



The Physics Observer

May 5th, 2020

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UPCOMING EVENTS

- June 13, 2020:
[Physics Virtual Graduation](#)
- July 8-July 10, 2021:
[Summitting the Unknown, Celebrating the Legacy of Ann Nelson](#)
- July 11-20, 2021
[Snowmass 2021: High Energy Physics Community Planning](#)

GENERAL & FINAL EXAMS

- May 15, 2020, 1:00 pm:
[Hannah Binney General Exam](#) (Advisor: David Hertzog) via Zoom
- May 28, 2020, 2:30 pm:
[Huangyu Xiao General Exam](#) (Advisor: Stephen Sharpe) via Zoom
- June 5, 2020, 4:00 pm:
[Ibrahim A Abdurrahman](#)

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)

Despite the stress of the Covid pandemic which affects everyone, halfway through spring quarter the good news is that the department faculty, students and staff are coping remarkably well. Online instruction proceeds apace and, by all reports, is working fairly well. Much experimental research is on standby, but planning is underway for gradual reopening.

Our faculty hiring efforts this year have been very successful, although most arrivals are delayed until autumn 2021. At that time, we look forward to the arrival of Assistant Professors Natalie Paquette (quantum field and string theory) and Masha Baryakhtar (particle phenomenology), plus Acting Assistant Professor Quentin Buat (high energy experiment). Associate Professor Mark Rudner (condensed matter theory) will be joining us next spring. One offer remains outstanding.

Research Awards and Grants

- ❖ [Associate Professor Arka Majumdar](#) has received a 2020 Young Investigator Award from the Office of Naval Research. Also, Arka Majumdar, together with ECE Professor Karl Bohringer and the optics startup Tunoptix, has been awarded a 223K small business technology transfer grant from [DARPA](#) to develop meta-surface lenses for imaging in satellites.
- ❖ [Kendall Crane](#), a Physics and Astronomy major, received the Mary Gates Research Scholarship.
- ❖ [Physics major Nathan June](#) was named one of [The Husky 100](#).
- ❖ [Associate Professor Kai-Mei Fu](#) and Professor Lukas Chrostowski (UBC) received a UBC-UW Collaborative Research Mobility Award (\$7,690) to host workshops and a summer school in Quantum Information Science and Technology.
- ❖ [Professor Gordon Watts](#) received a 17K grant for the US ATLAS IRIS-HEP Institute Buyout 2020 from Brookhaven National Laboratory.
- ❖ [Professor Emeritus John Rehr](#) received a 128K grant for the Theory Institute for Materials and Energy Spectroscopies (TIMES) from SLAC National Accelerator Laboratory.
- ❖ [Professor Subhadeep Gupta](#) received a 93K grant for Precision Contrast Interferometry with Ytterbium Bose-Einstein Condensates from the National Science Foundation.
- ❖ [Associate Professor Gray Rybka](#) received a 364K grant for Experimental Particle-Astrophysics at the University of Washington from the US Department of Energy.
- ❖ [Professor Xiaodong Xu](#) received a 130K grant for Ab-Initio Solid State Quantum Materials: Design, Production and Characterization at the Atomic Scale from Massachusetts Institute of Technology.
- ❖ [Professor Gerald Seidler](#) received a 40K grant for X-ray characterization of nickel-rich battery materials from Argonne National Laboratory.

General Exam (Advisor:
Aurel Bulgac), TBA

SEMINARS

➤ May 11-June 5, 2020:
INT Program INT-20-1c
Chirality and Criticality:
Novel Phenomena in
Heavy-Ion Collisions

➤ May 21, 2020:
ABC Physics,
(Atomic/Bio/Condensed
Matter): [Virtual] TBA,
David Reis
(Stanford/PULSE)

➤ May 28, 2020:
ABC Physics,
(Atomic/Bio/Condensed
Matter): [Virtual] TBA,
Young-June Kim (Univ.
Toronto)

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Assorted Talks and Meeting Announcements

University Washington has been hosting a global journal club seminar series for the XAFS community. You can find the schedule of talks [here](#). Contact Gerald Seidler (seidler@uw.edu) for more information.

INT has weekly online S@INT seminars. See [here](#).

There is a [virtual AMO series](#) hosted by Stanford University. The Virtual AMO Seminar will be held weekly on **Friday at 3 pm EDT / 12 pm PDT**. It can be accessed at this [Zoom link](#) and at this [YouTube channel](#) if the webinar is full.

Particle Physics Seminar: [Novel tau identification using deep-learning methods](#), Hadar Cohen, TAU, **May 7th, 2020, 10:00 am**, [Zoom](#), explores the use of advanced deep learning methods for the purpose of improving the tau trigger algorithms in ATLAS. In this talk, Hadar will present two methods, a CNN acting on the calorimeter data in an image like way, and a DeepSet network operating on a space-point data arranged as a graph.

May 11, 2020, 12:00 pm: Vir Bulchandani, UC Berkeley: [Digital herd immunity and COVID-19](#), Princeton University. Zoom meeting ID: 96787998386.

May 11-12, 2020: [Second Nuclear and Particle Theory Meeting](#), Washington University in Saint Louis. The objective of this second meeting is to discuss and exchange ideas on recent research topics in nuclear and particle physics, with the special focus on dense matter in neutron stars and binary neutron star mergers. This meeting will be conducted on Zoom. The link will be sent to all participants.

Pheno & Vino Seminar, Jan Heisig, CP3 UC Louvain, "[Probing dark matter with cosmic-ray antiprotons](#)", **May 12, 2020, 4:00 pm**, [Zoom link](#).

Particle Physics Seminar: [The Nuclear Photonics lab at Tel-Aviv University](#), Dr. Ishay Pomerantz, TAU, **May 14, 2020, 10:00 am**, [Zoom link](#).

October 14-16, 2020: Princeton Gravity Initiative: [PCTS Workshop, Exploring Supermassive Black Holes](#), Registration is [open](#).

Job Opportunities

- ❖ Assistant Professor of Physics at University of New Brunswick. See job description [here](#).
- ❖ Lecturer in Materials Science and Engineering at University of California-Irvine. See job description [here](#).
- ❖ Lecturer in Physics at University of California-Berkeley. See job description [here](#).
- ❖ Lecturer in Physics at University of California-Los Angeles. See job description [here](#).
- ❖ Research Assistant Professor in Physics and Astronomy at University of Pittsburgh. See job description [here](#).
- ❖ Assistant Professor of Astrophysics at Massachusetts Institute of Technology. See job description [here](#).
- ❖ Assistant Professor of Soft Condensed Matter and Biological Physics at Massachusetts Institute of Technology. See job description [here](#).
- ❖ Assistant Professor of Theoretical Physics at Massachusetts Institute of Technology. See job description <https://academicjobsonline.org/ajo/jobs/14309>

Selected Publications

- ❖ “[Flavour Lattice Averaging Group \(FLAG\) Review 2019](#)”, S. Sharpe et al, and the cover article of European Physical Journal C: See cover [here](#).
- ❖ “[Electrically tunable correlated and topological states in twisted monolayer-bilayer graphene](#)”, M. He, Z. Fei, D. Cobden, X. Xu, M. Yankowitz et al.
- ❖ “[Programmable Phase-change Metasurface for Multimode Photonic Convolutional Neural Network](#)”, Mo Li et al.
- ❖ “[A Unified Calibration Framework for 21 cm Cosmology](#)”, R. Byrne, M. Morales, B. Hazelton, M. Wilensky.
- ❖ “[Emergence of a pseudogap in the BCS-BEC crossover](#)”, A. Richie-Halford, J. Drut, A. Bulgac.

UW Coronavirus Response Information

- ❖ Be wary of scams aimed at remote work and those that play into COVID-19 fears. Read more in the “[Scams Aimed at Remote Work](#)” article published by the Office of the Chief Information Security Officer found on [ciso.uw.edu](#).
- ❖ Use Ally in Canvas to ensure the accessibility of your course’s online content. This resource allows you to generate alternative formats of course files that work for all students, including those with disabilities. Learn more at [itconnect.uw.edu](#) under “[Ally accessibility tool for Canvas](#)”.
- ❖ FedEx Express has implemented a temporary surcharge on all international parcel and freight shipments beginning **April 6th**.
- ❖ Package deliveries that can be postponed should be at this point. If this is not an option, it is recommended that deliveries should be re-routed and shipped to your home address. If this is still not an option, UW Mailing Services has offered to receive packages from UPS, FedEx, and DHL that are not hazardous or oversized. Include your name and department/building information. Their address is:
3900 7th Ave NE
Seattle, WA 98195

Community Relief Efforts in Response to COVID-19

- ❖ Coronavirus is impacting local blood supplies. [Bloodworks NW](#) and the [American Red Cross](#) are short of donors, which will have serious consequences that put patients at risk. Healthy, eligible individuals can make an appointment to donate today.
- ❖ Give to your favorite [food bank](#). The need is growing, and donations are down by 70%.
- ❖ Give time through volunteering. Visit United Way of King County’s COVID volunteer [site](#) or Volunteer Match-Seattle’s [site](#).
- ❖ Check out [All In Seattle](#) for links to great organizations you can support.
- ❖ This [article in the Seattle Times](#) has wonderful resources.
- ❖ All local nonprofits have been impacted by COVID-19. Consider making a direct donation to your favorite organization(s) or make a longer-term contribution through UW’s Combined Fund Drive through the [MyCFD online portal](#).