

Yale Physics



Week of December 3-9, 2023

Events

Monday, December 4

3:30 pm **Special Physics Club: Howard L. Schultz, Sr. Prize Lecture: *Neutrinos: From zeros to heroes?*** Roxanne Guenette, University of Manchester, SPL 57. Host: Yale Society of Physics Students. Refreshments will be served before the talk.

Tuesday, December 5

10:00 am **WIDG Seminar: *Probing the Higgs CP Structure and Quantifying QCD Systematics in Jet Substructure Techniques***, Arianna García Caffaro, Yale University, WL 216.

12:00 pm **NPA Seminar: *Precision Measurement of the Hubble Constant Using Type Ia Supernovae***, Charles Baltay, Yale University, WL 216. Host: Thomas Penny.

4:00 pm **Particle Theory Seminar: *The Sub-Leading Scattering Waveform***, Aidan Herderschee, Institute for Advanced Study, SPL 48.

5:30 pm **History and Foundations of Physics (HoFoP) Reading Group, Meeting 3.3: *Computing what cannot be Predicted: Origins of Machine Learning as Subjective Decision Making***, Aaron Mendon-Plasek, Yale Law School, KT 401. Contact Yarone Tokayer, Molly Watts, or Sebastian Fernandez-Mulligan for further information.

Wednesday, December 6

10:00 am **Physics & QBio Hagaromo Hour: *Biological computations at criticality***, Aneta Koseska, Max Planck Institute for Neurobiology of Behavior, Bass 405. Hosts: Michael Abbott, Isabella Graf, and Mason Rouches.

12:00 pm **Yale School of Medicine, Center for Systems and Engineering Immunology Seminar: *Multiscale diffusion geometry for (deep) learning of graphs, manifolds, and flows***, Smita Krishnaswamy, Yale School of Medicine, HOPE 216. Host: John Tsang.

- 4:00 pm **Molecular, Cellular and Developmental Biology Seminar:** *Proteogenomic tools for tissue biology*, Hattie Chung, Broad Institute, Bass 305.
- 4:00 pm **Earth & Planetary Science Colloquium:** *Title - To Be Announced*, Emily Cooperdock, Brown University, KGL 123.
- 4:00 pm **Mathematics Colloquium:** *Using logic to study homeomorphism groups*, Thomas Koberda, University of Virginia, KT 219.

Thursday, December 7

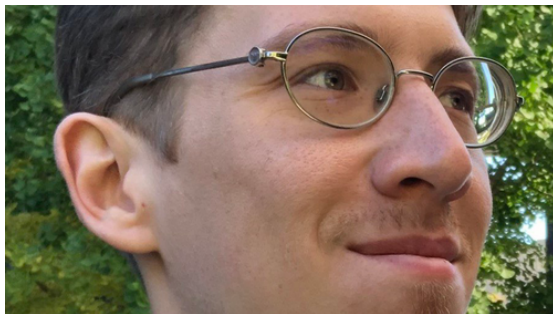
- 11:00 am **Yale Quantum Institute Talk:** *Good quantum LDPC codes and how to decode them*, Shouzhen (Bailey) Gu, Caltech, YQI Seminar Room + zoom.
- 12:00 pm **Physical Chemistry Seminar:** *Visualizing Biology Across Scales Using Electrons, Ions, and Photons*, C. Shan Xu, Yale School of Medicine, SCL 160. Host: Mark Johnson.
- 1:00 pm **NPA Seminar:** *Dark matter detection and beyond with crystal xenon*, Scott Kravitz, University of Texas at Austin, WL 216. Host: Thomas Penny.
- 2:30 pm **Yale Astronomy Colloquium:** *Parallelizing non-parallelizable N-body simulations*, Hanno Rein, University of Toronto, KT 509 A&B.

Friday, December 8

- 12:00 pm **Yale Quantum Institute Colloquium:** *Two fully-connected trapped-ion processors and a few application experiments*, David Hayes, Quantinuum, YQI Seminar Room + zoom. Host: Steven Girvin.
- 1:00 pm **NPA Seminar:** *Boosted Higgs boson production via vector boson fusion with the CMS experiment*, Jennet Dickinson, Fermilab, YQI Seminar WL 216. Host: Ian Mout.
- 2:00 pm **Physics Dissertation Defense:** *Criticality in Majorana wires*, Vlad Kurilovich, Yale University, SPL 57 + zoom. Thesis advisor: Leonid Glazman.

[More events](#)

News



Welcome Daniil Antonenko

Welcome to Daniil Antonenko who comes to us from Drexel University as a Mossman Fellow working with Leonid Glazman.



Welcome Eun-Joo Ahn

Welcome to Eun-Joo Ahn, postdoctoral Associate Fellow in the Yale Center for the Study of Race, Indigeneity, and Transnational Migration with a secondary appointment as a lecturer in Physics.



Physics recruits graduate students at SACNAS and NSBP

Students and faculty represented Yale Physics at the 2023 SACNAS National Diversity in STEM Conference and the National Society of Black Physicists 2023 Conference: Frontiers in Physics: From Quantum to Materials to the Cosmos.



Satish Dhawan marks 55+ years at Yale

Dhawan, senior research scientist in physics, is one of the longest-serving members of the Yale Physics Department. Dhawan has been a member of Yale Physics since 1967, first as an electrical engineer and then as a research scientist.

[More news](#)

Community

Climate and Diversity Committee News

The National Science Board has [published](#) the [Higher Education in Science and Engineering report](#) as part of the 2024 congressionally mandated [Science and Engineering Indicators](#) on the state of the U.S. science and engineering enterprise.

The report demonstrates that, in recent years, S&E degree recipients have become increasingly diverse in terms of both sex and race and ethnicity, although the representation of women and some racial and ethnic groups remains uneven among S&E fields. The full report [can be read here](#).

If interested in joining the CDC, please contact Rona Ramos, Chair of CDC. You may contact the whole committee at physics-cdc@mailman.yale.edu.

Lost and Found

Reminder, there is a Lost and Found box in the Chair's Office. [Please check our flickr album](#) to see what has been collected over the last AY. If you have an item go missing or think you have left it behind somewhere, please check with Kirstin or Jen in the Chair's Office (SPL 34).

Outreach



Yale Physics 'In the Land of Marvels'

Prof. Paola Bertucci from the department of history and History of Science gave a talk about her new book "In the Land of Marvels" at the Humanities Quadrangle on November 29th. As part of the event, through Professor Alison Sweeney, the physics department provided demonstrations in electrostatics that replicated some of the experiments that were part of many public science shows during the eighteenth century.

COVID-19 Update

[Yale COVID-19 Information](#) - including updates on [testing](#) and [vaccinations](#).

Opportunities

Faculty Opportunities

[Next-Generation Fellowship](#) - Physicists Coalition for Nuclear Threat Reduction (deadline **December 15, 2023**)

[Assistant, Associate, Full Professor positions](#)- Princeton University (anticipated start date September 1, 2024; application deadline **December 31, 2023**)

[Tenure Track Position - Physics](#) - Cal Poly (anticipated start September 16, 2024; application deadline **January 2, 2024**)

[Assistant Professor, Condensed Matter and Materials Theory](#) - University of California, Santa Cruz (anticipated start July 1, 2024; initial deadline **January 2, 2024** and final deadline **June 30, 2024**)

[2024 Simons Emmy Noether Fellowship](#) - Perimeter Institute for Theoretical Physics (application deadline **January 15, 2024**)

[Assistant Professor Position in Quantum Computing & Quantum Information \(Computational/Theory\)](#) - Rensselaer Polytechnic Institute (deadline **January 15, 2024**)

[Spring 2024 Awards](#) - NASA CT Space Grant Consortium (deadline **January 17, 2024**). Our campus representative is [Andrew Szymkowiak](#).

[Two tenure-track Assistant Professor positions in experimental physics](#) - Illinois Wesleyan University

[Faculty positions in experimental and theoretical physics](#) - King Fahd University of Petroleum and Minerals, Physics Department

Postdoctoral Opportunities

[Postdoc Position on Gravitational Wave and Multi-Messenger Astrophysics with the LISA Mission - University of Amsterdam](#) (preferred start date October 1, 2024; deadline **December 15, 2023**)

Postdoctoral Associate in Experimental Cosmology - Yale University (preferred start time, Fall 2024; application deadline **December 15, 2023**)

[Next-Generation Fellowship - Physicists Coalition for Nuclear Threat Reduction](#) (deadline **December 15, 2023**)

[Postdoctoral Fellowships in Physics and Astronomy - Johns Hopkins University](#) (deadline **February 29, 2024**)

[Postdoc Position in Theoretical Condensed Matter and Computational Biophysics - UC Riverside](#)

[Experimental Postdoctoral Position in Electron-Positron Plasmas - UC Riverside](#)

[Postdoctoral Position in the Quantum Monte Carlo Group - Washington University in St. Louis](#)

[Postdoctoral Research Position in Experimental Neutrino Physics - University of Pittsburgh](#)

Graduate Student Opportunities

[Next-Generation Fellowship - Physicists Coalition for Nuclear Threat Reduction](#) (deadline **December 15, 2023**)

[Graduate Research Fellowships - Jane Street](#) (deadline **December 17, 2023**)

[NRC Research Associateship Programs - National Academies for Sciences, Engineering, Medicine](#) (Online applications open as follows **December 1 (closes February 1)**, March 1 (closes May 1), June 1 (closes August 1), and September 1 (closes November 1))

[Stewardship Science Graduate Fellowship - Department of Energy National Nuclear Security Administration](#) (deadline **January 10, 2024**). Register here for an informational webinar on Wednesday, December 13, 2023 at 1:00pm CT.

[Foreign Affairs Information Technology Fellowship - U.S. Department of State](#) (deadline **January 16, 2024**), [Webinar](#) for more information.

[Spring 2024 Awards - NASA CT Space Grant Consortium](#) (deadline **January 17, 2024**). Our campus representative is [Andrew Szymkowiak](#).

[Perimeter Scholars International- Perimeter Institute for Theoretical Physics](#) (deadline **February 1, 2024**)

[The Department of the Airforce Science & Technology Fellowship Program](#)

Undergraduate Student Opportunities

[Foreign Affairs Information Technology Fellowship - U.S. Department of State](#) (deadline **January 16, 2024**), [Webinar](#) for more information

[Spring 2024 Awards - NASA CT Space Grant Consortium](#) (deadline **January 17, 2024**). Our campus representative is [Andrew Szymkowiak](#).

[Research Experience for Undergraduates - The Center for Neutrino Physics, Virginia Tech](#) (application deadline **February 15, 2024**)

[Undergraduate Research - Yale School of Medicine](#)

Meetings, Schools, Workshops, and Conferences

[American Physical Society Webinars](#) - Careers, Activating Industry Careers: Artificial Intelligence and the Physics Industry, December 12, 2023 @ 12:00pm ET.

[CircuitQED@20](#), January 10-12, 2024 - New Haven, CT. A celebration of the 20 years of circuit quantum electrodynamics.

[Gordon Research Seminar](#): The Bounds of Mechanical Systems From Probes of New Physics to Hardware for Quantum Technologies, March 2-3, 2024 - Ventura, CA. Applications for this meeting must be submitted by **February 3, 2024**.

[Gordon Research Conference](#): Mechanical Systems in the Quantum Regime, March 3-8, 2024 - Ventura, CA. Applications for this meeting must be submitted by **February 4, 2024**.

[American Physical Society March Meeting 2024](#), March 3-8, 2024 - Minneapolis, MN. In-person and virtual. Early bird registration through **January 17, 2024**).

[American Physical Society April Meeting 2024](#), April 3-6, 2024 - Sacramento, CA. **Abstract submissions** open Monday, November 13, 2023 and will **close on January 5, 2024, at 4:00 p.m. ET**.

[American Physical Society 55th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics](#), June 3-7, 2024 - Fort Worth, TX. Registration has yet to open.

[Undergraduate School on Experimental Quantum Information Processing](#), June 3-14, 2024 - University of Waterloo. Application deadline **January 2, 2024**.

[Boulder School for Condensed Matter and Materials Physics: Self-Organizing Matter](#), July 1-26, 2024 - University of Colorado Boulder. Application deadline **January 15, 2024**.

[MCQST Summer Bachelor Program](#), August 3-30, 2024 - Munich, Germany. Application deadline **January 31, 2024**)



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For further information email [Daphne Klemme](#). Please click on the links to contribute to the newsletter or update alumni information.

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