



The Physics Observer

Sep 11, 2025

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EVENTS

Tuesday, September 23rd, 2025 - 11:30am,
McDermott Plaza
Welcome Back BBQ

Monday, September 29th, 2025 - 4:00pm,
PAA 102
[Physics Colloquium: From the Sky to the Lab: New searches for the lightest particles](#)
Masha Baryakhtar,
University of Washington

Tuesday, September 30th, 2025 - 9:30am, PAT C-520
InQubator for Quantum Simulation (IQUS):
[Noncontextual Hamiltonians](#)
Peter Love, Tufts University

EXAMS

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 Letter

Dear Friends,

I hope the summer has provided you an opportunity for some rest and rejuvenation. This past year has been a challenging one - University-wide fiscal pressures and turbulence in science funding from the federal level have stressed us. It is gratifying to see that in spite of these unprecedented adversities, our department's research and teaching missions have continued strong, thanks to all the efforts from our faculty, students, and staff.



Congratulations to our graduates - nearly 100 Physics BS degrees, 42 MS and 26 PhDs awarded this past year. We are proud of you as you move on to form part of the next generation of scientists, engineers, professionals and leaders.

In May, we honored several students and faculty for excellence in academics and research at our annual Awards ceremony. Award details [here](#).

Research awards and recognition were aplenty this year. Several of these and more are captured in news articles on our webpage ([link](#)) and recent research awards are listed in the following section of this Newsletter. Prof. David Hertzog became a fellow of the National Academy of Sciences this past year, increasing the number in our current faculty to 3 and our overall departmental count (including emeriti) to 12! I also take this opportunity to thank Prof. Xiaodong Xu (NAS Discovery Award) and Prof. David Kaplan (Tomassoni-Chisesi Prize) for generously donating portions of their prize money to the department.

Wednesday, September
17th, 2025 - 10:00am,
BAG 464
([Agam Shayit](#))

Tuesday, September
23rd, 2025 - 2:00pm, PAT
C520
([Nicolas Williams](#))

SOCIAL MEDIA

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As we enter the challenges of the next academic year, let us reflect not only on our individual strengths, but also on the excellence in the physics community that surrounds us. We will be stronger when we work together, coherently and cohesively.

Thanks to all faculty, students, and staff, for everything you do for the department. Thanks also to all our donors for your support. I wish everyone a pleasant remainder of summer!

Best,

-Deep Gupta
Physics Chair

Awards & Grants

March:

→ Professor Margaret Cheung-Wyker received \$100,000 from PNNL for NW-BRaVE

April:

→ Professor Marilena Loverde received \$749,769 from Simons Foundation for DUSC Simons

→ Professor Subhadeep Gupta received \$106.362 from AFOSR for FERMI DYNAMICS

May:

→ Professor Masha Baryakhtar received \$251,000 from DOE for Lighting Dark Sectors

→ Professor Matthew Yankowitz received \$150,000 from DOE for STRAIN STM DOE

→ Professor Stephen Sharpe received \$676,000 from DOE for PArticle Theory

→ Professor John Rehr received \$130,000 from SLAC for TIMES

June

→ Professor John Rehr received \$50,000 from PNNL for SPEC REHR

→ Professor Armita Nourmohammad received \$366.490 from NIH for IMMUNE SHAPE SPACE

→ Professor Subhadeep Gupta received \$60,000 from ONR for Large Area IFM Sensors

→ Professor Subhadeep Gupta received \$81,094 from ISB for XIA RA ISB

→ Professor Mathhew Yankowitz received \$124,446 from NSF for TOPOLOGY NSF CAREER

July

→ Professor David Hertzog received \$735,000 from DOE for CENPA

→ Professor Armita Nourmohammad received \$180,000 from NSF for IMMUNE FUNCTION

→ Professor Shih-Chieh Hsu received \$32,500 from UCSC for TRAINING CMPTG HEP PSC

→ Professor Henry Lubatti received \$8,983 from BNL for BNL Twomey

→ Professor Natalie Paquette received \$212,000 from DOE for MATH OF HOLOGRAPHY

August

→ Professor Xiaodong Xu received \$750,000 from LBL for Anyon

→ Professor Xiaodong Xu received \$438,701 from DOE for EXCITON DYNAMICS20

→ Professor Paul Wiggins received \$231,707 from NSF for Metabolic Oscillations

→ Professor Shih-Chieh Hsu received \$28,121 from NSF for ATLAS Pixel

→ Professor Gordon Watts received \$48,261 from BNL for RSE for ATLAS

→ EPE Group received \$460,000 from NSF for EPE Physics 25-28

→ Research Scientist Fernando Vila received 640,000 from NSF for Mobile Metal Ions

→ Professor Gray Rybka received \$210,000 from NSF for ADMX Vera

Milestones & Arrivals

June:

- ★ Please welcome Instrument Shop Manager, [Nicholas Shwampe](#)!

July

- ★ Please welcome Payroll Coordinator, [Rebecca Johnson](#)!
- ★ Professor [Jiun-Haw Chu](#), celebrated 10 years with UW!
- ★ Research Scientist [Cristiano Alpigiani](#), celebrated 10 years with UW
- ★ Research Scientist [Steven Troy](#), celebrated 20 years with UW!

August

- ★ Professor [Xiaodong Xu](#), celebrated 15 years with UW!
- ★ Professor [Boris Blinov](#), celebrated 20 years with UW!

September

- ★ Professor [Paul Wiggins](#), celebrates 15 years with UW!
- ★ Program Operations Specialist [Huimei Wu](#), celebrates 25 years with UW!
- ★ Professor [Paula Heron](#), celebrates 30 years with UW!
- ★ Professor [Peter Shaffer](#), celebrates 40 years with UW!
- ★ Professor [Gerald Miller](#), celebrates 50 years with UW!

Assorted Talks & Meetings.

- ❖ September 8th, [Quantum Computing: Transforming Healthcare | American Physical Society](#), Webinar
- ❖ September 11th, [Q3 American Physical Society Community Meetup | American Physical Society](#), Austin, TX
- ❖ September 19th, [September Joint JNIPER/Science Trust Project Community Hour | American Physical Society](#), Webinar
- ❖ September 25th-26th, [Conference for Graduate Women and Gender Minorities in Physics | American Physical Society](#), Washington, DC

Job Opportunities

- [Machine Director job with Leaders International Executive Search | 41899973](#), Canadian Light Source
- [Science Assistant Professor, Physics job with AdventHealth University | 41909397](#), AdventHealth University
- [Pulsed Magnet Engineer job with Lund University | 41908687](#), Lund University
- [Lecturer in Discipline- Columbia Physics job with Columbia University in the City of New York | 41902486](#), Columbia University
- [FIB-SEM Lab Manager job with University of Oregon | 41901361](#), University of Oregon
- [Environmental Services Technician job with Wingspan Care Group | 41909572](#), Wingspan Care Group

Selected Papers

- *Optical Control of Integer and Fractional Chern Insulators*, William Holtzmann, Weijie Li, Eric Anderson, Jiaqi Cai, Heonjoon Park, Chaowei Hu, Jiun-Haw Chu, Di Xiao, Xiaodong Xu et al., <https://arxiv.org/abs/2508.18639>
- *Where does non-Universality in Assembly Bias come from?*, Charuhas Shiveshwarkar, Marilena Loverde et al., <https://arxiv.org/abs/2508.11798>
- *The real-time data processing and acquisition system for Project 8 Phase II*, A. Ashtari Esfahani, R. Cervantes, C. Claessens, J. Hartse, E. Novitski, R. G. H. Robertson, G. Rybka, B. A. VanDevender et al., <https://arxiv.org/abs/2506.22392>
- *Universal Magnetic Phases in Twisted Bilayer MoTe₂*, Weijie Li, Christiano Wang Beach, Will Holtzmann, Heonjoon Park, Jiun-haw Chu, Di Xiao, Xiaodong Xu et al., <https://arxiv.org/abs/2507.22354>
- *X-ray Emission Spectropolarimetry of Strongly Anisotropic Single Crystal Systems using a Rowland Circle Geometry*, Jared E. Abramson, Charles A. Cardot, Josh J. Kas, John J. Rehr, Gerald T. Seidler et al., <https://arxiv.org/abs/2507.18839>
- *Superconductivity from dual-surface carriers in rhombohedral graphene*, Manish Kumar, Derek Waleffe, Anna Okounkova, Matthew Yankowitz et al., <https://arxiv.org/abs/2507.18598>
- *Impact of cavities on the detection of quadratically coupled ultra-light dark matter*, Michael P. Ross, Gray Rybka et al., <https://arxiv.org/abs/2507.16526>
- *On the Impossibility of Obtaining Time-Independent, Three-Dimensional, Spherically-Symmetric Densities of Confined Systems of Relativistically Moving Constituents*, Gerald A. Miller, <https://arxiv.org/abs/2507.14388>
- *Photogalvanic effect in hydrodynamic flows of nonreciprocal electron liquids*, L. Bonds, A. V. Andreev et al., <https://arxiv.org/abs/2507.06933>
- *All-Dielectric Metasurface with a Two-Dimensional Locally Flat Photonic Band*, Christopher Munley, Arnab Manna, Arthur Barnard, Arka Majumdar et al., <https://arxiv.org/abs/2506.20871>