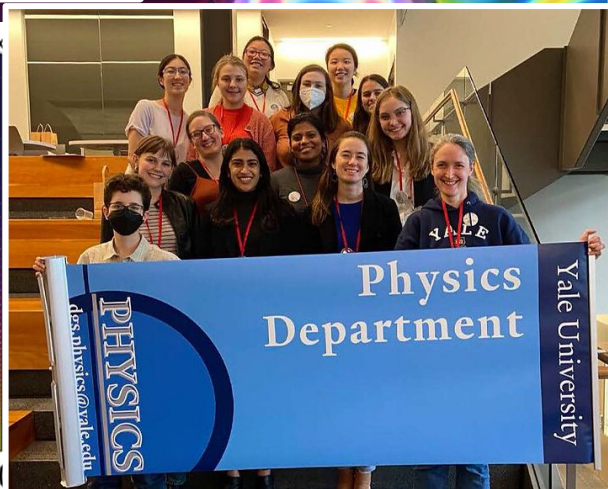
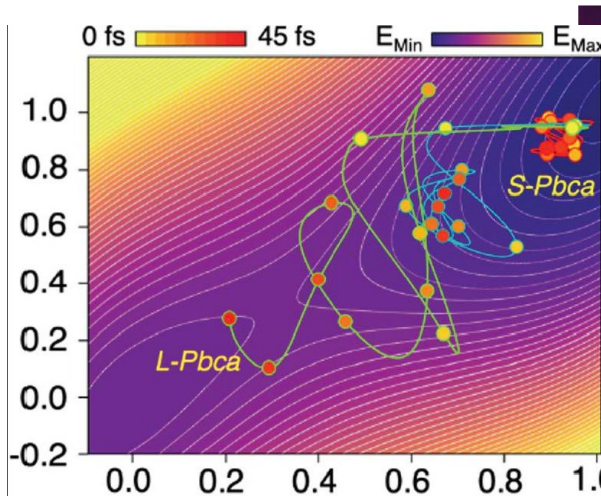
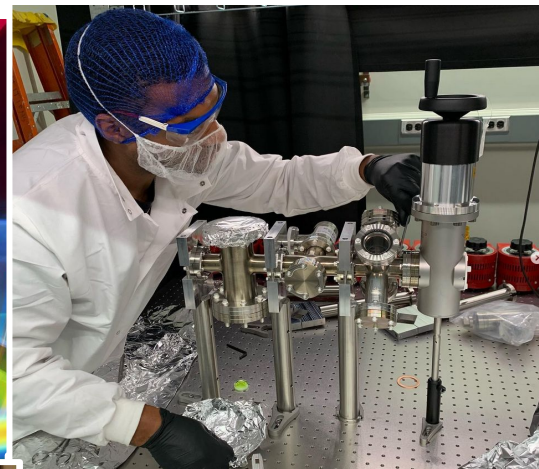
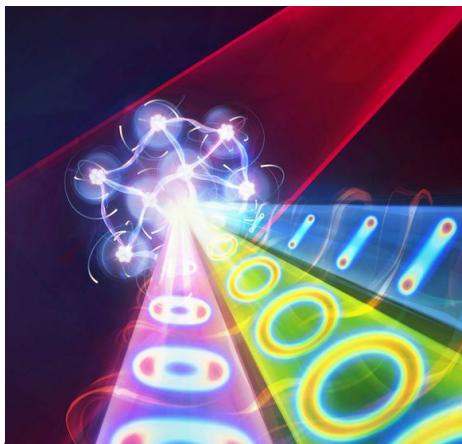


# Yale Physics Graduate Program Webinar 2024



[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 by the Numbers 2024

## People

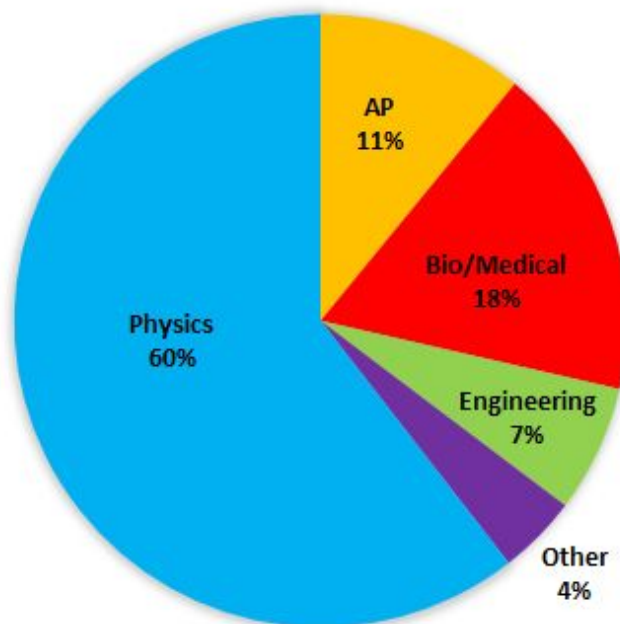
faculty (primary)	37
faculty (secondary)	29
research scientists	28
postdocs	24
grad students (physics)	160

## Median time to Graduation

6.3 years

Many opportunities to seek  
Interdisciplinary Research

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





# Research Areas

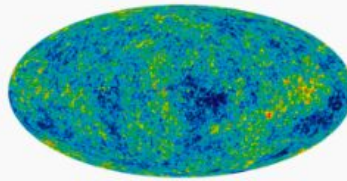
Traditional and emerging research areas

Research portfolio of department is evolving

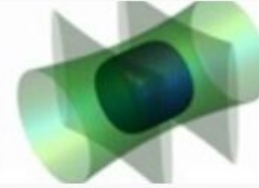
New faculty being hired

Current science initiatives on campus

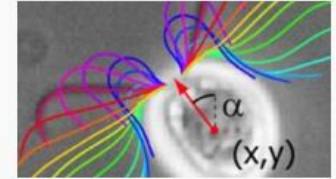
- data science
- quantum science
- instrumentation



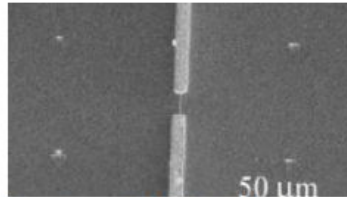
Astrophysics and Cosmology



Atomic, Molecular, and Optical Physics



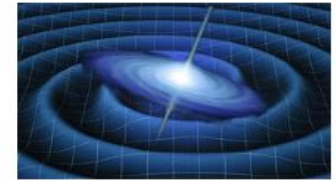
Biophysics



Condensed Matter Physics Experimental



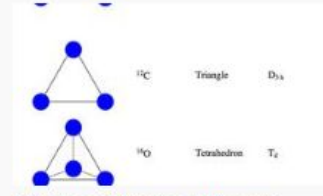
Condensed Matter Physics Theory



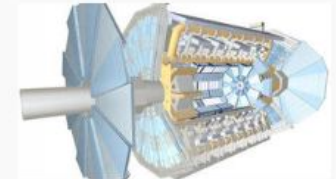
Gravitational Physics



Nuclear Physics Experimental



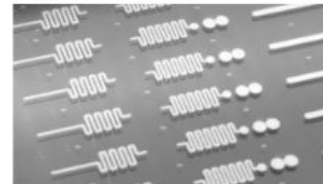
Nuclear Physics Theory



Particle Physics Experimental



Particle Physics Theory



Quantum Physics

# Yale Physics Research in Campus Centers



**Wright**  
**Laboratory**

**YQ** Yale Quantum Institute

**Yale** *Center for Research Computing*

**YCAA** Yale Center for  
Astronomy and Astrophysics



**WU TSAI INSTITUTE**  
**YALE UNIVERSITY**

Quantitative Biology Institute [QBio]



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



**Systems Biology Institute**

**ESI** Energy Science  
Institute



**Yale** *Physics*

# 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

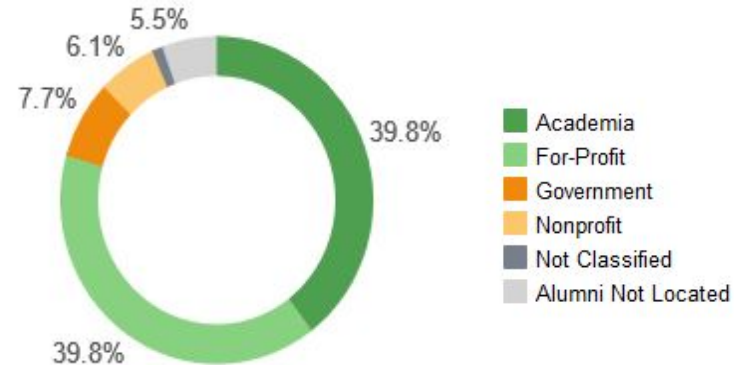
<b>Coursework</b> <ul style="list-style-type: none"><li>• 6 Core Courses (Waivers/Pass outs Available)</li><li>• 1 Advanced Elective</li><li>• 1 Special Investigation (research) course</li></ul>	<b>Program Flexibility</b> <ul style="list-style-type: none"><li>• Completion of Courses within one to two years</li><li>• Research during academic years permissible</li><li>• Quals taken after core course completion</li><li>• Interdisciplinary research in other departments</li></ul>	<b>Teaching</b> <ul style="list-style-type: none"><li>• 10 hrs/week for first 2 years</li><li>• 4 semesters required</li><li>• Additional Teaching Optional for extra pay</li></ul>
<b>Qualifying Event</b> <ul style="list-style-type: none"><li>• Four 4-question “Event”</li><li>• Taken August of your 2nd and/or 3rd Year</li><li>• Part of the learning milestone’s of the department. All students pass by participation!</li></ul>		<b>Research</b> <ul style="list-style-type: none"><li>• Typically, starts in first year</li><li>• Official join a lab by the end of 2nd year</li><li>• Full-time research summer of Year 1 and 2</li><li>• By mutual agreement, you can start summer before you start graduate school (Early Start)</li></ul>

# Career Mentoring

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

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

Top Employment Sectors



TOP FIVE

## EMPLOYERS

- 1 Massachusetts Institute of Technology
- 2 Google
- 3 Yale University
- 4 Amazon
- 5 Quantum Circuits, Inc.

## JOB TITLES

- 1 Assistant Professor
- 2 Research Scientist
- 3 Postdoctoral Associate
- 4 Postdoctoral Researcher
- 5 Senior Data Scientist

<https://gsas.yale.edu/admissions/yale-gsas-facts-figures>



# 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

External Seminars of Interest

Physics Club & Prize Lectures Flyer

Physics Club

Prize Lectures

Kimball Smith Series

Upcoming

Month

Week

Day

Year

All E

Upcoming Events

OCTOBER 12, 2022

11:00am [YCRC Research Support Office Hours](#)

4:30pm [Nobel Prize in Physics 2022 Lecture: A. Douglas Stone, Yale University, "Spooky Action at a Distance wins the Nobel Prize"](#)

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

Teaching Workshops

Writing Resources for Graduate Students


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

Teaching Programs and Grants

About Teaching Development for Graduate and Professional School Students



Teaching Forums

Teaching Consultations and Classroom Observations



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)

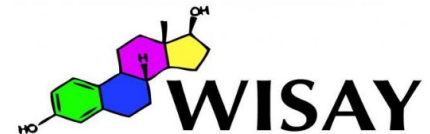
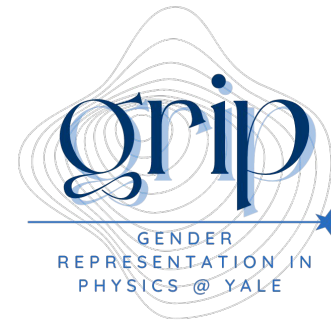


## Office for Graduate Student Development & Diversity (OGSDD)

Yale *Physics*

# Student Groups

## Climate and Diversity Committee



**GSAC**

Graduate Student Advisory Committee



Andy Ding (Year 5)



Charles Lomba (Year 4)



Katie Chang (Year 3)



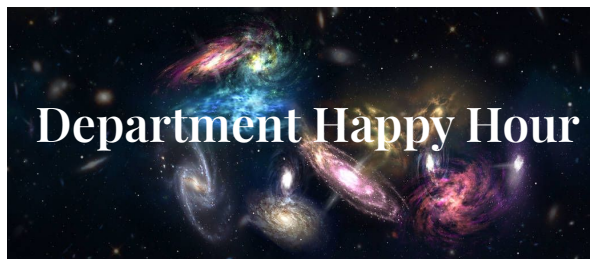
Braedyn Au (Year 3)



Andrew Neely (Year 2)



## History and Foundations of Physics Reading Group (HoFoP)

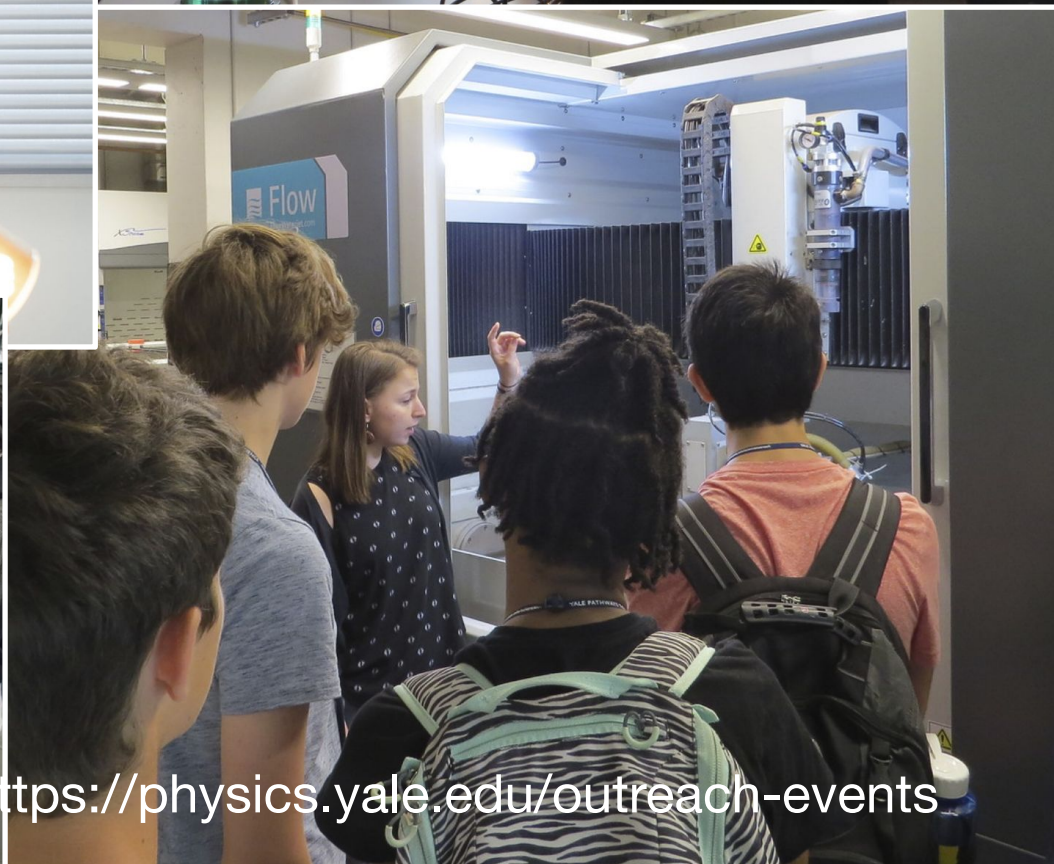


## Women in Physics (+Allies)





# Outreach Opportunities



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



# Ready To Apply?

## Application Notes -

- GREs Optional
- TOEFL/IELTS Required for most non-native English speakers
  - <https://gsas.yale.edu/fag/admissions/standardized-test-questions>
  - TOEFL < 26 or IELTS < 8.0 Required to participate in Summer English Program
- Personal Narrative - Highly Recommended (300 word limit)
- Eligible Incoming Awards - Looking for diverse personal experiences, interests, or perspectives
  - Dean's Emerging Scholar, Sterling Award, Leigh Page Award



## Mark Your Calendars

**Dec. 15 - Applications Due**

Early Feb. - Offer letters sent

April 10 - 12 - Yale Physics Open House

**April 15 - Deadline to Accept**



**Yale** *Physics*