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# Yale Physics



## Weeks of November 19, 2023 - December 2, 2023

### Events

#### Monday, November 20

All day **November recess.** November 20-26, 2023; classes resume at 8:20 a.m. on November 27.

8:30 am **Yale Gravitational Wave Symposium.** *Day 1* will focus on the gravitational wave background and pulsar noise. Symposium will be in Kline Tower.

#### Tuesday, November 21

8:30 am **Yale Gravitational Wave Symposium.** *Day 2* will focus on astrophysical interpretations of the background, and new physics. Symposium will be in Kline Tower.

3:00 pm **Particle Theory Seminar:** *First-principles prediction of the Landau parameter for Fermi liquids near the unitarity limit*, Ira Rothstein, Carnegie Mellon University, SPL 48.

#### Thursday, November 23

All Day **University Holiday – November 23-24:** The administrative offices will be closed November 23-24, 2023 for Thanksgiving.

#### Tuesday, November 28

11:00 am **Yale Quantum Institute Talk:** *Title - To Be Announced*, Qian Xu, University of Chicago, YQI Seminar Room + zoom.

12:00 pm **WIDG Seminar:** *COSINE-100 and ANAIS-112 Search for WIMPs*, Sophia Hollick, Yale University, WL 216. Host: Sierra Weyhmler.

4:00 pm **Particle Theory Seminar:** *Probing Quantum Black Hole Microstates*, Matthew Heydman, Harvard University, SPL 48.

4:00 pm **Theoretical Chemistry Seminar:** *Towards solution of many-electron problem for transition metal containing systems*, Sandeep Sharma, University of Colorado Boulder, SCL 110.

## Wednesday, November 29

- 10:00 am **Physics & QBio Special Seminar:** *Behavioral dynamics and Neural Computation for Olfactory Navigation in C. elegans*, Kevin S Chen, Princeton University, Bass 405. Host: Thierry Emonet.
- 4:00 pm **Molecular, Cellular and Developmental Biology Seminar:** *Diversifying cytoskeletal functions with the tubulin code*, Carsten Janke, Institut Curie, Paris, France, Bass 305. Host: Binyam Mogessie.
- 4:00 pm **Earth & Planetary Sciences Colloquium:** *Title To Be Announced*, Susan Evans, University College London, KGL 123.
- 4:00 pm **Department of Mathematics Colloquium:** *Title To Be Announced*, Matteo Parisi, Harvard and IAS, KT 219.

## Thursday, November 30

- 1:00 pm **Condensed Matter Theory Seminar:** *New topological invariants and quantized response of crystalline topological phases of matter*, Maissam Barkeshli, University of Maryland, SPL 51.
- 1:00 pm **NPA Seminar:** *Leveraging quantum sensors to shine new light on searches for low-mass dark matter*, Kelly Stifter, Fermilab, WL 216. Host: Michael Jewell.
- 1:00 pm **Yale Quantum Institute Talk:** *A 10-fold Symmetric Quasicrystal Quantum Simulator*, Cedric Wilson, Yale University, YQI Seminar Room + zoom.
- 2:30 pm **Yale Astronomy Colloquium:** *Resolved Stellar Populations Studies with the Hubble and James Webb Space Telescopes*, Kristen McQuinn, Rutgers University, KT 509 A&B.
- 4:00 pm **Franke Program in Science and the Humanities:** *They Flew: A History of the Impossible*, Carlos Eire, Yale University, HQ L01.

## Friday, December 1

- 11:00 am **Elusives Journal Club:** *Applying Superfluid Helium to Light Dark Matter Searches: Demonstration of the HeRALD Detector Concept*, Molly Watts, Yale University, WLC 245. Host: Xiran Bai. Reading.

[More events](#)

## News



### Brown honored for research excellence and mentorship

Charles D. Brown II, assistant professor in physics, has been awarded the Joseph A. Johnson Award for Excellence by the American Institute of Physics (AIP) and the National Society of Black Physicists (NSBP). The award honors a legacy of mentorship that makes science more accessible.



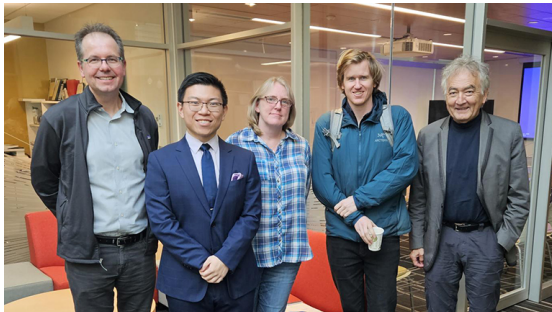
## Xiran Bai named a Dean's Emerging Scholar

Xiran Bai, graduate student in physics and a member of Yale's Wright Lab, has received a Dean's Emerging Scholar Award.



## Congratulations Dr. Chuan Tian

On November 2, 2023, Chuan Tian, successfully defended the thesis, "Deciphering the Trigger of Luminous AGNs through the Lens of Artificial Neural Networks" (advisor: Meg Urry).



## Congratulations Dr. Tong Liu

On November 14, 2023, Tong Liu, successfully defended the thesis, "Inclusive Hadron Yield Analysis in Small and Mid-sized Collision Systems at  $\sqrt{s_{NN}}=200$  GeV at STAR" (advisor: Helen Caines).

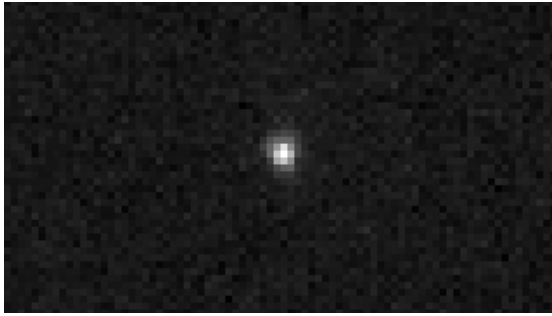


## Flor and Wilde advocate for nuclear physics on Capitol Hill

Wright Lab researchers Fernando Flor and Sierra Wilde joined nuclear scientists from across the U.S. for a Nuclear Physics Day on Capitol Hill to inform elected officials and their staff about the 2023 Long Range Plan for Nuclear Science; recently issued by the Nuclear Science Advisory Committee.

[More news](#)

## Community



## Happy Anniversary Sedna!

November 14, 2023 marked the 20th anniversary of the discovery of the dwarf planet Sedna by Wright Lab senior research scientist David Rabinowitz and collaborators. The discovery was made using the Palomar QUEST camera, built by Wright Lab's Charlie Baltay group.

## Climate and Diversity Committee News

### Belonging at Yale: Can You Truly Be Authentic?

Thursday, November 30th | 12 - 1:15 PM | Virtual

The Future Leaders of Yale and the Office of Diversity and Inclusion and Belonging at Yale, cordially invite you to join us for the second session of the Belonging at Yale Series. This enlightening three-part series is dedicated to the theme of fostering a sense of belonging within the complexities of the modern workplace. Throughout these events, we will delve into the evolving concept of organizational belonging and present a diverse array of experiences and pathways to encourage authenticity in your professional environment. [Register 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](mailto: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



### Girls' Science Investigations shines a light

On November 4th, the Yale Physics Department, in collaboration with Yale Pathways to Science, welcomed over 100 local middle school students to explore the "World of Light" at Girls' Science Investigations (GSI).

## COVID-19 Update

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

# Opportunities

## Faculty Opportunities

Assistant Professor position in the fields of Neutrino Physics, Particle Astrophysics, Cosmology and Gravitational Waves - UC Riverside (deadline **November 19, 2023**)

Tenure-track faculty position in Quantum Condensed Matter Theory - Brown University (application deadline **November 30, 2023**)

Two Assistant Professor positions - Columbia University in the City of New York (application deadline **December 1, 2023**)

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

Assistant Professor Position in Experimental Particle Physics - New York University (deadline **December 1, 2023**)

Assistant, Associate, Full Professor positions- Princeton University (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**)

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

Tenure-Line Faculty hire in Experimental Dark Matter/Neutrinos - Brown University (application deadline **March 15, 2024**)

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 in Gravitational Wave Probes of Particle Dark Matter - University of Amsterdam (deadline **December 1, 2023**)

Congressional Science Fellowships - American Physical Society (deadline **December 1, 2023**)

Postdoctoral Fellows in the Center for Cosmology and AstroParticle Physics (CCAPP) - Ohio State University (deadline **December 1, 2023**)

Postdoc Position on Gravitational Wave and Multi-Messenger Astrophysics with the LISA Mission - University of Amsterdam (deadline **December 15, 2023**)

**Postdoctoral Associate in Experimental Cosmology - Yale University (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

[Paid Graduate Student Fellowship Opportunity for Summer 2024](#) - Sandia National Laboratory (deadline **November 24, 2023**)

[PhD position in gravitational wave probes of particle dark matter](#) - University of Amsterdam (deadline **December 1, 2023**)

[Congressional Science Fellowships](#) - American Physical Society (deadline **December 1, 2023**)

[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 cycle **December 1, 2023-February 1, 2024**)

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

## Meetings, Schools, Workshops, and Conferences

[American Physical Society Webinars](#) - Student Success: PULSE Undergraduate Research Webinar: Lifetime of a Research Project, November 29, 2023 @ 10:00am ET.

[Gravitational Wave Symposium](#) - Yale University, November 20-21, 2023.

[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**. Any applicants who wish to be considered for an oral presentation should submit their application by **November 26, 2023**.

[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 and virtual (dates to be announced). Registration opens in mid-November 2023.

[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. Applications accepted November 1, 2023 - **January 31, 2024**)



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