



The Physics Observer

June 7th, 2021

In This Issue

- [Welcome](#)
- [Chair's Corner](#)
- [Upcoming Events](#)
- [Milestones & Arrivals](#)
- [Research Awards & Grants](#)
- [Department Resources & News](#)
- [Assorted Talks & Meetings](#)
- [Funding Announcements](#)
- [Selected Publications](#)

UPCOMING EVENTS

- June 9, 2021, 1:00pm:
[Physics Department: Final Exam: Enabling the Next Generation of 21 cm Cosmology: Precision Analysis Techniques for Radio Cosmology Observations](#), Ruby L Byrne (Advisor: Miguel Morales)
- June 10, 2021, 9:00am:
[Final Exam: Improving 21-cm Epoch of Reionization Power Spectrum Limits by Characterizing and Mitigating Radio Frequency Interference](#), Michael Wilensky (Advisor: Miguel Morales)
- June 10, 2021, 2:30pm:
[Final Exam: Probing the symmetry-breaking phases in iron-based superconductors with combined strain, transport and x-ray techniques](#), Joshua Sanchez (Advisor: Jiun-Haw Chu)

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)

Spring quarter wraps up with final exams this week. The department's graduation ceremony on June 12 will, once again, be a virtual Zoom presentation. We have an impressive graduating class of nearly 200 Physics majors receiving of a Bachelor in Science degree, together with a dozen Physics minors and several dozen Ph.D and professional Masters recipients. Congratulations to all!

I want to thank all the donors who have supported, and continue to support, the Department of Physics. Your gifts benefit the department in many ways, large and small, ranging from social gatherings to student awards and fellowships to endowed professorships and chairs. A few highlights from the past year include very generous contributions to both the Arthur B. McDonald and Dr. Ann Nelson endowed professorships, and the creation of a new student support fund by the family of Guy D. Pitzel and a new endowed scholarship fund from the estate of Werner and Ursula Brandenburg. To these, and many other donors, I offer my gratitude and thanks.

Milestones & Arrivals

- ❖ [The Department of Physics Administrator, Michael Kummer](#), celebrated 25 years at the University of Washington.
- ❖ The Department of Physics welcomes the new [IT Director, Emile Bakelaar](#) to the University of Washington.

Research Awards & Grants

- Professor Larry McLerran was awarded the 2021 [Pomeranchuk Prize](#) for achievement in theoretical physics.
- [Professor Jiun-Haw Chu](#) received \$200K from the Air Force Office of Scientific Research (AFOSR) for Strain control of topological quantum materials.
- [Professor Paul Wiggins](#) received \$179,446 from Vanderbilt University for Replication resolved in the living cell: Replisome dynamics stability and structure.

Department Resources & News

In Washington state, for the time being, we remain under Covid guidance mandating 6' distancing and wearing of masks when indoors with other people. However, we have gotten clearance to allow on-site work in the Physics/Astronomy building when all the following conditions apply:

- June 12, 2021
Physics Virtual Graduation Presentation
- June 14, 2021, 10:00am:
[Final Exam: The Debye Mechanism in Superconductors](#), Michael David Smith (Advisor: Anton Andreev)
- June 22, 2021, 3:30pm:
Physics Department:
[General Exam](#), Joseph Merritt (Advisor: Lukasz Fidkowski)
- June 25, 2021, 11:00am
[Final Exam: Quantum complexity of symmetry-protected topological phases of matter](#), Tyler Ellison (Advisor: Lukasz Fidkowski)

[SOCIAL MEDIA](#)

[Instagram](#)

[Facebook](#)

[YouTube](#)

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

[Vimeo](#)

[Pinterest](#)

[CONTACT US](#)

physrecp@uw.edu

amhall2@uw.edu

- 1) on-site work will significantly benefit scholarly or research progress,
- 2) working on-site is voluntary,
- 3) minimum 6' distancing can be strictly maintained,
- 4) masks are used whenever inside the building and not alone in a room,
- 5) Workday Covid attestation is performed (every day!) prior to coming onto campus.

Work in research labs, consistent with the above, has been approved for some time, so the major change is to allow more work in offices, and to no longer need individual pre-authorization from the chair. For students in shared multi-person offices, all our student offices should be large enough to allow two people to be present while maintaining adequate distancing. For offices with three desks, maintaining 6' distancing with three people is generally problematic, so treat max occupancy as two, and if need be someone should go find an empty small conference room or other vacant space to use instead of crowding three into an office.

The above guidance applies regardless of vaccination status, but we very strongly urge anyone who is not already vaccinated to go do so immediately. (The UW medical center is open for walk-in vaccinations 8am-6pm daily. Or visit <http://uwmedicine.org/schedulevaccine> or call 844.520.8700 to book an appointment.)

For those first year graduate students who have not yet been in the Physics/Astronomy building and not had any keys issued, if you wish to work on-site you will need to fill out the [key request form](#) and send the completed form to physrecp@uw.edu to arrange a specific time and day to come into the Physics main office.

Required COVID-19 safety training: The University's COVID-19 Safety Training must be completed by all University personnel before or upon returning to work on site at a University location, even if personnel have been performing critical work on site at a UW work location.

Phishing emails may target you with fake job offers: If you are a LinkedIn member, beware of unsolicited job offers that contain attachments or links. Any attachment, including Word documents, PDFs and Zip files, can contain malware.

Assorted Talks & Meetings

2022 AAAS Annual Meeting Symposia: proposals are solicited for scientific sessions and workshops. Details [here](#). Proposal submission deadline: **June 17, 2021**.

Sunday, June 20, 9am–noon PDT: [APS Juneteenth Freedom Day Wiki Editathon](#). Join in and help create and edit Wikipedia pages for biographies about Black physicists. All welcome to participate, regardless of subject field or Wikipedia editing experience.

June 23 - July 16, 2021: Rensselaer Polytechnic Institute boot camp and summer school on computational physics, [“Advanced Cyberinfrastructure Training for Modeling Physical Systems”](#) with particular emphasis on applications that require high performance computing. This on-line boot camp/summer school is aimed at advanced undergraduates and all levels of graduate students. Apply [here](#).

June 28 - July 1, 2021: [AAPT New Faculty Workshop](#), designed to assist faculty in the first few years of teaching appointments. Register [here](#).

Funding Announcements

Applications open for James S. McDonnell Foundation [21st Century Postdoctoral Fellowship Awards in Understanding Dynamic and Multi-scale Systems](#). \$200K over 2-3 years. Applicants should be graduate students who are in the final stages of completing their Ph.D. and looking to add new dimensions to their graduate training involving theoretical and mathematical tools contributing to the study of complex nonlinear systems. Deadline **June 11, 2021**.

NSF has recently issued a new program solicitation ([NSF 21-573](#)) "Mathematical and Physical Sciences Ascending Postdoctoral Research Fellowships (MPS-Ascend)" whose

goal is to broaden the participation of groups that are underrepresented in MPS fields in the U.S. More information [here](#). Application deadline **June 15, 2021**.

Applications open for the [Army Research Laboratory Distinguished Postdoctoral Fellowship](#). 100K annual stipend. Applicants must be within 5 years of PhD. Application deadline **June 15, 2021**.

Applications open for [Moore Foundation Fundamental Physics Innovation Awards](#). The Gordon and Betty Moore Foundation Fundamental Physics Innovation Awards hope to stimulate ideas on innovative ways in which emerging technologies can be used to address pressing problems in the physics of fundamental particles and interactions. See more info [here](#). Application deadline **July 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: **August 1, 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**.

Applications open for the [Fermi National Accelerator Lab - URA Visiting Scholars Program](#). \$50K to support students or faculty working at Fermilab for up to a year. Deadline: **August 26, 2021**.

Applications for the next cycle of [Royalty Research Fund](#) grants are due to the college by **September 23, 2021**. Note: teaching faculty are eligible to be PI on an RRF grant, while acting faculty or faculty with temporary appointments may be paid for up to 2 months on RRF grants even though they are not eligible to be PI or Co-I.

Job Opportunities

- Assistant Professor in Subatomic Physics, University of Manitoba, Department of Physics and Astronomy. [Apply here](#).
- Post-Doctoral Associate in Plasma Physics/Applied Mathematics, University of Maryland. [Apply here](#).
- Postdoctoral Scholar in Machine Learning of Sub-Grid Microphysical and Turbulent Processes for Next-Gen Climate Modeling, University of California Irvine. [Apply here](#).
- Postdoctoral Scholar in Astronomy, University of California Berkeley. [Apply here](#).
- Two year Visiting Assistant Professor of Physics at Lewis & Clark College, Department of Physics. [Apply here](#).
- Applications solicited for tenure-track positions at all levels at Ahmedabad University, a young private university in Ahmedabad, India. Information [here](#).

Selected Publications

“Optimal Evolutionary Decision-Making to Store Immune Memory”, O. Schnaack, A. Nourmohammad, <https://elifesciences.org/articles/61346>.

“Dynamics of B cell repertoires and emergence of cross-reactive responses in patients with different severities of COVID-19”, Z. Montague, H. Lv, J. Otwinowski, W. DeWitt, G. Isacchini, A. Nourmohammad, et al., [https://www.cell.com/cell-reports/fulltext/S2211-1247\(21\)00518-0](https://www.cell.com/cell-reports/fulltext/S2211-1247(21)00518-0).

“A new look at the proton sea”, J. Miller, Physics Today, [Search and Discovery, May 2021](#).

“Three-particle finite-volume formalism for $\pi^+\pi^+K^+$ and related systems”, T. Blanton, S. Sharpe, <https://arxiv.org/abs/2105.12094>.

UW Coronavirus Response Information

On Thursday May 13th, the Board of Deans and Chancellors, President's Cabinet, and HR partners and administrators received telework guidance for staff covering the timeframe after Sept. 10, 2021. It was also posted to <https://www.washington.edu/coronavirus/> and is accompanied by [new UWHR resources on the return to onsite work and telework](#).

Masks still required, employee vaccine requirement under discussion

The Washington State Department of Labor and Industries is still developing rules in response to new CDC guidance easing masking and [distancing requirements](#) for fully vaccinated individuals. The [UW's existing face covering](#) policy and distancing requirements will remain in effect until at least June 30. **Regardless of your vaccination status, when at a UW campus or facility please continue to wear a mask indoors when other people are present and when you are in common areas, and outdoors when you can't maintain a six-foot distance from others.**