittsburgh during May 6-8, 2019.

The Symposium will cover current issues in particle physics phenomenology, theoretical developments, and recent experimental results, ranging from low energy phenomena over collider physics to astroparticle physics and cosmology. The Symposia are attended by both experimental and theoretical physicists, with a large number of junior participants. The broad plenary and parallel sessions provide an excellent forum for discussions.

Early registration will end **April 15, 2019**; Talk submission will end **April 22, 2019**; Registration will close **April 29, 2019**. A number of awards are available to domestic graduate students for travel and accommodation. There will be a “Forum on early career development” on Monday at lunchtime. For registration and further information, please visit the web site: <https://indico.cern.ch/event/777988/>

We look forward to seeing you at PHENO 2019!

Best regards!

Tao Han

on behalf of the PHENO 2019 organizers:

Brian Batell, Joshua Berger, Ayres Freitas, Joni George, Dorival Gonçalves, Tao Han (chair), Ahmed Ismail, Adam Leibovich, Natália Maia, And Cédric Weiland

(Pheno Symposia are supported by the US DOE, NSF, and PITT PACC)

XXVIIth International Conference on Supersymmetry and Unification of Fundamental Interactions

[SUSY 2019](#)

May 20-24, 2019

Corpus Christi, Texas, USA

XXVIIth International Conference on Supersymmetry and Unification of Fundamental Interactions (SUSY 2019), hosted by Texas A&M University – Corpus Christi during May 20-24, 2019, will provide a unique venue to discuss and understand the status of SUSY, connection between particle physics and cosmology, supersymmetry and its alternatives, Higgs sector, neutrino sector, flavor sector, dark matter, electroweak phase transition, astroparticle physics, gravitational waves and string theory. Discussion of results from the LHC, recent neutrino experiments and observations, direct and indirect dark matter detection experiments, detection of gravitational waves, data from particle colliders, as well as measurements of the CMB and Large Scale Structure will be an integral part of SUSY 2019. To ensure the younger participants will benefit from the conference the most, the conference will be preceded by the 4 day long pre-SUSY summer school for graduate students and postdocs. The school will take place on Texas A&M University – Corpus Christi campus during the week prior the SUSY 2019 conference (May 15 – 18, 2019).

SUSY2019 – SCIENTIFIC TOPICS:

- Supersymmetry: Models, Phenomenology and Experimental Results
- Unification of Forces
- Electroweak, Top and Higgs Physics
- Precision Calculations and MC tools
- BSM in Flavor Physics
- Neutrino Masses: Models and Phenomenology
- Cosmology and Gravitational Waves
- Dark Matter, Astroparticle Physics
- Formal Field Theory and Strings
- Alternatives to Supersymmetry
- Quantum Information: Machine Learning/Big Data

Contact info: Phone: [001-361-825-3916];

Email: susy2019@tamucc.edu

Event website: <http://www.sci.tamucc.edu/events/susy/index.html>

On behalf of the Local Organizing Committee: Barbara Szczerbinska & Bhaskar Dutta

SNEWS 2.0: Supernova

Neutrinos in the Multi-Messenger Era

14-17 June, 2019

Save the date!

Workshop at Laurentian University, Sudbury, Canada, June 14-17, 2019

SNEWS, the SuperNova Early Warning System (<http://snews.bnl.gov/>), is an inter-experiment network with the aim of providing a prompt alert to the astronomical community of the observation of the burst of neutrinos from a nearby core-collapse supernova. SNEWS began in 1998 and has been operational in automated-output mode since 2005. Since that time, there has been remarkable evolution of the transient astronomy landscape. Gravitational wave detectors are now active, and there have been recent spectacular observations involving multiple wavelengths of electromagnetic radiation, neutrinos and gravitational waves. Community infrastructure for fast response to alerts has improved significantly and there are new opportunities available for rare and valuable gathering of scientific information in response to a detected neutrino burst.

The "SNEWS 2.0" workshop will be held at Laurentian University, Sudbury, Canada, June 14-17, 2019. It will focus on plans for an update of SNEWS, given the new context of multi-messenger astronomy. The focus will be on real-time alert aspects of supernova neutrino detection.

Topics to be covered:

- Supernova neutrino detection capabilities of existing and future experiments
- Multi-messenger signals from core-collapse supernovae and other transients also observable in neutrino detectors
- Existing astronomical alert networks
- Updated alert dissemination; information to be shared, mechanisms for information sharing
- Pointing with neutrinos: methods and strategies
- Pre-supernova alert sensitivities and strategies

The workshop format will include invited talks, some talks selected from contributed abstracts, and a poster session. Early-career community members are especially encouraged to attend. Details concerning travel bursaries for graduate students will be placed on the workshop website prior to opening of registration. Underground tours of SNOLAB will be available on both June 14th and 17th, but tour spots are limited to 30 per day. Signup for tours will be part of the online registration.

Registration and abstract submission will open on March 1.

<http://snews2.0.snolab.ca/>

The organizing committee Alec Habig (U. of Minnesota, Duluth), Rafael Lang (Purdue University), Danny Milisavljevic (Purdue University), Kate Scholberg (Duke University), Clarence Virtue (Laurentian University)

2019 CTEQ Summer School: University of Pittsburgh, USA

16-26 July 2019

Dear Colleagues,

This is the first announcement of the 2019 CTEQ Summer School on QCD and Electroweak Phenomenology, to be held at the University of Pittsburgh in Pittsburgh PA, USA on **16-26 July 2019**.

In addition to a focused introduction to perturbative QCD and recent experimental results, this year's school will include lectures and tutorials on **Machine Learning** and **Monte Carlo** methods and applications. The school is ideally suited for advanced graduate students and young postdocs.

For further information, including application procedures, please refer to the Summer School website: <http://cteq.org/schools/summer19> which is linked from the CTEQ webpage at <http://www.cteq.org/> or contact cteq.school@gmail.com.

Review of applications will begin on 15 March 2018.

Sincerely,

The CTEQ Summer School Organizers

BOOST 2019

22-26 July 2019

11th International Workshop on Boosted Object Phenomenology, Reconstruction and Searches in HEP

BOOST 2019 is the eleventh conference of a series of successful joint theory/experiment workshops that bring together the world's leading experts from theory and LHC experiments to discuss the latest progress and develop new approaches on the reconstruction of and use of boosted decay topologies in order to search for new physics. This year's workshop is hosted at the MIT Stata Center from 22-26 July 2019.

More information about this workshop is available at <https://indico.cern.ch/e/boost2019> .

We look forward to welcoming you to BOOST in Boston!

Zeynep Demiragli, Philip Harris, Yen-Jie Lee, Matthew Schwartz, Jesse Thaler

2019 APS Division of Particles and Fields Meeting

July 29 – August 2, 2019

Dear colleagues,

Abstract submission and registration are now open for the 2019 APS Division of Particles & Fields (DPF) Meeting.

More details can be found at: <http://dpf2019.northeastern.edu/>

The deadline for abstract submission is **18 May**.

The deadline for early registration (\$350) is **30 June**. The deadline for late registration (\$400) is **25 July**.

More information regarding the conference is summarized below, and detailed at the above website.

We look forward to your participation.

Best regards,

Emanuela Barberis and Toyoko Orimoto for the APS DPF 2019 Organizing Committee

The meeting brings the members of the Division together to review results and discuss future plans and directions for our field. It is an opportunity for attendees, including young researchers, to present their findings at multiple parallel and plenary sessions. Participants will also have the chance to talk with DOE and NSF representatives about funding opportunities. This is a major biennial meeting of the U.S. particle physics community, and it includes substantial international participation.

Topics covered will include: Higgs & Electroweak Physics; Top Quark Physics; Quark & Lepton Flavor; QCD & Heavy Ions; Beyond Standard Model Physics; Dark Matter; Cosmology & Dark Energy; Astroparticles & CMB; Field & String Theory; Particle Detectors; Accelerators; Computing, Analysis Tools, & Data Handling; Diversity & Inclusion; Education & Outreach.

Plenary and parallel sessions will take place in large lecture halls or classrooms on the Northeastern University campus, located in the heart of Boston.

Accommodation is available both on-campus in dorms, as well as off-campus in nearby hotels with a range of nightly rates.

More information can be found at: <http://dpf2019.northeastern.edu/>

Student Travel Awards Available for DPF 2019

July 29-August 2, 2019

We are pleased to announce that the Division of Particles and Fields (DPF) will provide partial travel support for a limited number of students to attend the DPF Meeting 2019, which will take place from July 29-Aug 2nd, 2019 in Boston, Massachusetts. For meeting details, see the DPF meeting website (<http://dpf2019.northeastern.edu>).

The travel award will be up to \$300 in a travel reimbursement, depending on the number of travel award recipients. To be eligible for the award, a student must be presenting a paper or poster and must be a student at a U.S. educational institution. Applications from graduate and undergraduate students presenting results based on their research will be considered on an individual basis. Applicants must be members (or applicant members) of the DPF. Details on a free one-year student trial APS membership can be found at the [Student Membership](#) web page. Students can join the DPF unit when they apply for APS membership. Preference will be given to students who do not have support from another APS division.

To be considered for an award, students should submit an email request to Andre Luiz De Gouvea (degouvea@northwestern.edu) by **5:00 p.m. PST on June 15, 2019**. The request should include their university affiliation, thesis (faculty) adviser, expected date of degree completion, and the abstract number and title of the paper or poster they are presenting at the meeting, and optionally, gender and minority status information. The request should also include a follow-up letter of recommendation from the student's faculty supervisor, to be transmitted by that supervisor to the same email address by the same date. Students from underrepresented groups are strongly encouraged to apply. Please note that requests received after the deadline will not be considered.

Please take advantage of this opportunity to promote student participation in the DPF Meeting in Boston, MA

Emanuela Barberis

47th SLAC Summer Institute

August 12-23, 2019

Dear Colleagues:

The 47th SLAC Summer Institute will take place 12-23 Aug 2019. The theme will be the broad landscape of flavor physics associated with quarks, charged leptons and neutrinos. Lectures will cover contemporary theoretical developments, current experimental results and future frontiers, as well as discussions of the various flavor puzzles and anomalies. The program will also include discussions of the fundamental origin of the Standard Model family structure and the prospects towards the next level of insight.

Lectures will be given in the mornings during both weeks. Afternoons include additional lectures and topical talks which alternate with discussion sessions, student project sessions and tours. Evening events include poster sessions and social activities.

The full program and further details can be found on the SSI website:

<https://conf.slac.stanford.edu/ssi2019>

SSI has a long tradition of offering comprehensible lectures for advanced graduate students & postdoctoral fellows while senior researchers are also welcome. Students and postdoctoral fellows are encouraged to contribute to the poster sessions.

If you have further questions, please contact us at

mherraez@slac.stanford.edu

We hope to see you at SLAC this summer for SSI 2019!

The SSI 2019 Program Directors,

Wolfgang Altmannshofer, Mark Convery, Lisa Kaufman, Greg Madejski, Su Dong, Rich Partridge, Charlie Young, and Tom Rizzo (chair)

2019 CERN-JINR European School of High-Energy Physics (ESHEP2019)

September 4-17, 2019

The 2019 CERN-JINR European School of High-Energy Physics (ESHEP2019) will take place in St. Petersburg, Russia, 4-17 September 2019.

The School is targeted particularly at students in experimental HEP who are in the final years of work towards their PhDs, although candidates at an earlier or later stage in their studies may be considered. **The deadline for applications is 19 April 2019**. Sponsorship may be available for a few students from developing countries.

Further details are available here: <https://indico.cern.ch/event/798971/>

Regards,

Nick Ellis and Martijn Mulders

(On behalf of the Organising Committee)

DPF Membership

If you are reading this, you are likely a DPF member already, and you already know that the DPF drives the U.S. particle physics community planning process, connects to other divisions and to a broader international community, and provides networking and resources for its members (for example, student travel support to meetings). The more DPF members we can engage, the more APS resources we have access to, and the stronger our community will be. International members are very welcome.

Please forward the information below to your students and colleagues. Information on how to check unit membership is included.

APS Unit Membership Information

Here are general benefits of APS membership:

<http://www.aps.org/membership/benefits.cfm>

If you are not an APS member, you can join here:

<https://www.aps.org/memb-sec/join/startpage.cfm>

Students can join at a reduced rate, and for free for their first year:

<http://www.aps.org/membership/student.cfm>

If you are already an APS member, and you are not sure if you are also a DPF member, you can check whether you are by doing the following:

Go to the member page:

<https://www.aps.org/membership/index.cfm>

Sign in at “My member profile,” and click on the “membership” tab. To add a unit, click on the “Add Unit” button.