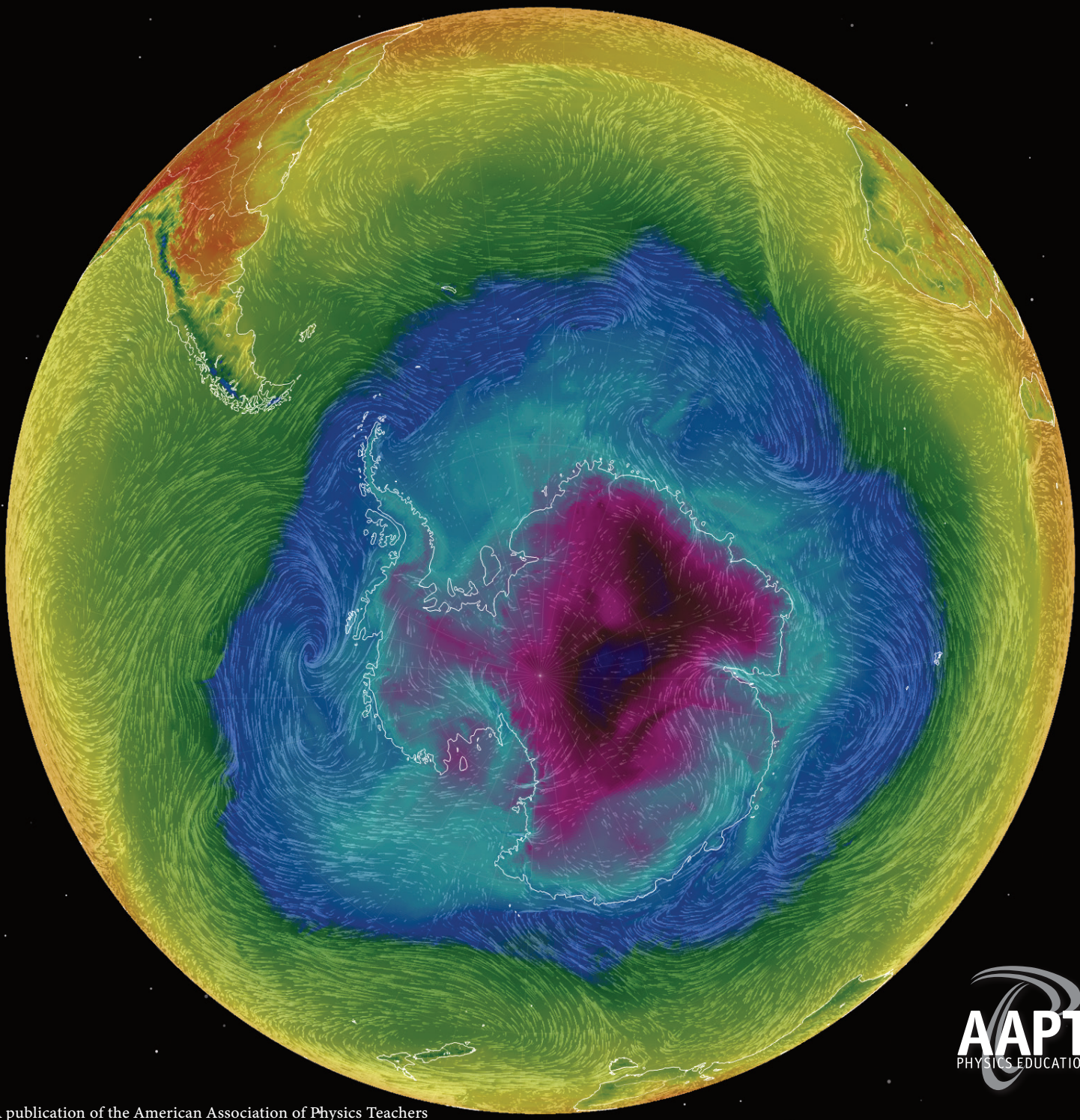
2023 Annual Report



AAPT PHYSICS EDUCATION®

A publication of the American Association of Physics Teachers

2023 in Review

Executive Officer's 2023 Annual Report

Beth A. Cunningham

This report provides a summary of Executive Office activities in 2023. This summary should give you a taste of the most visible or important activities that the Executive Office led.

A very committed and loyal staff supports AAPT's successes. The AAPT staff helps the vision of the AAPT Board of Directors and members come to fruition. The staff has had a few notable changes in 2023. We bid farewell to Associate Executive Officer Bob Hilborn who retired after 12 years at AAPT. We also said goodbye to K-12 Program Manager Mark Hannum who went back to teaching at Thomas Jefferson High School for Science and Technology and to Associate Director of Programs & Conferences Cerena Cantrell who joined the team at INFORMS. Rachel Ivie joined AAPT in December as the Director of Higher Education Programs and Grants and Justine Harren joined in the summer as the Interim K-12 Program Manager. If you interact with any of these individuals, please express your gratitude for their hard work and dedication to AAPT and their support of your volunteer work.

We continue to make improvements to AAPT to better support our mission and the work of the volunteer members. Several infrastructure projects have been completed in 2023:

- The ComPADRE landing page has a fresh, modern look integrated with the rest of AAPT's website. We are working on an integrated search that will return AAPT resources and resources and subsites associated with ComPADRE. This will be completed in 2024.
- The American Physical Society, American Institute of Physics, and AAPT began searching for space in Washington, D.C. to augment the space that we share in the American Center for Physics in College Park, MD (ACP-MD). We envision this space for collaborations and meetings in an easy-to-get-to location in the central part of our nation's capital. We were successful in finding space at 555 12 Street NW. Occupancy of this space started at the very end of 2023 after an extensive build-out. Also, ACP-MD was sold to the University of Maryland in September. AIP, APS, and AAPT are renting back the 5th floor. The sale of ACP-MD and the reduction in footprint at ACP-MD will reduce AAPT's rent expenses and the proceeds from the sale will be invested in AAPT's long-term reserves.
- We had a major upgrade of AAPT's membership database and e-commerce system. Both are now in the cloud, have the latest features, and updates are automatically made regularly. AAPT's accounting software was also upgraded.
- AAPT swag is now available on demand at "Print Your Cause." We will expand the offerings if we experience enough demand for AAPT t-shirts, sweatshirts, mugs, water bottles, etc. You can see samples of AAPT swag at our national meetings.
- We continue to work with the fundraising firm Windmill Hill Consulting (WHC) to build AAPT's fundraising capacity. WHC, a woman-owned business, specializes in supporting nonprofits. Why give? AAPT's revenue from membership dues is less than 20% of the total! We need additional funding to offer a rich suite of programs that supports physics educators across the education spectrum. The Board is so committed to the goals of fundraising that 100% made a gift in 2023!

We also continue to be successful in receiving external support for several projects. These include:

- The STEP UP project received additional support from the National Science Foundation to address the historic marginalization of women and minoritized racial/ethnic groups in physics. Specifically, the project will develop professional learning for high school physics teachers to implement equitable practices in the classroom. This project includes the partners Florida International University and the American Physical Society (APS). (National Science Foundation 2300609)
- We received another round of funding from NSF for the Physics Teacher Education Coalition project to increase the number of physics teachers produced by institutions of higher education (in partnership with APS). (National Science Foundation 2325980)
- We received a sub-award from AAAS to support the Physics & Astronomy STEMM Equity Achievement

project. This project seeks to support physics and astronomy departments in creating systemic, structural change regarding equity, diversity, and inclusion. (National Science Foundation 1841687)

- An AIP Venture Fund grant was received to support the project "Creating a Culture of Teaching as Scholarly Work Among Physicists." This project supports the development of well-respected, open-access databases for publishing lessons. The project aims to raise the recognition of teaching and curriculum development as scholarly activities.

We have been busy supporting other activities including:

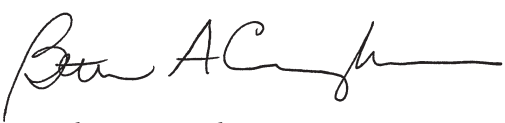
- WM 23 was held in Portland, OR, our first in-person Winter Meeting since the start of the pandemic.
- SM23 was held in Sacramento, CA. Registration was strong but less than the pre-pandemic average.
- The U.S. Physics Team trained at the University of MD and competed in the 2023 International Physics Olympiad in Tokyo, Japan. The traveling team members (Shuoyan Chen, Collin Fan, Evan Kim, Zian Shi, and Feodor Yevtushenko) won 4 Gold medals, 1 Silver medal, and two special prizes (Best Experiment and Best Theory).
- The Effective Programs for Physics Programs (EP3) guide is finished! AAPT partnered with the American Physical Society on this project.
- The Board has appointed one new Task Force along with three continuing Task Forces:
- Recruiting and Retaining New and Early Career Physics Educators (new)
- K-12
- Equitable Policies
- Local Member Engagement
- A new award, the Barbara Wolff-Reichert Travel Grant, will provide funds to cover travel, lodging, and registration on a one-time basis to a high school physics teacher who has never attended an AAPT national meeting. In addition, the awardee will have a mentor during the meeting. The first two award recipients are Saara Naudts and Mike Florek. Both will attend WM24. This award was made possible by a generous donation from Jonathan Reichert
- A new webinar series Video AAPT provided free virtual streaming interactive workshops for physics educators. Recordings of the workshops are available on the website. Video AAPT was generously supported by Vernier, Polyhedron Physics, ExpertTA, and Digitalis.

As described in previous annual reports, our events are held under the Event Participation Code of Conduct (see https://aapt.org/aboutaapt/organization/code_of_conduct.cfm). We continue to educate attendees about the Code of Conduct and appropriate behavior at our events. The following is a summary of incidents that were reported in 2022:

- WM23 - none
- SM23 - none
- Other AAPT-supported meetings (e.g., Faculty Teaching Institute, etc) - none

We continue to be part of over 100 other scientific, engineering, and medical societies in the Societies Consortium on Sexual Harassment in STEMM (https://societiesconsortium.com). The Societies Consortium in collaboration with several institutions of higher education released the Ethical Transparency Tool (ETT). This tool will help "to create a norm of transparency about findings of misconduct against a person, across the higher-education and research ecosystem of societies, institutions of higher education, and other research organizations." AAPT signed up to be part of the pilot of the ETT which is scheduled to be launched in 2024.

We have many successes as well as several challenges. AAPT's reserves continue to be healthy and we are carefully monitoring the operating budget which is now experiencing a deficit. We continue to see a decline in our K-12 memberships and we are now experiencing a decline in higher education memberships. We know that the pandemic hit both K-12 and higher education hard. The physics education community needs the programs, services, and resources offered by AAPT now more than ever. We hope you continue to see value in membership and will renew. We also ask that you consider contributing to the annual fund or to a program that resonates with you (see the AAPT website for a complete list). Finally, spread the word about the value of an AAPT membership to your colleagues (especially those entering the profession), friends, and students. AAPT is stronger with a robust and diverse group of members.



Beth A. Cunningham
Chief Executive Officer

Diversity, Equity, and Inclusion at AAPT Report

This section describes AAPT activities around diversity, equity, and inclusion (DEI) that occurred in 2023. The accomplishments in DEI this year are exciting because the new DEI Council was established. The DEI Council will oversee progress on the roadmap for AAPT's DEI activities in the next 3-5 years. AAPT leadership, in strong partnership with the Committee on Diversity in Physics (CoDP), continues to support AAPT members as we work together to improve physics education for all. The list below highlights some of these activities.

Below is a summary of the 2022 activities:

- The DEI Council was established with Catherine Herne and David Marasco serving as co-chairs. The DEI Council is the overarching AAPT DEI governing body that:
  - Provides long-term strategic oversight of the DEI Roadmap & DEI sub-structures.
  - Collects and responds to urgent member DEI questions and feedback (through defined processes), bringing important concerns to the table.
  - Aligns all AAPT efforts to advance DEI by breaking down silos.
  - Serves as a hub to track, evaluate, and communicate progress on all AAPT DEI efforts (including the DEI Roadmap) to all members.
  - Centralizes DEI institutional knowledge.
  - Holds other AAPT DEI structures accountable.
- Physics & Astronomy SEA Change project seeks to support physics and astronomy departments in creating systemic, structural change regarding equity, diversity, and inclusion. Departments interested in undergoing an awards process undergo a self-assessment to identify unnecessary structural challenges and barriers for groups historically excluded from participating in physics and astronomy. To complete the award process, departments must create a 5-year plan with measurable outcomes to address areas they wish to improve. This project is a part of the broader American Association for the Advancement of Science's SEA Change project. The first award was made in late 2023 and went to Smith College. This was the first Physics & Astronomy SEA Change award and the first disciplinary award. This project is funded by the AIP Venture Fund and by a subaward from AAAS.
- AAPT is a partner in the AIP TEAM-UP Together project. The goal of this project is to double the number of African Americans earning bachelor's degrees in physics and astronomy by 2030. In 2023, the second round of student scholarships and the first cohorts of the departmental program were announced.
- State-level legislation targeting diversity, equity, and inclusion (DEI) has expanded significantly over the past two years. APS, AAPT, and NSBP partnered to provide members with informational webinars to help them better understand how these policies and bills might impact their professional lives. The two webinars were offered in the fall of 2023:
- Guest speaker Dr. Jeremy Young of PEN America spoke on anti-DEI laws across the United States. The webinar is available here.
- Guest speaker Prof. Katheryn Russell-Brown of the University of Florida's Levin School of Law spoke on anti-DEI laws in Florida. The webinar is available here.

Publications

Having a strong publications program enables AAPT members to obtain greater insight into physics and learn about new teaching methods.

American Journal of Physics (ajp.aapt.org)

Beth Parks, Editor, Colgate University

AJP informs physics educators globally with member subscriptions, institutional subscriptions, such as libraries and physics departments, and consortia agreements. The mission of the *American Journal of Physics* is to publish articles on the educational and cultural aspects of physics that are useful, interesting, and accessible to a diverse audience of physics students, educators, and researchers. Our audience generally reads outside their specialties to broaden their understanding of physics and to expand and enhance their pedagogical toolkits at the undergraduate and graduate levels.

The American Journal of Physics Statistics

- 12 issues—January–December 2023 (Volume 91)
- 1032 pages, 796 reviewers, 1301 reviews, 154 papers published—21.7% acceptance rate
- 18 open access articles
- 5 video abstracts
- 5 papers featured in Scilights
- 8,730 individual and institutional subscriptions
- Approximately 56% of subscribers teach at the college and university level and 24% teach at the high school level. The remaining 20% are scientists at research facilities, students, and other interested members of the physics community.

Resource Letters - 2 letters

Resource Letters Editorial Board: Sergei Gleyzer, Geraldine Cochran, Darsa Donelan, Michelle Kuchera, Benjamin Crider, Anne Goodsell

Editorials and Guest Editorials - 12 editorials

Computational Physics - 6 articles

Instruction Laboratories and Demonstrations - 6 articles

Advanced Topics - 4 articles

Notes and Discussions - 15 articles

Back of the Envelope - 1 articles

Letters to the Editor - letters

Book Reviews - 4 reviews

Awards - 2 awards listings

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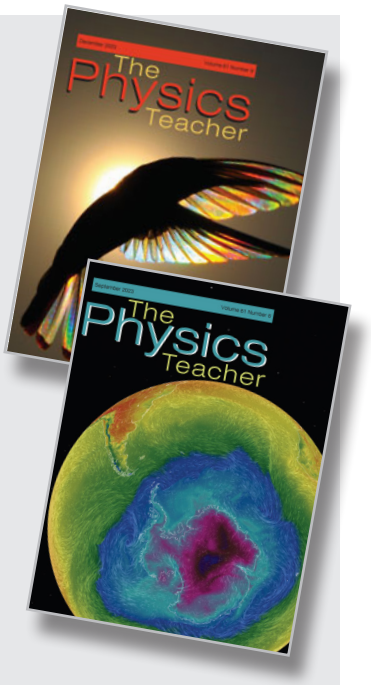
GUEST EDITORS

Special Issue: Teaching about the Environment, Sustainability, and Climate Change
Published September 2023
Kyle Forinash, Roger Tobin, Barbara Whitten, and Rich Wolfson

The Physics Teacher (tpt.aapt.org)

Gary D. White, Editor, The George Washington University
Ben Lefstein, Managing Editor, American Association of Physics Teachers

The Physics Teacher (*TPT*) publishes peer-reviewed papers on the teaching of introductory physics and on topics such as contemporary physics, applied physics, and the history of physics. Established in 1963, *TPT* is focused on the teaching of introductory physics at all levels, including secondary schools, colleges, and universities. The 2023 collection of papers in *The Physics Teacher* was the largest in its 61-year history, at 816 pages. Highlights from the year included the special collection of articles on "Climate Change and the Environment in Introductory Physics," which included more than 30 articles on the subject, and a series of manuscripts on "Using Math in Physics" by Edward "Joe" Redish, among the most popular papers in *TPT.* Other popular articles from 2023 include "Pulling a Spool" by Carl Mungan, "Serious Physics on a Playground Swing..." by Ann-Marie Pendrill, "Using Cosmic Rays to See the Unseeable" by Don Lincoln, and "How Can We Design Instruction to Support Student Reasoning About Physicists' Ethical Responsibilities in Society?" by Alice Olmstead and colleagues.



COLUMN EDITORS

And the Survey Says...
Susan C. White, AIP, College Park, MD

AstroNotes
Janelle M. Bailey, Temple University, Philadelphia, PA
Donald A. Smith, Guilford College, Greensboro, NC

Fermi Questions
John Adam, Old Dominion University, Norfolk, VA

Figuring Physics
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iPhysicsLabs
Jochen Kuhn, University of Kaiserslautern, Germany
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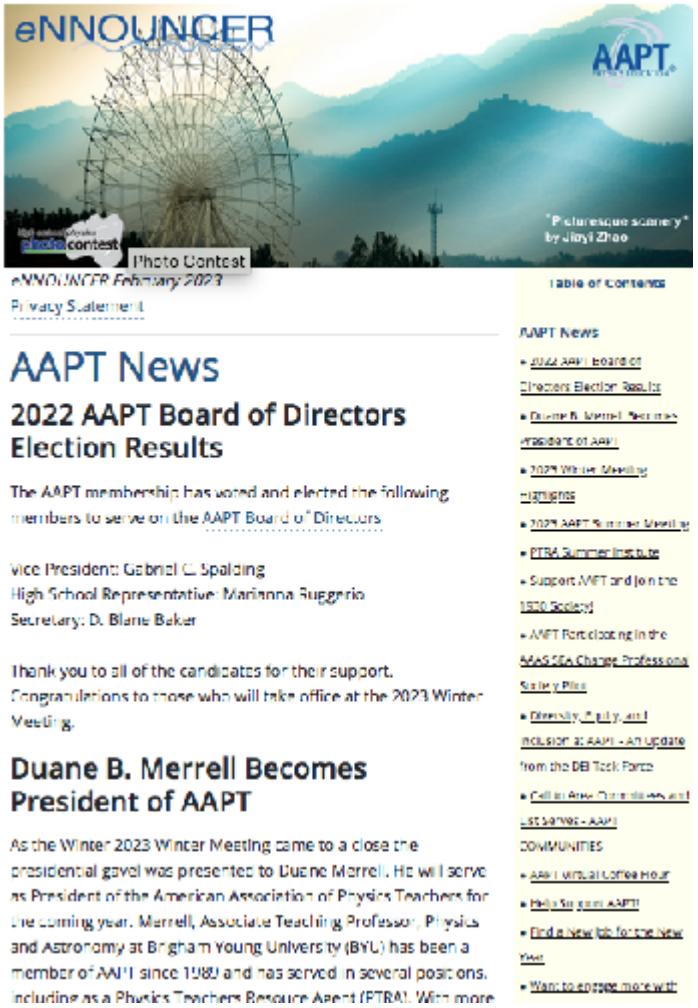
THE PHYSICS TEACHER STATISTICS

- 9 issues—January–May, September–December 2023 (Volume 61)
- 816 pages, 808 reviewers, 1 papers, and 88 contributions to monthly columns —44% acceptance rate
- 8,352 individual and institutional subscriptions
- Approximately 40% of subscribers teach at the college and university level and 33% teach at the high school level. The remaining 27% are scientists at research facilities, students, and other interested members of the physics community.

Electronic Communications

eNNOUNCER

The *eNNOUNCER,* AAPT's electronic newsletter publication, is distributed to members by e-mail. The *eNNOUNCER* issues are published at the beginning of each month and archived on AAPT.org. The *eNNOUNCER* contains dates and deadlines for upcoming conferences, meetings, symposiums and events, member news and information, and recent news from the worlds of physics and teaching. Topics covered include organization specific items, action items and notable dates, news from the AAPT Executive Office, member news, section news, recommended reading, and science and education news.


eNNOUNCER

AAPT

Photo Contest

"Picturesque scenery" by Jiayi Zhao

eNNOUNCER February 2023

Privacy Statement

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• Call for Area Chairs and Associates - AAPT

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• Help Support AAPT!

• Find a New Job for the New Year

• Want to engage more with

AAPT News

2022 AAPT Board of Directors Election Results

The AAPT membership has voted and elected the following members to serve on the AAPT Board of Directors

Vice President: Gabriel C. Spalding
High School Representative: Marianna Ruggerio
Secretary: D. Blane Baker

Thank you to all of the candidates for their support. Congratulations to those who will take office at the 2023 Winter Meeting.

Duane B. Merrell Becomes President of AAPT

As the Winter 2023 Winter Meeting came to a close the presidential gavel was presented to Duane Merrell. He will serve as President of the American Association of Physics Teachers for the coming year. Merrell, Associate Teaching Professor, Physics and Astronomy at Brigham Young University (BYU) has been a member of AAPT since 1980 and has served in several positions, including as a Physics Teachers Resource Agent (PTRA). With more

eNNOUNCER TOPICS

eNNOUNCER publishes monthly news for members including:

- Recent AAPT related events and programs
- Members in the news
- Section news
- Workshops and topical conferences
- Scholarship and fellowship announcements
- Awards announcements
- Science related festivals
- Video and photo contests
- Career and teaching opportunities

2023 TOP AAPT NEWS STORIES

Listed below are highlighted news stories from the *eNNOUNCER.* To read the full story go to http://www.aapt.org/abouta-apt/ennouncer/index.cfm.

JANUARY

- Darsa Donelan Named as 2023 Recipient of the Doc Brown Futures Award
- S. James Gates, Jr. to Receive AAPT 2023 Oersted Medal
- Kimberly Ann Coble Named as the 2023 John David Jackson Excellence in Graduate Physics Education Awardee
- Alice Flarend is Recipient of the 2023 Homer L. Dodge Citation for Distinguished Service to AAPT

FEBRUARY

- Duane B. Merrell Becomes President of AAPT

MARCH

- Diversity, Equity, and Inclusion at AAPT - An Update from the DEI Task Force

APRIL

- Jeffrey Bennett Named as Recipient of the 2023 Klopsteg Memorial Lecture Award
- Katherine (Katie) Mack Recognized as 2024 Recipient of the Richtmyer Memorial Lecture Award
- Alice Flarend to Receive 2023 Paul W. Zitzewitz Excellence in K-12 Teaching Award

MAY

- Barbara Wolff-Reichert Travel Grants
- PTRA Celebrates 35+ Years

JUNE

- 2023 Homer L. Dodge Citation for Distinguished Service to AAPT to be Awarded to Catherine Hernes
- Craig Bohren is New AJP Book Review Editor

JULY

- Lin Ding Named AAPT Fellow
- New Anonymous Reporting Tool!

AUGUST

- SCOTUS Ruling on Race-based Affirmative Action
- U.S. Physics Team Members Win Four Gold Medals and One Silver Medal in the 2023 IPhO

SEPTEMBER

- Laura H. Greene to Receive AAPT 2024 Oersted Medal"

OCTOBER

- Mike Florek and Saara Naudts Receive 2024 Barbara Wolff-Reichert Travel Grant

NOVEMBER

- 2023 AAPT Board of Directors Election Results

DECEMBER

- Debbie Andres elected AAPT Vice-President

Electronic Communications

AAPT.ORG

Having strong online publications offers AAPT members convenient access to physics education resources, **news, and other member benefits. AAP**T.org continues to emphasize ease-of-access and user-friendliness, and aims to be more inviting to new visitors. The landing page includes a new navigation system with many new photos and information pertaining to upcoming or ongoing programs, projects, events, and resources; and buttons to donate, join, and to sign into the e-commerce member website. The new website design implemented in 2018 stresses ease of navigation and will guide visitors based on their role in the physics education community.

Features

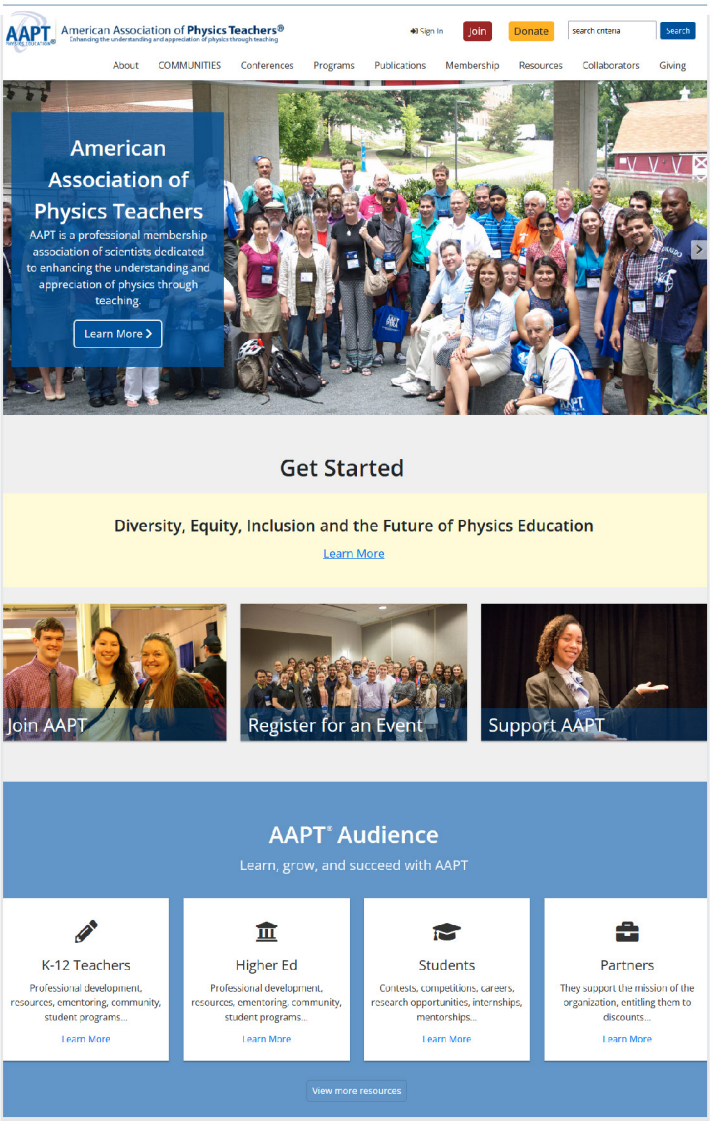
AAPT.org organizes the association's many assets into appropriate categories allowing the user (both members and non-members) to easily access information regarding topical news, governance, member benefits and profiles, conferences and workshops, awards, publications, local sections, teaching and student resources, partners, giving, and marketing opportunities.

Added features include.

- A new diversity emphasis that promotes women in the sciences
- Help for early career members
- The member spotlight that highlights those members that are doing or have done significant work on AAPT projects and other projects that support the greater physics education community

What's next?

Efforts to enhance AAPT.org are ongoing and numerous. Some areas of activity are the area committee reports, awards nominations, online advertising, and member recruitment.



SOCIAL NETWORKING

AAPT continues to open the channels of communication and community using online social networking platforms. Below is a list of online social networks
AAPT uses:

- facebook.com/AAPTHQ
- twitter.com/AAPTHQ
- flickr.com/physicsteachers
- youtube.com/physicsteachers
- pinterest.com/AAPTHQ/
- aboutaapt/socialnetworks.cfm
- instagram.com/AAPTHQ/

AAPT.ORG

AAPT continues to create new web pages and update others.

MEETING PRESENTATIONS

AAPT continues to preserve content from the national meetings.
In addition to meeting abstracts, other content including posters, talks, plenaries, photos, and videos will be archived for future reference. The archive will be searchable. This will be a very useful source of information for members as well as area committees as they plan sessions for future meetings.

For 2023 aapt.org had:

- 3,673,241 visits • 1,375,322 pageviews • 2.75 pages per visit
- 284,000 new visitors *All from 198 countries/territories*

#1 U.S., #2 China, #3 India,#4 Canada, #5 United Kingdom

National Meetings

Winter Meeting Highlights

AAPT returned to beautiful downtown Portland, Oregon for the first Winter Meeting since the COVID Pandemic limited in person gatherings. The headquarters hotels for the 2023 Winter Meeting were the Hilton Portland Downtown and The Duniway Portland a Hilton hotel. Portland Community College and Vernier Science Education hosted workshops on Saturday and Sunday with selections ranging from "Fun, Engaging, Effective, Research-Validated Lab Activities and Demos for Introductory University, College and High School Physics (including Virtual Learning Options), Neutrino Physics Masterclasses" to "PICUP: Integrating Computation in Introductory Physics Courses." Commercial Workshops were hosted by PASCO Scientific, Expert TA, Perimeter Institute, Pearson, and Vernier. Attendees also enjoyed a variety of social opportunities such as the Accessibility Meet-Up, Early Career & First Timers Gathering, Two Year College Gathering, First Timers' Gathering, Multi-Cultural Meet-Up, LGBTQ+ Meet-Up, SPS Awards and Trivia Dinner, and Game Night.

Plenaries

Michael R. Landry

Michael R. Landry is the Head of LIGO Hanford Observatory (LHO) in Richland, WA and a physicist with the California Institute of Technology. His talk, "Next steps in gravitational-wave astronomy", addressed the upcoming project O4, of LIGO, Virgo, and KAGRA, the fourth observation run of terrestrial gravitational-wave detectors. To date, 90 sources have been observed including mergers of binary black holes, binary neutron stars, or one of each of those compact objects. He reviewed the status of detectors as they are commissioned for the spring 2023 O4 start of that year-long observation run, and prospects for detection. He sketched plans for O5 and beyond, and survey ideas for next-generation detectors, particularly Cosmic Explorer. Landry, received his PhD from the University of Manitoba in 2000, with experimental studies in strange hadronic matter at the Brookhaven AGS and TRIUMF accelerators. He started with Caltech as a postdoc at LHO in 2000, working his way through a series of science roles on the interferometers in Initial and Advanced LIGO phases. He was Detection Lead Scientist at the time of the first direct detection of gravitational-waves, GW150914, and was named LIGO Hanford Observatory Head in 2016.

Catherine Herne

AAPT envisions a world where all physics educators and AAPT staff feel a sense of belonging; where physics educators combat the unconscious harassment and discrimination that is pervasive across the field of physics. AAPT has dedicated intensive resources over the past year to create a roadmap for change. Structural changes will make the member experience better for all of AAPT. In this presentation, *Centering AAPT Members: How DEI Work Gives Us a Roadmap* the groundwork was laid for DEI growth in AAPT and how our members can engage. Elements of the roadmap, the new proposed governance structure were shared, and AAPT's progress from a historic and current perspective was discussed.

Awards

Member service to AAPT was recognized with the announcement of the Homer L. Dodge Citations for Distinguished Service to AAPT to Glenda Denicolo and Alice Flarfend. Richard Gelderman, emeritus professor, Physics and Astronomy Department, Western Kentucky University, Bowling Green, KY was recognized as an AAPT Fellow

Kimberly Ann Coble Award

The 2023 **John David Jackson Excellence in Graduate Physics Education** Awardee was Kimberly Ann Coble. She was selected to receive the Jackson Award in recognition of her work as a teacher of graduate Physics and Astronomy. She is a pioneer in graduate physics & astronomy education. Her talk, *Human Potentials in the Universe of Graduate Teaching and Mentoring* was based on her work at San Francisco State University (SFSU) she created a new course called PHYS 885: Inclusive Pedagogy for the Physical Sciences. Nearly all master's students who are Graduate Teaching Assistants (GTAs) in Physics & Astronomy at SFSU take this class to learn how to become more effective teachers for the ever more diverse students enrolling in the physical sciences. Throughout her career she has created opportunities for graduate students and beyond to become involved in research in meaningful ways and to engage in the academic work, such as presenting at conferences and writing manuscripts for publication, and supporting them in doing so well.

S. James Gates

Dr. Sylvester James Gates, Jr. was the 2023 recipient of the prestigious **Hans Christian Oersted Medal**. The Oersted Medal recognizes his outstanding, widespread, and lasting impact on the teaching of physics through his national leadership in physics education, his exceptional service to AAPT, and his mentoring of students and in-service teachers. The year of 2022 marked the 51st consecutive year of his service as a university instructor in mathematics and physics. His talk, *A Half Century of a Mathematically Enabled Physicist's Life*, focused on his lifetife of service and achievements. Gates is the Clark Leadership Chair in Science in the Department of Physics and School of Public Policy at the University of Maryland at College Park (UMCP). Prior to July of 2022 he spent the previous six years at Brown University, where he held appointments as the Brown Theoretical Physics Center Director, Ford Foundation Professor of Physics, an Affiliate Mathematics Professor, and a Faculty Fellow of the Watson Institute for International Studies & Public Affairs. In addition he was the 2021 president of the American Physical Society (APS). Gates has had a very long and successful career as a theoretical physicist and an educator. He is well known for his work on supersymmetry, supergravity, and superstring theory. From 1985-2016 he was a faculty member at University of Maryland, College Park as a University System Regents Professor, the John S. Toll Professor of Physics, the Director of the String and Particle Theory Center, and Affiliate Professor of Mathematics. He also served on the U.S. President's Council of Advisors on Science and Technology (PCAST) under President Barack Obama. He served on the Maryland State Board of Education from 2009-2016, and the National Commission on Forensic Science from 2013-2016. Gates has provided undergraduate research experiences via the Summer Student Theoretical Physics Research Session (SSTPRS) since around 2000. He served as an active member of the Physics and Astronomy New Faculty Workshop (NFW) Advisory Board. The NFW has had a large impact on the teaching of physics in four-year colleges and universities. The NFW advisory board has helped the organizers improve the workshops and create a more impactful experience for participants. The Joint Task Force on Undergraduate Physics Programs (J-TUPP) was a joint task force convened by AAPT and APS. His work on promoting diversity, equity, and inclusion in physics and the sciences is significant.

Darsa Donelan

The 2023 recipient of the **Doc Brown Futures Award** was Darsa Donelan. A member of AAPT since 2014, Donelan earned a B.S. in Physics and B.A. in Mathematics at Massachusetts College of Liberal Arts and a Ph.D in Physics at the University of Florida. Donelan is Continuing Assistant Professor at Gustavus Adolphus College in Saint Peter, Minnesota. In 2019 Donelan joined the AAPT/NASA collaboration to produce space science themed educational supplements supported by a grant from NASA. The team is an eclectic group with a range of skills and background, and Donelan fit right in. At the time, we had received instructions from the project leadership at Goddard Space Flight Center that we could expand the context area beyond heliosphysics to include subjects like planetary science. This led to the development of tutorials on Habitable Zones, Exoplanet Atmospheres, and Stellar Spectra.

Presidential Transfer

Passing the Presidential Gavel

The meeting concluded with the Presidential Transfer where Duane Merrell turned the Presidential Gavel over to incoming president, Kelli Warble.

National Meetings

Summer Meeting

July 15–19, 2023

Statistics:

- Attendees: 782
- Exhibitors: 20
- Sessions: 95
- Commercial Workshops: 9
- Topical Discussions 7
- Poster Topics 12
- Workshops: 28

Program Committee Chair
Kelli L. Warble

Meeting Structure Committee: Jon Anderson, Alice D. Churukian, Elaine Gwinn, Jan Landis Mader, Duane B. Merrell, Adebanjo Oriade, Toni Sauncy, Brad R. Conrad, and Tiffany M. Hayes, Ex Officio

Meeting Planning Committee: Brad Conrad, Debbie Andres, Cerena Cantrell , Alice D. Churukian, Tiffany Hayes, Jonathan Perry, Gabe Spalding, and Kelli Gamez Warble.

AAPT PHYSICS EDUCATION 2023 SUMMER MEETING July 15–19, Sacramento, CA

One of the most historic cities in California, Sacramento boasts an impressive array of landmarks, parks, amenities and other points of interest. The city welcomed physics educators as AAPT gathered to collaborate and share research.

Several Pre-conference meetings were held in support of AAPT's mission supporting physics education. AAPT High School Physics Teacher Camp, a self-organizing opportunity for teachers of high school physics classes to discuss topics such as inquiry labs, standards-based grading, video analysis, equity, and other issues important to high school physics. The registrants determined the topics and shared teaching ideas with a small group.

The Conference on Laboratory Instruction Beyond the First Year (BFY4) 2023, The Fourth Topical Conference on Laboratory Instruction Beyond the First Year of College (BFY IV) took place from Wednesday, July 12-14 at California State University, Chico in Chico, CA. The goal of the BFY IV Conference was to expose attendees to a broad range of contemporary instructional lab experiments appropriate for sophomore-, junior- and senior-level college physics courses, while also serving as an opportunity to discuss a range of curricular models that allow for enhancement of the undergraduate physics major. This goal was met through a combination of hands-on small-group workshops, plenary talks, panel discussions, poster sessions as well as informal conversations.

The Tandum TYC Meeting, a one-day event brought together faculty teaching physics, astronomy, and physical science at two-year colleges to share ideas, learn from each other, and build community. It was a productive day of activities with new skills and ideas to enhance student success, and advancements in knowledge and tools.

Physics Education Researchers participated in the post-meeting PER Conference, Working Together to Strengthen PER Community of Practice (https://www.per-central.org/conferences/2023/

PASCO sponsored a special event with drinks and appetizers at the nearby Sheraton Grand Hotel. Memers mingled with fellow educators, met the PASCO team, and entered to win PASCO products for their physics course.

AAPT hosted a retirement celebration for Dr. Robert Hilborn, AAPT's Associate Executive Officer, in honor of his many years of service to AAPT.

Much anticipated features of the Summer Meeting, The AAPT Fun Run/Walk, The High School Physics Photo Contest, Demo Show, Game Night, Speed Networking, Safe Solar Observing Share-A-Thon, First Timers Gathering, Two-Year College Meetup, and the Apparatus Competition, are always highlights and this year they were exceptional.

Awards

The **Klopsteg Memorial Lecture Award** was given to Jeffrey Bennett in recognition of his notable and creative contributions to the teaching of physics. Bennett is a astronomer, teacher, and writer. His talk, *Pathway to a Post- Global Warming Future — Teaching a Scary Topic with Inspiration, Not (Only) Fear*, helps students deal with their despair when it comes to the topic of climate change, which is unsurprising given that the media often portrays our climate future as a choice between bleak and bleaker. But it doesn't have to be that way, because if we understand the science behind global warming, then we can also see pathways to its solution. In this presentation he showed how he approaches the topic "with inspiration, not (only) fear," by providing simple ways to discuss global warming science, consequences, and solutions. In this way, students (and adults!) can begin to envision the possibility of creating a "post-global warming" future within their own lifetimes, meaning a future in which the threat of global warming will have been relegated to the history books.

National Meetings continued

The **2023 Paul Zitzewitz Excellence in K-12 Physics Teaching Award** winner was Alice Flarend, a physics teacher at Bellwood-Antis High School, Bellwood, PA. This award recognizs contributions to pre-college physics teaching and awardees are chosen for their extraordinary accomplishments in communicating the excitement of physics to their students. In her talk, *The Power of Words*, she argued that language is an often overlooked but powerful pedagogical tool in the classroom. Of course, we all talk to our students, but do we talk with our students? Are we the only ones talking? Using language for learning means not only the language a teacher uses in explaining ideas, but also the opportunities the student has to communicate. Students have different experiences that influence their path to building an interconnected model of the world of physics. In building a more robust and nuanced model, they need to share their understandings, explain their unique connections and evaluate the ideas of others. Physics classroom should be filled with student voices and student ideas.

The Summer 2023 recipient of the **Homer L. Dodge Citations for Distinguished Service to AAPT** was Catherine Herne, Associate Professor in the department of Physics and Astronomy at the State University of New York at New Paltz, in New Paltz, New York. Herne has been a key leader of AAPT's Diversity Equity and Inclusion (DEI) Task Force. The efforts of the Task Force will reshape the Association's understanding of how to best serve its diverse membership, and will support both teachers and students of physics in the 21st century. Her leadership was central, and her work enabled the Task Force to complete its initial goals.

The **2023 Fellow**: Lin Ding, Physics Education Researcher at the University of Ohio, Columbus, Ohio.

Plenaries

Challenges and Innovations for Inclusive Assessments for Blind Students in STEM by Cary Supalo, Educational Testing Service (ETS)

In a recent collaboration, the Educational Testing Service and the Carnegie Foundation announced this new refocus on skills development in assessment – a priority that will redefine how STEM assessments are designed and conducted in the United States. This presentation described where we are today with assessments, how new innovative technologies are shifting the needle towards assessments for skill development and away from timebased approaches, and discuss some innovations on the horizon. Inclusive assessment design works in conjunction with inclusive curricula. As textbook publishers and science education technology firms become more inclusively minded, so too will the STEM subject fields. As STEM industry standards shift towards inclusion, so too must the education profession. Inclusion can and will be the future of STEM education.

Dr. Anna Quider brings over 15 years of experience and award-winning leadership spanning higher education, the federal government, and the nonprofit sector to helping clients define and achieve their strategic goals. As a former professional astrophysicist, Anna unites a systems-thinking, analytical approach with enthusiasm and creativity to support clients in co-creating unique solutions to their challenges and driving measurable results. She adeptly guides clients through complex issues and ambiguity, with particular strengths across the science, technology, innovation, and higher education sectors; federal government processes and engagement; program and process optimization; and stakeholder engagement. Diversity, equity, and inclusion are Quider's foundational values and she utilizes a DEI lens for her engagements. Her talk introduced federal science policy by examining the current federal science funding and policy landscape and exploring its impact on the fields of physics & astronomy and higher education. She discussed her experience as a physicist-turned-policymaker working within the federal government at the U.S. House of Representatives and U.S. Department of State, and external to the federal government as a higher education and science advocate.

TEAM-UP Together: Supporting African American Student Success through Systemic Change TEAM UP Together Update by Arlene Knowles The 2020 TEAM-UP report, The Time Is Now: Systemic Changes to Increase African Americans with Bachelor's Degrees in Physics and Astronomy, states that unsupportive environments in many physics and astronomy departments and enormous financial challenges faced by African American students contributed to their underrepresentation in these fields. To address these issues systemically, TEAM-UP Together (TU-T), a new collective action initiative led by the American Institute of Physics, American Association of Physics Teachers, American Astronomical Society, American Physical Society and the Society of Physics Students, was started. TEAM-UP Together takes a multipronged, multilayered approach to support the scientific community in taking the next bold step to double the number of African American students earning physics and astronomy bachelor's degrees annually by 2030. This program provides direct support to Black students, while providing funding and resources to physics and astronomy departments committed to doing the work needed to address

National Meetings continued

STEM equity at their institution and design programs that support the success of Black students. In this plenary, Ms. Knowles will discuss the work that TU-T is doing to engage the community in this program, the impact the program is having on students today, and the future plans for creating systemic change that will transform the education of students, especially, Black students.

Beyond Representation: Data to Improve Equity in Physics and Astronomy Diversity in Physics and Astronomy Update – Rachel Ivie The American Institute of Physics (AIP) collects data on the representation of women and members of other underrepresented groups in physics and astronomy at all levels, from high school students to faculty members. Although indicative of some trends, these data do not tell the whole story. For physicists and astronomers who persist despite being underrepresented, data show that there are additional barriers to equitable participation. For example, women physicists who responded to a global survey reported that they have less access to career-advancing resources than men reported. In addition, AIP's TEAM UP report documents factors that contribute to the low numbers of Black undergraduate students in physics and astronomy. A recent AIP study of the effects of COVID on undergraduate physics and astronomy students showed more negative effects for those who are from marginalized groups than for those who are not marginalized. The effects of barriers such as these combine to create an accumulation of disadvantage that can set back individual scientists' careers and impede scientific progress. Data on inequity in physics and astronomy are essential so that we may design programs and practices that will allow full participation for all.

We thank PASCO for sponsoring the Special Event and badge holders, Vernier for their support of the 5K Fun Run Walk and Physics Photo Contest, and Sacramento for a warm welcome.

Physics Education Research (PER)

PER LEADERSHIP ORGANIZING COUNCIL

Rachel Henderson – Chair
Raymond Zich – Vice-Chair & PERC Liaison
Alice Churukian – RIPE Liaison
Rebecca Rosenblatt – Treasurer
Nekeisha Johnson – PERCOGS Representative
Sujata Krishna – PERC Liaison
Eugenia Etkina - GPER Liaison
Lauren Barth-Cohen – Mini-Grants

PERC ORGANIZING COMMITTEE

Rebecca Lindell
Liam McDermott
Jason Morphew
Mary Urquhart

PER Conference 2023

July19-20,
Sacramento, CA

"Working together to Strengthen the PER Community of Practice"

The theme of the 2023 PERC was "Working Together to Strengthen the PER Community of Practice." A community of practice, by definition, is a collection of individuals who "share a concern or a passion for something they do and learn how to do it better as they interact regularly." When the first PER community gathering occurred nearly 30 years ago, it represented a meeting of a true PER community of practice, made up of advisors, professors, and their students. Since then, the PER community has continued to evolve and now consists of a much broader and diverse community.

The PERC '23 organizing team believes that the nature of the PERC needs to evolve to form a true community of practice for this new, broader, and more diverse PER community. PERC '23 will allow members of the community to gather, discuss, share, learn, and work together with other PER professionals, as well as providing mechanisms for the community to work together to improve the field of Physics Education Research as a whole. Our vision of this theme is providing a conference to help create a diverse community based on a culture of collaboration and mutual respect.

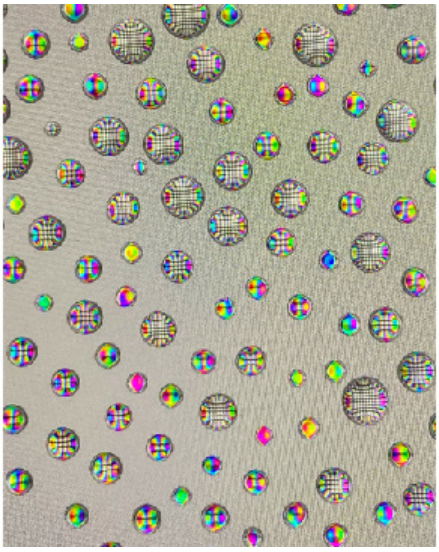
The peer-reviewed 2023 PERC Proceedings are available as a written record of the conference.

Organizers
Rebecca Lindell, Tiliadal STEM Education: Solutions for Higher Education
Liam McDermott, Department of Physics, Rutgers University
Jason Morphew, School of Engineering Education, Purdue University
Mary Urquhart, Department of Science and Mathematics Education and Department of Physics, University of Texas Dallas
Lyle Barbato, American Association of Physics Teachers (Volunteer)

The Conference Procedings are available online at: https://www.per-central.org/items/PERC.cfm?Y=2023

2023 High School Physics Photo Contest

First Place Contrived

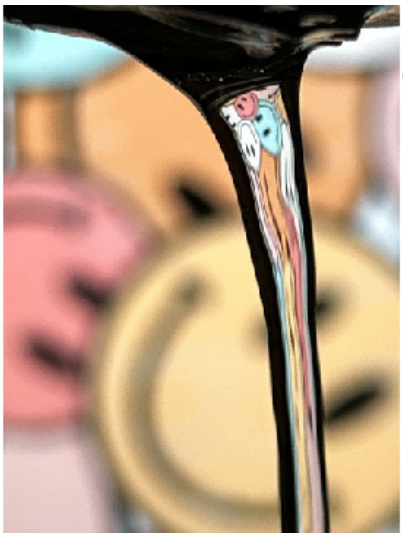


high school physics photo contest

First Place Natural

Second Place Contrived

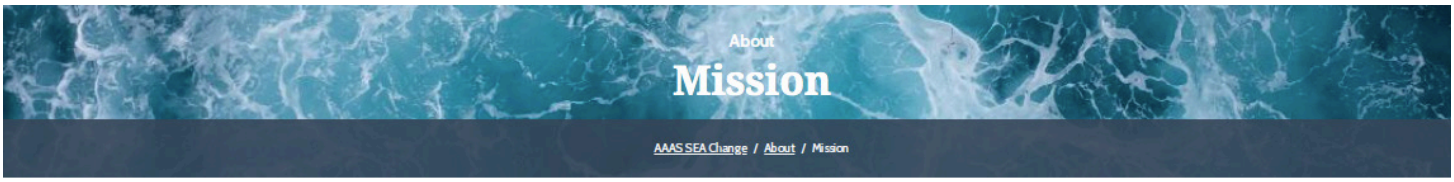
Second Place Natural



Third Place Contrived

Third Place Natural

Collaborative Projects



Our Mission

SEA Change seeks to inspire, guide, and support voluntary transformation of colleges and universities so that the environment for research and education in science, technology, engineering, mathematics, and medicine (STEMM) is excellent, equitable, diverse, and inclusive.

Our Vision

We envision an excellent, diverse, equitable, and inclusive STEMM ecosystem.

Our Approach

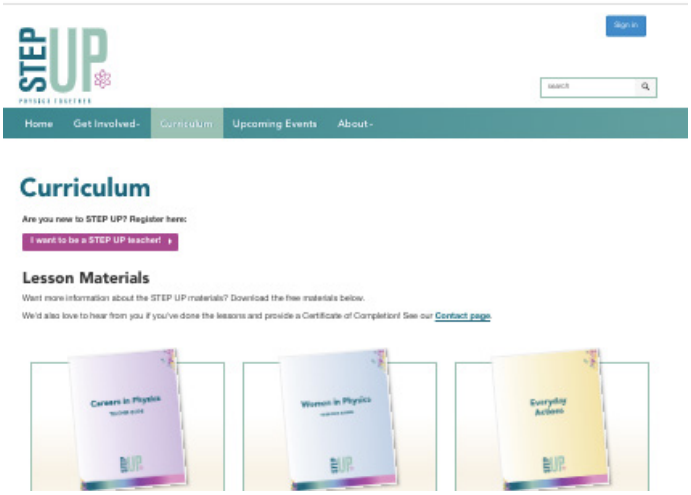
Colleges and universities and the departments within them use research-informed strategies and supportive community of peers to build capacity for, and implement, transformation. Our program strives for a culture change that makes DEI in STEMM normative and inextricably linked to excellence.

Our members:

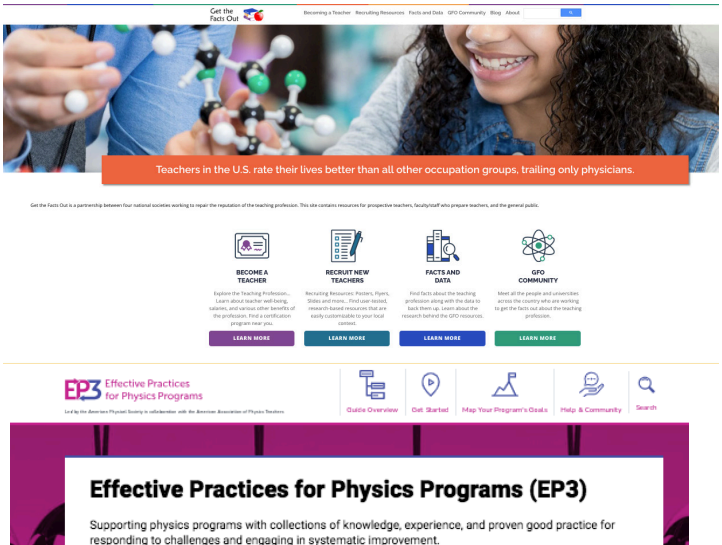
- Access knowledge and tools to guide self-assessment
- Identify their own context-specific barriers and opportunities
- Develop and implement action plans

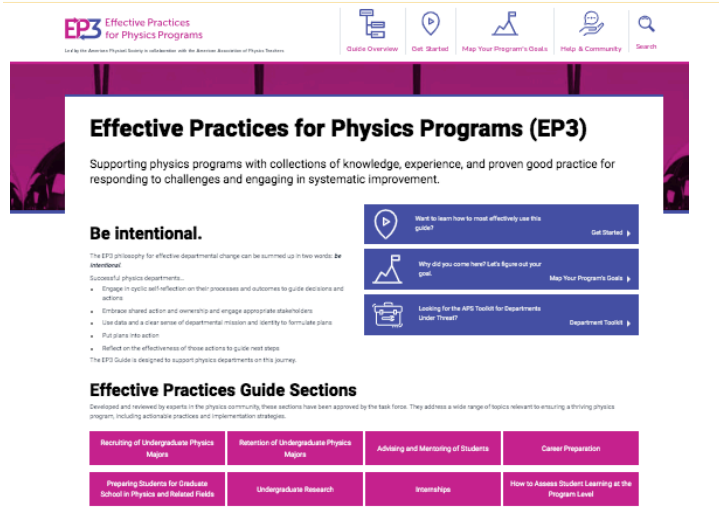
Interested in learning more? Contact us and set up an informational meeting today!

Contact Us



STEP UP





PI-

Project Goals:

- Mobilize thousands of high school physics teachers to help engage young women in physics
- Change deep-seated cultural views about physicists
- Inspire young women to pursue physics in college

We will achieve this if each of the high school physics teachers in our community inspires at least one young woman into physics each year.
https://www.aps.org/programs/education/su4w/index.cfm

PhysTEC Teacher of the Year

The 2023 National PhysTEC Teacher of the Year is Joe Cossette of Minnetonka High School in Minnetonka, MN. Cossette was nominated by PhysTEC institution University of Minnesota, from which he graduated.

Cossette is an exceptional leader in his department, school, district, and the field of physics teaching at large. In his 9-year career, Cossette has created a hands-on learning environment for physics students. By meeting students where they are, engaging them in deep discussion, and using humor and song in addition to direct instruction, he has been able to make physics an accessible and enjoyable experience.

This dedication to students and excellent education has resulted in impressive growth in Cossette's classroom: through his efforts, the International Baccalaureate (IB) physics classes grew from one section of 12 students to four sections with 120 students in five years. Cossette emphasizes that the number of students taking physics each year has been maintained, but many more students are taking more challenging physics classes. Students excel in these challenging classes due to the welcoming and positive environment he creates.

Cossette's impact goes far beyond the students he teaches regularly. He has mentored numerous teachers, both new and experienced, and has taken on leadership roles in his science department as chair and as IB curriculum lead. Furthermore, he is a former Knowles Teaching Fellow. As an early career teacher, he received financial support, mentoring and coaching, and the support of a community of more than 400 teachers committed to improving their own teaching and their students' learning. Many of the innovative activities Cossette developed during this time are featured on his Passionately Curious Science website.

With over 90,000 unique visitors each year, the lessons Cossette has developed and shared have been used in classrooms around the world and are advancing student learning and appreciation for physics among students he has never met. He also actively shares his knowledge through presentations at professional conferences and co-teaching pre-service teachers at his alma mater.

By all accounts, Cossette's classroom is an inspiration. His intentional and successful efforts to connect students with physics has encouraged each of them to take on challenging science, and his mentorship and sharing of innovative ideas ensures the legacy of his work will continue to spread and positively influence physics teaching around the world.

2023 PhysTEC Conference

March 3-4, 2023, Las Vegas, NV

Nearly 90 participants joined together for the nation's largest meeting dedicated to the education of future physics teachers. The 2023 PhysTEC Conference was hybrid, meaning there were in-person and virtual experiences for attendees to enjoy. Among these were plenary sessions, panel sessions, and table discussions led by physics teacher preparation experts.Physics educators connected in Las Vegas and virtually while they came together to shape current and future physics teacher education. Conversations revolved heavily around:

- Physics teacher needs and support
- Diversity, equity, and inclusion skill building for faculty and future teachers
- Community building and collaboration

Virtual Experience

- February 25: Teacher Needs, Teacher Expertise
- March 7-18: Watch Parties
- March 18: Action Planning: Take the Lessons Home

2023 Awards and Grants

Doc Brown Futures Award

Darsa Donelan Named as 2023 Recipient

ESTABLISHED IN 2020, THE DOC BROWN FUTURES AWARD IS ENDOWED BY ROBERT WILLIAM BROWN (DISTINGUISHED UNIVERSITY AND INSTITUTE PROFESSOR IN THE PHYSICS DEPARTMENT AT CASE WESTERN RESERVE UNIVERSITY) AND HIS WIFE, JANET GANS BROWN TO RECOGNIZE AND SUPPORY EARLY CAREER PHYSICS EDUCATORS.

The Doc Brown Futures Award recognizes early-career members who demonstrate excellence in their contributions to AAPT and physics education and exhibit the potential to serve in an AAPT leadership role. The award will be presented during the 2023 Winter Meeting.

A member of AAPT since 2014, they earned a B.S. in Physics and B.A. in Mathematics at Massachusetts College of Liberal Arts and a Ph.D in Physics at the University of Florida. Donelan is Continuing Assistant Professor at Gustavus Adolphus College in Saint Peter, Minnesota.

In 2019 Donelan joined the AAPT/NASA collaboration to produce space science themed educational supplements supported by a grant from NASA. Their scientific background in planetary science and obvious skill in teaching and working with students made for an ideal addition to the team. Our team is an eclectic group with a range of skills and background, and Donelan fit right in. At the time, we had received instructions from the project leadership at Goddard Space Flight Center that we could expand of context area beyond heliosphysics to include subjects like planetary science. This led to the development of tutorials on Habitable Zones, Exoplanet Atmospheres, and Stellar Spectra. Donelan was essential not only to the development of these materials but also in the professional development that we provide to teachers around their use. Moreover, they have increasingly played a leadership role, attending meetings of the Space Science and Astronomy committee, representing our team.

The full press release is available at *https://www.aapt.org/aboutaapt/Darsa-Donelan-Named-as-2023-Recipient-of-the-Doc-Brown-Futures-Award.cfm*

Hans Christian Oersted Medal

ESTABLISHED IN 1936, THE OERSTED MEDAL HONORS THE DANISH PHYSICIST HANS CHRISTIAN OERSTED (1777-1851). THIS PRETIGIOUS AWARD IS PRESENTED ANNUALLY TO A PERSON WHO HAS HAD OUTSTANDING, WIDESPREAD, AND LASTING IMPACT ON THE TEACHING OF PHYSICS.

S. James Gates

"A Half Century of a Mathematically Enabled Physicist's Life"

Dr. Sylvester James Gates, Jr. was recognized for his outstanding, widespread, and lasting impact on the teaching of physics through his national leadership in physics education, his exceptional service to AAPT, and his mentoring of students and in-service teachers.

Gates is the Clark Leadership Chair in Science in the Department of Physics and School of Public Policy at the University of Maryland at College Park (UMCP). Prior to July of 2022 he spent the previous six years at Brown University where he held appointments as the Brown Theoretical Physics Center Director, Ford Foundation Professor of Physics, an Affiliate Mathematics Professor, and a Faculty Fellow of the Watson Institute for International Studies & Public Affairs. In addition he was the 2021 President of the American Physical Society (APS).

Gates has had a very long and successful career as a theoretical physicist and an educator. Sensitive to diversity issues over the duration of his career, in 1995 he authored an essay entitled "Equity versus Excellence: A False Dichotomy in Science and Society." This avenue of his writings eventually led to a work "Thoughts On Creativity, Diversity and Innovation in Science and Education" that was cited by the U.S. Supreme Court of the United States in its 2016 decision in the case 'Abigail N. Fisher v. University of Texas at Austin, et. al.' He held the position of the president of the National Society of Black Physicists. He also is an elected member of the American Academy of Arts and Sciences, and the American Philosophical Society. In 2013, he was elected to the National Academy of Sciences, becoming the first African-American theoretical physicist so recognized in its 150-year history.

The full press release is available at *https://www.aapt.org/aboutaapt/S-James-Gates-Jr-to-Receive-AAPT-2023-Oersted-Medal.cfm*

Klopsteg Memorial Lecture Award

Jeffrey Bennett

Pathway to a Post- Global Warming Future — Teaching a Scary Topic with Inspiration, Not (Only) Fear

THE KLOPSTEG MEMORIAL LECTURE AWARD IS NAMED FOR PAUL E. KLOPSTEG, A PRINCIPAL FOUNDER, A FORMER AAPT PRESIDENT, AND A LONG-TIME MEMBER OF AAPT, AND RECOGNIZES OUTSTANDING COMMUNICATION OF THE EXCITEMENT OF CONTEMPRARY PHYSICS TO THE GENERAL PUBLIC. THE RECIPIENT DELIVERS THE KLOPSTEG LECTURE AT AN AAPT SUMMER MEETING ON A TOPIC OF CURRENT SIGNIFICANCE AND AT A LEVEL SUITABLE FOR A NON-SPECIALIST AUDIENCE AND RECEIVES A MONETARY AWARD, AN AWARD CERTIFICATE, AND TRAVEL EXPENSES TO THE MEETING.

Jeffrey Bennett, astronomer, teacher, and writer, was the 2023 recipient of the Klopsteg Memorial Lecture Award.

Bennett received his B.A. in Biophysics from the University of California at San Diego and an M.S. and Ph.D. in Astrophysics from the University of Colorado at Boulder. Specializing in mathematics and science education, he writes for and speaks to audiences ranging from elementary school children to university faculty.

For more than 30 years, Bennett has successfully advanced the cause of public understanding of physics. Key achievements include:

Serving as the first "Visiting Senior Scientist" at NASA Headquarters whose focus was specifically on education and outreach. In this role, he launched a transformative effort at NASA that vastly expanded public outreach by scientists engaged in astrophysics missions and research.

Creating the concept for a new and innovative type of scale model solar system exhibit, first at the University of Colorado and then with the Voyage scale model solar system (for which he served as co-PI), the first permanent installation on the U.S. National Mall in Washington, DC to be focused specifically on science education.

Leading creation of the free Totality app (bigkidscience.com/eclipse/), which helps people plan for upcoming solar eclipses and learn eclipse science.

Read the full press release at: *https://www.aapt.org/aboutaapt/Jeffrey-Bennett-Named-as-Recipient-of-the-2023-Klopsteg-Memorial-Lecture-Award.cfm*

The Paul W. Zitzewitz Award for Excellence in K-12 Physics Teaching

Alice Flarend, Bellwood-Antis High School, Bellwood, PA

The Power of Words

ESTABLISHED IN 1993 AND FUNDED SINCE 2010 BY A GENEROUS GIFT TO AAPT FROM PAUL W. AND BARBARA S. ZITZEWITZ AND NAMED FOR PAUL W. ZITZEWITZ, THE PRINCIPAL AUTHOR OF THE HIGHLY ACCLAIMED AND WIDELY ADOPTED HIGH SCHOOL PHYSICS TEXT *PHYSICS: PRINCIPLES AND PROBLEMS* AND A LONG-TIME MEMBER AND SUPPORTER OF AAPT, THE PAUL W. ZITZEWITZ AWARD FOR EXCELLENCE IN PRE-COLLEGE PHYSICS TEACHING RECOGNIZES OUTSTANDING ACHIEVEMENT IN TEACHING PRE-COLLEGE PHYSICS.

Flarend was recognized for exemplary ontributions to the mission of the American Association of Physics Teachers through exceptional leadership and motivation to the PTRA community, AAPT's Committee on physics in Pre-High School Education, and to individual members.

Flarend has served with distinction on AAPT committees providing service that is essential to the working of the organization. This service is typical of Alice, she just does the next thing that is needed efficiently and effectively. One of the most recent examples of this service to the community has been her work in developing and leading the PTRA effort to provide educational materials and workshops for high school teachers and students in quantum physics.

Because of her nuclear engineering background and interest, she was uniquely positioned to refine and expand the work done by the Perimeter Institute in this area. Her work to develop hands-on and virtual quantum physics materials has allowed teachers and students to build their understanding.

Read the full press release at: *https://www.aapt.org/aboutaapt/Alice-Flarend-to-be-Recognized-as-a-Recipient-of-the-2023-Homer-L-Dodge-Citation-for-Distinguished-Service-to-AAPT.cfm*

John David Jackson Excellence in Graduate Physics Education Award

Kimberly Ann Colby, San Francisco State University, San Francisco, CA

Human Potentials in the Universe of Graduate Teaching and Mentoring

THE JOHN DAVID JACKSON AWARD FOR EXCELLENCE IN GRADUATE PHYSICS EDUCATION IS PRESENTED TO PHYSICISTS AND PHYSICS EDUCATORS WHO, LIKE JOHN DAVID JACKSON AFTER WHOM THE AWARD IS NAMED, HAVE MADE OUTSTANDING CONTRIBUTIONS TO CURRICULUM DEVELOPMENT, MENTORSHIP, OR CLASSROOM TEACHING IN GRADUATE PHYSICS EDUCATION..

Coble earned her B.A. in Physics, Astronomy, and Astrophysics at The University of Pennsylvania. Both her M.S. and Ph.D. in Astronomy & Astrophysics were earned at The University of Chicago. She was a Postdoctoral Fellow at the University of California, Santa Barbara and a National Science Foundation Astronomy and Astrophysics Postdoctoral Fellow at The University of Chicago and Adler Planetarium.

At San Francisco State University (SFSU) she created a new course called PHYS 885: Inclusive Pedagogy for the Physical Sciences. Nearly all master's students who are Graduate Teaching Assistants (GTAs) in Physics & Astronomy at SFSU take this class to learn how to become more effective teachers for the ever more diverse students enrolling in the physical sciences.

Throughout her career she has created opportunities for graduate students and beyond to become involved in research in meaningful ways and to engage in the academic work, such as presenting at conferences and writing manuscripts for publication, and supporting them in doing so well. When these students attend conferences, Coble goes out of her way to help students network, identify learning opportunities, and model academic engagement so that they get the most out of their experience.

She led the development of "Big Ideas in Cosmology," a flexible, interactive set of online modules on cosmology that instructors use at many levels, from graduate and upper-division undergraduate majors to lower division courses for non-majors. The modules use active learning design elements, particularly those that leverage personal computing tools, so that students engage with real data through a scaffolded approach that facilitates knowledge construction.

Coble's work in teaching, mentoring of, and curriculum development for graduate students in astronomy and physics is outstanding. She is training a generation of new scholars who are helping to change the culture of physics and astronomy pedagogy to be more inclusive and equitable. In recognition of her sustained leadership in these endeavors, Coble was elected as a Legacy Fellow in the inaugural class of the American Astronomical Society Fellows Program in 2020.

The full press release is available at *https://www.aapt.org/aboutaapt/AAPT-Named-Kimberly-Ann-Coble-as-the-2023-John-David-Jackson-Excellence-in-Graduate-Physics-Education-Awardee.cfm*

Homer L. Dodge Citation for Distinguished Service to AAPT

Winter Meeting 2023

Glenda Denicolo

A member of AAPT since 2008, Denicolo became a member of the Committee on Physics in Two-Year Colleges in 2015 and served as Vice Chair in 2018 and as Chair in 2020. She has provided exceptional leadership and motivation to the TYC community, AAPT's Committee on Physics in Two-Year Colleges, and to individual members personally. Her efforts resulted in significantly reducing the isolation felt by Two-Year College Physics faculty across the nation at the beginning and through the pandemic. In her work on the Committee, she has been a consistent leader and motivator. During the early days of the COVID-19 pandemic, teachers across the country found themselves strangely isolated from their home institutions, many for the first time. Denicolo initiated a series of virtual committee meetings via Zoom that not only served to reunite them literally from coast to coast but to allow them to commiserate and share ideas for how to make it through what would be almost two years of unprecedented activity. She even established a YouTube channel so TYC faculty could make use of the sharing from these meetings. In addition, Denicolo acted as the driving force behind the movement to build on previous successful professional development efforts for Two-Year College faculty in a more permanent and sustainable way. Her efforts in motivating colleagues and tirelessly working on an NSF white paper have led to the successful funding of The Organization for Physics at Two Year Colleges (OPTYCs) NSF grant that will positively affect the future of the AAPT TYC Physics community for years to come.

Read full press release at: *https://www.aapt.org/aboutaapt/2023-Homer-L-Dodge-Citation-for-Distinguished-Service-to-AAPT-to-be-Awarded-to-Glenda-Denicolo.cfm*

Summer Meeting 2023

Catherine Herne

Herne is an Associate Professor in the department of Physics and Astronomy at the State University of New York at New Paltz, in New Paltz, New York. She has been a key leader of AAPT's Diversity Equity and Inclusion (DEI) Task Force. The efforts of the Task Force will reshape the Association's understanding of how to best serve its diverse membership, and will support both teachers and students of physics in the 21st century. Her leadership was central, and her work enabled the Task Force to complete its initial goals. Additionally, Herne serves in other roles in AAPT, such as being part of the chair chain in the Committee on Laboratories, she was one of the authors of the recent AAPT White Paper on the Increase Investment in Accessible Physics Labs: A Call to Action for the Physics Education Community.

Herne has been appointed to represent AAPT on AIP's Diversity, Equity, Inclusion, Belonging, and Accessibility (DEIBA) strategic Framework Work Group, on the SEA Change Professional Association Assessment Team, as Regional Director, NY State region for the Advanced Laboratory Physics Association, and has given many contributed and invited talks at our meetings..

Herne has been appointed to represent AAPT on AIP's Diversity, Equity, Inclusion, Belonging, and Accessibility (DEIBA) strategic Framework Work Group.

Read full press release at: *https://www.aapt.org/aboutaapt/2023-Homer-L-Dodge-Citation-for-Distinguished-Service-to-AAPT-to-be-Awarded-to-Catherine-Herne.cfm*

2023 Awards and Grants (cont.)

AAPT 2023 Fellows Award

Richard Gelderman and Lin Ding

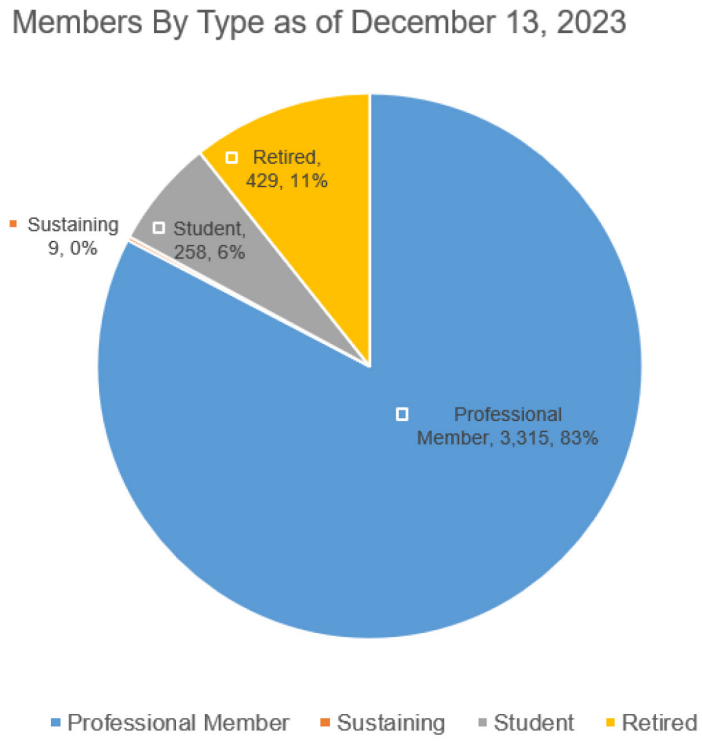
AAPT Fellows Awardee for Winter 2023 is Richard Gelderman. AAPT Fellows are distinguished physicists, educators, administrators, and communicators who have been recognized for their contributions to the physics education community

Dr. Lin Ding, is AAPT Fellows Awardee for Summer 2023 has been named as an AAPT Fellow by the AAPT Awards Committee.

The AAPT Fellowship is awarded to AAPT members for exceptional contribution to AAPT's mission, "To advance physics teaching and learning by serving as the trusted hub for valued resources and programs, facilitating strong professional networks, and supporting members to advocate for physics education." The committee citation for Dr. Ling's award is as follows:

Membership

AAPT closed out 2023 with a net decrease of 315 members. We plan to aggressively market membership in 2024 to our lapsed members as well as to non-members who are utilizing AAPT resources. We are hopeful that we can capitalize on a number of factors, such as the return to better-attended national meetings, an increase in virtual events that are open to non-members, and an on line engagement platform (COMMUNITIES) that continues to exhibit increased participation.



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Committee Contributions

Committees are essential to AAPT.

In addition to committees that advise and oversee operations, such as publications, awards, and budget, there are those that focus on advancing physics education. There are currently 18 Area Committees, each with nine members who hold staggered three-year terms: One new member is appointed each year by the Nominating Committee and two are appointed by the incoming President. Their responsibilities range from developing academic content for the meetings to acting as stewards for their particular area of interest.

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Contributions support the future of physics education and are an investment in the enhancement of physics teaching, from high school to far beyond the graduate level.

Membership Development Funds

- E. Leonard Jossem International Education Fund—Provides grants to individuals in support of international programs dealing with teaching and learning of physics.
- New Teacher Fund—Support outreach and provide reduced membership fees for first and second year physics teachers.
- Student Fund—Support reduced membership fees for physics students and outstanding teaching assistants.

Program Funds

- AAPT Annual Fund—Support ongoing outreach and development programs
- Betty Preece SEES Memorial Fund—The SEES program provides 100 minority, low-socioeconomic students with the opportunity to engage in three hours of hands-on science activities. AAPT provides lunch, career and science materials
- ComPADRE Continuation Fund—Sustain and continue the operation of the ComPADRE website
- Memorial Fund—zDiscretionary fund resulting from donations given in memory of members who are deceased. Funds are used to honor deceased members and help preserve and share their interest(s) in physics education with the greater physics community.
- Physics Olympiad Fund—Promote academic excellence by helping U.S. students prepare for and participate in the International Physics Olympiad, providing a meaningful scientific and cultural experience for team members.
- PTRA Continuation Fund—Continue the work of the PTRA program.
- Undergraduate Curriculum Task Force Fund—Provides data on the current status of undergraduate physics and guidelines for enhancing undergraduate physics programs.

Excellence in Physics Education Award Funds

- AAPT-ALPhA Award—The AAPT-ALPhA Award will be given to a student (or group of students) majoring in physics, who has built, and possibly developed, an advanced laboratory experiment that becomes part of their school's advanced laboratory program
- John David Jackson Excellence in Graduate Education Award recognizes physicists and physics educators who, like Jackson, have made outstanding contributions to curriculum development, mentorship, or classroom teaching in graduate physics education
- Melba Newell Phillips Award Endowment—Restricted fund to endow the award that is presented to an AAPT leader whose creative leadership and dedicated service have resulted in exceptional contributions within AAPT.
- Oersted, Phillips, Millikan, Klopsteg, and Richtmyer Endowments fund the awards for AAPT's recognition of contributions to physics education.

AAPT 2023 Section Representatives

Local sections increase the impact of AAPT programs and resources.

AAPT Sections spread across the United States sand Canada to Mexico. Some sections follow geopolitical boundaries, serving a province, a state, or a territory. Others may serve part of a state or areas as large as six combined states. AAPT members' activity in their local sections strengthens physics education. Sections provide an outstanding opportunity to interact and network with other local physics educators. Acting together we are much stronger and have a bigger impact on physics education. Section Representatives are AAPT members who are officers in the local section.

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STATEMENT OF ACTIVITIES AND CHANGES IN NET ASSETS

FOR THE YEAR ENDING DECEMBER 31, 2023
And Summarized for the Year Ended December 31, 2022

	Without Donor Restrictions	With Donor Restrictions	2023 Total	Summarized 2022 Total
REVENUE AND SUPPORT				
American Journal of Physics	$ 1,272,803	$ -	$ 1,272,803	$1,590,980
The Physics Teacher	979,392	-	979,392	877,007
Membership	574,845	-	574,845	511,389
Meetings, Workshops, and Programs	691,095	-	691,095	501,325
Grants	1,675,577	-	1,675,577	1,344,790
Investment income (loss), net	834,682	222,243	1,056,925	(1,443,342)
Other Publications	119	-	119	13,792
International Physics Olympiad	160,779	-	160,779	117,435
Earnings (loss) on investment in ACP	1,392,637	-	1,392,637	(51,918)
Contributions	83,331	139,913	223,244	70,250
Miscellaneous income	14,526	-	14,526	2,553
Net assets released from donor restrictions	32,845	(32,845)	-	-
Total revenue and support	**7,712,631**	**329,311**	**8,041,942**	**3,534,261**
EXPENSES				
Program Services:				
American Journal of Physics	201,256	-	201,256	244,600
The Physics Teacher	354,453	-	354,453	381,016
Membership	267,598	-	267,598	486,691
Meetings, Workshops, and Programs	1,235,201	-	1,235,201	1,052,332
Grants	1,836,683	-	1,836,683	1,462,863
Other Publications	281,449	-	281,449	287,569
Total program services	4,176,640	-	4,176,640	3,915,071
Supporting Services:				
General and Administrative	2,232,169	-	2,232,169	1,725,455
Fundraising	1,697	-	1,697	-
Total supporting services	2,233,866	-	2,233,866	1,725,455
Total expenses	**6,410,506**	**-**	**6,410,506**	**5,640,526**
Change in net assets before other items	**1,302,125**	**329,311**	**1,631,436**	**(2,106,265)**
OTHER ITEMS				
Other components of net periodic benefit cost	(11,658)	-	(11,658)	(19,736)
Benefit-related changes other than net periodic benefit cost	(18,644)	-	(18,644)	109,417
Change in net assets	**1,271,823**	**329,311**	**1,601,134**	**(2,016,584)**
Net assets at beginning of year	7,197,710	1,601,787	8,799,497	10,816,081
NET ASSETS AT END OF YEAR	**$ 8,469,533**	**$ 1,931,098**	**$10,400,631**	**$8,799,497**

The accompanying notes are an integral part of these financial statements.

Financials continued

AMERICAN ASSOCIATION OF PHYSICS TEACHERS, INC.

STATEMENT OF ACTIVITIES AND CHANGES IN NET ASSETS

FOR THE YEAR ENDING DECEMBER 31, 2023
And Summarized for the Year Ended December 31, 2022

	Without Donor Restrictions	With Donor Restrictions	2023 Total	Summarized 2022 Total
REVENUE AND SUPPORT				
American Journal of Physics	$ 1,272,803	$ -	$ 1,272,803	$1,590,980
The Physics Teacher	979,392	-	979,392	877,007
Membership	574,845	-	574,845	511,389
Meetings, Workshops, and Programs	691,095	-	691,095	501,325
Grants	1,675,577	-	1,675,577	1,344,790
Investment income (loss), net	834,682	222,243	1,056,925	(1,443,342)
Other Publications	119	-	119	13,792
International Physics Olympiad	160,779	-	160,779	117,435
Earnings (loss) on investment in ACP	1,392,637	-	1,392,637	(51,918)
Contributions	83,331	139,913	223,244	70,250
Miscellaneous income	14,526	-	14,526	2,553
Net assets released from donor restrictions	32,845	(32,845)	-	-
Total revenue and support	**7,712,631**	**329,311**	**8,041,942**	**3,534,261**
EXPENSES				
Program Services:				
American Journal of Physics	201,256	-	201,256	244,600
The Physics Teacher	354,453	-	354,453	381,016
Membership	267,598	-	267,598	486,691
Meetings, Workshops, and Programs	1,235,201	-	1,235,201	1,052,332
Grants	1,836,683	-	1,836,683	1,462,863
Other Publications	281,449	-	281,449	287,569
Total program services	4,176,640	-	4,176,640	3,915,071
Supporting Services:				
General and Administrative	2,232,169	-	2,232,169	1,725,455
Fundraising	1,697	-	1,697	-
Total supporting services	2,233,866	-	2,233,866	1,725,455
Total expenses	**6,410,506**	**-**	**6,410,506**	**5,640,526**
Change in net assets before other items	**1,302,125**	**329,311**	**1,631,436**	**(2,106,265)**
OTHER ITEMS				
Other components of net periodic benefit cost	(11,658)	-	(11,658)	(19,736)
Benefit-related changes other than net periodic benefit cost	(18,644)	-	(18,644)	109,417
Change in net assets	**1,271,823**	**329,311**	**1,601,134**	**(2,016,584)**
Net assets at beginning of year	7,197,710	1,601,787	8,799,497	10,816,081
NET ASSETS AT END OF YEAR	**$ 8,469,533**	**$ 1,931,098**	**$10,400,631**	**$8,799,497**

The accompanying notes are an integral part of these financial statements.

Financials continued

AMERICAN ASSOCIATION OF PHYSICS TEACHERS, INC.

STATEMENT OF FUNCTIONAL EXPENSES

FOR THE YEAR ENDING DECEMBER 31, 2023
And Summarized for the Year Ended December 31, 2022

	Program Services							Support Services			Summarized	
	American Journal of Physics	The Physics Teacher	Membership	Meetings, Workshops, and Programs	Grants	Other Publications	Total Program Services	General and Administrative	Fundraising	Total Support Services	2023 Total Expenses	2022 Total Expenses
Compensation	$ -	$ 322,267	$ 227,980	$ 504,321	$ 554,756	$ 276,508	$ 1,885,832	$ 1,430,685	$ -	$ 1,430,685	$ 3,316,517	$ 3,002,456
Consultants, contracts and temporary	-	-	-	65,904	435,898	-	501,802	149,962	225	150,187	651,989	572,895
Participant support	-	-	-	9,413	461,723	-	471,136	(250)	-	(250)	470,886	292,294
Rent	-	-	-	-	-	-	-	216,443	-	216,443	216,443	183,399
Indirect cost allocation	-	-	-	-	123,646	-	123,646	(123,646)	-	(123,646)	-	216,431
Computer supplies and maintenance	-	(206)	-	14,900	23,035	-	37,729	217,328	-	217,328	255,057	179,595
Editorial office	181,845	(413)	-	-	-	-	181,432	-	-	-	181,432	225,606
Honoraria	4,000	11,250	-	42,943	12,000	-	70,193	-	-	-	70,193	85,700
Professional fees	-	-	-	305	-	-	305	24,074	-	24,074	24,379	20,076
Audio Visual	-	-	-	192,441	59,198	-	251,639	4,564	-	4,564	256,203	170,691
Dues and memberships	15,000	14,925	35,114	2,935	229	-	68,203	6,605	-	6,605	74,808	47,994
Awards	-	-	-	43,962	-	-	43,962	352	-	352	44,314	33,892
Publications	-	-	-	-	9,280	76	9,356	-	-	-	9,356	30,952
Bank fees	-	-	-	-	-	-	-	54,735	-	54,735	54,735	44,101
Depreciation and amortization	-	-	-	-	-	-	-	67,081	-	67,081	67,081	29,683
Materials and supplies	-	(74)	675	35,563	18,619	-	54,783	33,121	33	33,154	87,937	48,086
Bad debt expense	-	-	-	-	-	-	-	33,513	-	33,513	33,513	-
Conferences, meetings and workshops	-	-	-	77,141	52,710	-	129,851	17,998	-	17,998	147,849	117,853
Insurance	-	-	-	650	1,255	-	1,905	17,558	-	17,558	19,463	13,942
Travel	-	4,300	1,804	162,176	78,491	4,865	251,636	70,065	1278	71,343	322,979	279,122
Exhibit and meeting expenses	-	-	-	68,954	-	-	68,954	2,748	-	2,748	71,702	12,734
Postage, packing and shipping	26	400	1,877	10,657	2,598	-	15,558	1,300	161	1,461	17,019	14,095
Advertising	-	-	-	-	1,200	-	1,200	6,375	-	6,375	7,575	9,374
Photocopying and printing	385	2,004	148	2,936	2,045	-	7,518	1,558	-	1,558	9,076	6,875
Publishing services	-	-	-	-	-	-	-	-	-	-	-	2,680
TOTAL EXPENSES	$ 201,256	$ 354,453	$ 267,598	$ 1,235,201	$ 1,836,683	$ 281,449	$ 4,176,640	$ 2,232,169	$ 1,697	$ 2,233,866	$ 6,410,506	$ 5,640,526

The accompanying notes are an integral part of these financial statements.

Financials continued

AMERICAN ASSOCIATION OF PHYSICS TEACHERS, INC.

STATEMENT OF CASH FLOWS

FOR THE YEARS ENDING DECEMBER 31,

	2023	2022
CASH FLOWS FROM OPERATING ACTIVITIES		
Change in net assets	$ 1,601,134	$ (2,016,584)
Adjustments to change in net assets to net cash (used in) provided by operating activities:		
Depreciation and amortization	67,081	29,683
Bad debt expense	33,513	-
Net realized and unrealized (gains) losses on investments	(759,491)	1,642,334
Interest and dividends reinvested	(297,434)	(198,992)
(Earnings) loss on investment in ACP	(1,392,637)	51,918
Amortization of right-of-use asset	79,444	-
(Increase) decrease in:		
Accounts receivable	202,020	(177,537)
Grants receivable	(480,464)	513,891
Inventory	170	601
Prepaid expenses	(15,726)	(73,690)
Increase (decrease) in:		
Accounts payable and accrued liabilities	(111,710)	440,131
Accrued payroll and related liabilities	126,761	23,113
Accrued postretirement benefit obligation	14,661	(104,608)
Unearned revenue	(64,716)	80,987
Net cash (used in) provided by operating activities	(997,394)	211,247
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchases of property and equipment	(79,581)	(136,201)
Proceeds from sales of investments	2,587,809	-
Dispositions of investments	(1,972,874)	-
Purchases of investments	(150,541)	-
Net cash provided by (used in) investing activities	384,813	(136,201)
CASH FLOWS FROM FINANCING ACTIVITIES		
Payments on finance lease obligation	(2,671)	(2,689)
Net cash used in financing activities	(2,671)	(2,689)
Net (decrease) increase in cash and cash equivalents	(615,252)	72,357
Cash and cash equivalents:		
Beginning	1,145,744	1,073,387
Ending	**$ 530,492**	**$ 1,145,744**

The accompanying notes are an integral part of these financial statements.

2023 In Memoriam

AAPT Member and Physics Community Obituaries

Remember someone special by giving a gift in their memory...
Donate to the Memorial Fund at aapt.org.Membership/memoriam.cfm.

Vasant Itagi

MAY 10, 2022

Dr. Vasant Itagi passed away on May 10, 2022, from age-related health problems. Itagi was born in Dharwad, India in 1933.

After receiving his Ph.D., he joined the faculty at Aurangabad University in the mid-60's. His research interests were in lasers and spectroscopy. He went on the serve as the head of the Physics department for two decades.

He built one of the first lasers in India - a CO2 laser - in 1969. In 1970, he spent an academic year at the Central Research Institute in Budapest where he worked on metal ion lasers. During the late 70s and early 80s, he prototyped nitrogen lasers with innovative designs that resulted in building a short-pulse high-intensity laser. This laser was used as a pump in dye lasers with different dyes.

Subsequently, Itagi developed applications for his nitrogen laser - a high-intensity system for the time - including a contactless electro-optic-Kerr-effect-based technique for ultrafast high-voltage measurement.

In the early 80s, Itagi spent a year in the US on a Fulbright scholarship. His time was shared between Dr. Michael Feld's group at MIT and Dr. Arthur Schawlow's group at Stanford.

Over the next decade, Itagi (and his group) worked on plasma spectroscopy applications such as space-time fluorescence analysis of laser-induced plasma generated on the surface of metals in low-pressure gas environments.

Itagi advised more than a dozen doctorate students. The state of Maharashtra presented him with a special award for his teaching contributions. He retired in 1993. He was an emeritus member of the AAPT.

He is survived by his wife, also a physicist, and a son who works at the Johns Hopkins Applied Physics Laboratory.

Thomas D. Rossing

July 14, 2022

Thomas D. Rossing, 93, teacher, mentor, researcher, and author, passed away on Thursday, July 14, 2022, in West Lafayette, IN. Tom was a staunch supporter of physics and acoustics education at all levels. While at Northern Illinois University, he hosted many teacher workshops and ran summer courses for high school physics teachers. He was active in the Illinois and Chicago sections of the AAPT. In 1991 Tom served as national president of the AAPT. His dedication to physics and acoustics education was further demonstrated through the endowment of the Rossing scholarship for physics majors at Lutheran colleges and universities, the endowment of a fund for the Illinois Section of AAPT to sponsor invited speakers to joint section meetings, and a gift to the ASA Foundation establishing the Rossing Prize, an award that recognizes individuals who have made significant contributions toward furthering acoustics education.

Tom's contributions to musical acoustics included research on the acoustics of percussion instruments, most notably the timpani, the Caribbean steelpan, and bells. He was a prolific writer. He authored or coauthored 12 books, mostly on acoustics or musical acoustics. He was also co-author of a textbook called "Light Science" for use in a class on the physics of the visual arts. He was the author or co-author of hundreds of scientific papers on topics in condensed matter physics, musical acoustics, and physics education. Many of his contributions to The Physics Teacher are as relevant today as when he wrote them1-3.

Tom was the recipient of numerous honors and awards, including the Acoustical Society of America's Gold Medal in Acoustics and the Silver Medal in Musical Acoustics. The American Association of Physics Teachers also awarded him the Millikan medal (now known as the Lillian McDermott Award). He was a fellow of four professional societies: the Acoustical Society of America, the American Association for Advancement of Science, the American Physical Society, and IEEE.

Initially our teacher and mentor, Tom became a good friend and colleague. We have many fond memories of Friday evening dinners at his home with colloquium speakers or visitors to his lab. We will be forever grateful for his friendship and the support he gave us throughout the many years we had the privilege of studying and collaborating with him. He changed our lives in so many positive ways. We are pleased to have this opportunity to say, "thank you, Tom."

Paul Hickman

SEPTEMBER 23, 2023

Paul was born in Flushing, New York on May 29, 1942, to Herman Charles Hickman and Eleanor (Smigelski) Hickman and grew up in Glendale, New York. He graduated in 1959 from Bishop Loughlin Memorial High School, in 1963 from Manhattan College with a Bachelor of Science degree in Physics and Mathematics, and in 1978 from Long Island University with a Master of Science degree in Physics and Education.

Paul began his career in engineering, working on the construction of NASA's lunar module at Grumman Aircraft Engineering Corporation on Long Island. He was proud to say that his name is somewhere on the surface of the moon! But Paul soon realized that teaching was his true calling. Paul taught physics and earth science at Cold Spring Harbor High School on Long Island and taught physics at Belmont High School in Belmont, MA before becoming Associate Professor and Director of the Center for Science and Math Education at Northeastern University.

In 1985, Paul was selected by the American Association of Physics Teachers (AAPT) to become a Physics Teaching Resource Agent (PTRA). Over the next two decades he developed science curriculum and lead teacher training workshops, spending many summers working with teachers at San Diego State University and Princeton Plasma Physics Lab. From Hayes, KS to Anchorage, AK, Paul traveled the country each summer running workshops for teachers. His work earned him several awards including the Presidential Award for Excellence in Science Teaching, the Tandy Technology Scholars Award, the MAST Science Educator of the Year, the American Association of Physics Teachers Award for Excellence in Pre-College Teaching, and many others. He served on numerous national boards and committees, reviewed grants for the National Science Foundation, developed national standards in physics education and gave talks and conducted workshops around the world.

Priscilla Laws

DECEMBER 12, 2023

Priscilla Laws, emerita professor of physics and George W. Pedlow

2023 In Memoriam (continued)

chair of education, Dickinson College, Carlisle, PA was a pioneer in developing and disseminating student-centered physics education and promoting quality physics learning through the world.

Born in 1940, she grew up in San Francisco, Calif. After graduating from Lowell High School, she received her bachelor of arts from Reed College in 1961. She went on to earn a master's and Ph.D. in nuclear physics from Bryn Mawr College, where she met her husband, Kenneth Laws, Dickinson professor emeritus of physics. Ken began at the college in 1962 and Priscilla in 1965. For more than 35 years the college was home to the "Laws of Physics." They have two children, Kevin and Virginia, who is married to David Jackson, Dickinson professor of physics and astronomy.

Priscilla began focusing her efforts on the health effects of radiation which led to the publication of two consumer books on medical x-rays. Since 1986, she has dedicated herself to the development of activity-based curricular materials and computer software to enhance student learning in introductory physics courses. This work has resulted in the publication of curricular materials developed with members of the Activity-Based Physics Group and published by John Wiley & Sons. These include the Workshop Physics Activity Guide, Understanding Physics, and several RealTime Physics Laboratory Modules. She is also a co-author of Physics with Video Analysis, published by Vernier Software and Technology in 2009.

A member of AAPT since 1991, she received several national awards for educational innovations and software design. These include a Charles A. Dana award for Pioneering Achievement in Education (1994) and the Robert A. Millikan Medal for notable and creative contributions to the teaching of physics from the American Association of Physics Teachers (1996) and the Homer L. Dodge Citation for Distinguished Service to AAPT (1992).

For the 75th anniversary of AAPT, she was voted by their members as one of the 75 most influential physics researchers or educators. While teaching and writing, she also was on several advisory panels at the National Science Foundation and was on the FIPSE Board of Directors for the Department of Education. She promoted ways to use physics research and education to enhance sustainable development in Africa, Asia and Latin America. Priscilla received the International Commission on Physics Education (ICPE) 2008 Medal in recognition of distinguished contributions to Physics Education with far reaching international impact. In 2010 she shared the American Physical Society's Excellence in Physics Education award with David Sokoloff and Ronald Thornton for "For twenty-three years of national and international leadership in the design, testing, validation, and dissemination of research-based introductory physics curricula, computer tools and apparatus." In 2014 she was recognized as part of the inaugural cohort of AAPT Fellows.

Charles H. Holbrow

DECEMBER 19, 2023

For more than sixty years Charles H. Holbrow made significant and innovative contributions to physics education and physics research. The American Association of Physics Teachers (AAPT), recognized these contributions by awarding him the Home L. Dodge Citation for Distinguished Service to AAPT (2009), the Hans Christian Oersted Medal (2012), and the AAPT Fellow (2014).

The Oersted Medal recognizes those who have had an outstanding, widespread, and lasting impact on the teaching of physics.

Holbrow earned his B.A. in History at the University of Wisconsin, Madison in 1955. In 1956, he married Mary Louise Ross, with whom he has five daughters. Following the addition of an A.M. in History and a Certificate of the Russian Institute from Columbia University he returned to the University of Wisconsin where he earned his M.S. (1960) and Ph.D. (1963) in Physics.

While working on his Ph.D. Holbrow worked as a Research Assistant for the Midwestern Universities Research Association and as a Research Assistant at the University of Wisconsin. From 1962-65 he was Assistant Professor at Haverford College, and then Research Associate at the University of Pennsylvania.

After a short time as Associate Editor at Physics Today in New York City, he took a position as Associate Professor at Colgate University. During his first years there, he taught physics and was Associate Director of the Colgate Computer Center (1968) and Director (1972). He was also Chairman of the Department of Physics and Astronomy (1970-72), and Director of Institutional Research in 1972. He spent 1972-73 at Stanford University as an ACE Academic Administration Intern Fellow. Colgate promoted him to full Professor in 1975 and named him Charles A. Dana Professor of Physics in 1986. He directed Colgate's Division of Mathematics and Natural Sciences from 1985 to 1988.

He was Visiting Professor of Physics at Massachusetts Institute of Technology, Cornell University, and the University of Wisconsin-Madison. He has been Visiting Physicist at Brookhaven National Laboratory, Visiting Scientist at SRI International, Molecular Physics Laboratory, Guest Scientist at SUNY Stony Brook, Department of Physics, Visiting Associate in Physics at California Institute of Technology, Guest Scientist at Gesellschaft für Schwerionen Forschung in Darmstadt, Germany, and Gast Professor at the University of Vienna, Austria.

Holbrow was an active participant in physics education, serving as a member of the Steering Committee of 'The Research Physicist in Undergraduate Curriculum Development: A Joint Program of the American Physical Society and the American Association of Physics Teachers.' He was a member of the APS Forum on the History of Physics program committee, of the APS Committee on Education, of the Board of Directors of the American Institute of Physics, of AIP's Liaison and Advisory Committee on Public Policy, and of the Physics Today advisory committee.

He has served AAPT as President, Senior Staff Physicist, and Executive Officer. He was editor of the New Problems section of the American Journal of Physics. He served as a member of AAPT's Finance Committee and Co-chair of the 2012 Gordon Research Conference -- Physics Research and Education: "Astronomy's Discoveries and Physics Education."

Harvard University recognized him for excellence in teaching during the academic year 2006-2007. In 2009 AAPT presented him with the Distinguished Service Citation in recognition of his contributions as a physics teacher, textbook author, nuclear physics researcher, and physics historian as well as his service as Associate Editor of Physics Today, AAPT President, AAPT Senior Staff Physicist, and AAPT Executive Officer. He was honored as an AAPT Fellow in 2014.

In recent years, he was active in the Lexington Computer and Technology Group, taught for the Lexington Community Education Program, and created an alumni group for Ford Foundation Fellows. He continued to correspond with friends and colleagues throughout his life.