



# The Physics Observer

December 5, 2019

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## UPCOMING EVENTS

- Monday December 9, 2019, 9-10am, HUB:  
[Laboratory Safety Awards & Innovations Event](#)
- January 17-19, 2020, Washington State University:  
[2020 APS Conference for Undergraduate Women in Physics](#)
- Sat-Mon January 18-20, 2020:  
[TIQM Inaugural Workshop](#)
- February 14-16, 2020:  
[AAAS Annual Meeting](#)
- May 30-June 1, 2020  
[Summitting the Unknown: Celebrating the Legacy of Ann Nelson](#)

## General Exams

- Wednesday, December 11, 2019 - 10:00am, PAT C520:  
[General Exam: Numerical study of dynamics and stability of frequency combs, Chang Sun](#)

## Welcome

The Physics Observer is a periodic bulletin of happenings in and around UW Physics. Our goal is to share information of notable happenings, events, and news associated with the department. Please feel free to pass this newsletter to anyone who may be interested. Readers wishing to subscribe, or unsubscribe, may do so [here](#). Previous newsletters may be found on the physics website at [The Physics Observer Newsletter](#). Information for future editions may be sent to the editor, [Alexis Hall](#).

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## Chair's Corner (L. Yaffe)

I want to extend heartfelt thanks to R.G. Hamish Robertson for endowing the newly created Arthur B. McDonald Professorship which will be used to help attract and support outstanding faculty.

In addition to previously announced events, next May 30-June 1, 2020 the department will host the meeting “Summitting the Unknown: Celebrating the Legacy of Ann Nelson”.

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## Milestones & Arrivals

- ❖ Budget Analyst [Kathryn Hennessey](#) completed her 30<sup>th</sup> year of service at the University of Washington.
- ❖ Jessica McDermott will join the department as a Budget Fiscal Analyst.”

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## Research Awards and Grants

- ❖ Assistant Professor [Alvaro Chavarria](#) received 280K NSF grant for 50-CCD tower of DAMIC-M to search for light dark matter particles
- ❖ Associate Professor [Gray Rybka](#) received 155K US DOE grant for Experimental Particle-Astrophysics at the University of Washington.
- ❖ Professor [Gordon Watts](#) received 16K US DOE grant for US ATLAS IRIS-HEP Institute Buyout.
- ❖ Professor [Gerald Seidler](#) received 45K NSF grant for STTR Phase I: The xAristotle Platform for Advanced X-ray Spectroscopy.

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## Funding and Meeting Announcements

Apply for the APS Congressional Science Fellowship! [The APS Congressional Science Fellowship](#) provides a stipend to work on Capitol Hill for a year, helping legislators effectively interpret scientific knowledge for use in public policy decisions, while learning about the legislative process. You must have a PhD and be an APS member to qualify. Application deadline: **December 15, 2019**.

Applications solicited for DOE/BES Energy Frontier Research Center proposals in Quantum Information Science or Microelectronics. More information [here](#). This is a limited submission opportunity. Internal UW letter of intent deadline: **5:00 PM Monday, December 16, 2019**.

Applications open for Two Sigma PhD Fellowships, offering full tuition and stipend. Areas of interest to the sponsor include applications of machine learning, simulation & big data techniques in physics, including particle physics, astrophysics, and condensed matter. More information [here](#). Deadline: **December 30, 2019**. This is a limited submission opportunity. If interested, contact Marcel den Nijs well in advance of the deadline.

(Advisor: Jose Kutz),  
University of Washington:

➤ Thursday, December 12,  
2019 - 10:30am, LSB  
201

General Exam:  
Dimensionality Reduction  
for Complex Dynamical  
Systems, Seth Hirsh  
(Advisor: Jose Kutz)

➤ Thursday, December 12,  
2019 - 2:00pm, PAT  
C520:

General Exam: Visualizing  
electronic states in operating  
2D devices, Paul Van  
Nguyen (Advisor: David  
Cobden)

### SEMINARS

See [Here](#)

### CONTACT US

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The National Science Foundation (NSF) Mathematical Sciences Graduate Internship (MSGI) Program provides opportunities for mathematical sciences doctoral students to participate in internships at federal national laboratories and research facilities. Application Deadline: **January 13, 2020 5:00 PM EST**. More information [here](#).

UBC & University of Washington Collaborative Research Mobility Award: Are your faculty collaborating with faculty at the University of British Columbia, or would they like to? Funding is available to support such collaborations. Sponsor due date is **February 10, 2020**. More information [here](#).

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### Job Opportunities

- ❖ Adjunct Faculty in Physics, Pennsylvania State University. See <https://physicaloxy.com/adjunct-faculty-in-physics,i7789.html>.
- ❖ Assistant, Associate, or Professor of Quantum Science and Engineering, University of Wisconsin Madison. See <https://jobs.hr.wisc.edu/en-us/job/502951/assistant-associate-or-professor-of-quantum-science-and-engineering-cluster-hire>.
- ❖ Assistant Professor of Physics, University of Wisconsin Madison. See <https://physicaloxy.com/assistant-professor-of-physics,i7912.html>.
- ❖ Professor (Open Rank) of Experimental Nuclear Physics at University of Illinois Urbana Champaign. See <https://physicaloxy.com/professor-open-rank-of-experimental-nuclear-physics,i7811.html>.
- ❖ Assistant Professor of Experimental Solid State Physics and Applications, University of British Columbia. See <https://academicjobsonline.org/ajo/application/14901>.

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### Selected Publications

- ❖ “Nuclear Fission Dynamics: Past, Present, Needs, and Future”, A. Bulgac, S. Jin, I. Stetcu, <https://arxiv.org/abs/1912.00287>.
- ❖ “Fractional quantum Hall effect in a relativistic field theory”, D. Kaplan and S. Sen, <https://arxiv.org/abs/1911.11292>.
- ❖ “Towards understanding and characterizing expert covariational reasoning in physics”. C. Zimmerman, A. Losho, M. Loverude, A. Boudreaux, T. Smith, S. Brahmia, <https://arxiv.org/abs/1911.01598>.
- ❖ “Improved upper limit on the neutrino mass from a direct kinematic method by KATRIN,” Phys. Rev. Lett. 123, 221802 (2019), <https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.123.221802>.