



The Physics Observer

Feb 6, 2024

In This Issue

[Welcome](#)
[Chair's Corner](#)
[Research Awards & Grants](#)
[Assorted Talks & Meetings](#)
[Funding Announcements](#)
[Selected Publications](#)

EVENTS

**Tuesday, February 6,
2024 - 3:00pm,
PAT-C421**
[Particle Theory: Chiral
gauge theory at the
boundary between
topological phases](#)
David B. Kaplan,
University of Washington

**Wednesday, February
7, 2024 - 1:30pm,
PAT-C520**
[InQubator for Quantum
Simulation \(IQUS\):
Simulating fermionic
scattering using a digital
quantum computing
approach](#)
Yahui Chai, DESY

**Tuesday, February 13,
2024 - 3:00pm,
PAT-C421**

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, physrecp@uw.edu.

Chair's Corner (L. Yaffe)

For something different this month, I want to recommend this column by David Brooks in the NY Times, "[How to Save a Sad, Lonely, Angry and Mean Society](#)". It speaks to the role of arts in teaching one how to understand others, including this bit: "The hard sciences help us understand the natural world. The social sciences help us measure behavior patterns across populations. But culture and the liberal arts help us enter the subjective experience of particular people: how this unique individual felt; how this other one longed and suffered. We have the chance to move with them, experience the world, a bit, the way they experience it." Give it a read. And here in Seattle, or wherever your travels take you, visit art museums!

Awards & Grants (past 7 months)

- Associate Professor Samu Taulu received 43K from UCSF for Quantitative bSSFP MRI.
- Professor Kai-Mei Fu received 241K from BNL for C2AQ.
- Professor Xiaodong Xu received 100K from Clarkson for Photo-Spintronics.
- Associate Professor Lukasz Fidkowski received 254K from NSF for Topological Phases.
- Assistant Professor Arthur Barnard received 293K from the Washington Research Foundation for Scanning screening.
- Professor Kai-Mei Fu received 80K from Sandia for NV Quantum Nodes.
- Professor Xiaodong Xu received 816K from the DOE for EFRC.
- Professor Anna Goussiou received 72K from the DOE for US ATLAS Software Development.
- Professor Henry Lubatti received 153K from the DOE for HL-LHC Pixels IST.
- Professor Xiaodong Xu received 840K from the DOE for 2D Quantum Matter.
- Professor Shih-Chieh Hsu received 5.1M from NSF for A3D3.
- Professor Shih-Chieh Hsu received 100K from the NSF for Meta-Workshop on AI to Accelerate Scientific and Engineering Discovery.

Particle Theory: Resurgent
Extrapolation and QFT:
Mining Perturbation
Theory for
Non-perturbative
Information

Gerald Dunne, University
of Connecticut

**Wednesday, February
14, 2024 - 1:30pm,
PAT-C520**

InQubator for Quantum
Simulation (IOuS):
Tapered Quantum Phase
Estimation

Andrew Sornborger, Los
Alamos National Lab &
Quantum Science Center

**Monday, February 26,
2024 - 4:00pm,
PAA-A102**
Physics Colloquia: TBD

EXAMS

Friday, February 23,
2024 - 1:00pm, PAB-B405
General Exam,
Chengxuan Li

Monday, February 26,
2024 - 9:00am, PAT C-520
General Exam,
Heonjoon Park

Monday, March 4,
2024 - 9:30am, PAB
B-042
General Exam,
Yiyun Dong

Friday, March 8, 2024 -
10:30am, PAT-C610C
**Final Exam: Nanopore
sequencing of ALIEN
DNA,**
Chris Thomas

- Assistant Professor Natalie Paquette received 450K from the Simons Foundation of the Simons Collaboration on Celestial Holography.
- Assistant Professor Masha Baryakhtar received 875K from DOE for Lighting Dark Sectors.
- Assistant Professor Joaquin Turiaci received 50K from DOE for Quantum Black Holes.
- Assistant Professor Justin Kaidi received 40K from DOE for Non-invertible Symmetries.
- Professor Xiaodong Xu received 410K from DOE for Exciton Dynamics.
- Professor Henry Lubatti received 750K from NSF for EPE Physics.
- Professor Martin Savage received 2.1M from DOE for Simulation InQubator.
- Professor Jens Gundlach received 220K from NSF for LIGO 22.
- Professor Gerald Miller received 650K from DOE for Nuclear Theory.
- Professor Deep Gupta received 181K from NSF for Enhanced Sensing w/Yb.
- Professor Jens Gundlach received 595K from NIH for Nanopore SMPS.
- Professor Jens Gundlach received 1.1M from NSF for Tests of Gravity 22.
- Assistant Professor Natalie Paquette received 197K from DOE for Math of Holography.
- Professor Kai-Mei Fu received 4.4M from the AFOSR for Unveiling and Controlling Quantum Point Defects in Oxides.
- Professor Boris Blinov received 154K from NSF for Quantum Jumps.
- Associate Professor Armita Nourmohammad received 368K from NIH for Immune Shape Space.
- Associate Professor Armita Nourmohammad received 180K from NSF for Immune Function.

Assorted Talks & Meetings.

- ❖ March 3-8, 2024, APS March meeting, Minneapolis, MN.
- ❖ April 3-6, 2024, APS April meeting: Quarks to Cosmos, Sacramento, CA.
- ❖ June 9-22, 2024, Quantum Connections School, Stockholm, Sweden.
- ❖ July 15-26, 2024, US Quantum Information Summer School, ORNL, Tennessee.

Funding Announcements

- Applications solicited for Winter 2024 Student Technology Fee proposals. Priority deadline **February 11, 2024**.
- Applications solicited for 2024 NSF A3D3 Institute Postbaccalaureate Fellowship. Deadline **February 15, 2024**.
- Applications solicited for Gordon and Betty Moore Fellows in Materials Synthesis, \$1.2M. Deadline **February 16, 2024**.
- Applications solicited for Packard Fellowships for Science and Engineering, \$875K. Internal UW deadline **February 21, 2024**.

SOCIAL MEDIA

[Instagram](#)

[Facebook](#)

[YouTube](#)

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

- Applications solicited for French-American Cultural Exchange (FACE) [transatlantic research partnership grants](#), \$20K, early career applicant pairs. Deadline **February 29, 2024**.
- Applications solicited for [NSF Research Traineeship \(NRT\) Program](#), \$2M. Internal UW deadline **March 6, 2024**.
- Applications solicited for [NSF Innovations in Graduate Education \(IGE\) Program](#), \$500K-1M. Internal UW deadline **March 6, 2024**.
- Applications solicited for [Washington Research Foundation planning grant](#), \$200K. Deadline **March 11, 2024**.
- Pre-proposals solicited for NSF [Partnerships for Innovation \(PFI\)](#) program proposals, \$1M. Internal UW deadline **March 13, 2024**.
- Nominations solicited for the Gravity Research Foundation [Essays on Gravitation](#) prize. Deadline **March 31, 2024**.
- Nominations solicited for the [Breakthrough Prize in Fundamental Physics \(\\$3M\) and New Horizons in Physics Prizes \(\\$100K\)](#). Deadline **April 1, 2024**.
- Applications solicited for [Northwest Nanotechnology Infrastructure seed grants](#), up to \$10K. Deadline **April 15, 2024**.

Job Opportunities

- [Full-time associate editor](#), PRX Quantum
- [Professor and Director of the California NanoSystems Institute](#), UCSB
- [Visiting Assistant Professor](#), Physics and Astronomy, Carleton College
- [Assistant Professor](#), The Chinese University of Hong Kong
- [Senior Lecturer](#), Vanderbilt University

Selected Publications

Line operators, vortex statistics, and Higgs versus confinement dynamics, L. Yaffe, et al., [arXiv:2401.17489](#).

Quantum Oscillations Measurement of the Heavy Electron Mass near the van Hove Singularity in a Kagome Metal, E. Rosenberg, J. DeStefano, C. Hu, Y. Shi, J.-H. Chu, et al., [arXiv:2401.14699](#).

Spin drag mechanism of giant thermal magnetoresistance, A. Andreev, et al., [arXiv:2401.14455](#).

Quantum Simulations of Hadron Dynamics in the Schwinger Model using 112 Qubits, R. Farrell, M. Illa, A. Ciavarella, M. Savage, [arXiv:2401.08044](#).