



The Physics Observer

June 10, 2022

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UPCOMING EVENTS

Saturday, June 11, 2022 - 9:00 am, Physics-Astronomy Auditorium (RSVP ONLY) & Zoom:
[Physics Graduation Celebration!](#)
Department of Physics
2021-22 Graduating Class and Department Members

June 11, 2022 - 1:30pm Husky Stadium:
[Other Events: University of Washington Commencement](#)
University of Washington Administration and Guests

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 are 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)

Spring quarter is at an end, and the Physics department commencement celebration will take place this Saturday morning, June 11, followed by the main UW ceremony that afternoon. We have 160 B.S. Physics majors graduating this year, as well as 16 M.S. and 18 Ph.D. degree recipients. Congratulations to all!

Spring is always our main hiring and recruiting season. Joining the department next year will be three new Assistant Professors, four Research Assistant Professors, over a dozen Postdoctoral Scholars, and an anticipated 38 entering Ph.D. students. For the first time ever, our entering class of Ph.D. students will be well balanced in gender; underrepresentation of women in Physics has been a long-standing problem and it is great to see real progress being made. This past year we also filled several critical staff positions. Our successful recruitments owe much to the generous support we have received from our donors, the College of Arts and Sciences, and the UW Provost.

Milestones & Arrivals

- ★ [Associate Professor Gray Rybka](#) celebrates 15 years with the University of Washington.

Research Awards & Grants

- ❖ [Assistant Professor Natalie Paquette](#) is a 2022 recipient of a Department of Energy Early Career Award.
- ❖ [Professor Gerald Miller](#) received 330k from the US Department of Energy for Theoretical Nuclear Physics.
- ❖ [Professor Gordon Watts](#) received 100k from the US Department of Energy for the Seattle Snowmass Summer Study 2022.
- ❖ [Associate Professor Gray Rybka](#) received 425k from the US Department of Energy for Experimental Particle-Astrophysics at the University of Washington.

July 14-16, 2022 - 8:00 am:
[Physics Department:
Summitting the Unknown:
New Physics, Celebrating the
Legacy of Ann Nelson](#)

July 20, 2022 - 7:30pm, Kane
Hall 130:

[Frontiers of Physics: The
Surprising Expansion
History of the Universe,
Adam Riess \(2011 Nobel
Laureate in Physics\), Johns
Hopkins University and the
Space Telescope Science
Institute](#)

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- ❖ [Associate Professor Shih-Chieh Hsu](#) received 6k from the US Department of Energy for Pixels Front-End Chip.
- ❖ [Research Assistant Professor Andrew Laszlo](#) received 120k from the National Institutes of Health (NIH) for nanopore sequencing of AEGIS Nucleotides.
- ❖ [Affiliate Professor Margaret Cheung](#) received 18k from both the Pacific Northwest National Laboratory and US Department of Energy for reversible thiol oxidation on protein folding landscapes and characterization of biomolecular complexes from noisy images with machine learning.
- ❖ [Professor Henry Lubatti](#) received 80k from the Brookhaven National Laboratory for HL-LHC Pixels IST.

Department Resources & News

[Graduates of Color in Astronomy and Physics \(GCAP\)](#): This past year, GCAP have been virtually hosting bi-weekly lunches to connect with and support one another. They were happy to welcome prospective students. GCAP are looking forward to our first in-person volunteering event with the Conscious Eatery and celebrating the many accomplishments of members with an outdoor potluck at the end of the year. To help support the GCAP community, gifts to the [GCAP support fund](#) are welcome.

[It's time to renew your parking permits](#): Faculty and staff have until June 30 to renew their parking permits, bike lockers, vanpools, carpools and other products for next year. Learn how to renew your products. If you did not already receive a [fully subsidized U-PASS](#), you may start on July 1 when faculty, professional staff and other UW paid personnel will join classified staff in receiving a fully subsidized U-PASS.

Assorted Talks & Meetings

[Conflict Resolution, Negotiation, and Mediation](#): Conflict Resolution: Negotiation and Mediation is an interactive training where scholars will identify and assess factors that are common to a wide range of negotiations. Participants will consider and practice how these factors can be applied and adapted to specific situations; including negotiations between individuals, organizations, and community groups, and in multi-party negotiations involving public or nonprofit agencies, the private sector, or other interest groups. Live, interactive sessions will be offered in an inclusive environment where diverse perspectives, ideas, and opinions are heard and respected. Schedule: Eight weekly sessions on Zoom every Tuesday from **July 12 to Aug. 30, 2022**, at 10:00 – 11:30 a.m. Pacific. Registration closes **Monday, June 20, 2022**.

June 15-July 8, 2022, Rensselaer Polytechnic, Troy NY. [Cyberinfrastructure Training for Modeling Physical Systems](#): Online boot camp and summer school for advanced undergraduates and graduate students.

Applications open for the [annual Wolfram summer school](#), **July 3-22, 2022** at the WRI headquarters in Champaign, Illinois. Space is limited; early applicants have a higher chance of acceptance.

August 4-5, 2022, Washington DC, [Advancing Graduate Leadership conference, sponsored by the APS, for women and gender minority graduate students and postdocs](#): The in-person AGL Conference will feature professional development training, networking, and a celebration of women and gender minorities' roles in exploring cutting edge science and in shaping our disciplinary culture. Facilitators will include physicists from academia, industry, national laboratories, and non-profit

organizations, bringing a diverse range of personal and professional backgrounds allowing participants to draw from a variety of experiences.

Funding Announcements

Nominations solicited for the [Micius Quantum Prize 2022](#), recognizing contributions to quantum technologies. ~ \$150K. **Deadline June 30, 2022.**

Job Opportunities

- [Lecturer or Senior Lecturer in Physics](#), South Dakota School of Mines.

Selected Publications

- "Efficient magnetometer sensor array selection for signal reconstruction and brain source localization", W.-J. Yeo, S. Taulu, J. N. Kutz, <https://arxiv.org/abs/2205.10925>.
- "Generalized Hall currents in topological insulators and superconductors", D. Kaplan, S. Sen, <https://arxiv.org/abs/2205.05707>.
- "Next-to-leading order scalar contributions to $\mu \rightarrow e$ conversion", V. Cirigliano, et al., <https://arxiv.org/abs/2203.09547>.
- "Prethermalization and entanglement dynamics in interacting topological pumps", M. Rudner, et al., <https://arxiv.org/abs/2103.15831>.
- "Ensemble spin relaxation of shallow donor qubits in ZnO", V. Niaouris, X. Linpeng, M. Viitaniemi, C. Zimmermann, K.-M. Fu, <https://arxiv.org/abs/2111.11564>.
- "Ab initio multiplet plus cumulant approach for correlation effects in x-ray photoelectron spectroscopy", J. Kas, J. Rehr, et al., <https://arxiv.org/abs/2107.10409>.

UW Coronavirus Response Information

Current Covid Conditions

Since the end of March, we have seen elevated case counts in our region, driven by fewer COVID-19 restrictions and the more transmissible Omicron BA.2 sub variant. This has understandably led to rising case counts at the University, and in April, we adjusted our masking guidance to strongly recommend high-quality masks indoors in response to this increase.

Because of high levels of vaccination — including booster shots — and growing levels of immunity due to infections, hospitalizations have not risen at nearly the same rate as in previous waves. As of today, both King and Pierce counties remain in the “medium” level on the Centers for Disease Control’s county-by-county COVID-19 Community Level assessment, and we do not anticipate major changes to University policies between now and the end of the academic year.

Summer and fall health measures

Masks: Our University mask policy continues to be guided by CDC’s community level assessment, state, and local health guidance. Currently, masks are strongly recommended indoors while King and/or Pierce County remain in the “medium” community level CDC category. Should one of the counties move into the “high” category, or we experience increases in campus transmission and/or the emergence of a more virulent variant, our mask policy will be reevaluated. Masks continue to be required in health-care and clinical facilities. Masks should be well-fitted and high quality, such as N95, KN95, KF94 and surgical masks. These types of masks protect the

wearer better than a cloth face covering and we will continue to make them available at no cost on each campus during the coming quarters.

Vaccinations: We will also continue to follow the state's requirements when it comes to vaccinations. Vaccinations remain a condition of employment for personnel and for students. At this time, the state has not required booster shots, but we continue to strongly encourage you to keep your vaccination up to date by being boosted.

COVID-19 case response: UW Environmental Health & Safety will continue to track and respond to COVID-19 cases, including contact tracing when students or personnel report a positive test, and maintain the COVID-19 dashboard. Activating the WA Notify app gives you an additional way to receive exposure notifications — and to anonymously notify others if you test positive.

COVID-19 treatments: UW Medicine currently offers several treatments for COVID-19 patients, as well as a new therapy that is used to prevent infection in people who are at higher risk for severe illness.