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Supporting and Enhancing Diversity and Inclusiveness in AAPT

Report Prepared by AAPT Committee on Diversity in Physics
February 2017

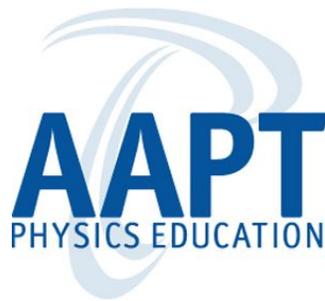


Table of contents

I. Summary of recommendations

- A. Recommendations for National Meetings
- B. Recommendations for the AAPT website

II. Motivation, process, and background

III. Acknowledging other AAPT efforts

IV. Recommendations for National Meetings

- A. Add gender pronouns to nametags
- B. Create travel funds for URM speakers and speakers with expertise in diversity
- C. Create diversity training sessions for Area Chairs and Section Representatives
- D. Ensure that diversity-oriented sessions are not run in parallel
- E. Devote a plenary slot to a speaker focusing on equity, diversity, and social justice

V. Recommendations for the AAPT website

- A. Create a page explaining gender pronouns
- B. Create a page advertising travel funds
- C. Create a page describing “best practices” for chairs and representatives
- D. Create a page linking to papers and presentations on diversity, equity, and justice
- E. Create a page linking to other organizations that focus on diversity

VI. Committee on Diversity efforts in support of recommendations

I. Summary of recommendations

We, the Committee on Diversity in Physics (CoDP), propose five recommendations for National Meetings and five additional recommendations for the AAPT website. The recommendations for meetings and the website are intended to be mutually reinforcing.

We emphasize that the recommendations in this report are, collectively, one step towards the goal of supporting and enhancing diversity and inclusiveness in AAPT. They are not a checklist of recommendations that, when accomplished, indicate that the goal has been achieved. After implementing these recommendations, the Board of Directors should continue to solicit and implement recommendations in the future.

A. Recommendations for National Meetings

1. Add gender pronouns to nametags at National Meetings.
2. Create and advertise travel funds for speakers who meet any of the following criteria:
 - Members of the local community in which the meeting is being hosted;
 - Teachers and two-year college faculty from underrepresented minority (URM) groups;
 - Teachers and two-year college faculty whose students are predominantly URM; and,
 - Researchers, educators, and/or organizers with expertise about diversity issues, including people from outside the AAPT membership.
3. Create diversity training sessions for:
 - Area Committee Chairs; and,
 - Section Representatives.
4. Ensure that diversity-oriented sessions are not run in parallel at AAPT meetings.
5. Devote a plenary slot to a speaker focusing on equity, diversity, and social justice as it relates to physics education and/or the AAPT community.
 - When possible, select speakers from URM groups

B. Recommendations for the AAPT website

1. Create a page explaining gender pronouns.
2. Create a page advertising travel funds.
3. Create a page describing “best practices” for Area Committee chairs and Section Representatives related to the following topics:
 - a. Improving diversity of committee membership;
 - b. Improving diversity of invited speakers and workshop facilitators;
 - c. Incorporating topics of diversity into “regular” sessions;
 - d. Supporting session organizers in presiding inclusively; and,
 - e. Supporting speakers in creating inclusive/accessible slides.
4. Create a page with links to papers and presentations that focus on diversity and justice.

5. Create a page with links to other relevant organizations and professional society pages that focus on diversity, including international organizations.

II. Motivation, process, and background

AAPT's mission is "to enhance the understanding and appreciation of physics through teaching." To this end, AAPT has identified "four critical issues that will guide our future activities:"¹

1. Increase AAPT's outreach to, and impact on, physics teachers;
2. Increase the diversity and numbers of physics teachers and students;
3. Improve the pedagogical skills and physics knowledge of teachers at all levels; and,
4. Increase our understanding of physics learning and of ways to improve teaching effectiveness.

In addition, since 2009, the AAPT Board of Directors has had a statement on diversity in physics education. The most recent statement, which was approved in 2015, states:²

"The American Association of Physics Teachers is committed to increasing access to physics courses and physics related careers for all individuals including people of all races, religions, national origins, sexual orientations, ethnicities, genders and gender identities, physical appearances and abilities, socioeconomic backgrounds, regions, immigrant statuses, and military or veteran statuses."

This commitment to diversity is especially salient given that AAPT members comprise a group that is predominantly white and male: about 86% of members are white and about 78% are men. People from underrepresented racial/ethnic groups comprise less than 4% of AAPT membership. A breakdown of AAPT membership by race, ethnicity, and gender is provided in the left panel of Fig. 1; the right panel provides information about members' occupations.

Although information about National Meeting attendees' race, ethnicity, and gender is unavailable, breakdowns of meeting attendees' occupational status for Summer and Winter Meetings are provided in the left panel of Fig. 2. The right panel provides information about average meeting attendance. Upon comparing Figs. 1 and 2, it is clear that compared to the population of AAPT members, K-12 teachers are underrepresented at AAPT National Meetings and four-year college or university teachers are overrepresented. This is notable since the typical K-12 physics classroom is more diverse than the physics classrooms at the undergraduate level.

Among other efforts to improve diversity in AAPT, the AAPT Board of Directors approved the following statement last summer:

"The [Board of Directors] charges the Committee on Diversity with assistance from the Executive Office to develop specific recommendations for action to support and enhance diversity and inclusiveness in AAPT. The Committee should provide a report on their

¹ The full mission statement is available online: <<https://www.aapt.org/aboutaapt/mission.cfm>>

² The statement is online: <<http://aapt.org/Resources/policy/AAPT-Statement-on-Diversity-in-Physics.cfm>>

recommendations by July 1, 2016. The Board of Directors commits to providing resources to support their recommendations.”

Demographic Group	Representation (%)	Teaching Level	Representation (%)
White	85.6	Four-year college/uni.	32.8
Asian	7.5	K-12	31.3
Black	1.4	Non-teaching	10.2
Latinx	1.2	Retired	10.2
American Indian	0.3	Student	8.4
Pacific Islander	0.3	Two-year college	6.9
Other race/ethnicity	3.8	Sustaining	0.2
Men	78.1		
Women	21.8		
Other gender	0.1		

Figure 1. Demographic breakdown of AAPT membership by race, ethnicity, and gender (left) and teaching level (right). Of 7,496 total members, 2,023 (27%) provided information about their race or ethnicity and 2,399 (32%) provided information about their gender. Data is based on provided information from these members. Note that we use the term “Latinx” as a gender inclusive alternative to the terms Latina and Latino.

Occupation	Winter (%)	Summer (%)	Attendance	Winter (#)	Summer (#)
Four-year college/uni.	50.5	46.4	Average	630	1030
K-12	15.0	16.2	Standard dev.	70	70
Two-year college faculty	9.8	6.6			
Students	8.7	13.9			
Non-teaching	8.5	9.7			
Retired	0.0	0.0			
No information	7.5	7.2			

Figure 2. Demographic breakdown of conference attendees by teaching level (left) and attendance metrics (right) for AAPT Winter and Summer Meetings, averaged over the 5-year period from 2012 to 2016. Data on the race, ethnicity, and gender of conference attendees were not available.

To help generate the report and further AAPT’s mission and commitment to diversity in physics education, the CoDP had an in-person discussion during AAPT WM16, solicited ideas from members of CoDP and related committees³ via two surveys, organized video conferences with CoDP members to discuss survey results, and solicited demographic information about AAPT

³ The “related committees” were the Committee on Women in Physics, the Committee on International Physics Education, and the Physics Education Research Leadership and Organizing Council (PERLOC).

membership from the Board of Directors. These actions, and the resulting information, inform the recommendations presented herein.

Our recommendations focus on AAPT National Meetings and the AAPT website. Improving and enhancing diversity and inclusiveness at National Meetings is of particular importance given that conferences play a major role in shaping the direction of physics education, networking and idea-sharing, and other opportunities for professional development. Interpersonal interactions at conferences are consequential for individual newcomers' access to the field. Additionally, the AAPT website is the main access point for the AAPT membership, and is an excellent place to center content geared towards diversity and inclusiveness in physics and physics education. In this report, we recommend changes to the website that complement and reinforce our recommendations for National Meetings.

Before presenting our recommendations, we first acknowledge ongoing efforts to improve and enhance diversity in AAPT.

III. Acknowledging other AAPT efforts

CoDP acknowledges and commends ongoing efforts by AAPT to support, improve, and enhance diversity and inclusiveness in AAPT. For example:

- The AAPT Board of Directors has a statement on diversity in physics education.⁴
- The AAPT Code of Conduct⁵ makes clear that AAPT does not tolerate discrimination or any form of unlawful harassment, and is committed to providing an atmosphere that encourages free expression and exchange of scientific and educational ideas.
- The AAPT Board of Directors passed a motion at Winter Meeting 2016 to allow members of NSHP and NSBP to register for AAPT National Meetings at AAPT member rates.
- AAPT holds an LGBT+ meetup at AAPT National Meetings to promote networking and socializing among members and friends of the LGBT+ community.
- AAPT provides childcare grants for National Meeting attendees who are bringing children to a National Meeting or who incur extra expenses in leaving their children at home in order to attend a National Meeting.
- The Committee on Diversity in Physics and the Committee on Women in Physics provide programming for National Meetings as well as knowledge about, and initiatives that support, diversity in AAPT.
- The NSF-funded eAlliances program⁶ enables women in physics and astronomy departments (especially women who are racial/ethnic minorities) to create their own peer mentoring group of other women physicists or astronomers with whom they share important characteristics.

⁴ The statement is online: <<http://aapt.org/Resources/policy/AAPT-Statement-on-Diversity-in-Physics.cfm>>

⁵ The Code of Conduct is available at <https://www.aapt.org/aboutaapt/organization/code_of_conduct.cfm>

⁶ Information about the eAlliances program is available at <<http://ealliances.aapt.org>>

- The NSF-funded HERStories project⁷ includes a video that shares words of wisdom and encouragement from women in physics from around the world as well as materials for teachers to use in the classroom and introduce their students to women in physics.
- AAPT has provided administrative support for the 2011 and 2014 IUPAP International Conference on Women in Physics (ICWIP)⁸, including being the fiscal agent for NSF grants. In addition, AAPT is supporting the U.S. Delegation to the 2017 IUPAP ICWIP and a proposal to NSF has been submitted.

CoDP recognizes that these and related efforts are being led by other individuals and groups within AAPT. CoDP is open to supporting the leaders of such efforts in ways that align with AAPT's needs and vision. For example, at the 2017 AAPT Winter Meeting, CoDP and the Committee on Professional Concerns are co-sponsoring a panel called, "Creating Inclusive Environments at Conferences." One of the panelists will be current AAPT President Janelle Bailey, who will speak about the Code of Conduct.

In this report, our intention is to make recommendations that complement ongoing AAPT efforts to improve diversity in AAPT.

IV. Recommendations for National Meetings

CoDP has identified five major recommendations pertaining to diversity and inclusiveness at AAPT National Meetings: (i) add gender pronouns to nametags, (ii) create travel funds for URM speakers and speakers with expertise in diversity, (iii) create diversity training sessions for Area Chairs and Section Representatives, (iv) ensure that diversity-oriented sessions are not run in parallel, and (v) devote a plenary slot to a speaker focusing on equity, diversity, and social justice. In this section, we describe each of these recommendations in more detail.

A. Add gender pronouns to nametags

AAPT should ask conference attendees to indicate their gender pronouns on conference registration forms. AAPT should include attendees' pronouns on their nametags.

In most interactions, we are able to correctly guess the pronouns that other people use: people who look like men probably use "he, him, and his" and people who look like women probably use "she, her, and hers." However, sometimes our assumptions are incorrect; we may use, for example, the pronoun "he" to refer to someone who uses the pronoun "she." This behavior is known as *misgendering* another person, and it has negative impacts on people who are transgender, genderqueer, and/or who are regularly misgendered for other reasons.

Interpersonal interactions are a major feature of conferences: they are the means by which we maintain and expand our professional networks and by which newcomers gain access to the field of physics education. Therefore, it is imperative that we take actions to minimize instances where

⁷ Materials related to the HERStories project are available at <<http://aapt.org/resources/Herstories.cfm>>

⁸ More information about the IUPAP ICWIP is available at <<http://uswip.org>>

one person misgenders another. To this end, adding gender pronouns to nametags is one concrete action that conference organizers can take.

Pronouns on nametags have the following benefits:⁹

- They make it easy to know which pronouns to use when you aren't sure.
- They allow people with uncommon pronoun-sets to communicate with them easily.
- They prompt a conversation among cisgender people about gender and raise awareness that gender is complicated.
- They create a welcoming environment for people of all genders.

This recommendation may seem controversial to some people, especially cisgender people who have not been misgendered or who are not aware of instance where they may have misgendered someone else. One concern is that some women—a group that is underrepresented in physics—may be drawing unwanted “extra attention” to their gender. Another concern is that adding pronouns to nametags is unnecessary for most people.

However, for people who are not regularly misgendered, adding gender pronouns to nametags would not actually add “extra” information about their gender since others are already able to correctly guess which pronouns they use based on visual cues (clothing, hairstyle, etc.). We also believe that it is important for everyone to display their gender pronouns on their nametags; if only those people who experience misgendering added pronouns to their nametags, they would be singled out by the different appearance of their nametags. For these reasons, we recommend that gender pronouns be added to every nametag.

During online registration, conference attendees should be asked to select the pronouns that they use. Options could include:

- He/him/his
- She/her/hers
- They/them/their
- Other : _____
- Prefer not to specify

On nametags, pronouns could be displayed under the name or under the affiliation. Pronouns should be printed in a font identical to (or very similar to) the font used for the affiliation.

B. Create travel funds for URM speakers and speakers with expertise in diversity

AAPT should provide funds to defray travel and registration costs for contributed and/or invited speakers from the following groups:

- Members of the local community in which the meeting is being hosted.
- High school and two-year college faculty generally, but especially

⁹ List copied from <<http://www.pronounribbons.org>>

- a. Those who are from URM groups, and/or
 - b. Those whose students are predominantly URM.
- Researchers, educators, and/or organizers with expertise about diversity issues, including people from outside the AAPT membership.

Increasing access to AAPT by members of the above groups through defrayed conference costs will not only improve diversity among conference attendees, but it will also elevate creative teaching ideas that might not otherwise be heard at AAPT.

Importantly, educators who teach predominantly URM students and/or are themselves members of a URM group should *not* be expected to speak about diversity issues. Instead, these educators should be given opportunities to speak about their expertise and interests when it comes to physics and physics education.

Similarly, when it comes to speaking about diversity issues, AAPT should not provide funds only to people from URM groups. Raising awareness about and organizing to improve diversity is a responsibility that all people share. We note that looking beyond AAPT membership will likely help session organizers create panels and sessions with speakers who have niche expertise and collectively comprise a diverse group of experts.

C. Create diversity training sessions for Area Committee chairs and Section Representatives

AAPT should create opportunities for Area Committee chairs and Section Representatives to receive training on diversity issues pertaining to AAPT national and sectional meetings.

Volunteer organizers are responsible for making many decisions about the content and structure of AAPT meetings. For example, Area Committee chairs, Section Representatives, and other volunteers make decisions about session and workshop themes and formats as well as who will be invited to present in a given session. Therefore, it is important for AAPT to provide volunteer organizers with access to information about best practices for diverse and inclusive sessions and workshops.

By focusing our recommendation on the training of Area Committee chairs and Section Representatives, our hope is that practices for organizing diverse and inclusive sessions and workshops will percolate to Area Committees and Sections through the leadership of the Chairs and Representatives. Thus, AAPT can hope to have a broad impact on national and sectional meetings by providing educational opportunities to a relatively small group of people.

Diversity training for Chairs and Representatives could take place at National Meetings, with a similar structure to Programs I and II. These trainings could focus on:

- Addressing sexual, racial, and other forms of harassment;
- Improving diversity of committee membership;
- Improving diversity of invited speakers and workshop facilitators;

- Incorporating diversity-oriented talks in sessions that are not necessarily “about” diversity;
- Supporting session organizers in presiding inclusively; and,
- Supporting speakers in creating inclusive/accessible slides.

D. Ensure that diversity-oriented sessions are not run in parallel

AAPT should ensure that few or no sessions co-sponsored by either CoDP or the Committee on Women in Physics are run in parallel to one another at National Meetings.

AAPT meetings have a wealth of high quality sessions that share common themes. This of course presents a variety of challenges in the scheduling of sessions to accommodate its memberships' common interests, as meeting participants often need to make difficult decisions about what sessions to attend and whether they want session hop to view presentations of interest. Sessions that focus on diversity, equity, and social justice are fairly narrowly focused, and therefore are currently a small enough subset of sessions at the AAPT meetings. CoDP requests that AAPT make a concerted effort to avoid conflicts between sessions that address these themes so that participants can attend diversity oriented threads throughout the meeting. We understand that this can sometimes be challenging when paper sorters do not have enough information on whether particular sessions focus on these specific themes. When conflicts between similar sessions are unavoidable, we request that, when possible, sessions on common themes be held in close proximity to allow for participants to session hop.

We encourage AAPT rethink the drop down topics available to presenters as they submit their abstracts. Specifically we feel that adding a topic of “Diversity, Equity, and Social Justice” to the list of topics would be beneficial to the paper sorting process and that this topic list should be presented as a checkbox rather than a drop down menu as many presentations straddle multiple topics.

E. Devote a plenary slot to a speaker focusing on equity, diversity, and social justice

AAPT should devote a plenary slot to a speaker focusing on equity, diversity, and social justice as they relate to physics and/or physics education.

In recent years the AAPT, as well as the broader physics and astronomy communities, have seen a growing interest in workshops, sessions, and talks that focus on equity, diversity, and social justice. For instance, this year, at the Sacramento AAPT meeting, the CoDP meeting had about 30 participants, a workshop focusing on Race 101 was attended by about 20 AAPT members, and multiple invited sessions on this, and related topics, had over 100 participants with standing room only. This is a significant shift from only a few years ago where attendance at these types of sessions was small. Because of the growing interest in this area, on the part of the AAPT membership, the CoDP feels that this is the appropriate time to include a speaker on these topics in one of the plenary slots. Ideally, every National Meeting would have one such plenary speaker

Including a speaker who focuses on equity, diversity, and social justice accomplishes a number of goals: (1) it aligns with AAPT membership interest, (2) it affirms AAPT's position on these issues and this topic to both its members and the larger physics community, (3) it aligns with AAPT's identified critical issues and the 2015 Board of Directors statement on diversity, and (4) it is an essential starting point for some and a jumping off point for others to think about topics that are essential to the creation of physics learning communities that are inclusive, and (5) it helps us place the physics content into broader societal structures. Speakers who focus on these topics for plenary talks at AAPT meetings must be national leaders in the field who garner the same respect as other plenary speakers at AAPT meetings. The CoDP is interested in, and committed to, working with AAPT leadership to identify national leaders as possible plenary speakers for this particular theme. National Leaders who also happen to belong to URM population should be given priority over National Leaders who are not from URM populations.

V. Recommendations for the AAPT website

The Resources section of the website lists "Teaching" and "Diversity" as the top two items in the Resources drop down menu. CoDP encourages AAPT to consider placing these two items ("Teaching" and "Diversity") in the main header. This would create three items in the main header: Teaching, Diversity, and Additional Resources. While the teaching resources page is well populated, the Diversity page needs additional content. The specific recommendations below will provide substantial content to the Diversity page.

CoDP has identified five major recommendations pertaining to diversity and inclusiveness on the AAPT website. Changes to the website are meant to serve as complements to our recommendations for National Meetings. In this section, we describe our vision for each of these web pages in more detail.

We understand that the website is currently undergoing an overhaul; hence, some of these recommendations may be used to inform design decisions for the new website.

A. Create a page explaining gender pronouns

AAPT should create a web page with information about gender pronouns: what they are and why it is important to include them on nametags at meetings.

Because most people do not regularly experience misgendering and do not often question their assumptions about which gender pronouns other people use, many members may have questions about the practice of including gender pronouns on nametags at AAPT meetings. A web page that addresses this issue could be an important resource for such members. In addition, such a website could help increase the visibility of misgendering as an issue that affects physics educators and physics students.

B. Create a page advertising travel funds

AAPT should create a web page with information about opportunities for financial support to defray travel and registration costs for speakers from the groups listed in Section IV B.

It is important to advertise opportunities for travel support so that people who may not otherwise attend an AAPT meeting are aware of the opportunity and can apply for funds. The web page advertising travel support should clearly describe eligibility criteria, the application process, important deadlines, and information about who to contact with questions.

C. Create a page describing “best practices” for chairs and representatives

AAPT should create a web page with diversity- and accessibility-oriented resources for Area Chairs, Section Representatives, workshop and session organizers, and speakers.

To complement the training of Area Chairs and Section Representatives, the website should have information about the proposed training topics listed in Section IV C. Providing this information online could be a valuable resources for Chairs and Representatives who are unable to attend a particular training session. In addition, this page could be valuable for session and workshop organizers and invited speakers who want to incorporate principles of diversity and inclusiveness into their sessions, workshops, and presentations. Chairs could point session and workshop organizers to this site and, in turn, organizers could share the link with invited speakers.

D. Create a page linking to papers and presentations on diversity, equity, and justice

AAPT should create a web page that consolidates links to important papers and presentations on diversity, equity, and social justice as they related to physics and physics education.

There is currently a wealth of papers and presentations that would be of interest to the AAPT membership at both the introductory and the more advanced level. These materials come from both the AAPT and PER community as well as communities in other disciplines. CoDP is committed to working with members of the AAPT community to both identify and organize these resources.

E. Create a page linking to other organizations that focus on diversity

AAPT should create a web page that provides links to other organizations (including those in the United States and beyond) that focus on diversity and inclusiveness in physical science education.

Many organizations focus on diversity with varying degrees of synergy and overlap with the interests and concerns of the physics and AAPT communities. CoDP is committed to identifying groups and organizations with missions, goals, and ideas that would resonate with AAPT membership. Examples of such organizations within the United States include

- National Society of Hispanic Physicists (NSHP),

- National Society of Black Physicists (NSBP),
- Society for the Advancement of Chicanos and Native Americans in STEM (SACNAS),
- American Indian Science and Engineering Society (AISES),
- Society of Hispanic Professional Engineers (SHPE),
- Latinos in Science and Engineering (MAES),
- Women in Science and Engineering (WISE),
- Annual Biomedical Research Conference for Minority Students (ABRCMS),¹⁰
- McNair Scholars Program, and
- Louis Stokes Alliance for Minority Participation (LSAMP).

Additionally, many professional societies have committees similar to CoDP, such as the APS Committee on Minorities in Physics and the AAS Committee on the Status of Minorities in Astronomy.

VI. Committee on Diversity efforts in support of recommendations

To facilitate implementation of the recommendations described herein, CoDP may provide the following support, depending on the availability and interests of CoDP members:

- Co-develop learning goals and/or materials for training Chairs and Representatives,
- Help identify qualified individuals to co-develop and/or facilitate such training,
- Review meeting schedules to ensure that diversity-oriented sessions are not run in parallel,
- Help identify potential plenary speakers who meet the criteria described in this report, and
- Partner with AAPT to design web pages described herein.

In addition, CoDP will work towards adopting the following internal policies, guidelines, and aspirations for speakers in sessions and workshops co-sponsored by CoDP:

- Each speaker will have expertise in relevant dimensions of diversity,
- Collectively, speakers will constitute a diverse group of people according to race, gender, and other dimensions of identity,
- When relevant, speakers will represent the expertise of schools, colleges, and universities near the site of the meeting,
- When relevant, speakers with appropriate expertise will be included in sessions and workshops even if they belong to disciplines other than physics education.

VII. Concluding remarks and future directions

In this report, we described mutually reinforcing recommendations for National Meetings and the AAPT website. We believe that, if implemented, these changes will have meaningful and positive

¹⁰ABRCMS is increasingly becoming a space for minority physics students, not just biology students.

impacts on the culture of the AAPT community and access to information about issues of diversity and inclusiveness in physics and physics education.

We reiterate the view that this report is one step along a pathway of continued introspection and change, and we look forward to working with the AAPT Board of Directors on future efforts to continue supporting diversity and inclusiveness in AAPT.