



# The Physics Observer

Apr 6, 2022

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## UPCOMING EVENTS

Thursday, April 7, 2022,  
12:30 pm, Online:  
[Thouless Institute for  
Quantum Matter: Nonlinear  
topological photonics](#), Bo  
Zhen, University of  
Pennsylvania

## Welcome

The Physics Observer is a periodic bulletin of happenings in and around UW Physics. Our goal is to share information on 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.

## Chair's Corner (L. Yaffe)

The war in Ukraine continues. Global warming continues. The pandemic continues, but local infection rates are small and a semblance of once-normal life returns. Classes this quarter are in person, as will be our department faculty meetings for the first time in two years.

This is recruiting season for new faculty. We have multiple offers outstanding with, at the present moment, one acceptance in hand for a new assistant professor in string theory and quantum field theory, Justin Kaidi, who will be joining us next year. Several new research assistant professors, and numerous new postdocs, will also be arriving next autumn. Our search for a new senior fellow in the Institute for Nuclear Theory continues.

Quite a few new artworks, large giclee prints of paintings by Lawrence Frank Bahrych, have recently been installed, one in the newly renovated hbar lounge, one in the main Physics office, and most downstairs brightening up the basement lab corridor. Do check them out! The original painting of the San Juan Islands which hangs outside the chair's office is also by Frank Bahrych and was donated by his sister Lynn. Lynn's late husband, Keith Jefferts, worked with Hans Dehmelt on the development and utilization of atomic ion traps. I'm very pleased to see the new art gracing our building.



## Milestones & Arrivals

- ★ Please welcome the new Student Services Program Assistant, [Lihong Zhang](#), who will start April 18th, 2022.
- ★ Grants Manager [Andrew Sattler](#) celebrates 25 years with the University of Washington.

Monday, April 11, 2022 -

4:00 pm, PAA A-102:

[Physics Colloquia: Studying the Beginning of the Universe from the Bottom of the World](#), [Clement Pryke](#), [University of Minnesota](#)

Thursday, April 14, 2022

- 12:30 pm, PAB 421,

TIQM meeting space:

[Thouless Institute for Quantum Matter: Manipulating optical and magnetic symmetry at the nanoscale in 2D semiconductors](#), [Alex High](#), [University of Chicago](#)

Monday, April 18, 2022 -

4:00 pm, PAA A-102:

[Physics Colloquia: The synthesis of heavy elements in stellar explosions](#), [Artemis Spyrou](#), [Michigan State University](#)

Thursday, April 21, 2022

- 12:30 pm, PAT C-520:

[HRL Labs: Encoded Silicon Qubits: A High-Performance & Scalable Platform for Quantum Computing](#), [Mitchell Jones](#), [HRL Laboratories](#)

Thursday, April 21, 2022

- 12:30 pm to 1:20 pm,

B421/ hybrid:

[ABC Physics: Encoded Silicon Qubits: A High-Performance & Scalable Platform for Quantum Computing](#), [Mitchell Jones](#), [HRL Laboratories](#)

Monday, April 25, 2022 -

4:00 pm, PAA 102:

[Physics Colloquia: Helical tunneling of Dirac Fermions](#), [Vidya Madhavan](#), [UIUC](#)

## Research Awards & Honors

- ❖ [Assistant Professor Matthew Yankowitz](#) received \$60k from the US Army Research Office for Band structure engineering of moiré van der Waals heterostructures with high pressure.
- ❖ [Professor Stephen Sharpe](#) received \$311k from the US Department of Energy for Theory of Particles, Fields and Strings 2020.
- ❖ [Professor Subhadeep Gupta](#) received \$10k from the Air Force Office of Scientific Research (AFOSR) and \$4.8K from the National Institute of Standards and Technology (NIST) for support for students to attend the 2022 APS-DAMOP conference.
- ❖ [Professor Gordon Watts](#) received \$130K from the US Department of Energy for working with US ATLAS on ATLAS ROOT I/O.
- ❖ [Chair Laurence Yaffe](#), on behalf of Physics, received \$27K from the Institute for Systems Biology to support a student working at the Institute.
- ❖ [Associate Professor Kai-Mei Fu](#) received \$80k from the US Department of Energy for PNNL Dual appointment and Deputy Directorship of C2QA.
- ❖ [Professor Aurel Bulgac](#) received \$100k from the National Nuclear Security Administration for Center of Excellence in Low Energy Nuclear Science.

## Department Resources & News

**Husky Giving Day! April 7th** for 24 hours. Celebrate and support the people, causes, and programs you care about at the UW. From providing resources for student scholarships and innovative research to furthering equity and inclusion initiatives, there is a passion for every member of our community to get behind on Husky Giving Day!

The **AIP Statistical Research Center** has recently posted a new report: [Exploring Harassment and Discrimination in Astronomy](#). The report is based on a poll of astronomy graduate students with 33% of respondents reporting experiences of harassment and discrimination at school or work. Respondents' descriptions of their harassment or discrimination experiences are analyzed, including the form of harassment, who performed the behavior, and where it took place. The report aims to shed light on the nuanced and complex circumstances around these events.

[Build a website easily with UW Sites](#): Get your UW-branded website up and running easily using UW Sites, a WordPress-based service supported by UW-IT.

## Assorted Talks & Meetings

APS April Meeting, April 9-12, 2022. Register [here](#). The Moore Foundation will be hosting a reception on Monday, 5:30-7:00pm, at which their goal of supporting 20 new experimental physics investigators per year will be discussed.

Save the Date! **Thursday, May 19, 2022 at 7:30 pm**, the Frontiers of Physics Lecture Series welcomes [Dr. Donna Strickland, 2018 Nobel Laureate in Physics](#) from University of Waterloo. The topic is [Generating High-Intensity, Ultrashort Optical Pulses](#). Invitations will go out *April 11th*.

Applications open for the annual Wolfram summer school, **July 3-22, 2022** in Champaign, Illinois, US, at the Wolfram Research Inc headquarters. Apply [here](#).

## Funding Announcements

NSF is soliciting proposals for [Materials Research Science and Engineering Centers \(MRSEC\)](#). Internal UW deadline for preliminary proposals: **April 13, 2022**.

Thursday, April 28, 2022

- 11:00am, CENPA

Conference Room:

Physics Department: General  
Exam, Joshua Labounty  
(Advisor: David Hertzog),  
University of Washington

Monday, May 16, 2022 -

3:00 pm to 5:00 pm,

William H. Foege Hall,  
Vista Cafe:

[2022 Physics Awards  
Ceremony](#)

Thursday, May 19, 2022

- 7:30 pm, Kane Hall  
130:

[Frontiers of Physics  
Lecture Series: Generating  
High-Intensity, Ultrashort  
Optical Pulses](#)  
Dr. Donna Strickland  
(2018 Nobel Laureate in  
Physics), University of  
Waterloo

Friday, June 3, 2022 -

12:00 pm, Mark

Mcdermott Plaza:

Physics Spring BBQ

Saturday, June 11, 2022

- 9:00 am, Physics-

Astronomy Auditorium:

Physics Graduation

July 14-16, 2022 - 8:00 am:

[Physics Department:  
Summitting the Unknown:  
New Physics, Celebrating  
the Legacy of Ann Nelson](#)

## [SOCIAL MEDIA](#)

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The Graduate School is pleased to announce the 2022 Graduate School Medal for PhD, DMA, AudD, DNP, DPT, and EdD candidates who have demonstrated an exemplary commitment to both the University and its larger community. This award, described on the [Medal website](#), is made possible by annual private gifts to The Graduate School. All nominations must go through the Awards module in [MyGradProgram](#). The nomination deadline is **Wednesday, April 13 at noon**.

The Moore Foundation is soliciting proposals for flexible funding grants for their [Emergent Phenomena in Quantum Systems Initiative](#). **Deadline April 22, 2022.**

UW Provost bridge funding applications for the current cycle are due to the College by **Monday, April 25**. The Bridge Funding program provides bridge funding to support faculty to span a temporary funding gap in critical research programs. See [here](#). Send applications to Dan Pollack and Steve Majeski.

The Simons Foundation is soliciting [Pivot Fellowship proposals](#), supporting changes in research direction. **Deadline April 29, 2022.**

NSF is accepting [research concept outlines \(RCOs\)](#) potentially leading to Early-concept Grants for Exploratory Research (EAGER) proposals focusing on new approaches to refrigeration below 1K. **RCO deadline: April 30, 2022**, invited proposals due by June 30.

## Job Opportunities

- [Senior Lecturer in Physics](#), Vanderbilt University Department of Physics and Astronomy.

## Selected Publications

- "Entropy, single-particle occupation probabilities, and short-range correlations", A. Bulgac, <https://arxiv.org/abs/2203.12079>.
- "Axion Dark Matter", Snowmass white paper, C. Bartram, M. Baryakhtar, G. Carosi, M. Guzzetti, G. Rybka, et al., <https://arxiv.org/abs/2203.14923>.
- "The Selena Neutrino Experiment", Snowmass white paper, A. Chavarria, X. Ni, A. Piers, et al., <https://arxiv.org/abs/2203.08779>.
- "Data-Driven Cosmology", Snowmass white paper, M. Loverde, et al., <https://arxiv.org/abs/2203.07946>.
- "The Project 8 Neutrino Mass Experiment", Snowmass white paper, A. Esfahani, C. Claessens, P. Doe, S. Enomoto, E. Novitski, H. Robertson, G. Rybka, B. VanDevender, et al., <https://arxiv.org/abs/2203.07349>.
- "Hadron Spectroscopy with Lattice QCD", Snowmass white paper, S. Sharpe, et al., <https://arxiv.org/abs/2203.03230>.
- "Light-Induced Ferromagnetism in Moiré Superlattices", X. Wang, H. Park, J. Zhu, D., X. Xu, et al., <https://arxiv.org/abs/2203.07161>.

## UW Coronavirus Response Information

[New face mask guidance for spring quarter](#): With the start of spring quarter on March 28, face masks became optional — but still recommended — inside most UW facilities.