



The Physics Observer

Nov 10, 2022

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UPCOMING EVENTS

Tuesday, November 14, 2022 - 4:00pm, PAA A-102:

[Physics Colloquia](#)
Peter Zoller, University of Innsbruck.

Monday, November 21, 2022 - 4:00pm, PAA A-102:

[Physics Colloquia: TBA](#)
Shih-Chieh, University of Washington.

Monday, November 28, 2022 - 3:00pm, PAT 610C:

[Physics Department: Final Exam](#)

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)

Earlier this week, Art McDonald, 2015 Nobel laureate and past director of the Sudbury Neutrino Observatory, visited the department and delivered both a regular Physics colloquium and a wonderful Frontiers of Physics public lecture on "Understanding our Universe from Deep Underground". It was terrific to see 130 Kane Hall, the largest lecture hall on campus, filled to capacity by people eager to hear about fundamental science.

Quantum information science and technology is of growing interest everywhere. In our department we have a new "QIS in Physics" seminar series on Tuesday afternoons. We are also hosting multiple workshops organized by the [Inqubator of Quantum Simulation](#), the latest of which, on quantum sensors, is taking place this week and next. We will be offering a hands-on project based course on "Implementations in Quantum Information" next quarter, as part of the "[Accelerating Quantum-Enabled Technologies](#)" program. Students in this course will use IonQ quantum computers accessed through Microsoft's Azure Quantum system; there is a nice video about this [here](#).

Adding significantly to our already strong efforts in quantum materials, which underpin much quantum information science, I am very pleased that we have been successful recruiting Charles Marcus to the UW, as a joint appointment between Physics and Materials Science and Engineering. Charlie is a member of the National Academy of Science and is currently the director of the Center of Quantum Devices at the Niels Bohr Institute in Copenhagen.

Milestones & Arrivals

- ★ Welcome [Kayla Troske](#), the new Administrative Coordinator in the main physics office.
- ★ Welcome to Jalayna Ruland, a new student assistant in Student Services.
- ★ Eric Lindahl celebrates 50 years with UW.
- ★ Eric Smith celebrates 10 years with UW.

Awards & Grants

- ❖ [Professor Kai-Mei Fu](#) has been elected as a 2023 Fellow of Optica (formerly the Optical Society of America), for "advances in characterization, synthesis, control and

Wanjin Yeo (Advisors: Jose Kutz and Samu Taulu), University of Washington.

Monday, November 28, 2022 - 4:00pm, PAA A-102:

Physics Colloquia

Andrey V. Chubukov, University of Minnesota.

Wednesday, November 30, 2022 - 1:30pm, PAB C520 and Zoom

InQubator for Quantum Simulation (IQUS): Generalized hydrodynamics, local prethermalization, and hydrodynamization in ultracold 1D gases

Marcos Rigol, Penn State

Wednesday, November 30, 2022 - 3:45pm, PAA A-102:

Physics Colloquia

Jason Detwiler, University of Washington.

Friday, December 9, 2022 - 3:00pm, Kane (Walker-Ames):

Autumn QuantumX Poster Session

RSVP ([here](#)) by Nov. 21.

Friday-Sunday, January 20-22, 2023:

APS Conference for Undergraduate Women in Physics.

SOCIAL MEDIA

Instagram

Facebook

device integration of optically-active quantum point defects in crystals".

- ❖ Professor Di Xiao has been elected as a 2022 Fellow of the American Physical Society, for "contributions to the theory of condensed matter physics, including foundational work on geometric phase effect on Bloch electron dynamics, orbital magnetism, valleytronics, and two-dimensional materials."
- ❖ Professor Martin Savage received \$1.5K from the US Department of Energy for InQubator for Quantum Simulations of Quantum Systems.
- ❖ Professor Gourdan Watts received \$72K from Princeton University for the proposed NSF Center "Institute for Research and Innovation in Software in High Energy Physics".
- ❖ Professor and Director of CENPA David Hertzog received \$35K from the American Physical Society for Developing New Directions in Fundamental Physics.
- ❖ Associate Professor Suzanne White received \$40K from the American Physical Society for the APS Conference for Undergraduate Women in Physics.
- ❖ Professor Xiaodong Xu received \$150K from the Taiwan Semiconductor Manufacturing Company Limited for Topological Twistronics for Interconnects and Contacts.

Department Resources & News

- The Physics Department's annual holiday party will be on Friday December 16, from 3-5pm.

Assorted Talks & Meetings

November 29, 2022, 10am-noon PST, and subsequent 3 weeks. Science Trust Project workshop: virtual training on science communication and combating misinformation. Register by November 22 [here](#).

December 1, 2022, "[Sparking Climate Connections: UW Lightning Talks on Climate Change](#)". Submission deadline November 17, 2022.

April 15-18, 2023, [APS in-person April Meeting](#), Minneapolis. Abstract submission opens November 16.

April 24-26, 2023, [APS virtual April Meeting](#), Minneapolis. Abstract submission opens November 16.

Funding Announcements

[Letters of intent](#) solicited by the Future of Life Institute for grants related to the impacts of nuclear war. 100-500K. Deadline November 15, 2022.

[Applications](#) solicited for summer internships from the German Academic Exchange Service (DAAD). Opportunities for undergrads, graduate students, postdocs and faculty. Deadline December 15, 2022.

[Applications](#) solicited for AIP science policy fellowships. Varying deadlines: November 9 - December 2, 2022.

[Prep-proposals](#) solicited for Keck Foundation Science and Engineering grants. \$1M. Limited submissions, internal UW deadline April 20, 2023.

[YouTube](#)

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

[Vimeo](#)

[Pinterest](#)

Job Opportunities

- [Associate Editor](#) (remote), materials research & applied science, American Physical Society
- [Visiting Assistant Professor](#) in Physics, Siena College.
- [Instructor of Physics](#), Charleston College.
- [Physics faculty](#) (open rank), as part of a cluster hire in quantum sciences, Washington University.
- [Assistant professor](#), Electrical and Computer Engineering, Princeton University.
- [Assistant professor](#), theoretical physics, UC Berkeley.
- [Tenure-track faculty](#), theoretical physics of quantum matter, Cal State Long Beach.
- [Tenure-track faculty](#), applied physics, Cornell.

Selected Publications

[Learning the shape of protein micro-environments with a holographic convolutional neural network](#), M. Pun, A. Ivanov, Q. Bellamy, Z. Montague, A. Nourmohammad, et al.,.

[Long Range Plan: Dense matter theory for heavy-ion collisions and neutron stars](#), S. Harris, L. McLerran, S. Reddy, A. Sorensen, et al.

[Strange-metal behavior in a Fermi liquid with strange scatterers](#), B. Spivak, et al.

[New developments in fission studies within the time-dependent density functional theory framework](#), A. Bulgac.

[Programmable adiabatic demagnetization for systems with trivial and topological excitations](#), M. Rudner, et al.

[Entanglement transitions with free fermions](#), J. Merritt, L. Fidkowski.

[Even lighter particle dark matter](#), A. Chavarria.

UW Coronavirus Response Information

- Current pandemic information on the [UW Covid-19 tracking dashboard](#).