TEAM-UP TOGETHER STUDENT EXPERIENCE CONFERENCE

Quantum Noir

Claiming space in quantum science

October 29–30, 2025 | Denver, Colorado

TEAM-UP TOGETHER

LEAD PARTNERS

AAPT PHYSICS EDUCATION | AAS | AIP | APS | SPS

WELCOME MESSAGE

Welcome to the second annual TEAM-UP Together Student Experience Conference (TUTSEC)! We are thrilled to have you join us for two days of inspiring talks, stimulating discussions, meaningful connections, celebration, and fun! This conference is designed especially for you, our TEAM-UP Together students who are the next generation of leaders in physics and astronomy. It offers a platform for you to explore new career paths and opportunities, build community, and strengthen your identity as a physicist or astronomer.

This year, our theme **Quantum Noir: Claiming Space in Quantum Science** was chosen not only in recognition of 2025 as the *International Year of Quantum Science*, but also to invite you to claim your place in this dynamic, multi-faceted field that holds many possibilities for shaping your future. We encourage you to learn from our speakers' journeys in this exciting field and to listen closely as they share their perspectives on where quantum science is headed and how you might be a part of that future.

As an added bonus, following TUTSEC, you will participate in the Society of Physics Students Congress (SPS Con), the largest gathering of undergraduate physics and astronomy students in the world. This will expand your access to a vibrant, national scientific community of peers and professionals who can inspire you, share insights, and help you advance in your career.

We encourage you to take every opportunity to network and learn from the scientists and professionals who have generously agreed to share their journeys, experiences, and expertise with you at TUTSEC and SPS Con. We welcome you all and we look forward to a successful conference.

—Arlene Modeste Knowles, Associate Director, TEAM-UP Together

TUTSEC CODE OF CONDUCT
AND DRESS CODE POLICY

TUTSEC CODE OF CONDUCT

The TEAM-UP Together Student Experience Conference is dedicated to fostering the safety and well-being of all participants during the conference. To do so, all conference attendees must agree to the Conference Code of Conduct outlined below:

1. Conference badges must be worn at all conference events.
2. Abide by all city and federal laws and regulations, including the rules and regulations of the hotel, the Sheraton Denver Downtown Hotel.
3. No alcohol consumption if you are under the age of 21 or a TEAM-UP Together student.
4. No use of controlled or illegal substances.
5. Report any incidents of harassment or inappropriate behavior to a TEAM-UP Together staff member.
6. Report any incidents of illness or injury that occur during the conference to a TEAM-UP Together staff member.
7. Comply with the dress code at all conference events.
8. Students attending with an advisor must check in with them daily.
9. Students are expected to attend and be on time for all conference sessions.
10. No recording or photographing another participant's intellectual property without their verbal and/or written permission.
11. Be courteous to all conference attendees, hotel staff, TEAM-UP Together staff, event planners, and all hotel guests.

Failure to adhere to the code of conduct may result in removal from the conference and could affect eligibility for participation in future events.

TUTSEC DRESS CODE POLICY

The Dress Code for TUTSEC is **Business Casual Attire**. Attendees are encouraged to dress in a professional, yet comfortable manner suitable for a professional conference environment. We ask that participants refrain from wearing clothing displaying offensive/vulgar designs or language, half shirts, shorts, or revealing clothing. TEAM-UP Together reserves the right to request that any attendee not adhering to this policy modify their attire to meet the dress code requirements. Individuals who are unable or unwilling to do so, may be asked to step out of a session or, in some circumstances, leave the conference. Students asked to leave risk losing their eligibility to participate in future events.

CONFERENCE AGENDA

WIFI:
Network: MarriottBonvoy_Conference — **Access Code:** SPScon2025

WEDNESDAY, OCTOBER 29

TIME (MOUNTAIN)	SESSION/ACTIVITY	LOCATION
3:00–6:00 pm	**TUTSEC Registration** (light snacks available)	Outside of Windows Room
5:00–6:00 pm	**Welcome Reception** - Remarks	Tower Court D
6:00–8:30 pm	**Conference Opening Session & Dinner** Opening Plenary (7:30-8:30) **Dr. Ron Gamble**, *NASA Goddard and University of Maryland, College Park*	Windows Room
9:00–11:00 pm	**Fun activities - *Optional*** Late night Snacks Available	Tower Court D

CONFERENCE AGENDA

THURSDAY, OCTOBER 30

TIME (MOUNTAIN)	SESSION/ACTIVITY	LOCATION
8:00–9:00 am	**Breakfast** (Buffet)	Hallway Outside Windows Room
8:45–9:00 am	**Welcome and Framing of the Day** TEAM-UP Together Leadership	Windows Room
9:00–10:30 am	**Plenary and Communication Workshop** "Using Your Voice to Communicate Your Science" **Dr. Renee Horton**, *NASA GoSwift Chief Engineer, Sustainable Flight Demonstrator Chief Engineer*	Windows Room
10:30–10:45 am	**Coffee Break**	Hallway
10:45 am–12:00 pm	**Quantum Scientists & Professionals Career Panel** Moderator: Arlene Modeste Knowles **Dr. Daniel Hart**, *NASA & Southern University* **Dr. Michelle Lollie**, *Quantinuum* **Dr. Kayla Lee**, *IBM* **Dr. William Wilson**, *Harvard University*	Windows Room
12:00–1:15 pm	**Lunch (Buffet) – Luncheon Plenary** (12:30-1:15) **LaToya Anderson,** *MIT Lincoln Lab, and former TU-T Scholar*	Lunch – Hallway Windows Room
1:15–2:30 pm	**Physics Identity session** Physics Identity Presentation **Dr. Simone Hyater-Adams**, Mega Imagination Discussion facilitated by Dr. Hyater-Adams and TU-T Scholars, **Italian Johnson & Julian Jackson**	Windows Room

THURSDAY, OCTOBER 30 - *CONTINUED*

SPS Physics & Astronomy Congress Events

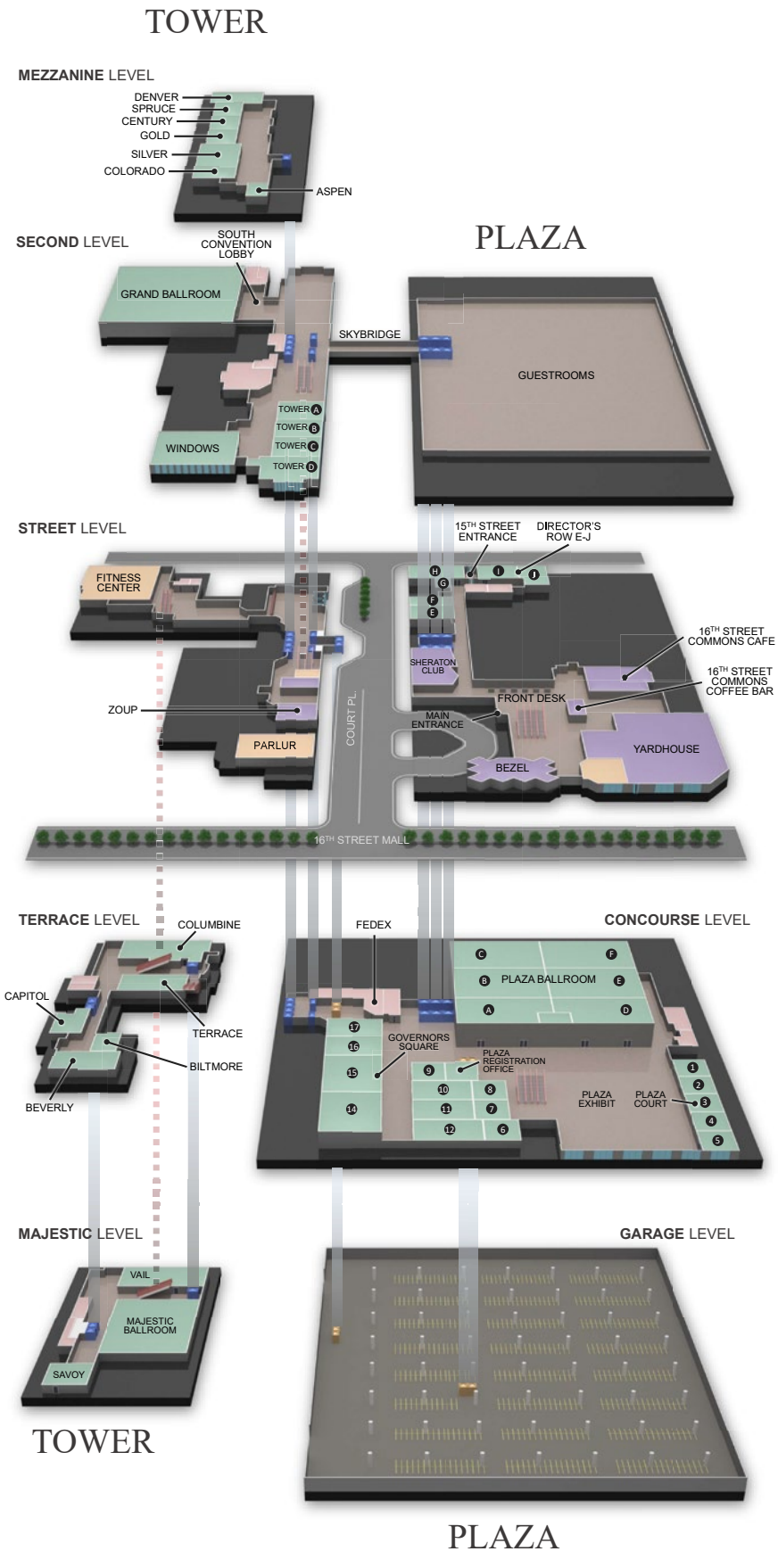
TIME (MOUNTAIN)	SESSION/ACTIVITY	LOCATION
2:30–3:00 pm	Physics Congress Opening Event	Plaza Ballroom
3:00–3:15 pm	Historian	Plaza Ballroom
3:15–4:30 pm	Plenary – Jocelyn Bell Burnell	Plaza Ballroom
4:30–4:45 pm	Break	Plaza Ballroom
4:45–6:15 pm	Physics and Astronomy Congress (Plenary Workshop)	Plaza Ballroom

TEAM-UP Together Student Experience Awards Dinner

TIME (MOUNTAIN)	SESSION/ACTIVITY	LOCATION
6:30–9:00 pm	**Celebratory Dinner (plated)** Keynote Speaker (7:30-8:30pm) **Femi Fadugba,** Science Fiction Author & Quantum Physicist Acknowledgement of TUT Seniors and new scholars Conference Closing	Windows Room

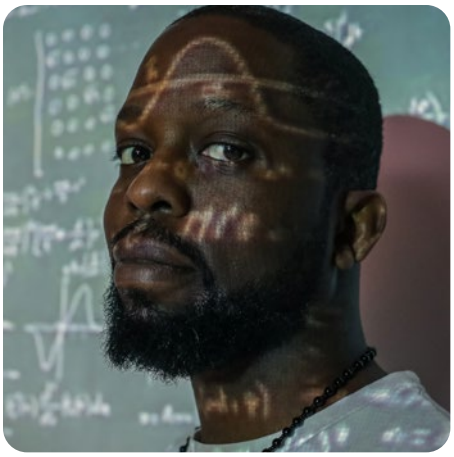
***** TUT Evaluation Student Interviews** to be held in Directors Row E at designated times

SHERATON HOTEL MAP



CONFERENCE SPEAKERS

KEYNOTE SPEAKER



Femi Fadugba

Physicist and Author – Thursday Dinner Keynote Speaker

Femi Fadugba believes the story of physics is too powerful to stay in the lab. He was the middle-schooler who got handed a quantum physics book by the school custodian—and never looked back. He earned an MEng in Materials Science from Oxford University, where he co-authored a Physical Review Letters paper in quantum computing, and later completed an MPA at the University of Pennsylvania as a Thouron Scholar. He worked in consulting, solar energy, and the creative arts before returning to Oxford as a Dummett Fellow at New College.

Femi's debut YA novel, The Upper World, fuses South London life with time-travel physics; it sparked a 15-way auction and is in development at Netflix with Daniel Kaluuya attached to star in and produce. Its sequel, The Mirror World (2025), brings quantum mechanics to the fore.

Today, Femi leads ShepherdXR, a nonprofit building VR experiences that help middle schoolers master math and, in his words, "speak the language of physics" for themselves. His through-line—on the page, in the lab, and now in the headset—is simple: turn big ideas into stories people can feel and futures young people can choose.

CONFERENCE SPEAKERS

PLENARY SPEAKERS

Dr. Ron Gamble

Cosmic Origins Research Scientist, NASA Goddard Space Flight Center/ University of Maryland-College Park

Opening Plenary

Dr. Renee Horton

NASA Chief Engineer, Subsonic Flight Demonstrator Project and the GoSwift Project, Armstrong Flight Research Center

Thursday Morning Plenary

LaToya Anderson

High-Performance Computing Research Facilitator,MIT Lincoln Laboratory

Lunch Plenary Speaker

CONFERENCE SPEAKERS

PHYSICS IDENTITY SESSION WORKSHOP SPEAKER AND FACILITATORS

Dr. Simone Hyater-Adams

Founder, MEGA Imagination LLC – Physics Identity Session

Julian Jackson

TU-T Scholar, Physics/Astrophysics Major, University of California, San Diego

Italian Johnson

TU-T Scholar, Physics Major, Jackson State University

CONFERENCE SPEAKERS

QUANTUM SCIENTIST AND PROFESSIONALS CAREER PANEL

Dr. Daniel Hart

IBM-HBCU Quantum Scholar-in-Residence and Visiting Research Associate Professor in the Department of Physics and Mathematics, Southern University and A&M College – Quantum Panelist

Dr. Kayla Lee

Head of Quantum Programs & Data at IBM Quantum Network & Programs – Quantum Panelist

Dr. Michelle Lollie

Advanced Laser Scientist, Quantinuum – Quantum Panelist

Dr. William Wilson

Executive Director of the Center for Nanoscale Systems at Harvard University - Quantum Panelist

Moderated by Arlene Modeste Knowles

MEET THE TUTSEC
PLANNING COMMITTEE

Charles Brown, PhD
Physics Professor, Yale University and Member, AIP Board of Directors

Robert Hilborn, PhD
Retired Associate Executive Officer, AAPT
Lecturer, Dept of Physics, University of Maryland, College Park
Professor of Physics, Emeritus, Amherst College

Julian Jackson
TU-T Scholar, Physics Major, University of California, San Diego

Italian Johnson
TU-T Scholar, Physics Major, Jackson State University

SUPPORTED BY TEAM-UP TOGETHER STAFF

Morgan Harding, TEAM-UP Together Program Coordinator, AIP
Arlene Modeste Knowles, Associate Director, TEAM-UP Together, AIP
Kamsi Oduyoye, TEAM-UP Together Community Engagement Coordinator, AIP

TEAM-UP TOGETHER

LEAD PARTNERS

teamuptogether.org

Breaking down the starkest barriers to student success in physics and astronomy to ensure equal opportunity for all.

About Us

TEAM-UP Together is a collective action initiative established by the American Association of Physics Teachers, American Astronomical Society, American Institute of Physics, American Physical Society, and Society of Physics Students to drive systemic change in physics and astronomy.

Our mission is to catalyze structural and cultural change in physics and astronomy to significantly improve graduation outcomes for undergraduates who face the starkest barriers to success in these fields, including a focus on African American students. To maximize our impact, we focus on two main areas, undergraduate students and departmental programs.

Student Programs

Our programs fuel undergraduate student success in physics & astronomy through community building, mentorship, direct funding, and academic & professional development.

MENTORSHIP
Personalized mentorship through the APS National Mentoring Community.

RESEARCH FELLOWSHIP PROGRAM
Funded research experiences where undergraduates develop real-world scientific skills-guided by research scientists.

SCHOLARSHIPS
$10k annual scholarships

COMMUNITY BUILDING
A thriving peer and professional network where students belong, collaborate and grow together.

ACADEMIC SKILL BUILDING
Strengthening core academic skills that boost student confidence so they can excel in their programs.

TRAVEL FUNDING
Funding to present at or attend scientific conferences of their choice.

PROFESSIONAL DEVELOPMENT
Training and workshops to equip students with skills to lead in the physical sciences & beyond.

STUDENT EXPERIENCE CONFERENCE
Annual conference to inspire and educate the next generation of leaders in physics and astronomy through engaging networking sessions, workshops, and research poster presentations.

The TEAM-UP Together Scholarship Program

$10,000 renewable scholarships to keep undergraduate students engaged in science, thriving, and on track to earn their bachelor's degrees in physics and astronomy.

UNLOCK THESE BENEFITS

- Up to **$10,000** per year.
- Renewable funding for **ANY educational** expense such as tuition, housing, fees, books, supplies, or equipment.
- Complimentary **Society of Physics Students** membership.
- Access to mentoring, training, professional development, and travel support.
- Become a part of a supportive community of peers and professionals in physics and astronomy.

Learn more at **teamuptogether.org**.

Departmental Program

Driving systemic change — one department at a time.

We aim to motivate and support departments to address systemic issues and inspire and support tomorrow's physics and astronomy leaders.

THIS PROGRAM PROVIDES:

- Funding to implement an/or scale up systemic change initiatives that improve the retention and success of undergraduate students — with a focus on African American students where opportunity gaps exist — as part of their overall student programs.
- Professional development and training opportunities for faculty and other professionals to better support students.
- A community of practice and engagement opportunities to network and learn from the efforts of others.

TUT EXCEL

(TEAM-UP Together Expanding eXpertise, Championing Excellence and Leadership Departmental Grant Program)

Proposals by Invitation Only

The TUT EXCEL grant program invests up to $200,000 in departments driving change — scaling what works or pioneering new programs so more students, including a focus on African American students, persist, thrive, and graduate with their undergraduate physics or astronomy degree.

Selected departments must demonstrate leadership, deep commitment, and proven success in addressing systemic barriers and improving graduation outcomes.

A key objective of TUT EXCEL is to highlight departmental models of success and excellence that can be replicated or adapted to produce successful outcomes for students across the US.

Join us in shaping the future of physics and astronomy

For more information about TEAM-UP Together efforts and how to get involved, contact us at **info@teamuptogether.org**.

TEAM-UP TOGETHER

LEAD PARTNERS AAPT AAS AIP APS SPS

MEET THE
TEAM-UP TOGETHER STAFF

Jovonni Spinner
Career Opportunity and Advancement Officer, AIP

Arlene Modeste Knowles
Associate Director, TEAM-UP Together AIP

Raven Proctor
Sr. Associate, Office of Career Opportunity and Advancement, and TEAM-UP Together Scholarship Administrator, AIP

Morgan Harding
TEAM-UP Together Program Coordinator, AIP

Kamsi Oduyoye
TEAM-UP Together Community Engagement Coordinator, AIP

TEAM-UP TOGETHER
LEAD PARTNER PROGRAM COMMITTEE

The TEAM-UP Together (TUT) Lead Partner Program Committee is made up of representatives from each of the five TUT Lead Partners: American Astronomical Society (AAS), American Association of Physics Teachers (AAPT), American Institute of Physics (AIP), American Physical Society (APS), and the Society of Physics Students (SPS). This committee carries out the mission and vision of TEAM-UP Together, develops programming, steers operations, and ensures alignment with partner organizations.

Alejandro de la Puente
Student Engagement Officer and Director of Society of Physics Students and Sigma Pi Sigma

Erika Brown
Director of Inclusion and Collaboration, American Physical Society

Robert Hilborn
Physics Lecturer, University of Maryland, College Park, Amanda and Lisa Cross Professor of Physics (Emeritus), Amherst College, and Associate Executive Officer (Retired), American Association of Physics Teachers

Rachel Ivie
Director of Higher Education Programs and Grants, American Association of Physics Teachers

Tom Rice
Education Program Manager, American Astronomical Society

Kayla Stephens
Associate Director, Society of Physics Students and Student Engagement

Frank Graeff
AIP Federation Engagement Liaison

TEAM-UP TOGETHER STAFF

Jovonni Spinner, Career Opportunity and Advancement Officer, AIP
Arlene Modeste Knowles, Associate Director, TEAM-UP Together
Raven Proctor, TEAM-UP Together Scholarship Administrator and Sr. Associate, Office of Career Opportunity and Advancement
Morgan Harding, TEAM-UP Together Program Coordinator
Kamsi Oduyoye, TEAM-UP Together Community Engagement Coordinator

TEAM-UP TOGETHER
PARTNER ORGANIZATION LEADERS

These leaders of the TU-T partner organization champion the TUT initiative within their organizations and member communities, support the alignment of the program activities to TU-T goals, commit resources to the program, and appoint staff to serve on the Lead Partner Program Committee.

Kevin Marvel
Executive Officer, AAS

Jon Bagger
Chief Executive Officer, APS

Michael Moloney
Chief Executive Officer, AIP

Beth Cunningham
Chief Executive Officer, AAPT

DONOR RECOGNITION

We are deeply grateful to these major benefactors for their support of TEAM-UP Together.

QUANTUM CIRCLE — $10M+

SIMONS FOUNDATION

THE SIMONS FOUNDATION INTERNATIONAL, LTD.

FUSION CIRCLE — $1M+

AIP

HIGH ENERGY CIRCLE — $500K+

HEISING-SIMONS FOUNDATION

MOLECULAR CIRCLE — $250K+

Carnegie Corporation of New York

ATOMIC CIRCLE — $100K

DEBORAH C. BRITTAIN AND THE LATE WILLARD W. BRITTAIN, JR.

ANONYMOUS

ANONYMOUS

ELEMENTAL CIRCLE — $50K+

HEINEMAN FOUNDATION

MRS. LAURA ROWE

DR. JAMES H. AND ALBERTA SMITH

DONOR RECOGNITION

We extend our heartfelt thanks to these individuals and organizations for their support of TEAM-UP Together.

The Troy C Alley & Unnice Alley Foundation

(Ret.) Maj. Gen. Charles F. Bolden, Jr.

Mr. Bobby J. Carey

Ms. Liz Dart Caron

Mr. and Mrs. Harry E. Clack

Mr. Walter Delphin

Dr. Judy R. Dubno

Ms. Bettie J. Elerson

Professor Eric Furst and Ms. Teresa Chang

Ms. Mary Sue Jackson Getwood

Dr. Edray Goins

Mr. Robert M. Goodwin

Dr. Philip W. Hammer and Dr. Rebecca C. Thompson

Mr. and Mrs. Ronald H. Hollimon, Sr.

Ms. Cheryl Jamison

Professor David I. Kaiser

Mr. Josef Koller

Mrs. Anna Lee

Mr. Matt Loeb

Dr. John C. Mather

Mrs. Arlene Modeste Knowles

Dr. Michael H. Moloney

Mr. and Mrs. Scott Montgomery

Ms. Athaline Moore

Ms. Dara Norman

Mr. Richard Obermann

Ms. Dorothy Paige-Turner

Dr. James Parson, Jr.

Ms. Sally Peoples

Dr. Julia M. Phillips

Ms. Er'Ron Robinson

Mrs. Burnette T. Sheffield

Ms. Marcia Lynn Smith

Mary and Thomas Snitch

Mrs. Rebecca W. Stefanon

Dr. Tracee Walker Gilbert

Mrs. Vanessa E. Wyche

Ms. Ruthie R. Wiley

Mr. Grady Wright

Dr. Chick Woodward

WE Memorial Acquisition Company

SPS SUMMER **INTERNSHIP PROGRAM**

Internships are 10-week long positions in science policy, communication, research, education, and outreach for undergraduate physics and astronomy students.

All internships include **paid housing**, a **competitive stipend**, a **commuting allowance**, and **transportation to and from the Washington, DC** area.

For more information, view the previous work and journal entries of SPS interns at **spsnational.org/programs/internships**.

APPLICATION DEADLINE

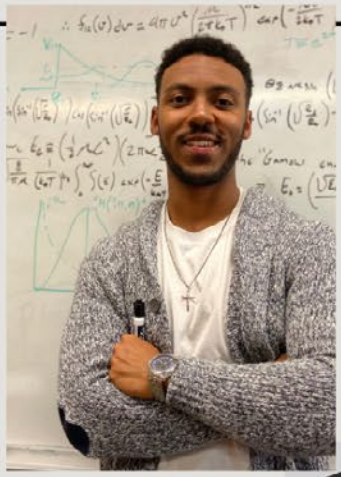
JANUARY 15

AIP SPS

2025 NSBP-NSHP JOINT CONFERENCE

The 2025 NSBP - NSHP Joint Annual Conference will be held in **San Jose, California**, at the San Jose McEnery Convention Center on **November 19-23, 2025**. Conference theme: **Beyond Boundaries** Physics for the Future of Workforce and Research Development (**P-FOWARD**).

The 2025 NSBP/NSHP Joint Conference will comprise four days of **technical seminars**, **educational sessions**, **employment exhibitions**, **interactive networking opportunities**, new and existing scholarship and postdoctoral programs, as well as **hybrid and virtual career fairs and poster sessions**. The conference theme is directed towards expanding workforce and research opportunities for the next generation of physicists and astronomers.



Dr. Connor Alexander Williams

KEYNOTE SPEAKERS

Dr. Sekazi Mtingwa

CONFERENCE WEBSITE: HTTPS://NSBP.ORG/2025CONFERENCE

JOIN AAPT TODAY!

AAPT Student Member Benefits:

Discounts on National Meetings
Access to AAPT journals
Member Portal: COMMUNITIES
The Physics Store
AAPT On Demand Products
Member Discounts Services Programs

But wait! There's more!

You'll receive research/internship opportunities
Career advice/guidance
Participate in Contests/Competitions
Receive Grants, Scholarships, and more!
Plus, undergrad and graduate students qualify for the student rate

Visit www.aapt.org/Membership/joining and join AAPT today!

AAAS SEA CHANGE | PHYSICS & ASTRONOMY

Interested in **doing a deep dive to become an excellent department**? Join P/A SEA Change cohort 5

P/A Societies involved: AAPT (lead), AAS, AIP, AAPM, APS, AVS, CUR, NSBP, NSHP, Optica, SPS.

Program Activities

- Undertaking a comprehensive but customizable self-assessment to examine policies, practices, and outcomes for all populations
- Reflecting on department to better understand oneself
- Crafting a bespoke 5-year action plan to remove root causes that create unnecessary barriers
- Receiving continued feedback and consulting through awarding

Program Benefits

- Supportive cohort of departments seeking to be better
- Individual consulting and feedback on department from a variety of sources
- Opportunity to receive Bronze recognition
- Opportunity to renew at the end of 5 years or go up a level (i.e., Silver)
- Improved physics and astronomy learning and working environments

Ready to join?

Please go to https://bit.ly/PhysAstroSEA_Change_Cohort5 or or use the QR code fill out the form by 30 November 2025. Cohort 5 starts in Jan. 2026, with the expectation of applying for a Bronze award at the end of May 2027.

Contact Alexis V. Knaub, Director of P/A SEA Change at aknaub@aapt.org with any questions.

AMERICAN ASTRONOMICAL SOCIETY

We are excited that you are considering an **undergraduate major in astronomy**! As potential astronomers in training, the American Astronomical Society may represent your interests on the national scale and creates workshops, programming, and resources to support the broader community. Below you will find links to helpful resources for beginning your undergraduate journey. Please visit the AAS website (https://www.aas.org) to learn more about everything the AAS has to offer.

Why should I major in astronomy?

These resources provide information about the skills and knowledge you will gain through an astronomy major. They also showcase some of the major research topics currently being explored in the field of astronomy — research in which you could be involved, even as an undergraduate!

Scan with your phone camera or click here!

What can I do with a major in astronomy?

These resources highlight potential jobs, both inside and outside of astronomy, for which your undergraduate degree will prepare you well. Resources include: general information about graduate school in astronomy, timelines for applying for graduate school and nonacademic jobs, and general career advice.

Scan with your phone camera or click here!

How can I make the most of my major?

These resources will help you take advantage of all the experiences and opportunities available to undergraduate astronomy majors. Resources include: summer research experience advertisements, opportunities to learn about cutting edge research in accessible ways, tools to improve your science communication, and advice on balancing life and work/study.

Scan with your phone camera or click here!

Welcome home.

The American Physical Society positions members to lead systemic and cultural change that ensures effective physics education for all, strengthening and diversifying the field.

Join the **APS National Mentoring Community** to connect with an inclusive network of mentors and diverse physics students.

Nominate students for the **APS Bridge Program** to increase the number of physics PhDs granted to historically underrepresented minority students.

Join the **APS Forum on Diversity and Inclusion** to help ensure everyone can thrive within the physics community.

Learn more at

go.aps.org/inclusion

APS Advancing Physics