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# Yale Physics



## Week of April 14-20, 2024

### Events

**Quantum Week at Yale** April 13 to 19, 2024. [Click here for full schedule.](#)

#### Monday, April 15

- 10:00 am - 5:00 pm **Quantum Week at Yale Workshop: *Quantinuum Workshop for Quantum Researchers***, YQI and QuantumCT are inviting quantum researchers to work with our industry partner Quantinuum on use-case quantum research problems during a day-long Workshop, YQI Seminar room. [Register here.](#)
- 10:15 am **Applied Physics Seminar: *Principles for phonon-driven energy solutions in functional electronic materials***, John Sous, University of California, San Diego, DL 220 + [zoom](#) (password: 901400). Host: Sohrab Ismail-Beigi.
- 3:30 pm **Physics Club: *Gravitational Wave Probes of Dark Matter***, Gianfranco Bertone, University of Amsterdam and Columbia University, SPL 57 + [zoom](#) (password: 595687). Host: [Reina Maruyama](#).

#### Tuesday, April 16

- 12:00 pm **Quantum Week at Yale Tour: *Tour of the superconducting qubits laboratories***, To celebrate Quantum Week at Yale, please join us for a guided tour the quantum laboratories in Becton Center and see the superconducting qubits and the dilution fridges. Space limited to 15 persons. [Please sign up here.](#)
- 2:00 pm **Kimball Smith Series: *Writing Workshop by Richard Rhodes***, Richard Rhodes, historian and Pulitzer Prize-winning author of “The Making of the Atomic Bomb,” Kline Tower. [Register here](#) for the writing workshop (and/or for a lecture by Mr. Rhodes).
- 2:00 pm **AMO Seminar: *Precision Sensing with Optomechanically Nonlinear Mach-Zehnder Interferometers***, Aaron Markowitz, Caltech, SPL 51. Host: Jack Harris.
- 4:00 pm **Particle Theory Seminar: *Bootstrapping Mesons at large N***, Leonardo Rastelli, Stony Brook University, SPL 51.

6:30 pm **Kimball Smith Series:** *The Rise of Malignant Deterrence* with [Richard Rhodes](#), Richard Rhodes, historian and Pulitzer Prize-winning author of “The Making of the Atomic Bomb,” Rosenfeld Hall.

## Wednesday, April 17

1:00 pm **Graduate Theory Seminar:** *Topological phases protected by non-invertible symmetries*, Sahand Seifnashri, Institute for Advanced Study, SPL 51.

2:00 pm -  
4:00 pm **Quantum Week at Yale Pop-Up Exhibit:** *Pop-Up Exhibit: Rare Books on Quantum and Science at the Beinecke Library*, To celebrate Quantum World Day, and part of the 2023-2024 Model Research Collection on quantum computation, we invite you to a pop-up exhibit to discover a selection of rare science books and manuscripts from 1511 into the 20th century from the collections of the Beinecke Rare Book and Manuscript Library. Featured authors include Galileo, Isaac Newton, Josiah Gibbs, Albert Einstein, Werner Heisenberg, Max Planck, and Neils Bohr.

## Thursday, April 18

12:00 pm **Quantum Week at Yale Tour:** *Tour of the many-body quantum simulation lab*, To celebrate Quantum Week at Yale, join us for a guided tour the many-body quantum simulation lab guided by YQI Fellow Cedric Wilson. Space limited to 15 persons. [Please sign up here](#).

1:00 pm **Nuclear-Particle-Astrophysics (NPA) Seminar:** *Electron-Ion Collider (EIC) 2nd Detector Program at BNL*, Jihee Kim, Brookhaven National Laboratory, WL 216. Host: Isaac Mooney.

1:00 pm **Condensed Matter Theory Seminar:** *Attention to Quantum Complexity*, Eun-Ah Kim, Cornell University, SPL 51.

2:30 pm **Yale Astronomy Colloquium:** *The Evolution of Stellar Magnetism and Exoplanet Habitability*, Travis Metcalfe, White Dwarf Res. Corp., KT 205.

4:00 pm **Department of Chemistry Chupka Lecture in Physical/Biophysical Chemistry:** *Free Radical Chemistry in Air and Space: Lab Studies with Combs, Cavities, and Jets*, Mitchio Okumura, California Institute of Technology, SCL 160. Host: Mark Johnson.

## Friday, April 19

11:00 am **Special Solid State & Optics Seminar:** *Mid-IR fiber lasers at 3.5  $\mu\text{m}$* , Ori Henderson-Sapir, University of Adelaide, BCT 227 + [zoom](#) (password: 679809). Host: Jack Harris.

12:00 pm **Quantum Week at Yale - Yale Quantum Institute Colloquium:** *Quantum control and error mitigation from geometric space curves*, Edwin Barnes, Virginia Tech, YQI Seminar Room + [zoom](#). Host: Shruti Puri .

4:00 pm **Kimball Smith Series:** *Let's stick together: Sustaining the scientific record and scientific community during chaos*, Holden Thorp, Editor-in-Chief of the Science Family of Journals and a Professor of Chemistry and Medicine at George Washington University, Jane Ellen Hope Memorial Building.

[More events](#)

# News



*Yale Physics*

## Yale Physics students awarded NSF Graduate Research Fellowships

Congratulations to graduate students Aaron Greenberg, Andrew Neely, and Carlton Smith, and undergraduate student Rose Powers; who were each awarded a 2024 NSF-GRFP.



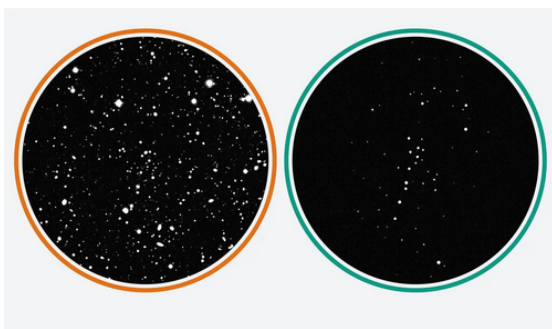
## From Prospect Street to the 'path of totality,' Yalies have eclipse covered

Visitors to Yale's Leitner Family Observatory and Planetarium on Monday, April 8 will see the moon cover 91% of the sun (weather permitting). See the follow-up story "Sun spot: Hundreds watch the solar eclipse at Yale's observatory"



## Key to harnessing light waves? First do the math

Scholars at Yale's Energy Sciences Institute have for the first time developed a mathematical model that effectively predicts a maximum rate of thermal energy transfer. The new theory sidesteps the requirement for endless checking of every possible permutation, instead revealing upper limits to what is possible.



## Astronomers find a tiny star system with a tantalizing story to tell

Yale astronomers have helped identify a tiny star system orbiting the Milky Way which they say hints at the existence of a new class of faint, satellite star systems that orbit around large galaxies.

[More news](#)

## Community

Outreach



## 2024 Yale Physics Olympics

On March 30, 2024, twenty teams of high school students from fifteen different schools from around Connecticut competed in the 24th annual Yale Physics Olympics.

## Climate and Diversity Committee News

### The National Society of Black Physicists Visions Series

The NSBP Visions Series brings two NSBP members from disparate fields together to discuss with each other, in front of an audience, commonalities and unique challenges in their work. The description for this iteration of the event is found below

*"Nothing in science has any value to society if it is not communicated" are the words of 20th century American psychologist Anne Roe. Traditionally, conversations about scientific communication in academic settings have focused on conveying the information of the researcher's own studies to an - most of the time, academic - audience. The importance of scientists to convey basic scientific information to a general audience is being increasingly recognized. The settings where individuals most have the opportunity to do this are in journalistic and educational environments. In recognition of this, we are curious to learn what common approaches a scientific journalist and a science educator take to convey basic scientific information to general audiences and what advice they might offer to scientists on how to improve their own communication skills to the general public.*

The panelists for this event include Dr Katrina Miller, a science writer for The New York Times, and Dr Cacey Bester, an assistant professor at the liberal arts college Swarthmore College. Contact [Carlton Smith](#) with any questions. [Webinar link here](#).

### National Arbor day

When it comes to celebrating [National Arbor Day](#) (April 26) at Yale, all are invited to participate and there's something for everyone. Check out a few of the ideas on the [It's Your Yale website](#) and be sure to give your favorite tree a hug!

*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).

# Opportunities

## Faculty Opportunities

[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

[NRC Research Associateship Programs - National Academies of Sciences, Engineering, and Medicine](#) (applications open March 1, 2024, deadline **May 1, 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](#)

## Graduate Student Opportunities

[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))

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

## Undergraduate Student Opportunities

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

[Research Position Available in Hatzios Lab - Yale Department of Molecular, Cellular and Developmental Biology.](#)

## Meetings, Schools, Workshops, and Conferences

[Asian Americans and STEM conference, May 10, 2024 - Yale University. Register now.](#)

[American Physical Society 55th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, June 3-7, 2024 - Fort Worth, TX. Early registration open until \*\*May 3, 2024.\*\*](#)

[2024 Fall Meeting of the APS Division of Nuclear Physics, October 6-10, 2024 - Boston, MA.](#)



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