Annual Newsletter

DEPARTMENT OF PHYSICS AND ASTRONOMY

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Academic Year 2025-2026

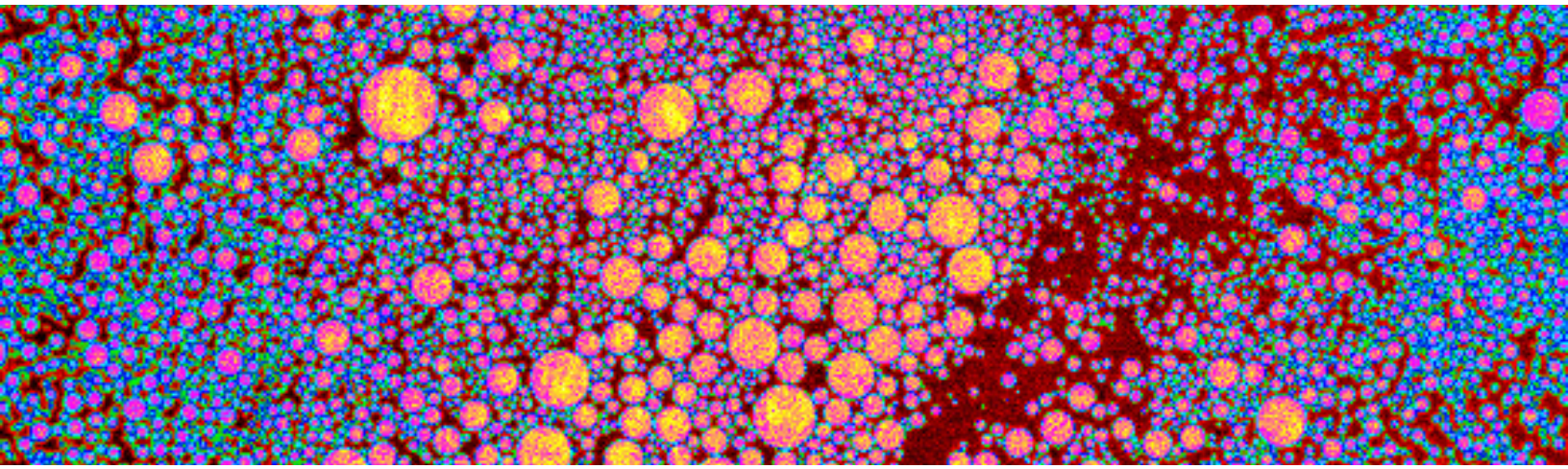


PHOTO CREDIT: MICHELLE DRISCOLL

Welcome to the third installment of the Annual Newsletter from the Department of Physics and Astronomy! This past academic year, like the one before, we continue to, for the most part, successfully navigate this more uncertain period for higher education and scientific research broadly. The department continues to evolve and thrive.

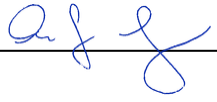
In faculty-related news, Assistant Professors Tim Kovachy and István Kovács were promoted to the rank of associate professor with tenure, and the department is preparing to welcome Professor Pieter van Dokkum in the Winter of 2027. After more than 40 years of service, and many more years of presence at Northwestern, Professor of Instruction Debbie Brown retired at the end of the 2025/2026 academic year. We are indebted to Professor Brown for all the years of service and will miss her very much.

The department's research productivity continues to shine and several of our faculty were recognized for their scholarship. Assistant Professor Allison Strom was awarded a 2026 Sloan Research Fellowship that will help pursue her ground-breaking work on galaxy evolution. Professor Claude-André Faucher-Giguère was named a 2026 Fellow of the American Astronomical Society. This is the AAS inaugural class of AAS Fellows. Professor Giles Novak was elected a 2026 Fellow of the American Physical Society while Professor Adilson Motter was named a Corresponding Member of the Brazilian Academy of Sciences. Beyond recognition for their scholarship, several faculty were the recipients of University awards for teaching-related activities (Professor Sasha Tchekhovskoy received a "Best Use of Videos" Award for his graduate Classical Mechanics course), service to Northwestern (Professor Vicky Kalogera was awarded the Daniel Linzer Award for Faculty Excellence in Service), and mentoring undergraduate students (Professor Adilson Motter was awarded the Karl Rosengren Faculty Mentoring Award).

Our graduate and undergraduate students continue to make the department proud; several of our current (and future) graduate and undergraduate students were awarded research-related fellowships. The department is looking forward to the new class of undergraduate, Masters, and Ph.D. students.

Among the many events we hosted and organized, I would like to highlight, in April 2026, Professor Sean Carroll (Homewood Professor of Natural Philosophy at Johns Hopkins University) visited the department as the Heilborn Lecturer and presented a series of very exciting lectures on foundational questions in cosmology and quantum mechanics. These were aimed at and very well attended by the Northwestern Community. In the Winter of 2025, we hosted the fifth edition of the Sievert Prize Lectures. The Sievert Lectures are aimed at the entire Chicago-land community, and we continue to be very positively impressed with the attendance and the level of engagement from the audience. This year, the lectures were on "The Physics of Life: from Molecules to Minds", presented by Thomas Wytock, a researcher in the department's Center for Network Dynamics.

The department continues to strive to ensure we provide, along with world-leading research in a plurality of exciting topics, a welcoming and safe environment for everyone who is excited, interested, or simply curious about Physics or Astronomy. I want to take advantage of the opportunity to thank everyone – students, postdoctoral researchers, faculty, and staff – who tirelessly contribute to the growth and evolution of the Department of Physics and Astronomy. Many new challenges and exciting opportunities lie ahead, and I look forward to an exciting new academic year!



Northwestern University

Faculty Announcements



Allison Strom Named a 2026 Sloan Research Fellow

Assistant Professor Allison Strom was awarded the prestigious fellowship from the Alfred P. Sloan Foundation. The Fellowships are awarded to “early-career researchers whose creativity, innovation, and research accomplishments make them stand out as the next generation of scientific leaders”. Professor Strom’s research is focused on observing galaxies to understand why galaxies follow different evolutionary paths.

Claude-André Faucher-Gigiuere Named a 2026 Fellow of the American Astronomical Society



Professor Claude-André Faucher-Giguère was named a 2026 Fellow of the American Astronomical Society (AAS) for his “significant contributions to a wide range of topics in cosmological hydrodynamics and theoretical galaxy formation”. Claude-André was one of only 23 members honored this year by the AAS.



Giles Novak Elected APS Fellow

Professor Giles Novak was elected an American Physical Society Fellow. APS Fellows are recognized for their excellence in physics and exceptional service to the physics community. Professor Novak was elected for his “key contributions to instrumentation for far-IR/submillimeter polarimetry, pioneering observations of magnetic fields at the Galactic Center and in star-forming regions, and excellence in mentoring”.

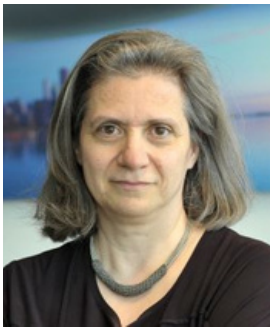
Adilson Motter won the Karl Rosengren Faculty Mentoring Award



Professor Adilson Motter received the Karl Rosengren Faculty Mentoring Award from the Office of Undergraduate Research for excellence in undergraduate research mentorship. He was the mentor for the undergraduate Jimmy Zhang for his summer research project, “Understanding the biological interactions of gene expression epistasis”.

Congratulations to Associate Professors Tim Kovachy and István Kovács on their promotions!

Faculty Announcements



Vicky Kalogera received the Daniel I. Linzer Award for Faculty Excellence in Service

Professor Vicky Kalogera is the selected recipient of the Daniel I. Linzer Award for Faculty Excellence in Service for her extensive contributions to various committees and interdisciplinary efforts. Linzer Award recipients have provided extraordinary service that has had a positive impact on the University.



Sasha Tchekhovskoy won the Best Use of Videos Award

Professor Sasha Tchekhovskoy was nominated by not just one but three students in his PHYSICS 411-0 Classical Mechanics for the Best Use of Videos Award. The award is presented by the Teaching and Learning Technologies and TEACHX planning committee.

We are excited to welcome incoming faculty member, Pieter van Dokkum



Professor Pieter van Dokkum will be joining us from Yale University in January 2027 as the Kimberly Querrey Professor of Astrophysics. van Dokkum earned his Ph.D. from the University of Grogingen in the Netherlands. He has received many notable awards for his contributions to astronomy. van Dokkum's research focuses on galaxy formation and evolution, and astronomical instrumentation and telescopes.

Professor of Instruction Dr. Deborah Brown is Retiring

Thank you Debbie for your 40 years of service!



Congratulations to all our Graduates!

Undergraduate Physics Major Graduates

Drew Alvarez

Emerson Brown

Audrey Clarendon

Isaac Cross

Leka Davis

Drew Jensen

Lucas Kritz

Ravi Nuxoll

Kiran Prakriya

Jesse Richter

Owen Roark

Pedro Rodriguez Jr.

Allie Salyga

Haley Shamah

Shane Williams

Joshua Willis

Richard Zhu

Master's Student Graduates

Saketh Raj Bhattiprolu
Yaxi Chen
Christopher Hays
Nathan Henry
Tiffany Liou
Mingrui Liu
Natalie Love
Lily Feng
Ember Tumuluri
Jaden Sidhu
Kierstin Sorensen
Omkar Sridhar
Matthew Turner
Theodore Wecker
Warit Wijitworasart
Yuanjia Zhang
Zixuan Zhang

Congratulations to all our PhD Student Graduates!

Dany Atallah
Dissertation Title: *Small N-Body Dynamics in Star Clusters: Runaway Black Hole Growth, Binary Formation, and Imprints Upon the Galactic Field*

Ethan Garvey
Dissertation Title: *Magnetically Correlated Exciton-Polaritons in Two-Dimensional Van der Waals Heterostructures*

Alexa Gordon
Dissertation Title*: Constraining the Origins of Fast Radio Bursts from their Host Galaxy Environments*

Emma Kaufman
Dissertation Title: *Magnetism in astrophysics: The origin, impact, and structure of magnetic fields*

Kyle Kennard
Dissertation Title: *An Electron-Recoil Dark Matter Search Using the Next Generation of SuperCDMS HVeV Detectors Operated at SNOLAB*

Taeyoon Kim
Dissertation Title: *Multi-qudit quantum information processing platform using High-Q SRF cavities*

Yanlin Li
Dissertation Title: *Exploring Specific Ion Effects on Protein Functional Groups Through Model Monolayers at Air-Water Interfaces*

Chang Liu
Dissertation Title*: Unveiling Type Ia Supernova Progenitor Demographics: From Rare Weirdos to a Diverse Population*

Yunwei Lu
Dissertation Title*: Optimal Control and Coherence Engineering for Superconducting Qubits*

Nathan McDonough
Dissertation Title: *A Continuous Coherent Lyman-alpha Source*

Yulun Miao
Dissertation Title: *Effective Field Theory Interpretation of Three Massive Gauge Boson Production at the Large Hadron Collider and Technical Development in the High Granularity Calorimeter upgrade of the Compact Muon Solenoid*

Kevin Ryan
Dissertation Title: Transport Studies of Superconductors for Quantum Applications

Charlotte Shao
Dissertation Title: Collective Decision Dynamics in Quantum Communications Networks

Gregorio R.M. Da Silva
Dissertation Title: *Towards a Coherent-Population-Trapping Atomic Clock beyond the Standard Quantum Limit*

Benedict Sukra
Dissertation Title*: Single-Electron Detection with a SQUID: Toward Quantum-Limited, Relativistic Detection*

Imran Sultan
Dissertation Title*: The Physics of Feeding Galaxies: Investigating Cold and Hot Mode Accretion and Angular Momentum Across Halo Mass and Redshift*

Elizabeth Teng
Dissertation Title: *AI-Enabled Emulators for High-Fidelity Binary Population Synthesis*

Max Wisne
Dissertation Title: *Studies on DC-Driven Single and Multiterminal Josephson Junctions*

Gan Zhai
Dissertation Title: *Nuclear Magnetic Resonance Study of Superconductivity and Spin Coherence in Nb3Sn Powder*

Yi Zhao
Dissertation Title*: Emergent Behavior in Biological and Metamaterial Networks*

Student Announcements



Left to Right: Issac Cross, Lucas Kritz, Leka Davis, Abby Pearson, Jonah Kim, Elijah Platnick, Hayley Shamah

2025 - 2026 Departmental Awards

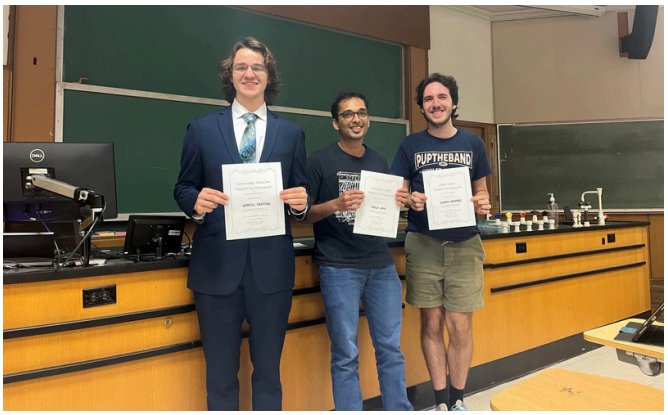
Outstanding Undergraduate Thesis Research
Issac Cross

Career Award
Hayley Shamah

Junior Career Award
Elijah Platnick

Physics and Astronomy Scholars
Leka Davis
Jonah Kim
Abby Pearson
Joshua Willis

Department Honor Recipients
Issac Cross
Leka Davis
Lucas Kritz
Haley Shamah



Left to Right: Gabriel Kenning, Sasank Chava, Edward Skrabacz

Rapid Fire Research Winners

Each year a mix of undergraduate and graduate Physics and Astronomy students have the opportunity to present their research in a condensed format to their fellow P&A community members. The presentations are judged by a panel of faculty and prizes are awarded.

1st Place
Edward Skrabacz

2nd Place
Sasank Chava

Honorable Mentions
Gabriel Kenning

Student Announcements



Piramon Kumnurdmanee

Piramon Kumnurdmanee Named 2025 Quad Fellow

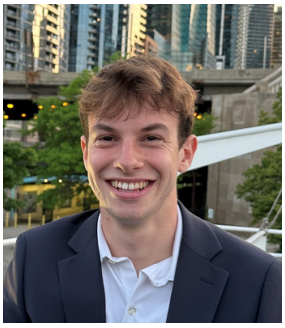
Astronomy Ph.D. student Piramon Kumnurdmanee was selected as a winner of the QUAD Fellowship, which supports top-performing students pursuing graduate degrees in science, technology, engineering and mathematics (STEM). The Fellowship program is designed to build ties among the next generation of scientists. Piramon was one of only 37 winners from 11 different countries.

Kiran Prakriya Named Fulbright Fellow

Physics undergraduate major and recent graduate Kiran Prakriya has been named a Fulbright Fellow. Kiran will be attending the University of Münster as a Fulbright Fellow for the 2026-2027 academic year, where he intends to conduct research on quantum transduction. As an undergraduate, Kiran worked in Professor Halperin's research group.



Kiran Prakriya



Nico Bers

Nico Bers Awarded Goldwater Scholarship

Undergraduate physics major and recent graduate Nico Bers was awarded the 2026 Barry Goldwater Scholarship, which supports students planning to pursue careers in natural sciences, math and engineering. Nico plans to pursue a Ph.D. in astrophysics. Nico has done research in both Professor Kalogera's and Professor Strom's research groups.

Elena González Prieto Receives Northwestern Presidential Fellowship

Astronomy Ph.D. student Elena González Prieto received the prestigious Northwestern Presidential Fellowship. Elena conducts research with Professor Rasio's research group.



Elena González Prieto

Student Announcements

Astronomy Ph.D. student, **Emma Kaufman** received a Future Investigators in NASA Earth and Space Science and Technology (FINNEST) Award.

Physics Ph.D. student, **Kyle Kennard** received a Department of Energy Office of Science Graduate Student Research (SCGSR) Award

Astronomy Ph.D. student, **Elizabeth Moné** was awarded a National Science Foundation Graduate Research Fellowship Grant

CIERA Reach Summer Grant Fellowships Recipients:
Andrea Ceja
Saarah Hall
Edward Skrabacz

Illinois Space Grant Consortium

Jupiter Ding received an Illinois Space Grant Consortium Fellowship

Illinois Space Grant Summer Research Scholarships;
Nico Bers
Tiger Lee
Mallika Sheshardi
Andrew Vincent

Outstanding Teaching Assistant Award

Outstanding Lab Teaching Assistant
Vedant Kashyap

Outstanding Discussion Teaching Assistant
Sarvesh Upadhyay

We appreciate your hard work and dedication throughout the year.
Thank you to all our Teaching Assistants!



Left to Right: Vedant Kashyap, Sarvesh Upadhyay

Department Groups Year in Review

Graduate Women in Physics (GWIP)



GWIP is an organization founded in 2023 and committed to supporting graduate students of minority genders by fostering an inclusive community, promoting mentorship, and advocating for equity. We have worked to create a supportive environment where members can connect, grow, and thrive within the department. This past year, we hosted six events, two of which focused on mentorship in collaboration with PAGSC. Through these events, we connected graduate students with mentors to build supportive relationships and provide guidance throughout their graduate journey. We kicked off the academic year with Glue, Goals, and Glitter, a welcome-back event where members reconnected, got to know one another, and set personal and professional goals for the year ahead. We also continued our coffee/boba series and invited senior graduate students, post-docs, and faculty to share advice and insights on navigating academic careers. New this year, we hosted a Bystander Intervention workshop to equip members with tools and strategies to recognize and respond to challenging situations. We are excited to continue growing our community in the coming years!

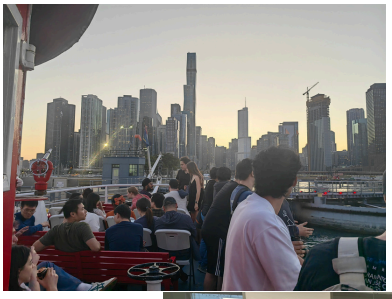




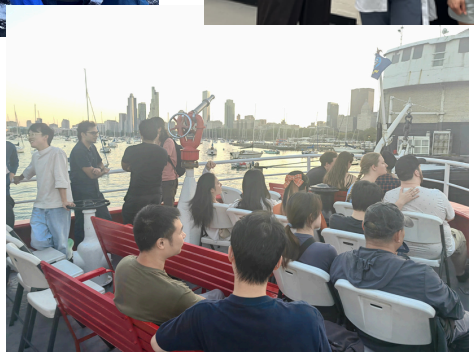
We're in Physics (WIP)

We're In Physics (WIP) is an undergraduate student organization for gender minorities in physics. Established in 2021, we focus on holding events, providing opportunities, and building a community for members. This past year, we hosted the undergraduate mentorship program with Northwestern's Society of Physics Students (SPS) and Graduate Women in Physics (GWIP), and sent students to Denver, CO for the annual APS Conference for Undergraduate Women and Gender Minorities in Physics (CU*iP). We also organized a tour of the quantum hardware company EeroQ, as well as movie night socials and weekly evening study sessions. We look forward to growing our membership and putting on more events in the coming year.

Department Groups Year in Review







Physics and Astronomy Graduate Student Council (PAGSC)

The Physics & Astronomy Graduate Student Council (PAGSC) addresses important issues pertaining to Physics & Astronomy graduate students at Northwestern University. We continued this year in our mission of ensuring communication between our graduate student community and the department leadership, holding quarterly town halls and meeting with the department chair, and for the first time sending out a report to the department email listserv to communicate issues important to graduate students. We helped welcome incoming students in the fall and participated in the open house for prospective students in the spring. This year, we again ran many of our traditional events, including our beginning of the year fireboat cruise on the Chicago River, the International Students Committee Thanksgiving dinner, ice skating in the winter, a trip to the Botanic Gardens, and Rapid Fire Research. Our weekly and bi-weekly events ran throughout the year, such as the P&A Early Career Research Seminar (PAECRS) and the DEI Committee's book club. The mentorship committee paired students for peer mentoring and hosted mixers and coffee hours throughout the year. Additional events included a game room night, DEI Committee action nights, a ping pong tournament, a tax workshop run by the International Committee, and a science communication series from our Science Engagement Committee. We look forward to another year of fun events and working to support our graduate student community!

If you are interested in learning more about any of our department groups, please feel free to reach out to the P&A Staff.

Department Events Year in Review

Each year the department hosts a variety of events to bring the P&A Community together to learn, converse, and engage outside the classroom and research spaces. Ultimately, these events always end in someone drawing equations on the blackboard, letting us know that these community building events are successful.











Fall Welcome

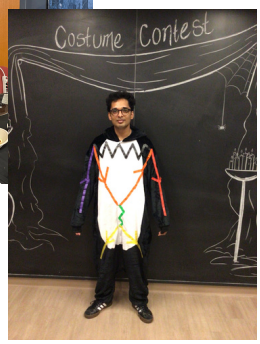
Our academic year commenced with the annual Fall Welcome. Professor Jens Koch presented on the 2025 Nobel Prize winners for Physics. Our new undergraduate students were introduced to the department and the exciting work being done in the field while enjoying liquid nitrogen ice cream made by Professors Kovachy and Kovács.



Graduate Student Orientation

In the fall, we were delighted to welcome 29 new Masters and PhD students to the department. On Orientation day they gathered for their introduction to the department and took a minute to pose for a group photo in front of their new offices at the Dearborn Observatory.





Fall Celebration

Our Fall Celebration brought an autumnal spirit to Physics and Astronomy on the most fitting day of the year—Halloween! Faculty, staff, and students gathered to enjoy a variety of seasonal snacks. The celebration also featured a Halloween Costume Contest, with PhD student Sai Chava earning top honors for his clever "Penguin Diagram" costume.

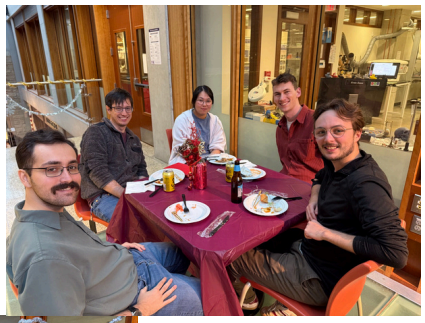


Department Events Year in Review

Holiday Party



Thank you to everyone who participated in the Cookie Contest! Lily Soucy took home the prize for best baker with her Gochujang Cookies.









Congrats to Carly Galvin, the top candy counter, who guessed the EXACT number of candies in the jar.













P&A won the Best Holiday Decor among all Weinberg departments for the second year in row!

The P&A Holiday Party is the perfect time for the entire department to gather over good food, great conversation and ridiculous raffle prizes. We hope to see you all again on December 2, 2026.

Department Events Year in Review

Sievert Prize Lecture Series

Our annual public lecture series was presented by postdoctoral scholar Thomas Wytock. The series, Physics of Life: From Molecules to Minds, explored the connections between physics and living systems across multiple scales. Thank you to Paul Sievert for his generous endowment. Recordings of the lectures are linked on the department website.







Sean Carroll presenting one of the Heilborn Lectures

Heilborn Lectures

The Heilborn LectureSeries has sustained for over two decades through the generous endowment provided by Walter and Christine Heilborn. This year's distinguished speaker was Sean Carroll, who holds the position of Homewood Professor of Natural Philosophy at Johns Hopkins University and is a member of the Fractal Faculty at the Santa Fe Institute.
Professor Carroll presented two scientific talks and one public lecture. Recordings of the lectures are available on the department website.

Physics Horizons

Physics Horizons is our undergraduate seminar series where faculty members present their research to undergraduate students. This year's talks included;

"Complex fluids under extreme stress ... or what happens when you throw oobleck?" presented by Associate Professor Michelle Driscoll

"Don't be Dense: Understanding the Diversity of White Dwarf Supernova Explosions" presented by Assistant Professor Adam Miller

"The Origin of Symmetry - A Perspective from Quantum Information" presented by Professor Ian Low

Department Events Year in Review

Mardi Gras



Mid-winter is time to celebrate Mardi Gras and serves as an occasion for the entire department to come together. Participants wore masks, enjoyed Zydeco music, and snacked on traditional treats such as King Cake and chicory coffee. The event embodied the festive spirit of "Laissez le bon temps rouler!"









Physics Majors Dinner

At the conclusion of the academic year, faculty, Physics majors and minors, and staff gathered at Five and Dime to honor our recent graduates, and award winners, and celebrate all our students' hard work.









P&A hosts several other yearly events to inform and engage our students.

How to Apply to Graduate School

A panel discussion for undergraduate students to learn more about graduate school and the application process

Undergraduate Research Mixer

A faculty and undergraduate student mixer connect undergrads interested in research with faculty seeking undergrads to join their research group

Graduate Student Research Mixer

A faculty and graduate student mixer aimed at connecting students with faculty performing research in alignment with their interests

NSF Graduate Research Fellowship Panel

A panel discussion for students to learn about the NSF Graduate Fellowship Program and how to apply

Physics and Astronomy Early Career Research Seminar (PAECRS)

Research seminars presented by current students

GRADUATION

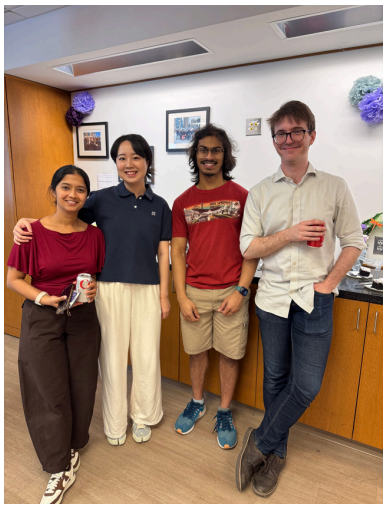
Congratulations to all our Physics and Astronomy Graduates! We are so proud of you and are excited to see what is next for you all!

















Physics and Astronomy in the Nortwestern News

Enectali Figueroa-Feliciano Featured on ChicagoNOW

Allison Strom Featured on Chicago Tonight

Northwestern accelerates quantum research with NVIDIA technology

Gravitational-wave detection verifies Stephen Hawking's theorem

Webb Telescope unveils doomed star hidden in dust

Renowned astrophysicist Pieter van Dokkum to join Northwestern

Cosmic crash caught on camera

Four to receive the Linzer Award for Faculty Service

Two Northwestern professors named Sloan Research Fellows

Gravitational-wave detections double with new catalog

Dark matter experiment reaches ultracold milestone

Spin separates giant planets from 'failed stars'

Two Northwestern students named Goldwater Scholars

Found: Milky Way black hole's missing wind

Northwestern projects receive Genesis Mission funding

Welcome to our incoming cohort of Physics and Astronomy Graduate Students!

Astronomy PhD Program Cohort

Ruoning Lan
Amanda Newton
Tristan Sand
Miguel Perdomo Luna
Connor Smith
Paxson Swierc

Masters Program Cohort

Tianzhuo Cheng
Roshan Chhetri
Roy Galazka
Cade Pankey
Luke Royer
John Stocker

Physics PhD Program Cohort

Emma Derrick
Nathan Henry
Jorge Hernandez
Sneha Jos
Khai Luong
Zeyu Ma
Nikita Mazotov
Spandan Pandya
Jaden Sidhu
Aditya Sriram
Thomas Thorton
Maddox Wroblewski
Yui Man Richmond Yeung
Iffat Zarif

Upcoming Academic Year 2026 - 2027 Events

October 13 : Fall Welcome

October 26: Fall festival featuring our annual Halloween Costume Contest

December 2: Department Holiday Party - New Location!

January 9 - February 27, 2027: Sievert Lecture Series

April 2027: Heilborn Lectures

Thank you to our Generous Donors

Shireen Dorab Adenwalla & Daniel Robert Claes

Robert J. Altizer

American Online Giving Foundation, Inc.

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Phyllis Heilborn

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Sonia Snejana Iovanovici & Crisan Liviu Talpes

Charles Kaczinski

Douglas P. Karim

Carol J. Koetke & Donald D. Koetke

Timothy W. Donovan & Walter Krause

William Lahti

Jinho Lim

Anita Madan & Sandip S. Madan

Joon H. Park

Marj Passini

Daniel J. Segel

Charles E. Wallace

In Memoriam of Professor Emeritus Kam Seth, PhD

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https://physics.northwestern.edu/make-a-gift/

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