



# The Physics Observer

March 5, 2021

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## UPCOMING EVENTS

- March 12, 2021, 2:00pm:

[Isaac Shelby \(Advisor: Paul Wiggins\) General Exam](#)

- March 16, 2021, 2:00pm:

[Paul Van Nguyen \(Advisor: David Cobden\) Final Exam: Micro-focus ARPES of operating 2D devices](#)

- March 29, 2021, 4:00pm:

[Physics Colloquium: Xie Chen \(Caltech\)](#)

- April 2, 2021, 4:00pm:

[Alexander Piers \(Advisor: Alvaro Chavarria\) General Exam](#)

- April 5, 2021, 4:00pm:

[Physics Colloquium: Sid Goyal \(U. Toronto\)](#)

- April 12, 2021, 4:00pm:

[David Hertzog: g-2 First Results](#)

- April 19, 2021, 4:00pm:

## 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](#).

## Chair's Corner (L. Yaffe)

This month, I want to highlight a number of recent contributions. First, thanks to Emeritus Professor Oscar Vilches who has researched and written a nice summary of department history, which is now posted on our website at [this link](#).

Second, congratulations to Assistant Professor Matthew Yaknowitz who has been awarded the 2021 Lee Osheroff Richardson Science Prize, which promotes and recognizes the novel work of young scientists working in low temperatures and/or high magnetic fields in the Americas. See [here](#).

Next, Arstechnica has recently published online the seven part introduction to quantum mechanics written by Professor Miguel Morales. The series attempts, and I believe succeeds, in honestly conveying the fundamentals of quantum mechanics in an accurate but completely math-free manner. Check it out [here](#).

Finally, please note that the next Frontiers of Physics Public Lecture will be presented (virtually) at 6pm on May 18, 2021 by Nobel Laureate William Phillips -- save the date.

## Awards & Grants

- ❖ [Assistant Professor Matthew Yankowitz](#) has been awarded the 2021 Lee Osheroff Richardson Science Prize, which is administered and funded by Oxford Instruments.
- ❖ [Professor Xiaodong Xu](#) received 250K from the US Army Research Office for Ab-Initio Solid-State Quantum Materials: Design, Production, and Characterization at the Atomic Scale.
- ❖ [Professor Anna Goussiou](#) received 55K from the US Department of Energy for US ATLAS Software Development.
- ❖ [Professor Henry Lubatti](#) received 1K from the US Department of Energy for Pixels Front-End Chip.
- ❖ [Assistant Professor Alvaro Chavarria](#) received 81K from the US Department of Energy for Packaging Charged Coupled Devices.

## Department Resources & News

**SPS Lunchbox.** Each **Monday at 12:30 pm**, join other undergraduates to discuss physics and life as a physicist with the department colloquium speaker. Connect to this [Zoom Link](#). This is a great opportunity for community in these unconventional times. Email [uwpssofficers@gmail.com](mailto:uwpssofficers@gmail.com) to get on the SPS mailing list.

**APS Pi Day Wiki Editathon:** On **Sunday, March 14** (9am–noon PDT), at the outset of the [2021 APS March Meeting](#), scientists will come together (virtually) for the **Women Make the World Go Round: A Pi Day Wiki Editathon** on the occasion of Women's History Month. After a quick introduction, we will gather in small groups and create and improve Wikipedia pages about women and other gender minorities in physics. Register [here](#).

Physics Colloquium:  
Stephanie Palmer

- April 26, 2021, 4:00pm:

Physics Colloquium: Eva  
Andrei (Rutgers)

- May 18, 2021, 6:00pm:

Frontiers of Physics Public  
Lecture, William D. Phillips

## SOCIAL MEDIA

[Instagram](#)

[Facebook](#)

[YouTube](#)

[Twitter \(@physicsuw\)](#)

[Vimeo](#)

[Pinterest](#)

## CONTACT US

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[UW launches faculty diversity initiative](#): Read how the UW is investing \$5 million in funding for Seattle campus faculty hiring in the next two years as part of its initiative to advance diversity, equity and inclusion.

[Unhealthy lockdown habits?](#) Give yourself some grace if you've picked up some unhealthy habits during the pandemic.

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## Assorted Talks & Meetings

**March 5-6, 2021:** [2021 PhysTEC Conference](#): Enhance Your Institution's Physics Teacher Education Program. The conference will be entirely virtual and will use QiqoChat. If you are registered, you may access the event [here](#).

**March 13, 2021:** [Pacific Northwest Association for College Physics Virtual Spring Meeting](#). They are still accepting submissions for short and medium length talks (10 or 20 min) and workshops. The theme of this meeting is "what lessons from teaching during a pandemic can improve our teaching moving forward?" They are also interested in hearing about any new and interesting research participants would like to share.

**March 15 to 19, 2021:** [APS March Meeting](#). Attendees representing 30 APS units and committees will convene for the 2021 March Meeting. Register now to join a global audience of physicists, scientists, and students and explore groundbreaking research from industry, academia, and major labs. Late registration: after February 25<sup>th</sup>.

**March 16 at 3:30 pm:** [Provost's Town Hall](#). Join University of Washington Provost and Executive Vice President Mark Richards for a livestream discussion of academic excellence, the impact of the University's work, and advancing diversity, equity and inclusion. Due to unforeseen circumstances, this event has been rescheduled from the originally planned date of March 2.

**April 12 to 16, 2021:** [Young Quantum Information Scientist \(YQIS-6\) conference](#): The Sixth International Conference for Young Quantum Information Scientists will be held online and is hosted by the Facility for Rare Isotope Beams / National Superconducting Cyclotron Laboratory (FRIB/NSCL) at Michigan State University. YQIS provides a venue for young researchers (graduate students, post-doctoral researchers) to share their research and strengthen ties to the quantum information community. YQIS welcomes submissions from all areas of theoretical and experimental quantum information science.

**April 17-20, 2021:** [APS April Meeting](#): Convene with a global audience of physicists, scientists, and students representing 20 APS units and committees and explore groundbreaking research from industry, academia, and major labs, virtually, from anywhere in the world. Regular registration deadline: March 26, 2021.

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## Funding Announcements

Applications open for various [NSF Data Science & Statistics Research opportunities](#) for undergraduates, graduate students, and postdocs. Deadline for summer internships: **March 31, 2021**.

Applications open for the [2021 LG Chem Global Innovation Contest](#), which awards up to \$150K per year. Areas of interest include energy, sustainability, advanced materials, and digital transformation. Deadline: **March 31, 2021**.

Applications open for [Lockheed Martin STEM scholarships](#), which provide \$10K to undergraduate majors in STEM fields. US citizens only. Deadline: **April 1, 2021**.

Applications open for the [2021 Brain Research Foundation Scientific Innovations Award](#) of \$150K. Internal UW deadline: **April 1, 2021**.

The [Association for Advancement of Research on Open Problems in Nuclear Physics & Particle Physics \(OPRA\)](#) solicits applications for grants of up to 70K/year for innovative research in nuclear and particle physics. Deadline **April 15, 2021**.

Applications open for [NRC Research Associateship Programs](#). The National Academies of Sciences, Engineer, and Medicine administers postdoctoral and senior research awards at multiple federal research labs. Application deadline for next review cycle: **May 1, 2021**.

Applications open for the [DOE Office of Science Graduate Student Research Program](#), which provides supplemental awards supporting doctoral thesis research carried out at facilities at DOE national labs (including PNNL). See [here](#) for priority research areas. Applicants must be US citizens or permanent residents. Application deadline: **May 5, 2021**.

NSF solicits letters of intent for its Inclusion across the [Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science \(NSF INCLUDES\)](#) program, which will fund grants of up to 10M. This is [limited submission](#) opportunity with internal UW deadline of **May 6, 2021**.

Applications open for proposals to the [John Templeton Foundation](#), which makes both large (>250K) and small grants in multiple areas one of which is "investigating the fundamental laws and structures of nature through mathematics and physics." See [here](#). Deadline for 2021 funding cycle: **August 20, 2021**.

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## Selected Publications

"Spin Photovoltaic Effect in Magnetic van der Waals Heterostructures",  
T. Song, E. Anderson, K. Seyler, X. Xu et al., <https://arxiv.org/abs/2102.10818>.

"Free-space optical neural network based on thermal atomic nonlinearity",  
A. Majumdar et al., <https://arxiv.org/abs/2102.04464>.

"Forces within hadrons on the light front",  
A. Freese, G. Miller, <https://arxiv.org/abs/2102.01683>.

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## UW Coronavirus Response Information

[Current UW status: Phase 2](#). All University of Washington campuses are in Phase 2 of COVID-19 recovery, in accordance with [Washington's Safe Start plan](#) and the state's [Campus Reopening Guide](#). More information at these [COVID-19 FAQs](#).

[New COVID-19 variants](#): Dr. Alex Greninger, assistant director of UW Medicine's Virology Lab explains the different types of COVID-19 variants and how to reduce the risk of transmission.

[COVID-19 vaccine information](#) (Updated: March 2, 2021): The Washington State Department of Health [timeline](#) for when different populations are eligible to receive COVID-19 vaccines. The University strongly encourages UW employees and students get vaccinated when they become eligible. [UW Medicine is administering vaccines](#), including to UW community members, based on eligibility criteria and supplies.

### COVID-19 vaccination status in Washington state: currently in [Phase 1B – Tier 1](#):

- The vaccine is available to anyone over age 65, and all people over 50 who live in a multigenerational household as defined by the Washington Department of Health.
- On March 2, 2021, [Gov. Inslee announced that Pre-K-12 educators, school staff and licensed childcare providers had been added to Phase 1B – Tier 1](#), effective immediately.
- Members of Phase 1A remain eligible to receive the vaccine. This includes high-risk health care workers, first responders, and staff and residents of long-term care facilities.
- Due to limited supplies from the state, UW Medicine is currently has a [waitlist](#) for first-dose appointments.