

# APS Activities: Enhancing Inclusivity & Embracing Diverse Perspectives

Proposals to Boost STEM Participation in Underrepresented Groups

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The University of Chicago

APS is committed to fostering an inclusive physics culture that values and lifts up diversity, equity, belonging, accessibility, and ethics.

We believe that creating a more inclusive community is not only a moral imperative, but also an essential step to strengthen our discipline and ensure a future where anyone can be a physicist.



## APS: Mission, Vision & Values

#### Our Mission

To advance and diffuse the knowledge of physics for the benefit of humanity, promote physics, and serve the broader physics community, we:

- Provide a welcoming and supportive professional home for an active, engaged, and diverse membership
- · Advance scientific discovery and research dissemination
- Advocate for physics and physicists, and amplify the voice for science
- Share the excitement of physics and communicate the essential role physics plays in the modern world
- Promote effective physics education for all

#### Our Vision

To excel as a leading physics society, we will:

- Be the authoritative advocate for physics
- Publish world-leading journals in physics and related sciences
- Convene vital meetings, conferences, and workshops
- Engage and support the next generation of physicists
- Foster equity and inclusion, and increase diversity in all its dimensions
- Expand public appreciation of physics and its many contributions

#### **Our Values**

The core values that drive our mission are:

- The Scientific Method
- Truth and Integrity
- Diversity, Inclusion, and Respect
- Partnering, Cooperation, and Open Collaboration
- Speaking Out
- Education and Learning

- Provide a welcoming and supportive professional home for an active, engaged, and diverse membership
- Promote effective physics education for all

- Foster equity and inclusion, and increase diversity in all its dimensions
- Diversity, Inclusion and Respect



# **APS Membership: Units**

## ~50,000 members and 50 units

#### **Divisions**

• 17 research areas

## **Topical Groups**

 13 research areas (narrower than areas in Divisions)

#### **Sections**

9 regions in the U.S.

#### **Forums**

- Diversity and Inclusion
- Early Career Scientists
- Education
- Graduate Student Affairs
- History and Philosophy of Physics
- Industrial and Applied Physics
- International Physics
- Outreach and Engaging the Public
- Physics and Society

### Units provide opportunities for members

- to interact with colleagues with similar interests
- to keep abreast of new developments in their specialized fields



## **APS Governance**

APS Board: Overall responsibility for governance and affairs of the Society, chaired by APS President

APS Council: Unit representatives focusing on science/membership, chaired by APS Speaker of Council

### **APS Committees**

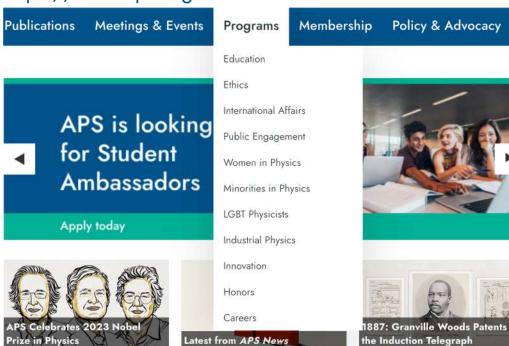
- Audit Committee
- Committee on Careers & Professional Development
- Committee on Committees
- Committee on Education
- Committee on Fellowship
- Committee on Informing the Public
- Committee on International Freedom of Scientists
- Committee on International Scientific Affairs
- Committee on Membership
- Committee on Minorities in Physics
- Committee on Prizes & Awards
- Committee on Scientific Meetings

- Committee on Scientific Publications
- Committee on the Status of Women in Physics
- Ethics Committee
- Finance Committee
- Governance Committee
- Historic Sites Committee
- Innovation Fund Committee
- Investment Committee
- Nominating Committee
- Panel on Public Affairs
- Physics Policy Committee



## **APS Programs**

**APS Home Page** https://www.aps.org



improve physics education impact policy makers enhance the STEM workforce increase diversity inform the public about the importance of physics connect physicists around the world



Education



Fostering international communication and scientific collaboration across nations.

International Affairs





Promoting the recruitment and inclusion of underrepresented minorities in physics.

**Minorities in Physics** 



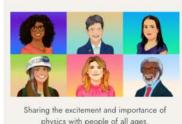
Supporting the recruitment, retention, and career development of women physicists at all levels.

**Women in Physics** 



Providing greater inclusion, engagement, and representation for LGBT physicists.

**LGBT+ Physicists** 



physics with people of all ages.

**Public Engagement** 



physicists with policy makers.

**Government Affairs** 

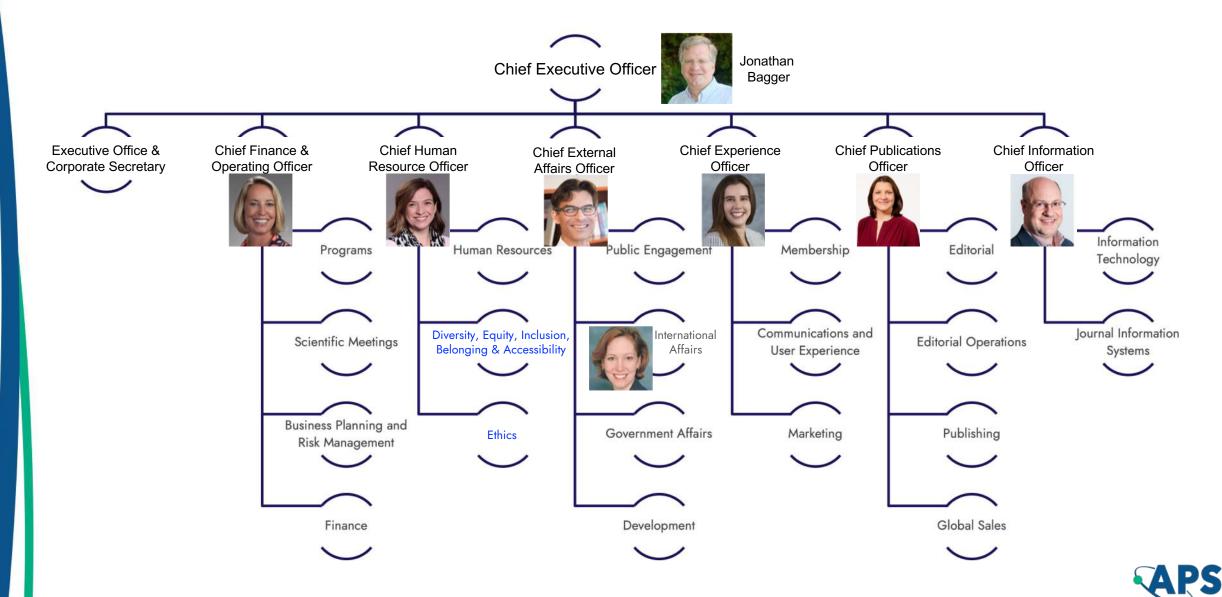


Facilitating ethical best practices involving physicists in education, government, and research

Ethics



# **APS Staff Organizational Structure**



# **APS Programs**

We prepare the next generation of physicists

We change the culture of physics

We foster a culture of collaboration and innovation

We aspire to serve as a welcoming global hub

We promote and facilitate meaningful careers in STEM



## **APS Programs**

#### **APS PROGRAMS FOCUSED ON INCLUSION & DIVERSITY**

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## We change the culture of physics

We drive important systems change with projects like the Effective Practices for Physics Programs (EP3) initiative, Faculty Teaching Institute, Get the Facts Out, Physics Teacher Education Coalition (PhysTEC), APS Bridge, APS IDEA, Department Action Leadership Institutes, NSF Physics REU Leadership Group, unit led DEIBA activities

# **Educator Resources**



In collaboration with the American Association of Physics Teachers

 Support physics programs with collections of knowledge, experience, and proven good practice for responding to challenges and engaging in systematic improvement



#### Supporting Faculty

In collaboration with the American Association of Physics Teachers

- Workshops to promote effective teaching
- Post-workshop ongoing professional development



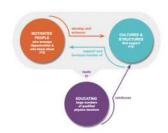
#### Repairing the Reputation

In collaboration with the American Chemical Society and the Association of Mathematics Teacher Educators

- Addressing myths about teaching (job satisfaction, pay, quit rate, benefits)
- Faculty-facing materials (about teaching) and student-facing materials (consider teaching)
- Handouts on teacher's life by the numbers



Physics Teacher Education Coalition



- Champions for teaching
- Supportive administrations
- Culture to support teaching
- Feedback loops with the community



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# Increasing Inclusivity and Access

## **APS Bridge Program**

Provides underrepresented minority post-baccalaureate students with research experience, advanced coursework, and coaching to prepare them for graduate school.



A network of students, faculty, and researchers implementing research-based transformational methods to drive cultural change and center people with marginalized identities in 100 academic departments and laboratories (including international organizations from Canada, Australia, Nigeria, Finland, Germany)







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# Increasing Inclusivity and Access

## **National Mentoring Community**

Facilitates mentoring relationships between African, Latinx and Indigenous physics students & physics mentors

#### **Climate Site Visits**

Provides external perspectives and suggestions to physics departments and research facilities to warn the "chilly climate" that minorities and women in physics often experience

### Inclusive Graduate Education Network

Leads a paradigm shift in increasing the participation of Black, Latinx and Indigenous students who enter graduate or doctorate level programs in the physical sciences







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# Increasing Inclusivity and Access

## Webinar Series: "Making Physics Inclusive & Equitable"

Address systemic barriers (Delta-Phy)



Understand anti-DEI legislation and its impact in collaboration with AAPT (American Association of Physics Teachers) and NSBP (National Society of Black Physicists)



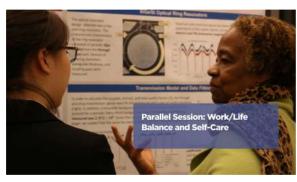
## We prepare the next generation of physicists

We create communities that provide education, support, mentoring, and a sense of belonging in physics with projects like the National Mentoring Community, CM Fellows program, CUWiP/AGL, Chapters, Future of Physics Days, APS Bridge, APS IDEA, Department Action Leadership Institutes, NSF Physics REU Leadership Group, Faculty Teaching Institute, Get the Facts Out, Physics Teacher Education Coalition

# Women and Gender Minorities in Physics

# Conference for Undergraduate Women in Physics (CUWiP)

- Empower undergraduate women physics majors to continue in physics
- Provide networking, information about graduate schools and professions in physics
- Share experiences, advice, and ideas with other undergraduate women & gender minorities.



#### Regional Conferences (same time)



(+ Canada, UK, ...)



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# Women and Gender Minorities in Physics

## Advancing Graduate Leadership (AGL)

Expands networking, strengthens retention, provides opportunities for future research and collaborations throughout the community.

Mentor training and professional development training for physics



graduate studies to support individuals in seeking leadership roles at their own institutions and in the broader community, where they train others and are recognized for their efforts

Grants for women in physics groups across the world, professional skills development seminars



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# Women and Gender Minorities in Physics

## **LGBT+** Physicists

Information through focus groups held at APS meetings, a detailed climate survey, a set of in-depth interviews with individuals who self-identify as LGBT+.

#### Recommendations

- Ensure a safe and welcoming environment at APS meetings
- Address the need to systematically accommodate name changes in publication records
- Develop advocacy efforts that support LGBT equity & inclusion
- Promote LGBT-inclusive practices in academia, nat.labs & industry
- Implement LGBT-inclusive mentoring programs
- Support the establishment of a Forum on Diversity and Inclusion





Report



## We aspire to serve as a welcoming global hub

We seek to establish APS as a welcoming convener of the global physics community, helping scientists worldwide to advance shared interests through collaborative activities such as the International Physics Roundtable, the 2025 International Year of Quantum Science & Technology, and international Satellite Sites for APS March & April Meetings.

# Global Engagement

#### **APS**

- ~50,000 worldwide members from > 115 countries
- ~12,000 outside U.S.
- Every member has a vital role in ensuring individuals from around the world and from all walks of life are valued, included, and empowered to succeed at APS.

## 2023 APS March Meeting

- 13,852 attendees
- 12,567 in-person (30% international)
- 1,285 virtual (57% international)









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## Global Engagement

## A Welcoming Global Hub

offers the world's physicists to connect with each other & advance their shared interests

- an opportunity for all physicists, regardless of race, nationality, ethnicity, gender, sexual orientation, to contribute to & benefit from the global scientific enterprise
- an opportunity for physicists of diverse levels of achievement and prosperity to build and strengthen relationships within the global physics community
- partnerships & collaborations with other national physics societies & international physics organizations.



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## Global Outreach

Price Equity for Less-Resourced Countries (APS March and April Meeting Registration Fees)

Scientists with verified residency in countries <u>classified by the World Bank</u> as lower income countries (LICs), lower-middle income countries (LMICs), and upper-middle income countries (UMICs) benefit from tiered registration pricing to minimize a financial barrier to meeting attendance.



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## Global Outreach

## APS Satellite Meetings (APS March and April Meetings)

Pilot program to extend the reach and diversity of annual meetings. Institutions convene local physics community to virtually watch and/or present research at APS Meetings.

2022: Satellite sites in South Africa, Rwanda, India (Bangalore & Mumbai)

2023: Satellite sites in Brazil (ICTP-SAIFR), India, Jordan (SESAME), Rwanda (EAIFR), South Africa

International Centre for Theoretical Physics
South American Institute for Fundamental Research

Nome About us Research Volreach V

2024: Planning underway! Please contact me if interested is hosting a site!



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## Global Outreach

## **APS International Young Leaders Forum**

- 50+ young physicists, 27 nationalities,
   19 countries spanning 6 continents
- Roundtable discussions on how APS can serve needs of international young physicists
- Sessions on publishing in peer-reviewed journals





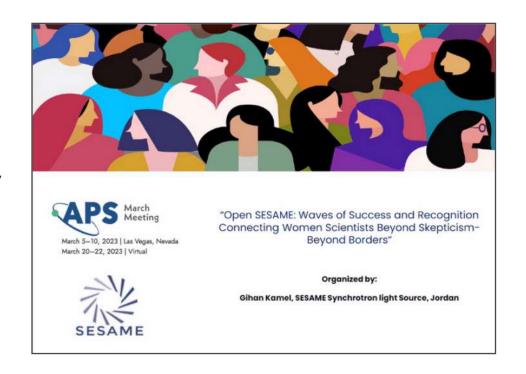
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## Global Outreach

## **SESAME Travel Award Program**

Partnership of 6 US & European Physics Societies to support training opportunities for Middle East physicists to use SESAME, the synchrotron light-source in Jordan





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## Global Outreach

## **International Physics Roundtable**

Partnership of 16 physics societies worldwide to work collaboratively toward common interests

We look forward to more diverse physics societies joining the roundtable (This is a topic for Physics Leadership Summit meetings in 2024)





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# Global Partnership

## **APS-EPS-ICTP Travel Award Fellowship Program (ATAP)**

ICTP, APS, EPS Partnership provides career-enhancing opportunities for early career scientists from developing countries. Since 2023, ATAP has been joined by the APS Forum on Early Career Scientists













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# Global Partnership

## **Young Physicists Forum**

Partnerships with Brazilian Physical Society and Chinese Physical Society (pre-COVID)



Young Physicists Forum 2020 at ICTP-SAIFR APS and ICTP-SAIFR jointly held



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# Global Partnership

# PHYSICS MATTERS - Online Colloquia Series



Part of the "Physics for Development" program of FIP to support international engagement for APS among students and early career physicists, targeting developing community audiences

## **Reciprocal Member Societies**

50 physics societies worldwide that have signed an agreement with the APS to exchange certain meeting registration privileges



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## Strengthern Global Partnership

## Physics Leadership Summit Meetings (1st half of 2024)

- Americas (Coming soon! January 2024!)
  - Argentina, Brazil, Canada, Chile, Cuba, Mexico, U.S.; Latin, ICTP-SAIFR
- Africa
- Asia-Pacific
- Europe
- Middle East

## Summit Follow-Up & Implementation (2<sup>nd</sup> half of 2024)

- Expand International Physics Roundtable
- Implement proposed activities from Summits
- Preparation for 2025 Year of Quantum Science & Technology



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## Strengthern Global **Partnership**

## Welcome to APS's New Home (2024)

Meeting Place, Gathering Place

Walking distance from White House









**Architectural Design** 



- All of you are welcome!
  - International physics community visiting Washington will be able to use it.
  - We expect an opening to visitors summer 2024
- Good timing: Celebration of the APS 125th Anniversary (2024)





While our membership is more diverse today than ever before, work in this area is far from complete.

APS will continue its commitment to increasing the number of members from underrepresented groups in physics at all career stages, removing barriers to participation, and taking an active role in organizational and institutional efforts to bring about this change.

This work extends across the APS community,

from staff initiatives to member-led activities.

