



The Physics Observer

Sep 12, 2024

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EVENTS

Friday, September 13, 2024 - 1:30am to 2:30pm, PAB B421

[Quantum stochastic resonance of individual Fe atoms](#)

Sue Coppersmith,
University of New South Wales

Thursday, September 19, 2024 - 12:30pm, PAB B421

[Heavy metals, cheap lasers, and precision measurements of atomic structure](#)

Protik Majumdar,
Williams College

Tuesday, September 24, 2024 - 12pm, PA

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 (S. Gupta)

It's nearly time to say goodbye to Summer and hello to a new Autumn quarter. The new academic year will soon bring a new cohort of students and postdocs. The search for a new faculty member in experimental atomic physics is also underway.

We thank Kayla Troske for her contributions to the department as front office Administrative Assistant, and wish her well in her new position in the Applied Physics Laboratory. We welcome Lina Nguyen as the new Administrative Assistant in the front office!

Congratulations to Assistant Professor Elise Novitski, recipient of a DOE-Early Career Award for the project "Precision Cyclotron Radiation Emission Spectroscopy for direct neutrino mass measurements" and to Professor Xiaodong Xu, recipient of a Vannevar Bush Faculty Fellowship for the project "Realizing Non-Abelian Anyons".

Milestones & Arrivals

- ★ Professor [Anton Andreev](#) celebrates 20 years with UW!
- ★ Instrument Maker [Peter Hirtle](#) celebrates 20 years with UW!
- ★ Research Assistant Professor [Andrew Laszlo](#) celebrates 15 years with UW!
- ★ Associate Professor [David Smith](#) celebrates 15 years with UW!
- ★ Associate Professor [Samu Taulu](#) celebrates 10 years with UW!
- ★ Professor [Gordon Watts](#) celebrates 25 years with UW!

- ★ Please welcome [Lina Nguyen](#), the new Administrative Assistant in the front office!

Courtyard

Welcome Back BBQ!

Thursday, September
26, 2024 - 12:30pm, PAB
B421

Experiments with
Strontium Rydberg States:
Spatial Correlations and
Synthetic Dimensions
Yi Lu, Rice University

EXAMS

Monday, September 23,
2024 - 3:00pm, PAT
C-421
(Yasmene Elhady)

SOCIAL MEDIA

Instagram

Facebook

YouTube

Awards & Grants

- Professor Boris Blinov received \$172K from NSF for Quantum Jumps.
- Research Scientist Bryna Hazelton received \$570K from NSF for pyFHD ATI.
- Associate Professor Armita Nourmohammad received \$370K from NIH for Immune Shape Space.
- Professor Gordon Watts received \$40K from BNL for the ATLAS Summer Meeting.
- Associate Professor Paul Wiggins received \$210K from NSF for Metabolic Oscillations.
- Professor Xiaodong Xu received \$63K from Clarkson for Photo-Spintronics 23.
- Research Assistant Professor Andrew Laszlo received \$675K from Moore Foundation for MoorFound MspA.
- Professor Subhadeep Gupta received \$125K from ONR for Large Area IFM Sensors.
- Professor David Hertzog received \$1.487M from DOE for Experimental Nuclear Physics.
- Affiliate Professor Margaret Cheung received \$83K from PNNL for CO2 capture.
- Assistant Professor Alvaro Chavarria received \$329K from NSF for DAMIC-M Base 2023.
- Professor Jens Gundlach received \$518K from NIH for Nanopore Sequencing.
- Professor Stephen Sharpe received \$485K from DOE for Particle Theory.
- Associate Professor Samu Taulu received \$37K from UCSF for Quantitative bSSFP MRI.
- Professor Xiaodong Xu received \$1.68M from DOE for 2D Quantum Materials.
- Professor Henry Lubatti received \$29K from BNL for BNL Twomey.
- Professor Shih-Chieh Hsu received \$84K from BNL for ATLAS Pixel.
- Professor Anton Andreev received \$390K from NSF for Topological Conductors.
- Professor Stephen Sharpe received \$45K from Indiana University for ExoHad Collaboration.
- Associate Professor Suzanne Brahmia received \$282K from NSF for PQL-MAD.
- Professor Xiaodong Xu was awarded a Vannevar Bush Faculty Fellowship.
- Assistant Professor Elise Novitski received a DOE-Early Career Award.

Assorted Talks & Meetings.

- ❖ September 25-27, 2024, Energy for Sustainable Science at Research Infrastructures, Madrid, Spain.
- ❖ September 30-October 4, 2024, GEC 2024, San Diego, CA.
- ❖ October 7-10, 2024, DNP 2024, Boston, MA.
- ❖ October 7-11, 2024, APS DPP Annual Meeting, Atlanta, GA.

Funding Announcements

- UW Royalty Research Fund (RRF) with submission deadline 9/30/24.

Job Opportunities

- Assistant Professor of Physics, Bryn Mawr College
- Physics Instructional Lab Manager, Worcester Polytechnic Institute
- Condensed Matter Theory Scientist, Los Alamos National Laboratory (LANL)
- Research Scientist, Occidental College

- [Assistant Professor of Experimental Physics](#), The Department of Natural Sciences of Pitzer and Scripps Colleges
- [Reader / Professor in Quantum Technology](#), University of Strathclyde, Glasgow
- [2025 Van Bibber postdoctoral Fellowship](#), Stanford Physics Department
- [Perimeter Postdoctoral Program](#), Perimeter Institute for Theoretical Physics
- Assistant Professor in [Experimental Condensed Matter Physics](#), [Experimental high Energy Physics \(CMS\)](#), [Experimental High Energy Physics \(neutrinos\)](#) at the University of Notre Dame
- [Assistant Professor in Experimental Atomic, Molecular, and Optical Physics](#), University of Washington

Selected Publications

- Rapid, in-situ neutralization of nitrogen- and silicon-vacancy centers in diamond using above-band-gap optical excitation, Christian Pederson, Lane Beale, Kai-Mei Fu et al., <https://arxiv.org/abs/2408.16921>
- Ultranarrow-linewidth Wavelength-Vortex Metasurface Holography, Johannes E. Froch, Arka Majumdar, et al., <https://arxiv.org/abs/2408.16342>
- Supersymmetry breaking in SYK and the black hole spectrum, Gustavo J. Turiaci et al., <https://arxiv.org/abs/2408.12138>
- Protein overabundance is driven by growth robustness, J. James Choi, Teresa W. Lo, Kevin J. Cutler, Dean Huang, Paul A. Wiggins, et al., <https://arxiv.org/abs/2408.11952>
- Scattering off of Twistorial Line Defects, Niklas Garner and Natalie M. Paquette, <https://arxiv.org/abs/2408.11092>
- Interplay of electronic crystals with integer and fractional Chern insulators in moiré pentalayer graphene, Dacen Waters, Anna Okounkova, Jiang Yao, Xiaodong Xu, Matthew Yankowitz, et al., <https://arxiv.org/abs/2408.10133>
- Observation of Photonic Chiral Flatbands, Arka Majumdar et al., <https://arxiv.org/abs/2408.09328>
- Extended Generator Coordinate Method: eGCM, Aurel Bulgac, <https://arxiv.org/abs/2408.02173>
- Strongly interacting Hofstadter states in magic-angle twisted bilayer graphene, Minhao He, Jiaqi Cai, Matthew Yankowitz, Xiaodong Xu, et al., <https://arxiv.org/abs/2408.01599>
- Test of the Equivalence Principle for Superconductors, M.P. Ross, E.G. Adelberger, C.A. Hagedorn, K. Venkateswara, C. Gettings, E.A. Shaw, S.K.Apple, J.H. Gundlach, et al., <https://arxiv.org/abs/2407.21232>
- Universal corrections to the superfluid gap in a cold Fermi gas, Silas R. Beane, Roland C. Farrell et al., <https://arxiv.org/abs/2407.20168>
- Bulk viscosity of nuclear matter with pions in the neutrino-trapped regime, Steven P. Harris, Sanjay Reddy, et al., <https://arxiv.org/abs/2407.18890>
- The DAMIC-M Low Background Chamber, A.E. Chavarria, M. Conde, M. Huehn, M. Kallander, H. Lin, K.J. McGuire, P. Mitra, D. Peterson, A. Piers, R. Roehnel, T. Van Wechel, M. Traina, et al., <https://arxiv.org/abs/2407.17872>
- Meta-Optics Triplet for Zoom Imaging at Mid-Wave Infrared, Anna Wirth-Singh, Johannes E. Fröch, Tina Le Teichmann, Arka Majumdar, et al., <https://arxiv.org/abs/2407.11255>

- Magnetochiral anisotropy on a quantum spin Hall edge, Elliott Runburg, David Cobden, et al., <https://arxiv.org/abs/2407.16023>
- Sequency Hierarchy Truncation (SeqHT) for Adiabatic State Preparation and Time Evolution in Quantum Simulations, Zhiyao Li, Dorota M. Grabowska, Martin J. Savage, <https://arxiv.org/abs/2407.13835>