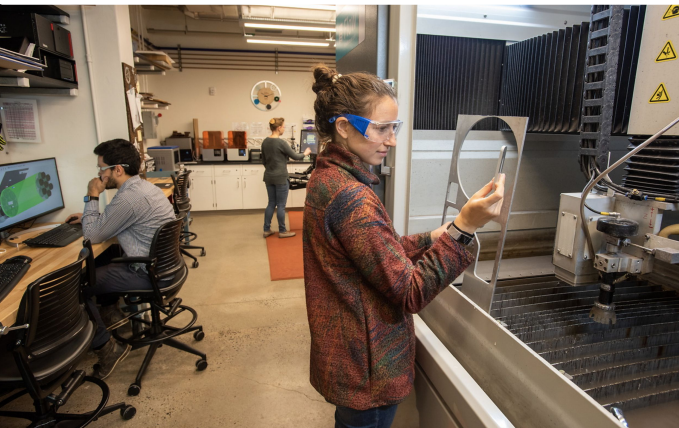


# Yale Physics Graduate Program Webinar



[physics.yale.edu](http://physics.yale.edu)

Yale *Physics*

# Yale Physics Graduate Program Team



Prof. Karsten Heeger  
*Chair*



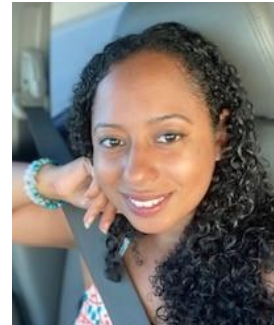
Prof. Daisuke Nagai  
*Director of Graduate Studies*



Prof. Helen Caines  
*Director of Graduate Admissions*



Dr. Rona Ramos  
*Graduate Program Coordinator & Lecturer*



Stacey Watts  
*Graduate Program Registrar*

# Yale Physics Graduate Student Representatives



Charles Lomba  
Biological Physics/PEB, Year 4



Molly Watts  
Particle Experiment, Year 3



Yarone Tokayer  
Astrophysics/Cosmology, Year 3

# Yale Physics by the Numbers 2023

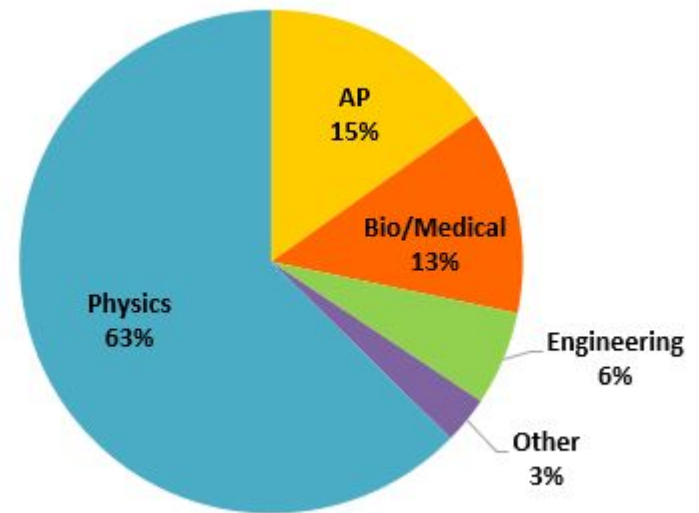
## People

faculty (primary)	36
faculty (secondary)	32
research scientists	28
postdocs	30
grad students (physics)	156

median time to graduation 6.6 years

many opportunities to seek  
Interdisciplinary research

Physics students have diverse  
interests working with advisors  
in Physics and related  
disciplines



# Research Areas

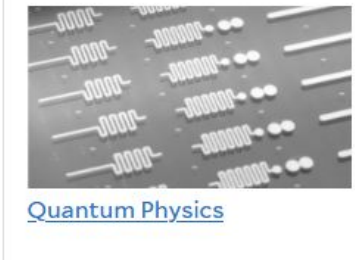
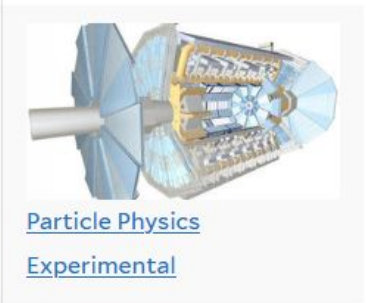
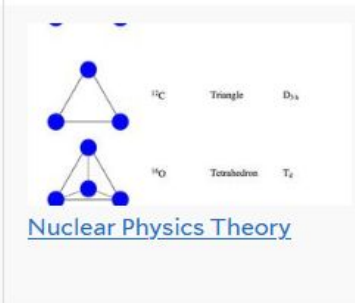
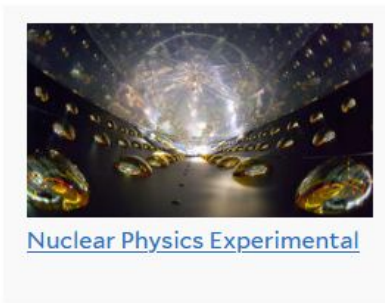
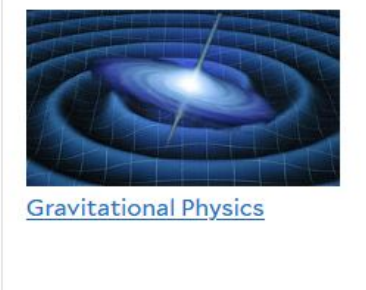
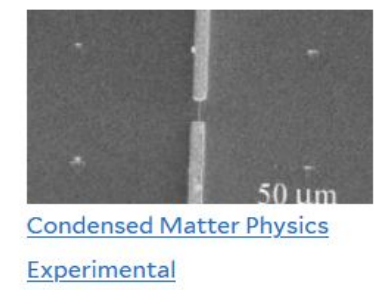
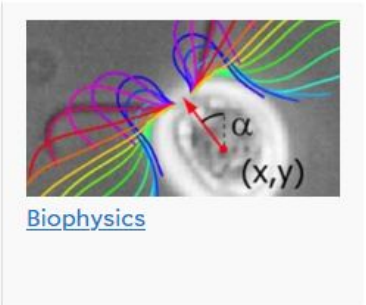
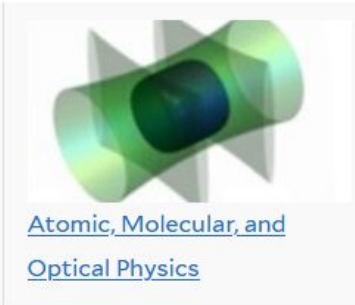
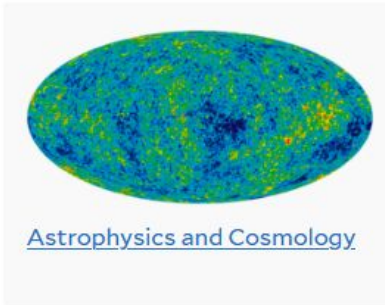
Traditional and emerging research areas

Research portfolio of department is evolving

New faculty being hired

Current science initiatives on campus

- data science
- quantum science
- instrumentation



# Yale Physics Research in Campus Centers



**YCAA** (Yale Center for Astronomy & Astrophysics)

Quantitative Biology Institute [QBio]



Yale's Integrated Graduate Program In  
**PHYSICAL** and **ENGINEERING BIOLOGY**



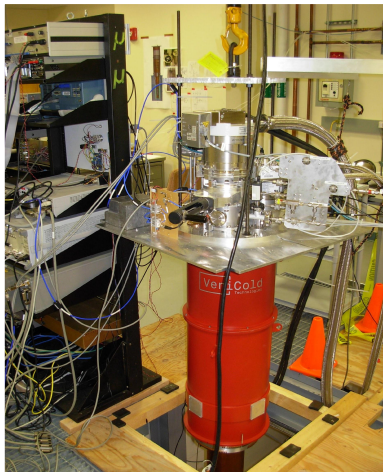
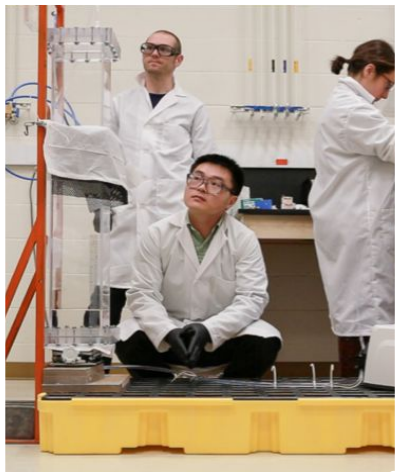
**Systems Biology Institute**

**Energy Science Institute**



**Yale** *Physics*

# State-of-the Art Facilities



# Physics Ph.D students' learning objectives

## guide to the graduate program

1. Students will acquire a **general foundational knowledge of physics** at the graduate level and the necessary accompanying methodological aspects of **mathematics, computing, and instrumentation**.
2. Students will learn to **identify and solve problems at the frontier of physics knowledge**, uphold standards of scientific integrity, and disseminate their research.
3. Students will become **educators and communicators** with the ability to promote an understanding and appreciation of physics across the university and in society.
4. Department members and students will work together to develop and realize, in the department and in the community, progress and success in **diversity, equity, and inclusion** in all aspects of the scientific enterprise.



# Graduate Program

- **Coursework**

- Must take or pass-out of 6 core courses, take at least one advanced elective and a Special Investigation (research) course

- **Teaching**

- 10hrs/week of teaching for first 2 years
- Learn to teach, deepen your knowledge of Physics

- **Qualifying Event**

- Four 4-question “Event” → Not an exam! Taken at the beginning of the 2nd year. Part of the learning milestone’s of the department. All students pass by participation!

- **Research**

- typically, start in first year, full-time in summer after year 1
- by mutual arrangement, you can start summer before you start graduate school (early start)

- **Flexibility in program**

- many ways to personalize your course of study and research
- admission to Yale does not bind you to a specific program

# Q&A



# Academic Life and Campus Resources

## Physics Colloquia and Seminars

### Department of Physics

Home About Research Academics People Media Events

For Prospectives

HOME » EVENTS

Physics Seminar Calendar	Upcoming	Month	Week	Day	Year	All E
External Seminars of Interest	Upcoming Events					
Physics Club & Prize Lectures Flyer	OCTOBER 12, 2022					
Physics Club	11:00am	<a href="#">YCRC Research Support Office Hours</a>				
Prize Lectures	4:30pm	<a href="#">Nobel Prize in Physics 2022 Lecture: A. Douglas Stone, Yale University, "Spooky Action at a Distance wins the Nobel Prize"</a>				
Kimball Smith Series	OCTOBER 13, 2022					

## Graduate Student Leadership

Regular town halls with department leadership

Graduate Student Advisory Committee


Graduate Students on Departmental Committees

## Yale Poorvu Center for Teaching and Learning

FACULTY ▾ POSTDOCS ▾ GRADUATE STUDENTS ▾ UNDERGRADUATES ▾ INITIATIVES ▾


Home Graduate Students

### Graduate Students




**About the Graduate Writing Laboratory**

The Graduate Writing Lab




**Writing and Public Speaking Consultations**




**Writing Workshops and Panels**

Each semester, the Graduate



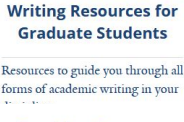
**Peer-Review Groups**

Learn about Peer-Review groups and how they can amplify your




**GWL Writing Retreats and All Writes**

Join your fellow graduate and professional school students for



**Writing Resources for Graduate Students**


Resources to guide you through all forms of academic writing in your




**About Teaching Development for Graduate and Professional School Students**




**Teaching Consultations and Classroom Observations**




**Teaching Workshops**



**Teaching Programs and Grants**



**Teaching Forums**



**Resources for Graduate Student Teachers**

## McDougal Graduate Student Center



student support resources and community

# Diversity, Equity, and Inclusion

## Statement of Principles

### Respect

We continually strive to make our department a place that respects people with **diverse** backgrounds and values each others' **creativity**.

### Well-being

We commit to actively engage in creating a **supportive** and **safe environment**. Criticism and praise are professional and constructive.

### Integrity

We carry out our work with **honesty** and with the **highest standards**. We shall not commit scientific or academic misconduct, defined as plagiarism, fabrication, or falsification.

### Community

Our community actively **includes all**, enhancing **collaboration** and promoting our common mission to advance the frontiers of knowledge.

<https://physics.yale.edu/statement-principles>

<https://physics.yale.edu/diversity-equity-and-inclusion>

## Yale Physics Graduate Diversity Fellowship



## Climate and Diversity Committee

## APS Inclusion, Diversity, and Equity Alliance (APS IDEA)



## Office for Graduate Student Development & Diversity (OGSDD)

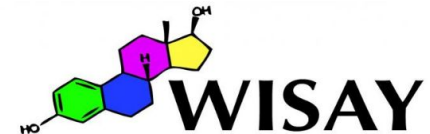
Yale *Physics*

# Student Groups

## Climate and Diversity Committee



Women in  
Physics +



## GSAC

Graduate Student Advisory Committee



Andy Ding (Year 5)



Charles Lomba (Year 4)



Katie Chang (Year 3)



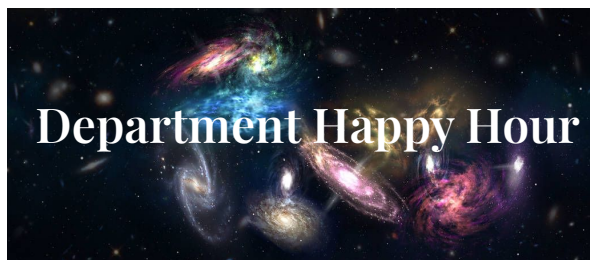
Braedyn Au (Year 3)



Andrew Neely (Year 2)



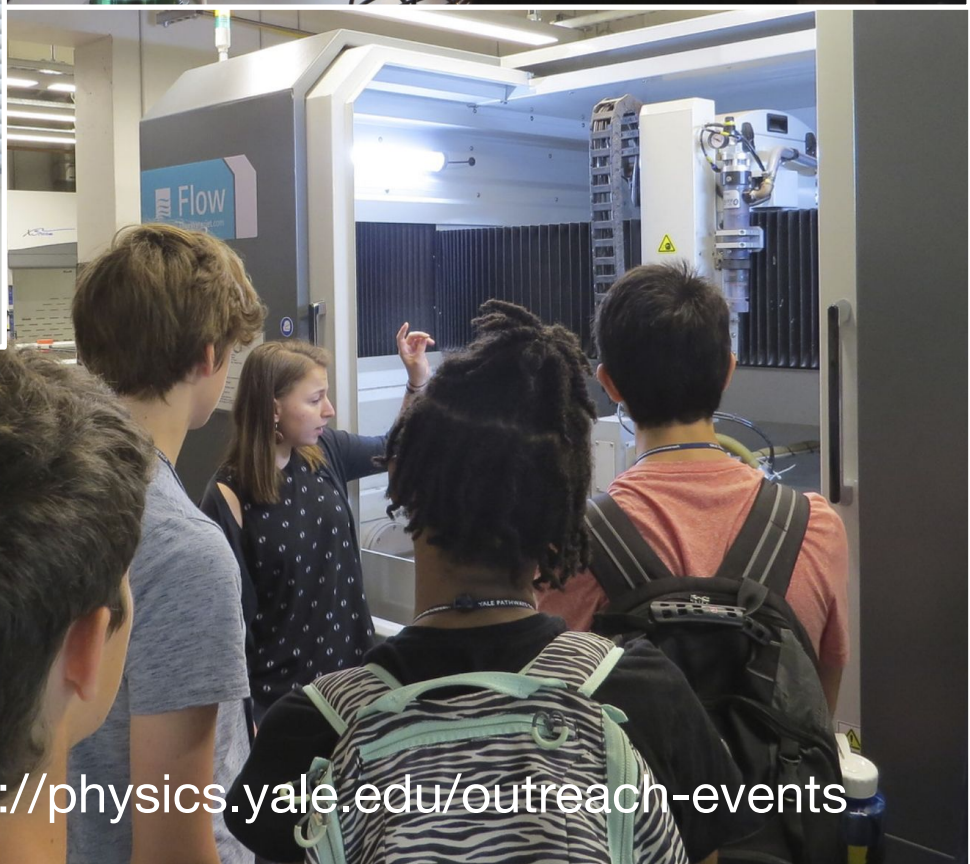
History and Foundations of Physics Reading  
Group (HoFoP)



## Women in Physics (+Allies)



# Outreach Opportunities



<https://physics.yale.edu/outreach-events>

# Career Mentoring

- Career development workshops through YPPDO (Yale Physics Professional Development Organization)
  - <https://yppdo.yale.edu/> and <https://wlab.yale.edu/calendar/year>
- Majority of our students go on to University/Lab Post-doctoral positions. Second largest group goes to Data Science/Engineering in Industry
- Support Career Mentoring towards academia, government, industry, and beyond



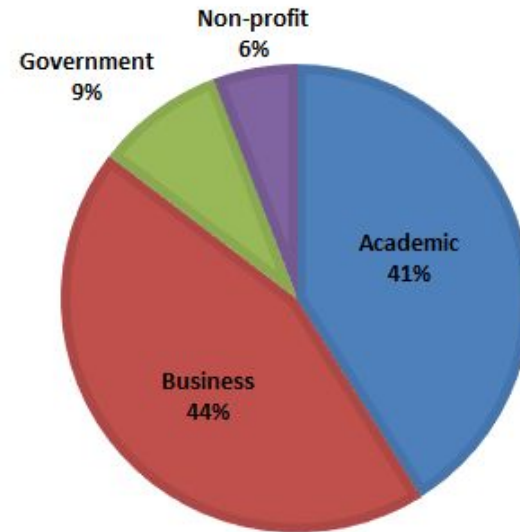
## YPPDO Seminar



**Ariana Hackenburg**, Wayfair  
**Sylvia Xin Li**, MIT  
**Catherine Matulis**, MathWorks  
**Savannah Thais**, Princeton

Wednesday Nov. 4, 2020  
3:00 p.m.

YPPDO Recent Physics Alumnae Panel with Ariana Hackenburg, Sylvia Xin Li, Catherine Matulis, and Savannah Thais



<https://physics.yale.edu/people/alumni>

# The Physics PhD Application Components

- Personal Details
- Program of Study
- Statement of Academic Purpose
- Recommendations (3)
- Academic History
- Program-Specific Questions
- Additional Questions (All optional, Personal Narrative Recommended)
- Languages
- Test Scores (\*GRE scores are Optional. TOEFL scores are required for non-english speakers.)  
<https://gsas.yale.edu/faq/admissions/standardized-test-questions>
- Resume/CV
- Background Check Information

<https://gsas.yale.edu/admissions/degree-program-application-process>



# Come and meet us!

Oct. 26-28 - SACNAS Conference

Nov. 7 - Joint Webinar with Astronomy

Nov. 8 - Joint Webinar with Applied Physics

Nov. 9-10 - NSBP Conference

**Dec. 15 - Applications Due**

Early Feb. - Offer letters sent

**April 15 - Deadline to Accept**



## Physics Open House

**Tentatively.... March 6-8 or April 4-6, 2023**