

AAPT 2022 Annual Report



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2022 in Review

EXECUTIVE OFFICER'S 2022 ANNUAL REPORT

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Executive Officer's 2022 Annual Report

BETH A. CUNNINGHAM



This report provides a summary of activities in 2022. I am not able to mention all of the important activities that occurred in 2022. This summary should give you a taste of the most visible or important activities that the Executive Office led.

The AAPT staff members need to be recognized for their hard work and contributions. AAPT's successes are supported by a very committed and loyal staff. The AAPT staff helps the vision of the AAPT Board of Directors and all of the volunteer members come to fruition. We had many milestone anniversaries for the staff during the pandemic:

- Mike Hall – 5 years (2021)
- Tiffany Hayes – 15 years (2022)
- Bob Hilborn – 10 years (2021)
- Janet Lane – 30 years (2022)
- Ashauni Lennox – 5 years (2020)
- Terry Sam – 5 years (2021)
- Sylvia Sandiford – 20 years (2020)
- Dave Wolfe – 10 years (2021)

In addition to these milestones, I am pleased to announce two promotions:

- Erwin Campbell – Chief Information Officer
- Jerri Anderson – Senior Marketing Manager

Finally, we bid Pam Aycock farewell as she started a new career in counseling and welcomed Ben Lefstein as the new *TPT* Managing Editor. 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.

“The AAPT staff members need to be recognized for their hard work and contributions. AAPT’s successes are supported by a very committed and loyal staff.”

We continue to make improvements to AAPT to better support our mission and the work of the volunteer members. The ComPADRE refresh is almost complete. ComPADRE is now integrated with aapt.org. Please go to “Resources” on the top menu and you’ll see that ComPADRE is now listed fourth on the right-hand side making it easier to find and navigate to all of the ComPADRE subsites. The ComPADRE landing page has a fresh, modern look, too. We are starting to work on an integrated search that will return not only AAPT resources but also resources and subsites associated with ComPADRE. Stay tuned!

In partnership with the American Physical Society and the American Institute of Physics, we began searching for space in Washington, D.C. to augment the space that we have in the American Center for Physics located in College Park, MD. We envision this space to be for collaborations and meetings in an easy-to-get-to location in the central part of our nation’s capital. We signed a lease for space at 555 12th Street NW in September and anticipate occupying this space in early 2024 once the build-out is completed.

I started working with the fundraising firm [Windmill Hill Consulting](#) (WHC) to build AAPT’s fledgling fundraising capacity. WHC, a woman-owned business, specializes in supporting nonprofits. The Board of Directors received training from WHC during its fall meeting and is actively participating in providing insight into potential donors including connections to companies and foundations, stewarding donors, and encouraging members to make a gift to AAPT to support our activities. Why give? AAPT’s revenue from membership dues is less than 20% of the total! We



need additional support to offer a rich suite of programs that support physics educators across the education spectrum. The Board is so committed to the goals of fundraising that 100% participated and made a gift in 2022!

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

- A collective impact project around diversity, equity, and inclusion (DEI) was funded by the [AIP Venture Fund](#). This project will develop a framework for collective action in the area of DEI programming for AIP Member Societies and Affiliates and help identify areas for taking joint actions, avoiding duplication of effort, and launching new programs (i.e., where there are gaps).
- We received multi-year funding from NASA (80NSSC21K1560) to continue the [Heliophysics Education Activation Team project](#). This multi-year initiative from NASA leads the development of research-based instructional materials for astrophysics taught in the context of introductory and upper-division physics and astronomy courses.
- The [Faculty Teaching Institute](#) (formally called the New Faculty Workshop) received another multi-year grant (National Science Foundation 2141745).
- The [Organization for Physics in Two Year Colleges](#) (OPTYCs), a program to support TYC physics faculty through professional development, mentoring and networking, scholarship of teaching and learning, new faculty, leadership, and DEI, was funded (National Science Foundation 2212807).

We have been busy supporting other activities such as:

- WM 22 was scheduled to be held in New Orleans, LA, and the continuing concerns about the continuing impact of the pandemic led us to make this event virtual.
- SM22 in Grand Rapids, MI, was the first in-person meeting since the start of the pandemic! Registration was strong but less than the pre-pandemic average.
- The U.S. Physics Team trained at the University of MD and competed virtually in the 2022 International Physics Olympiad. Led by Academic Director Tengiz Bibilashvili (his first year) and coaches Abijith Krishnan, Kye Shi, Brian Skinner, Mike Winer, Kevin Zhou, and Meredith Neyer, the traveling team consisting of Alex S. Gu, Collin S. Fan, Evan Erickson, Rishab X. Parthasarathy, and Rowechen Zhong won 3 Gold and 2 Silver medals.
- The [Effective Programs for Physics Programs](#) (EP3) guide is almost finished. AAPT has partnered with the American Physical Society on this project.
- The Board has appointed three new Task Forces:
 - [K-12](#)
 - [Equitable Policies](#)
 - [Local Member Engagement](#)
- AAPT signed the joint statement on “[Sustainable Systems for Quality Teaching](#)” in response to the K-12 teacher shortage and the best ways to solve this problem
- AAPT has a new [Strategic Plan](#)! In addition, the Board approved a revised vision and mission statement. Please take a look at this document that will provide a roadmap for AAPT over the next 3-5 years.
-

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:

- WM22 - none
- New Faculty Workshop (July) - one reported (resolved)
- SM22 - one reported (resolved)

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>). I continue to participate in virtual “hot topic” workshops and events organized by the Societies Consortium and take back ideas to help AAPT become a welcoming and inclusive society for all physics educators. 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.



We are pleased to announce the Area Committee of the Year: Physics in Two-Year Colleges. In addition, two Area Committees received Honorable mentions: Space Science & Astronomy and Physics in High Schools. Thank you to these three Area Committees and the many other Area Committees for the work that they conducted in 2022. These committees are vital for preparing programming for AAPT's national meetings and providing the intellectual resources and knowledge base for the activities that we do.

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 membership numbers. This is a phenomenon being experienced by many other professional societies that support the K-12 STEM community. We also saw a small decline in four-year college and university members for the second year in a row. We know that the pandemic hit both K-12 and higher education hard. Now is the time that the physics education community needs the programs, services, and resources offered by AAPT. We rely on current members to articulate the value of an AAPT membership. We hope you will assist AAPT in bringing in new members and volunteering at AAPT to contribute to the activities we offer to support the community.

We hope you continue to see value in membership and continue to renew. We also ask that you consider making a contribution 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
Executive Officer



Diversity, Equity, and Inclusion at AAPT Report

This section describes AAPT activities around diversity, equity, and inclusion (DEI) that occurred in 2022. The accomplishments in DEI in 2022 are particularly exciting since the Board of Directors approved the DEI Task Force deliverables. This establishes 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. The [CoDP annual report](#) includes other activities the committee engaged in during 2022.

Below is a summary of the 2022 activities:

- [DEI Task Force](#) shared [deliverables](#) with the Board of Directors at its Fall meeting. The Board approved the value proposition, vision, guiding principles, and 3-5 year road map.
- [Physics & Astronomy SEA Change](#) pilot onboarded 5 new physics and astronomy departments. This 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 in which they wish to improve. This project is funded by the [AIP Venture Fund](#).
- AAPT completed its participation in the [AAAS STEMM Professional Society DEI Self-Assessment](#) and shared the results with the Board.
- AAPT is a partner in the [AIP TEAM-UP Together](#) project. TEAM-UP Together's goal is to double the number of African Americans earning bachelor's degrees in physics and astronomy by 2030. In 2022, the student scholarship program was established and the [first awardees were recently announced](#). In addition, the partners began developing the departmental program.
- The final summit for the [eAlliance project](#) was held during SM22. The eAlliance project, funded by the National Science Foundation (HRD-1500529), enabled women faculty in physics and astronomy departments to create peer mentoring groups. These peer mentoring groups allowed women to get advice about important decisions in their careers and personal lives and to offer support and friendship to each other.
- AAPT in partnership with APS and AIP held a small workshop to learn more about the collective impact structure as a part of the [AIP Member Society Collective Impact](#) project (funded by the AIP Venture Fund). This project's goal is to develop a framework for collective action in the area of DEI programming for AIP MS and Affiliates and help identify areas for taking joint actions, avoiding duplication of effort, and launching new programs (i.e., where there are gaps).

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.

AMERICAN JOURNAL OF PHYSICS STATISTICS

- 12 issues—January–December 2022 (Volume 90)
- 934 pages, 731 reviewers, 144 papers published—17.5% acceptance rate
- 11 open access articles
- 8 video abstracts
- 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: Darsa Donelan, Michelle Kuchera, Benjamin Crider, Anne Goodsell, Maury Goodman, Stephanie Chasteen

Editorials and Guest Editorials - 2 editorials

Computational Physics - 5 articles

Instruction Laboratories and Demonstrations - 15 articles

Advanced Topics - 3 articles

Notes and Discussions - 7 articles

Back of the Envelope - 3 articles

Letters to the Editor - 17 letters

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THE PHYSICS TEACHER (TPT.AAPT.ORG)

Gary D. White, Editor, The George Washington University
Pamela R. Aycock, Managing Editor, Appalachian State University

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. Recently, TPT has seen a surge of submissions, resulting in the 2022 collection of TPT articles being the largest ever. Among the most popular articles include “Would Usain Bolt Beat the Dinosaur Dilophosaurus Wetherilli in a 100-Meter Race?” by Scott Lee and “Share It, Don’t Split It: Can Equitable Group Work Improve Student Outcomes?” by Danny Doucette & Chandralekha Singh. Other highlights include “DART: Planetary Defense in the Introductory Physics Curriculum” by Joseph Amato and “Fractals on a Benchtop: Observing Fractal Dimension in a Resistor Network” by Charles Creffield. Also in 2022, TPT saw two of its longest-tenured Column Editors step aside after years of excellent contributions: Chris Chiaverina, 18 years with “Little Gems” (see the October 2022 issue for Chris’s farewell along with his latest Gem called “Totally Tubular”) and Larry Weinstein, 15 years with “Fermi Questions” (see the May 2022 issue for Larry’s farewell along with his latest Fermi Question called “Space Telescope”).



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

Paul G. Hewitt, City College of San Francisco, San Francisco, CA

iPhysicsLabs

Jochen Kuhn, University of Kaiserslautern, Germany

Patrik Vogt, Institute of Teacher Training, Mainz, Germany

Just Physics

Deepak Iyer, Bucknell University, Lewisburg, PA

Shannon Wachowski, EdReports

Physics Challenge for Teachers and Students

Boris Korsunsky, Weston High School, Weston, MA

Talkin’ Physics

James Lincoln, Physics Videos.com, Newport Beach, CA

WebSights

Dan MacIsaac, SUNY-Buffalo State College, Buffalo, NY

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Arlissa Richardson, Chandler-Gilbert Community College

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Rebecca Vieyra, Inter-American Teacher Education Network

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AAPT, College Park, MD

David Wolfe, Director of Communications, AAPT-College Park, MD

Dan Cooke, Advertising, AIP, Melville, NY

Debbie Bott, Advertising, AIP, Melville, NY

THE PHYSICS TEACHER STATISTICS

- 9 issues—January–May, September–December 2022 (Volume 60)
- 816 pages, 808 reviewers, 176 papers, and 88 contributions to monthly columns —61% 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 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

2022 TOP AAPT NEWS STORIES

Listed below are highlighted news stories for 2022 from the eNNOUNCER. To read the full story go to <http://www.aapt.org/aboutaapt/ennouncer/index.cfm>.

JANUARY

- Dimitri Dounas-Frazer, Steven Henning, David McCachren, and Arlisa Richardson to receive Homer L. Dodge Citation
- Bree Barnett Dreyfuss named AAPT Fellow

FEBRUARY

- AAPT Joins the AAAS SEA Change Professional Society Pilot
- Toni Sauncy Becomes President of AAPT

MARCH

- 2022 Lillian McDermott Medal Awarded to Wolfgang Christian
- Sean J. Bentley to Receive the

AAPT 2022 David Halliday and Robert Resnick Award

- Debbie Stephanie Andres Named as 2022 Recipient of the Doc Brown Futures Award

- Andres R. Torres to Receive 2022 Paul W. Zitzewitz Excellence in K-12 Teaching Award

APRIL

- 2022 Homer L. Dodge Citation for Distinguished Service to AAPT to be Awarded to Paula Heron

MAY

- Diversity, Equity, and inclusion at AAPT



eNNOUNCER December 2022

[Privacy Statement](#)

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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.

2023 AAPT Winter Meeting

Registration

Registration for the 2023 Winter Meeting is now available. [Register now!](#)

Program

[View the on-line program](#)

Plenary Speakers/Awardees

AAPT News

- [2022 AAPT Board of Directors Election Results](#)
- [2023 AAPT Winter Meeting](#)
- [PTRA Summer Institute](#)
- [Jocelyn Bell Burnell Recognized as 2023 Recipient of the Richtmyer Memorial Lecture Award](#)
- [Darsa Donelan Named as 2023 Recipient of the Doc Brown Futures Award](#)
- [AAPT Named Kimberly Ann Coble as the 2023 John David Jackson Excellence in Graduate Physics Education Awardee](#)
- [S. James Gates, Jr. to Receive AAPT 2023 Oersted Medal](#)
- [Alice Flarend to be Recognized as a Recipient of the 2023 Homer L. Dodge Citation for Distinguished Service to AAPT](#)
- [2023 Homer L. Dodge Citation for Distinguished Service to AAPT](#)

Continue on AAPT in the Awards



Electronic Communications

AAPT.ORG

Having strong online publications offers AAPT members convenient access to physics education resources, news, and other member benefits. AAPT.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.

For 2022 aapt.org had:

- 3,577,481 visits • 1,331,502 pageviews • 2.95 pages per visit
- 274,000 new visitors All from 198 countries/territories
- #1 U.S., #2 China, #3 India, #4 Canada, #5 United Kingdom

AAPT American Association of Physics Teachers

Learn More

Get Started

Diversity, Equity, Inclusion and the Future of Physics Education

Join AAPT Register for an Event Support AAPT

AAPT Audience
Learn, grow, and succeed with AAPT

K-12 Teachers
Professional development, resources, mentoring, community, student programs...
Learn More

Higher Ed
Professional development, resources, mentoring, community, student programs...
Learn More

Students
Courses, competitions, awards, research opportunities, internships, career development...
Learn More

Partners
They support the mission of the organization, and bring ideas to the table...
Learn More

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.

National Meetings



WINTER MEETING

January 6–8, 2022, Virtual Meeting

Statistics:

Attendees: 476

Exhibitors: 4

Workshops 9

Sessions: 48

Tutorials: 2

Topical Discussions: 4

Poster Sessions: 8

Program Committee Chair
Duane B. Merrell

Special Thanks

Vernier Software & Technology –
Gold sponsor

American Institute of Physics –
Silver sponsor

Bronze sponsors

PASCO Scientific

American Association of Physics
Teachers

AAPT Publications

Winter Meeting Highlights

Virtual Commercial Workshops

Virtual commercial workshops were held on Friday, January 7 and Saturday, January 8 with selections ranging from “Teaching a Diverse History of Physics” to “Moments of Inertia and Angular Momentul Experiments with Video Analysis.” Commercial Workshops were hosted by AIP and Vernier.

Plenaries

Fred Myers

Fred Myers, Lead Subject Matter Expert for Great Minds, an innovative K-12 publishing company. Fred was in public and independent schools for 42 years before “retiring”. He taught physics for 33 years in a wide variety of high schools: Freeport H.S. (Freeport, NY), Choate Rosemary Hall (Wallingford, CT), Greenwich H.S. (Greenwich, CT), and Farmington H.S. (Farmington, CT) where he also served as Science Department Chair. During his last 9 years as a formal educator he served as Director of Science, an administrative position in Glastonbury Public Schools (Glastonbury, CT). His talk, Physics for All: Wonder, Magnificence, and Joy focused on the need for Physics educators to strive to reach a far greater percentage of the populous. A wider appreciation and understanding of the laws of physics will help produce a better, more informed citizenry. It behooves physics educators to develop and implement introductory physics courses that are relevant, interesting, inspiring, and joyful . . all while setting high expectations for achievement. He noted that veryone experiences physics in their everyday lives during childhood (from motion to magnets) and begins developing concepts about them. Sadly, only a very low percentage of humans enroll in a formalized physics course during their schooling, and an astonishingly low percentage enroll in a second physics course. Physics educators at all levels should strive to make a student’s first physics course engaging, interesting, challenging, and fun. Physics is for everyone and should not be treated as an elite course that is reserved for the best and the brightest students. A first-rate introductory course should challenge students’ minds and open their eyes to the magnificence of physics, and leave the students desirous of learning more physics.

Mathew Greenhouse

Matthew Greenhouse has served on the James Webb Space Telescope (JWST) senior staff as Project Scientist for the Webb science instrument payload since 1997. He specializes in infrared imaging spectroscopy, development of related instrumentation and technologies, flight project science, and technical management. He spoke about The James Webb Telescope. **The** JWST is the successor to the Hubble Space Telescope. It is the largest space telescope ever constructed,

and will extend humanities' high definition view of the universe into the infrared spectrum. The Webb will observe early epochs of the universe that the Hubble cannot see to reveal how its galaxies and structure have evolved over cosmic time. The Webb will explore how stars and planetary systems form and evolve and will search exoplanet atmospheres for evidence of life. The Webb's science instrument payload includes four sensor systems that provide imagery, coronagraphy, and spectroscopy over the near and mid-infrared spectrum. The JWST is being developed by NASA, in partnership with the European and Canadian Space Agencies, with science observations proposed by the international astronomical community in a manner similar to the Hubble. The Webb launched on Christmas Day, 2021.

Jim Stith

James H. Stith is a former president of the American Association of Physics Teachers (AAPT) and Vice President Emeritus of the American Institute of Physics (AIP). Throughout his career, he has been an advocate for programs that ensure ethnic and gender diversity in the sciences. As Vice President, he had oversight of a broad portfolio of units which included the Magazine Division, the Media and Government Relations Division, the Education Division, the Center for the History of Physics, the Statistical Research Division, and the Careers Division, all of which provided day to day support of AIP Member Societies. In his talk, Diversity, Equity, and Inclusion: An Elusive Goal? he noted that the quest to achieve ethnic and gender equity in physics has been a goal for at least the past fifty years. Despite the resolute and well-intended efforts of so many people and organizations, parity has alluded us. While there has been success in raising the numbers of African Americans in the field, we have lost ground in terms of overall representation. We were elated to see significant increases in percentages of women earning degrees, rising from single digits to just above twenty percent; but those numbers have plateaued well short of parity. It is encouraging to see the steady increase in the Latinx representation as we mine those numbers extracting the lessons learned that might be adapted in a broader context. While there is a compelling argument for the need to address the broad underrepresentation in physics, this talk focused on the underrepresentation of African Americans in the discipline. His journey began in 1964 at Virginia State College as an instructor in an NSF sponsored program to improve the science education of K-12 teachers. His thinking about solutions in over fifty years of active engagement has evolved from believing "It's just the science" to recognition of the need for a more comprehensive approach. This talk revisited that fifty-plus year journey by focusing on key issues. Among these: Are we asking the right questions? Are we solving the right problem? What is our definition of success?

Awards

Member service to AAPT was recognized with the announcement of the Homer L. Dodge Citations for Distinguished Service to AAPT to Arlisa Richardson, Dimitri Dounas-Frazer, Dave McCachren, and Steve Henning.

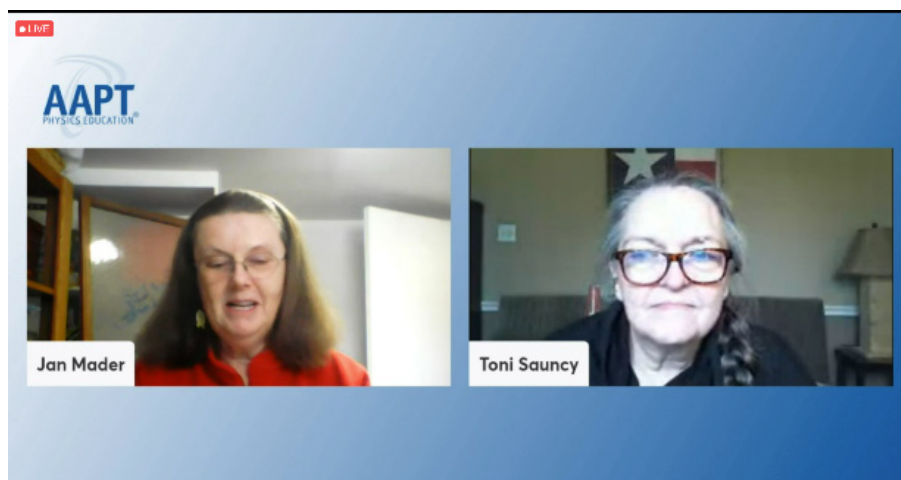
Bree Barnett Dreyfuss of Pleasanton, CA was recognized as an AAPT Fellow.

Meeting of the Members

The annual Meeting of the Members agenda included updates on the state of AAPT, progress on the Strategic Plan, future meetings, and the association's budget. The Committees on Diversity in Physics and Laboratories were recognized as 2021 Area Co-Committees of the Year. Members were informed about new Diversity, Equity, and Inclusion initiatives and the AAPT Statement regarding concerns about the naming of the space telescope called JWST.

Presidential Transfer

The meeting concluded with the Presidential Transfer where Jan Landis Mader turned the Presidential Gavel over to incoming president, Toni Sauncy.



National Meetings



SUMMER MEETING

July 9–August 13, 2022

Statistics:

In Person Attendees: 787
Virtual Registrants: 42
Exhibitors: 22
Sessions: 95
Commercial Workshops: 9
Topical Discussions: 7
Poster Topics: 12
Workshops: 14
Program Committee Chair
Duane Merrell
Workshop Organizer: Brad
Ambrose
Meeting Structure Committee:
Jon Anderson, Alice
D. Churukian, Elaine
Gwinn, Jan Landis Mad-
er, Duane B. Merrell,
Adebanjo Oriade, Toni
Sauncy, Brad R. Conrad,
and Tiffany M. Hayes, Ex
Officio



After two years of virtual meetings, physics educators gathered to collaborate and share research in Grand Rapids, Michigan, birthplace of President Gerald R. Ford and home to his Presidential Museum. Attendees had an opportunity to tour the Michigan State University National Superconducting Cyclotron Laboratory. During the meeting NASA released the first photos of space received from the JWST, celebrating the scientific collaboration of scientists around the world.

Also, celebrating collaboration were the participants in the 2022 International Physics Olympiad, hosted by Switzerland and held during the same week. The U.S. Physics Team, sponsored by AAPT and AIP member societies, participated in the virtual competition with high school students from countries around the world.

Physics Education Researchers participated in the post-meeting PER Conference, Queering Physics Education (<https://www.compadre.org/per/conferences/2022/>).

The AAPT Fun Run/Walk, with shirts and refreshments provided by Vernier, provided a break from the intense learning format of the meeting. New events this year were the Solar Share-a-Thon, First Timers Luncheon, and Bowling Social. Much anticipated features of the Summer Meeting, The High School Physics Photo Contest, Demo Show, and the Apparatus Competition, are always highlights and this year they were exceptional.

A remembrance session honoring Warren W. Hein and Robert Beck Clark was held at the beginning of the program. Warren W. Hein, former AAPT Executive Officer, passed away on June 11, 2021, while living in Fenton, Michigan. He served as both the Executive Officer (2008-2010) and Associate Executive Officer (1997-2007) of AAPT. Former AAPT President, Robert Beck Clark, passed away at home in Murray, Utah on June 4, 2022. He was honored as the recipient of both the Oersted (1995) and Melba Newell Phillips (2004) Medals and the Homer L Dodge Citation for Distinguished Service to AAPT. In 2014 he was named an AAPT Fellow. He served as the treasurer (1978-84) and president of the AAPT (1988-89).

Awards

The 2022 recipient of the Doc Brown Futures Award is **Debbie Stephanie Andres**. 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. Her talk, *Finding My Physics Teaching Family*, focused on the impact her introductory physics professor had on her. She was inspired to think about the difference she could make as a physics educator. This path led to meeting some incredibly motivated and passionate teachers. Familial relationships are important to her and it did not take long before she viewed these colleagues as immediate physics family. As she learned more about AAPT and its membership, she began to view the organization as her extended family. And just like any family, we learn, grow, and work together to be the best versions of ourselves. This talk is a reflection of her experiences through the lens of a high school physics teacher navigating AAPT and the extended physics teaching community.

Wolfgang Christian received the Lillian McDermott Medal. This award recognizes those who are passionate and tenacious about improving the teaching and learning of physics and have made intellectually creative contributions in this area. Christian has had a huge impact on the physics education community and has helped usher in computational physics in high school, undergraduate, and graduate education around the country and the world. In his talk, *The Promise and Impact of Computation for Teaching*, he addressed the history and dreams of



National Meetings continued

machines to automate computation starting with the abacus in 3000 BC, to the combination of at-your-fingertip computation and the internet. It presented a personal history of how computers and the internet have challenged me and changed how he teaches. He included examples to show that computers can provide a learning experience that utilizes students cognitive, affective, and psychomotor domains of learning.

The Halliday and Resnick Award for Excellence in Under Graduate Physics Teaching was presented to **Sean J. Bentley**. This award is given in recognition of contributions to undergraduate physics teaching and awardees are chosen for their extraordinary accomplishments in communicating the excitement of physics to their students. Associate Professor at Adelphi University's Department of Physics, Bentley spent two years as Director of the Society of Physics Students (SPS) and Sigma Pi Sigma (the physics honor society), and has been a professor for nearly 19 years. In 2013, Bentley was nominated by his students and recognized by the Adelphi University faculty and administration with the Teaching Excellence Award for Tenured Professors. His talk, *Some Pain, Much Gain*, shared challenges faced as his department was forced to evaluate alternative educational approaches. Instructional changes always pose difficulties, from overcoming departmental inertia and faculty resistance to building student buy-in and engagement in unfamiliar learning experiences. The proven gains in student learning, though, are well worth the initial pains. He explored a few recent examples of such changes we have implemented in our department, from introductory labs to senior courses, focusing on strategies for overcoming the challenges.

The 2022 Paul Zitzewitz Excellence in K-12 Physics Teaching Award winner was **Andres R. Torres**, a Physics, and Environmental Management and Research teacher at Ronald Reagan/Doral Senior High School. This award is in recognition for contributions to pre-college physics teaching and awardees are chosen for their extraordinary accomplishments in communicating the excitement of physics to their students. In his talk, *Thoughts on Teaching and Motivating Students While Implementing a StepUp for Physics Curriculum*, he shared research showing that there has been a massive improvement for women in medicine, business, and law careers over the past few decades (Silva, 2019). After completing a curriculum with interdisciplinary lessons and extracurricular activities, he knew that physics teachers are highly effective in motivating students to show interest in physics principles and applications in their daily lives. But in addition to this, physics teachers could teach lessons to create cultural change and inspire young women to pursue physics in college. STEP UP is a national community of physics teachers that provides valuable lessons, strategies, and professional developments (Step Up Physics Together, n.d.). Implementing the STEP UP curriculum in his classes and creating STEP UP for the physics club were successfully inspirational in motivating underrepresented students to pursue Physics and STEM careers.

The Summer 2022 recipient of the Homer L. Dodge Citations for Distinguished Service to AAPT was Paula Heron, a Professor of Physics at the University of Washington, Seattle, WA.

2022 AAPT Fellows, Geraldine Cochran, Rutgers University, Piscataway, NJ; Laura McCullough, University of Wisconsin-Stout, Menomonie, WI; and Arlisa Richardson, Chandler Gilbert Community College, Gilbert, AZ were also recognized.

Plenaries

The first plenary session featured Ed Galindo, (Yaqui, American Indian) is a faculty member at the University of Idaho, Associate Director for Education and Diversity for the NASA Idaho Space Grant Consortium, Affiliate faculty member at Idaho State University (Biology Department) and Affiliate faculty member at Utah State University (Physics Department). He has extensive education and research in working with Native American students. While serving as chairman of the science department on the Shoshone-Bannock Indian Reservation, he was twice elected as the National Indian Teacher of the Year, awarded by the National Indian School Board Association. He is serving as a board member with the Barry M Goldwater Scholarship and Excellence in Education Foundation. Most recently, Ed was honored to be inducted as a lifetime (Sequoyah Fellow) member of the American Indian Science and Engineering Society (AISES) for research and educational outreach in the American Indian communities.

In his talk, *Seeing Out of Both Eyes*, Galindo define inclusion as one of acceptance. An acceptance of at a minimum, of at least a fair "listening too". This would mean a listening to not only other ideas, but listening to other people's point of view on all sorts of things including life. Listening to a different culture than yours. Listening to the community where you teach



at. Listening to your students. Finally, listening to your heart and understanding what it is telling you. This concept has been talked about and written about by Galindo and others to also mean “two eyed seeing” and he has personally added “two ears listening”. Really listening to others is not as easy as it sounds.

Wendy Adams delivered the second plenary talk, *Teaching: The Best Kept Secret*. Adams is the Director of Teach@Mines and a Research Professor of Physics at the Colorado School of Mines. Adams is also the PI of the Get the Facts Out Project, a partnership between four national societies that aims to repair the reputation of the teaching profession. A Physics Education Researcher by training, she earned her PhD. from the University of Colorado, Boulder. Adams’ research focuses on instrument development, curriculum design, and perceptions of the teaching profession. She is the author of the CLASS, which measures students’ perceptions of physics and how to learn physics; has done extensive work on problem solving evaluation; developed the interface design guidelines for the PhET Interactive Simulations; designed and developed several curricula including the Explore Sound project - K-14 materials for acoustics; and has most recently developed the suite of Get the Facts Out resources including the PTaP and PTaP.HE instruments (Perceptions of Teaching as a Profession) for students and for faculty in Higher Education, respectively. She is an APS Fellow, and co-recipient of the 2018 American Physical Society Excellence in Physics Education Award.

Douglas Duncan talked about future opportunities in his talk, *Run A 2023 And 2024 Eclipse Event at Your School, For Fun, Education, And Profit!* In Oct. 2023 and April 2024 two spectacular eclipses of the sun will cross the US. Every state will see a partial eclipse, and over 30 million people are in the path of the total eclipse. He encouraged schools and communities to organize safe eclipse watching events. For one eclipse, we got the stands of the football field open for us, and 10,000 people attended! (see the photo) As a veteran of 12 total eclipses since 1970, Dr. Duncan is an expert on eclipse logistics, planning, and science.

During this Plenary, **David Wirth**, physics teacher at Millennium High School in Goodyear, AZ, was recognized as the 2021 PhysTEC Teacher of the Year. Throughout his 29-year career, Wirth has created an environment where students are advocates for science, their communities, themselves, and the world. He champions physics and physics education, and the success of his students is personal to him. His use of Modeling Instruction methods, partnerships with mathematics teachers and grant writing efforts have allowed him to quadruple his physics enrollment and build his students up so they can drive high-level physics discussions and have clear confidence in themselves and their scientific skill.

PHYSICS EDUCATION RESEARCH (PER)

PER LEADERSHIP ORGANIZING COUNCIL

Bethany Wilcox – Chair
Alice Churukian – RIPE
Liaison
Raymond Zich – PERC Liaison
Rebecca Rosenblatt – PERC
Liaison
Charlotte Zimmerman – PER-
COGS Representative
Rachel Henderson Co-Chair
Sujata Krishna GPER – Liaison
Lauren Barth-Cohen – Mini-
Grants

PERC ORGANIZING COMMITTEE

Madison Fitzgerald-Russell
Brienne Gutmann
Kelby T. Hahn
Alia Hamdan
Sara Mueller
Yasmeen Musthafa
Ben Pollard (he/him)
Xandria Quichocho
Mike Vignal (he/him)

PER Conference 2022

July 13-14, 2022

“Queering Physics Education”

PERC 2022 focused on “queering physics education” through an intersectional lens. By “queering,” we centered queer theory which breaks down social constructions and hierarchies to unpack normalized assumptions. In the context of physics education, we apply the theory to unpack who has power in physics to control the production of future physicists, how physics policies and practices are sometimes built on ideas of punishment and power, and how PER embeds binaries in both its content and sociological research. Further, we wanted to encourage a dialogue that is both a critique and an imagining of a queer future for PER. Explicit attention was given to constructions of race, (dis)ability, gender, sexuality and how they interact and impact lived experiences.

The peer-reviewed 2022 PERC Proceedings are available as a written record of the conference.

Organizers

Madison Fitzgerald-Russell (she/they), Western Michigan University
Brienne Gutmann (she/her), San José State University
Kelby T. Hahn (they/she), Oregon State University
Alia Hamdan (she/her), University of Arizona
Sara Mueller (she/they), Brown University
Yasmeen Musthafa (they/them)
Ben Pollard (he/him), Worcester Polytechnic Institute
Xandria Quichocho (they/them), Michigan State University
Mike Vignal (he/him), University of Colorado Boulder

Advisors

Tim Atherton (he/him), Tufts University
Ramón Barthelemy (he/him), University of Utah
Jacquelyn Chini (she/her), University of Central Florida
Katemari Rosa (she/her), Universidade Federal da Bahia
and others

The Conference Proceedings are available online at: <https://www.per-central.org/items/PERC.cfm?Y=2022>

Workshops and Programs



PHYSICS AND ASTRONOMY “NEW” FACULTY WORKSHOP

July 25-28, 2022

AAPT, in conjunction with the American Astronomical Society (AAS) and the American Physical Society (APS), held a workshop for new physics and astronomy faculty members at the Sheraton Gateway Los Angeles Hotel. This workshop helped new faculty understand how students learn physics and astronomy, and suggested how this information can impact a new professor's teaching methods. The workshop is intended for faculty in the first few years of their initial tenure-track appointment at a four-year college or university.

Department chairs at research and four-year institutions are asked to nominate tenure-track faculty. The ideal candidate would have a year or two of teaching experience and be aware of the challenges of teaching.

The New Physics and Astronomy Workshop program was funded by grants # DUE-0813481, DUE-0121384, and DUE-9554738 from the National Science Foundation. Read more online at: www.aapt.org/Conferences/newfaculty/

The Physics and Astronomy New Faculty Workshop

July 25-28, 2022

Los Angeles, CA



PHYSICS TEACHER RESOURCE AGENTS (AAPT/PTRA) PROGRAM

PTRAs had their Leadership Institute July 13-15, 2022, in Grand Rapids, MI. Two days focused on revised Perimeter Institute Resources including Climate Change, Bohr to Quantum, Black Holes, and Measuring Fields. The last day was spent learning ways to use Glowscript in the classroom. These topics can easily be transferred to K-12 classrooms in chemistry, physics, physical science, and computer science. Contact us for more information on professional development in your district.

March 2022

There are multiple sessions being given at the national NSTA meeting in Houston and the TSAAPT meeting in Abilene.

TSAAPT sessions are March 10-12 and the presenters are Janie Head and Kenric Davies.

NSTA sessions are March 30-April 2. PTRAs helping with the sessions include Jan Mader, Emma Smith, Kenric Davies, Janie Head, Tommi Holsenbeck, Stacy Gwartney, Cathy Barthelemy, and Karen Matsler.

Read more online at: www.aapt.org/PTRA

2022 PTRA COMMITTEE

Karen Jo Matsler, Program Director

OVERSIGHT COMMITTEE

Ann Robinson, Chair

Alice Flarend, Emma R. Smith, David E. Sturm, Janie Head, Toby Dittrich, Lowell McCann, Bob Hilborn (ex officio)



2022 UNITED STATES PHYSICS TEAM



U.S. Physics Team Members Win Three Gold Medals and Two Silver Medals in the Virtual IPhO 2022

Congratulations to the five members of the U.S. Physics team who participated in IPhO 2022. Special recognition also goes out to the organizers of this year's event. On the challenge of planning to host an International Physics Olympiad in just 2 months that normally takes 2 1/2 years, Dr. Lionel Philippoz, Chairman of the Organizing Committee IPhO22 said, "Collaboration is the key word. Had we been alone we would have for sure faced failure but, fortunately, we knew we could count on the international collaboration of motivated and committed people. It is only through the work of many that we can achieve a common goal such as an International Physics Olympiad. The informal motto of Switzerland is 'One for all. All for one.' This idea is represented in the IPhO22 choice of logos, the James Webb Telescope. Like many other scientific projects of that scale it can be seen as a symbol of collaboration. It would have been an impossible task without the support of thousands of physicists or engineers over many years. I'm sure your life will also be full of challenges, sometimes difficult ones. You might, perhaps think that they might be impossible to overcome and feel desperate. But don't lose hope. You are never alone. Life is too short to focus on negativity so let's rather embrace hope and optimism." IPhO 2022 was held remotely and hosted by Switzerland. The informational website, <http://www.ipho2022.com>.



Gold Medals

Evan Erickson, Erickson Homeschool Academy, Lake Elmo, MN
Alex S. Gu, Valley Christian High School, San Jose, CA
Rishab X. Parthasarathy, The Harker School, San Jose, CA

Silver Medals

Collin S. Fan, Adlai E. Stevenson High School, Lincolnshire, IL,
Rowechen Zhong, Westwood High School, Austin, TX

DIRECTOR

Tengiz Bibilashvili, Academic Director;

ACADEMIC COACHES

Tengiz Bibilashvili, Academic Director; Abijith Krishnan, Kye Shi, Brian Skinner, Mike Winer, and Kevin Zhou, Coaches; Meredith Neyer, Junior Coac.

PHYSICS BOWL SPONSORS

AAPT
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PHYSICSBOWL

AAPT PHYSICS BOWL

Read more at: [www.aapt.org/
Programs/contests/physicsbowl.cfm](http://www.aapt.org/Programs/contests/physicsbowl.cfm)

This year there were almost 7100 students participating from 307 schools from Australia, Canada, Costa Rica, Guam, Hong Kong, Indonesia, the Republic of Korea, the Netherlands, the Philippines, Serbia, Singapore, Switzerland, Turkey, the United Kingdom, and the United States, as well as 341 schools participating from China.

2022 TOP 10 GLOBAL WINNERS

#	SCORE	STUDENT, SCHOOL, CITY, STATE
1	38	Thomas Yang, University Of Toronto Schools ON
2	38	Harry Hu, Bayview Secondary School ON
3	38	Liu Yujie, Jiangsu Tianyi High School Jiangsu
4	37	Victor Li, IvyMax CA
5	37	Tony Zhang, Baylor School TN
6	37	Liu Yuhao, Xi'an Gaoxin No.1 High School Shaanxi
7	37	Li Chunmiao, Nanjing Foreign Language School Jiangsu
8	36	Junqiang Lyui, Portsmouth Abbey School RI
9	36	Wang Yi, Nanjing Foreign Language School Jiangsu
10	36	Jiao Weijin, Nanjing Hexi Foreign Language School Jiangsu

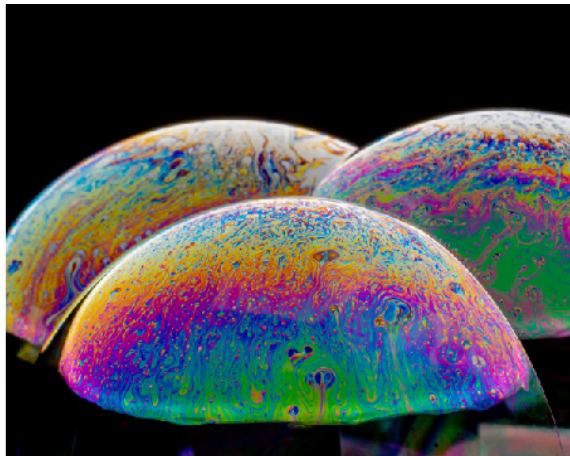
PHYSICSBOWL ADVISORY BOARD

Jon Anderson, Mike Bush, Beverly "Trina" Cannon, Meghan DiBacco, Chris Doscher Scott Dudley, Thomas Herring, Joel Klammer, Alex McKale, Marc Moody, Eric Strong, Myra West

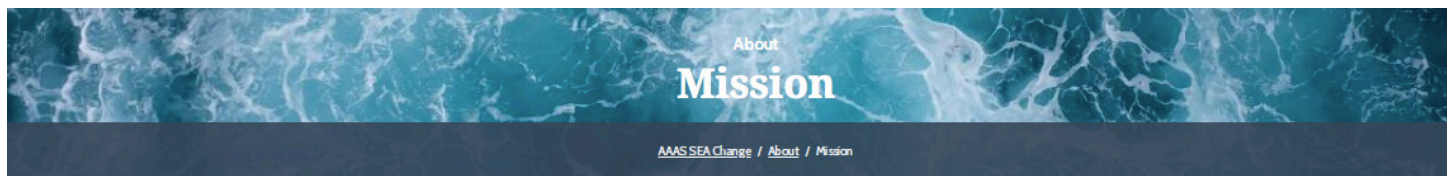
2022 High School Physics Photo Contest



high school physics
photo contest



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

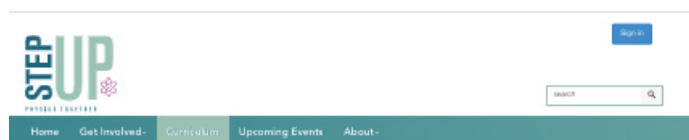
Colleges and universities and the departments within them use research-informed strategies and supportive community of peers to build capacity for, and implement, transformation. Our program strives for a culture change that makes DEI in STEMM normative and inextricably linked to excellence.

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](#)



Curriculum

Are you new to STEP UP? Register here:

[I want to be a STEP UP teacher!](#)

Lesson Materials

Want more information about the STEP UP materials? Download the free materials below.

We'd also love to hear from you if you've done the lessons and provide a Certificate of Completion! See our [Contact page](#).

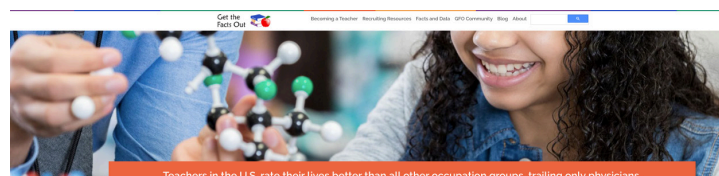


STEP UP

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>



Get the Facts Out is a partnership between four national societies working to repair the reputation of the teaching profession. This site contains resources for prospective teachers, faculty/staff who prepare teachers, and the general public.

 BECOME A TEACHER <small>Explore the Teaching Profession... Learn about teacher well-being, values, and various other benefits of the profession. Find a certification program near you.</small> LEARN MORE	 RECRUIT NEW TEACHERS <small>Recruiting Resource: Physics, Plans, Sites and more... Find user-tested, research-based resources that are easily customizable to your local context.</small> LEARN MORE	 FACTS AND DATA <small>Find facts about the teaching profession along with the data to back them up. Learn about the research behind the GPO resources.</small> LEARN MORE	 GPO COMMUNITY <small>Meet all the people and universities across the country who are working to get the facts out about the teaching profession.</small> LEARN MORE
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Effective Practices for Physics Programs (EP3)

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

Be intentional.

- The EP3 philosophy for effective departmental change can be summed up in two words: **Be intentional**.
- Successful physics departments...
- Engage in cyclic self-reflection on their processes and outcomes to guide decisions and actions
 - Embrace shared action and ownership and engage appropriate stakeholders
 - Use data and a clear sense of departmental mission and identity to formulate plans
 - Plan and take action
 - Reflect on the effectiveness of those actions to guide next steps
- The EP3 Guide is designed to support physics departments on this journey.

 <small>Want to learn how to most effectively use this guide?</small> Get Started	 <small>Why did you come here? Let's figure out your path.</small> Map Your Program's Goals	 <small>Looking for the AP3 Toolkit for Departments Under Threat?</small> Department Toolkit
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Effective Practices Guide Sections

Developed and reviewed by experts in the physics community, these sections have been approved by the task force. They address a wide range of topics relevant to ensuring a thriving physics program, including accreditation practices and implementation strategies.

Recruiting of Undergraduate Physics Majors	Retention of Undergraduate Physics Majors	Advising and Mentoring of Students	Career Preparation
Preparing Students for Graduate School in Physics and Related Fields	Undergraduate Research	Internships	How to Assess Student Learning at the Program Level

Collaborative Projects (cont.)

PHYSTEC TEACHER OF THE YEAR

PhysTEC National Teacher of the Year 2022: Danielle Buggé

The 2022 National Teacher of the Year is Danielle Buggé of West Windsor-Plainsboro High School South in Princeton Junction, NJ. Buggé was nominated by PhysTEC institution Rutgers University, from which she graduated.

Throughout her 13-year career, Buggé has created an environment where students develop confidence in science, communication, and collaboration. From her dedication to students and the teaching of physics, many successes followed.

Buggé builds her classroom using the Investigative Science Learning Environment, inquiry-based learning, universal design for education, and productive failure techniques. Her teaching techniques are backed by research, much of which she has performed herself. Students in her classroom, even though they come in nervous and unsure about science, learn to reflect on their own learning, to think critically, and to communicate and collaborate effectively. More often than not, those students at least consider going into a STEM field after high school. Many of them actually do.

Through leading by example as a teacher and winning grants to create real-world opportunities for students, Buggé has improved STEM teaching culture at her school as a whole. Not only have more STEM classrooms in her district adopted inquiry-based learning techniques, but enrollments have increased. She continues to share her knowledge by mentoring new physics teachers in her district and sharing her research with physics education researchers.

Beyond the classroom, Buggé gives back to the teaching community by co-leading a professional learning community of physics teachers from and around Rutgers University. She mentors pre-service teachers and co-teaches graduate courses for teachers at Rutgers. All Rutgers pre-service physics teachers who have been mentored by Buggé and were hired are still employed as teachers. In addition, at least two of her physics students are currently studying to become physics teachers. The 2021 National PhysTEC Teacher of the Year is David Wirth of Millennium High School in Goodyear, AZ. Wirth was nominated by PhysTEC institution Arizona State University, from which he graduated.



2022 PHYSTEC CONFERENCE

The 2022 Physics Teacher Education Coalition Conference, March 3-5 was a virtual conference. The meeting focused on how to Enhance Your Institution's Physics Teacher Education Program. Participants joined in the meeting dedicated to the education of future physics teachers. Plenary speakers were Stephanie Chasteen, Chasteen Educational Consulting.; Laurie Langdon, University Colorado at Boulder; Michael Marder, University of Texas, Austin; Valerie Otero, University Colorado at Boulder; and Michael Wittmann, American Physical Society. The conversations revolved heavily around:

Session 1

A: Educational Work of the Ethics Committee

B: How can we sustain physics teacher education programs? Insights from the sustainability study

C: Future of PhysTEC

Session 2 (attendee-selected and led)

A: Building a physics teacher recruitment plan and normalizing HS teaching as a valuable career

B: DEI and Professional Development for Faculty

C: Collaborating to build physics teacher pipelines

Session 3 (attendee-selected and led)

A: Community Building

B: Supporting "late decider" students and career changers in the path to HS physics teaching

C: Advocating for Physics Teacher Education

Session 4 (attendee-selected and led)

A: Recruiting students to physics and physics teaching: tools, practices, and problem solving

B: Courses for future physics teachers

C: DEI for pre-service teachers

2022 Awards and Grants

DOC BROWN FUTURES AWARD

Summer 2022

Debbie Stephanie Andres

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 SUPPORT EARLY CAREER PHYSICS EDUCATORS.

The 2022 recipient of the Doc Brown Futures Award is Debbie Stephanie Andres. 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. Her talk, Finding My Physics Teaching Family, focused on the impact her introductory physics professor had on her. She was inspired to think about the difference she could make as a physics educator. This path led to meeting some incredibly motivated and passionate teachers. Familial relationships are important to her and it did not take long before she viewed these colleagues as immediate physics family. As she learned more about AAPT and its membership, she began to view the organization as her extended family. And just like any family, we learn, grow, and work together to be the best versions of ourselves. This talk is a reflection of her experiences through the lens of a high school physics teacher navigating AAPT and the extended physics teaching community.



The full press release is available at <https://www.aapt.org/aboutaapt/Debbie-Stephanie-Andres-Named-as-2022-Recipient-of-the-Doc-Brown-Futures-Award.cfm>

THE DAVID HALLIDAY AND ROBERT RESNICK AWARD FOR EXCELLENCE IN UNDERGRADUATE PHYSICS TEACHING

ESTABLISHED IN 1993 AND NOW NAMED FOR THE AUTHORS OF A VERY SUCCESSFUL COLLEGE-LEVEL TEXTBOOK ON INTRODUCTORY PHYSICS AND FUNDED SINCE 2010 PRIMARILY BY A GENEROUS ENDOWMENT FROM JOHN WILEY AND SONS, THE PUBLISHER OF THAT TEXTBOOK, THE DAVID HALLIDAY AND ROBERT RESNICK AWARD FOR EXCELLENCE IN UNDERGRADUATE PHYSICS



Sean J. Bentley, Adelphi University, Garden City, NY *Some Pain, Much Gain*

The Halliday and Resnick Award for Excellence in Under Graduate Physics Teaching was presented to Sean J. Bentley. This award is given in recognition of contributions to undergraduate physics teaching and awardees are chosen for their extraordinary accomplishments in communicating the excitement of physics to their students. Associate Professor at Adelphi University's Department of Physics, Bentley spent two years as Director of the Society of Physics Students (SPS) and Sigma Pi Sigma (the physics honor society), and has been a professor for nearly 19 years. In 2013, Bentley was nominated by his students and recognized by the Adelphi University faculty and administration with the Teaching Excellence Award for Tenured Professors. His talk, Some Pain, Much Gain, shared challenges faced as his department was forced to evaluate alternative educational approaches. Instructional changes always pose difficulties, from overcoming departmental inertia and faculty resistance to building student buy-in and engagement in unfamiliar learning experiences. The proven gains in student learning, though, are well worth the initial pains. He explored a few recent examples of such changes we have implemented in our department, from introductory labs to senior courses, focusing on strategies for overcoming the challenges.

Read the full press release at: <https://www.aapt.org/aboutaapt/Sean-J-Bentley-to-Receive-2022-Halliday-Resnick-Award.cfm>

2022 Awards and Grants (cont.)

THE PAUL W. ZITZEWITZ AWARD FOR EXCELLENCE IN K-12 PHYSICS TEACHING

Andres R. Torres, Doral, FL



Thoughts on Teaching and Motivating Students While Implementing a StepUp for Physics Curriculum

The 2022 Paul Zitzewitz Excellence in K-12 Physics Teaching Award winner was Andres R. Torres, a Physics, and Environmental Management and Research teacher at Ronald Reagan/Doral Senior High School. This award is in recognition for contributions to pre-college physics teaching and awardees are chosen for their extraordinary accomplishments in communicating the excitement of physics to their students. In his talk, *Thoughts on Teaching and Motivating Students While Implementing a StepUp for Physics Curriculum*, he shared research showing that there has been a massive improvement for women in medicine, business, and law careers over the past few decades (Silva, 2019). After completing a curriculum with interdisciplinary lessons and extracurricular activities, he knew that physics teachers are highly effective in motivating students to show interest in physics principles and applications in their daily lives. But in addition to this, physics teachers could teach lessons to create cultural change and inspire young women to pursue physics in college. STEP UP is a national community of physics teachers that provides valuable lessons, strategies, and professional developments (Step Up Physics Together, n.d.). Implementing the STEP UP curriculum in his classes and creating STEP UP for the physics club were successfully inspirational in motivating underrepresented students to pursue Physics and STEM careers.

Read the full press release at: https://www.aapt.org/aboutaapt/Andres-R-Torres_Paul-W-Zitzewitz-Award.cfm

LILLIAN McDERMOTT MEDAL

Wolfgana Christian, Davidson College, Davidson, NC
The Promise and Impact of Computation for Teaching



Wolfgang Christian received the Lillian McDermott Medal. This award recognizes those who are passionate and tenacious about improving the teaching and learning of physics and have made intellectually creative contributions in this area. Christian has had a huge impact on the physics education community and has helped usher in computational physics in high school, undergraduate, and graduate education around the country and the world. In his talk, *The Promise and Impact of Computation for Teaching*, he addressed the history and dreams of machines to automate computation starting with the abacus in 3000 BC, to the combination of at-your-fingertip computation and the internet. It presented a personal history of how computers and the internet have challenged me him and changed how he teaches. He included examples to show that computers can provide a learning experience that utilizes students cognitive, affective, and psychomotor domains of learning.

Read the full press release at: <https://www.aapt.org/aboutaapt/2022-Lillian-McDermott-Medal-Awarded-to-Wolfgang-Christian.cfm>

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.

"LILLIAN McDERMOTT MEDAL RECOGNIZES THOSE WHO ARE PASSIONATE AND TENACIOUS ABOUT IMPROVING THE TEACHING AND LEARNING OF PHYSICS AND HAVE MADE INTELLECTUALLY CREATIVE CONTRIBUTIONS IN THIS AREA"

2022 Awards and Grants (cont.)

HOMER L. DODGE CITATION FOR DISTINGUISHED SERVICE TO AAPT

Winter Meeting 2022

Arlisa Richardson

In 2008, I completed a Ph.D. in Curriculum and Instruction specializing in Science Education at Arizona State University. My research examined the impact of gender on team interactions. Before returning to graduate school in 2000 to pursue a Doctorate degree, I worked as an engineer in the semiconductor manufacturing industry. In 2011, I accepted a Physics faculty position at Chandler Gilbert Community College, where I have had the opportunity to apply my research and engineering experience in the classroom. I've also had to refresh my physics knowledge and classroom management skills. AAPT has provided the extra support, resources, and networking needed specifically for two-year college faculty. The AAPT Two-Year College group promotes successful pedagogical practices that are also beneficial to four-year colleges and universities. The exchange of knowledge and experiences is invaluable. I welcome the opportunity to be a voice for two-year college faculty within AAPT.

Dimitri Dounas-Frazer

Regarding his selection to receive this citation, Dounas-Frazer said, "I'm deeply grateful to the people who nominated me for this award. Volunteering for AAPT and organizing for change in physics education has been a rewarding—and often challenging—experience. Doing so has provided me the opportunity to work with and learn from diverse groups of students, staff, faculty, and other stakeholders in secondary and post-secondary contexts. I hope that the efforts I've been part of ultimately do more good than harm. Sadly, physics education has a long way to go when it comes to eradicating systemic and interpersonal ableism, racism, cis-hetero-sexism, and commitments to capitalism and colonialism." Dounas-Frazer earned his Bachelors and Masters Degrees from the Colorado School of Mines and his Ph.D. from the University of California, Berkeley. He has been a member of AAPT since 2012 and has served in various leadership positions, including as the AAPT representative to the AIP Liaison Committee on Under-represented Minorities and as the At-large Four-Year College representative of the AAPT Colorado-Wyoming Section. He has also volunteered for AAPT as the Vice Chair and then Chair for the Committee on Diversity in Physics from 2015-2017 and for the Committee on Laboratories from 2018 to 2020. He currently serves on the AAPT Nominating Committee.

Dave McCachren

Regarding his selection to receive this citation, McCachren said, "AAPT & PTRAs were an important asset to my high school teaching career. I was totally surprised when notified of this prestigious award. I am humbled to be included with the recipients who continue to promote Physics and teaching at the section and national levels. Thank you!" McCachren earned his Bachelors and Masters Degrees at Indiana University of Pennsylvania and has his Teaching Certification in Pennsylvania in Instructional II Physics and Mathematics. He joined AAPT and the Central Pennsylvania Section of AAPT in 1973 and became a PTRAs in 1995, participating in the Summer Workshops each year since then. He served as Workshop Leader for National PTRAs Training Sessions in 2012 and 2017. He co-authored the PTRAs learning resource "Electromagnetic Spectrum: Window to the Universe" a workshop written in conjunction with NASA Goddard Space Flight Center. Since 1995 he has led PTRAs workshops for High School and Middle School teachers in Central Pennsylvania, Baltimore, Maryland.

Steve Henning

Regarding his selection to receive this citation, Henning said, "It has been an honor and pleasure to serve AAPT as a PTRAs and in other capacities. I look forward to continuing to serve the physics teaching community, especially when we will meet again in person." Henning has had a very successful career as a High School Physics Teacher, teaching all levels of physics in New York state. Additionally, he served two years as an adjunct professor of introductory physics at Concordia College in Bronxville NY. What makes his career so celebrated is he was among the early innovators, who brought technology into the physics classroom as early as 1985 and shared his expertise as a leader of many workshops with his colleagues. His allegiance to his profession outside of his classroom has been focused on being active in AAPT locally, regionally, and nationally. He became a PTRAs in 1986 and attended training sessions for 23 years and plans to continue attending PTRAs training sessions. He not only served his students and fellow teachers in his school district with the PTRAs materials. He also carries out the mission of the PTRAs program by conducting workshops in New Jersey, New York City, New York State, and New England with fellow PTRAs utilizing PTRAs Manuals and materials. He remains active on the national level in the PTRAs program as a member of the PTRAs Oversight Committee. From 2006 – 2009 Henning served as the Lead PTRAs for the AAPT-PTRAs Rural Physics Teachers Workshops at Colgate University in NY. From 2016-present, he served on the Physics Master Teacher Leader Task Force. His committee service in AAPT includes the Committee on Physics in High Schools (2013-2014), Committee on Teacher Preparation (2016-2018, 2022-), Nominating Committee (2018), and the Committee for Design and Implementation of High School Video Contest (2011). Henning has served on the Executive Board of New York State AAPT Section from 2011 – present and also is a member of the New England Section of AAPT.

2022 Awards and Grants (cont.)

Summer 2022

Paula Heron, a Professor of Physics at the University of Washington, Seattle, WA. Heron, a is honored for exemplary service contributions to the mission of the American Association of Physics Teachers to promote the pedagogical skills and physics knowledge of the teachers at all levels, and to increase understanding of physics learning and of ways to improve teaching effectiveness, and to disseminate this knowledge to a broader community of physics educators.

AAPT 2022 Fellows Award

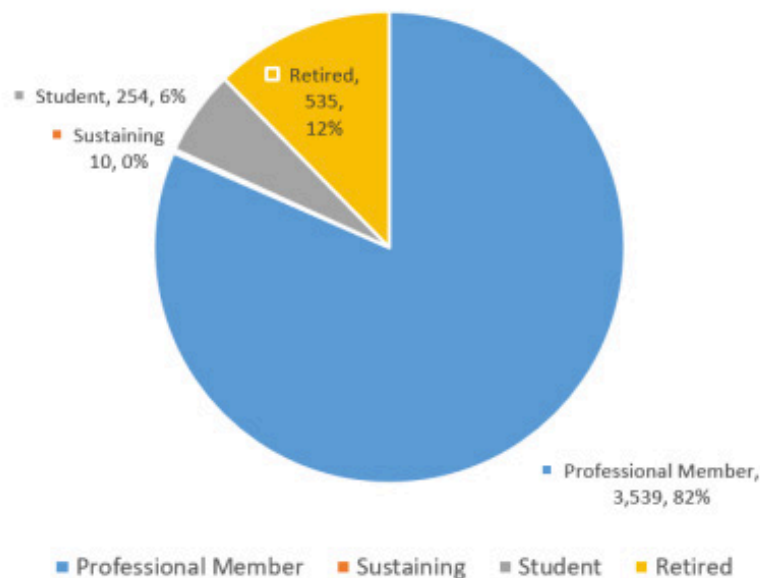
2022 AAPT Fellows, Geraldine Cochran, Rutgers University, Piscataway, NJ; Laura McCullough, University of Wisconsin-Stout, Menomonie, WI; and Arlisa Richardson, Chandler Gilbert Community College, Gilbert, AZ were also recognized.

The criterion for selection of Fellows is exceptional contribution to AAPT's mission, to enhance the understanding and appreciation of physics through teaching. Fellowship is a distinct honor signifying recognition by one's professional peers. Any AAPT member who has maintained an active membership for at least 7 years is eligible for nomination for Fellowship. Nominations are evaluated by the AAPT Awards committee and approved by the AAPT Board of Directors.

Membership

Spanning academia, research, and industry; comprised of educators, Nobel Prize winners, and students alike; our members bring a wealth of experience, diversity, and individual recognition. Most importantly, all share the same dedication to physics and the physics education community.
(December 16, 2022)

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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.

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- 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 2022 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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David Marasco

OHIO SECTION

Myra R. West

ONTARIO SECTION

Tetyana Antimirova

OREGON SECTION

William A. Dittrich

PUERTO RICO SECTION

Carmen A. Pantoja

QUEBEC SECTION

Chris Whittaker

SOUTH DAKOTA SECTION

Margaret A. Norris

SOUTHEASTERN PENNSYLVANIA SECTION

Amber L. Stuver

SOUTHERN ATLANTIC COAST SECTION

Sarah Formica

SOUTHERN CALIFORNIA SECTION

Bryn Bishop

SOUTHERN NEVADA SECTION

John W. Farley

SOUTHERN OHIO SECTION

Kathleen A. Harper

SOUTHWESTERN SECTION

Alexander F. Burr

ST. LOUIS SECTION

Bob Brazzle

TENNESSEE SECTION

Spencer L. Buckner

TEXAS SECTION

Daniel Marble

WASHINGTON SECTION

Robert Hobbs

WESTERN PENNSYLVANIA SECTION

Paul Ashcraf

WISCONSIN SECTION

A. James Mallmann



Financials

THE AMERICAN ASSOCIATION OF PHYSICS TEACHERS, INC.

STATEMENT OF FINANCIAL POSITION AS OF DECEMBER 31, 2022 AND DECEMBER 31, 2021

ASSETS	2022	2021
CURRENT ASSETS		
Cash and cash equivalents	1,145,744	1,073,387
Investments	904,124	923,378
Accounts receivable	495,101	317,564
Grants receivable	503,589	1,017,547
Inventory	2,712	3,313
Prepaid expenses	137,359	63,669
Total current assets	<u>3,189,627</u>	<u>3,407,857</u>
FIXED ASSETS		
Equipment	192,422	89,135
Right of use asset	3,908,786	-
Finance lease	12,500	12,500
Software	246,259	209,259
	<u>4,359,968</u>	<u>310,894</u>
Less: Accumulated depreciation and amortization	(314,303)	(280,512)
Net fixed assets	<u>4,045,664</u>	<u>30,382</u>
OTHER ASSETS		
Investments, net of current portion	6,819,865	8,234,952
Investment in ACP	1,374,566	1,426,484
Total other assets	<u>8,194,431</u>	<u>9,661,436</u>
TOTAL ASSETS	<u>15,429,722</u>	<u>13,099,675</u>
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES		
Accounts payable and accrued liabilities	705,176	262,045
Accrued payroll and related liabilities	267,989	244,845
Unearned revenue (current portion)	1,361,923	1,285,974
Operating lease obligation (current portion)	1,188	-
Finance lease obligation (current portion)	2,872	2,654
Accrued postretirement benefit obligation (current portion)	27,385	26,660
Total current liabilities	<u>2,366,533</u>	<u>1,822,178</u>



Financials

	2022	2021
LONG-TERM LIABILITIES		
Unearned revenue, net of current portion	95,119	90,081
Operating lease obligation, net of current portion	3,828,154	-
Finance lease obligation, net of current portion	250	3,157
Accrued postretirement benefit obligation, net of current portion	342,712	448,045
Total long-term liabilities	4,266,235	541,283
Total liabilities	6,629,766	2,363,461
NET ASSETS		
Without donor restrictions:		
Undesignated	6,081,426	7,411,682
Board designated	1,167,619	1,499,792
Total without donor restrictions	7,249,045	8,911,474
With donor restrictions	1,549,911	1,824,741
Total net assets	8,798,956	10,736,214
TOTAL LIABILITIES AND NET ASSETS	15,428,722	13,099,675

See accompanying notes to financial statements.

Financials

AMERICAN ASSOCIATION OF PHYSICS TEACHERS, INC.
STATEMENT OF FUNCTIONAL EXPENSES FOR THE YEAR ENDED DECEMBER 31, 2022
WITH SUPPLEMENTED FINANCIAL INFORMATION FOR 2021

	2022 Program Services						Total Program Services
	American Journal of Physics	The Physics Teacher	Microscopy	Meetings, Workshops, and Programs	Grants	Other Publications	
Compensation	-	\$ 390,884	\$ 312,259	\$ 587,877	\$ 388,221	\$ 286,144	\$ 1,995,385
Contracts, contracts and temporary	-	-	5,051	10,587	388,925	-	404,563
Peripart support	-	-	-	-	282,294	-	282,294
Meet	-	20,626	15,685	21,169	-	15,664	73,134
Infra-red Cost	-	-	18,138	248	188,045	-	216,631
Computer supplies and maintenance	-	-	-	13,805	9,732	349	23,887
Editorial office	225,606	-	-	-	-	-	225,606
Honoraria	2,500	7,500	18,250	19,875	37,575	-	85,700
Professional fees	-	-	-	-	-	-	-
Audio Visual	-	-	17,504	131,547	7,273	-	156,324
Dues and memberships	612	612	38,386	-	-	-	39,610
Awards	-	-	5,542	27,359	1,000	-	33,902
Publications	15,314	15,562	-	-	-	76	30,952
Bank fees	-	-	-	-	-	-	-
Depreciation and amortization	-	-	4,208	19,048	23,875	-	47,131
Materials and supplies	-	-	-	-	-	-	-
Bad debt expense	-	-	-	-	-	-	-
Conferences, meetings and workshops	-	791	28,801	72,055	9,555	600	111,802
Insurance	-	-	-	-	-	-	-
Traavel	500	4,257	10,602	115,351	88,395	3,387	222,892
Exhibit and meeting expenses	-	-	2,025	9,708	1,000	-	12,734
Postage, packing and shipping	67	846	2,774	8,941	927	-	13,554
Advertising	-	-	5,283	2,881	1,200	-	9,364
Photocopying and printing	1	1	2,231	2,013	1,065	1,400	6,712
Publishing services	-	-	-	-	2,081	-	2,081
TOTAL	\$ 244,608	\$ 381,078	\$ 486,758	\$ 1,052,446	\$ 1,462,063	\$ 287,620	\$ 3,915,358

AMERICAN ASSOCIATION OF PHYSICS TEACHERS, INC.
STATEMENT OF FUNCTIONAL EXPENSES FOR THE YEAR ENDED DECEMBER 31, 2022

WITH SUMMARIZED FINANCIAL INFORMATION FOR 2021

	2022 Support Services		2022	2021	
	General and Administrative	Fundraising	Total Support Services Total Expenses	Summarized Total Expenses	
Compensation	\$ 1,096,591	\$ -	\$ 1,096,591	\$ 3,002,976	\$ 2,702,123
Consultants, contracts and temporary	166,921	-	166,921	571,484	614,685
Participant support	-	-	-	292,294	281,867
Rent	110,264	-	110,264	183,399	185,473
Indirect Cost	-	-	-	216,431	180,719
Computer supplies and maintenance	155,708	-	155,708	179,595	162,717
Editorial office	-	-	-	225,606	128,930
Honoraria	-	-	-	85,700	97,453
Professional fees	20,076	-	20,076	20,076	59,481
Audio Visual	14,367	-	14,367	170,691	59,183
Dues and memberships	8,384	-	8,384	47,994	49,845
Awards	-	-	-	31,892	35,223
Publications	-	-	-	30,952	34,721
Bank fees	44,101	-	44,101	44,101	31,786
Depreciation and amortization	29,683	-	29,683	29,683	27,168
Materials and supplies	955	-	955	48,086	29,330
Bad debt expense	-	-	-	-	30,581
Conferences, meetings and workshops	5,951	-	5,951	117,853	20,576
Insurance	13,942	-	13,942	13,942	15,774
Travel	56,630	-	56,630	279,122	11,946
Exhibit and meeting expenses	-	-	-	12,794	8,063
Postage, packing and shipping	541	-	541	14,095	6,189
Advertising	-	-	-	9,374	4,938
Photocopying and printing	164	-	164	6,875	3,863
Publishing services	-	-	-	2,681	2,520
TOTAL	\$ 1,724,276	\$ -	\$ 1,724,276	\$ 5,638,635	\$ 4,784,206

**AMERICAN ASSOCIATION OF PHYSICS TEACHERS, INC.
STATEMENT OF CASH FLOWS FOR THE YEAR ENDED DECEMBER 31, 2022
WITH SUMMARIZED FINANCIAL INFORMATION FOR 2021**

	2022	2021 summarized
CASH FLOWS FROM OPERATING ACTIVITIES		
Cash received from donations	\$ 70,250	\$ 81,214
Cash received for services not related to grants	3,773,909	3,967,386
Cash received related to grants	1,701,241	1,471,501
Cash paid related to employees and retirees	(3,041,135)	(2,932,906)
Cash paid for goods and services	(2,336,288)	(2,569,261)
Interest paid	(1,465)	(574)
	<u>177,995</u>	<u>17,360</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of equipment	(103,288)	(17,100)
	<u>(103,288)</u>	<u>(17,120)</u>
CASH FLOWS FROM FINANCING ACTIVITIES		
Principal payments on capital lease obligation	(2,500)	(2,500)
	<u>(2,500)</u>	<u>(2,500)</u>
Net cash used by financial activities	(2,500)	(2,500)
Net change in cash and cash equivalents	72,207	(2,260)
Cash and cash equivalents at beginning of year	1,073,387	1,075,497
CASH AND CASH EQUIVALENTS AT END OF YEAR	<u>\$ 1,145,594</u>	<u>\$ 1,073,237</u>

2022 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.

Alexander Kane Dickison

JANUARY 8, 2022

He was born in Jamaica, New York on October 16, 1943, to William Dickison and Eileen Kane Dickison (both deceased). Alex graduated from Western Illinois University where he received a Bachelor of Science in Education in Physics. He later attended Montana State University, where he received his Master of Education in Physics and eventually earned a Doctor of Education in Physics.

He married his high school sweetheart, Lois Jean Tansley, on March 21, 1967. They lived in Appleton, Wisconsin for a short time and moved to Montana while he worked on his graduate degree. They eventually moved to Central Florida in 1972 to raise their boys.

Alex worked as a professor of Physics at Seminole Community College (SCC) where he served as the Physics Department Chair for many years. After a 40+ year career with SCC, he continued teaching online Astronomy courses. His dedication to the education profession and his passion for Physics led him to the office of President of American Association of Physics Teachers.

Alex loved his community and was an active member of the Seminole County Historical Society, where he served in many capacities including being on the Board of Directors.

Alex enjoyed the outdoors and played golf with many of the professors who became his close friends from SCC. He also traveled across the United States and enjoyed camping in National Parks and hiking the trails.

Robert Beck Clark

June 20, 2022

Former AAPT President, Robert Beck Clark, passed away at home in Murray, Utah on June 4, 2022. The eldest of three children, he was born on July 18, 1941 in the thriving coal mining town of Rock Springs, Wyoming. Reading nonfiction books from the local library in grade school sparked his interest in becoming a physicist. Robert attended Provo High School where he served as a student body officer, co-captain of the football team, state championship debater, state medal winning wrestler and the first president of the Provo High School Chapter of the National Honor Society. He was also selected as a first team all-state football player. He married the true love of his life, Lois Yvonne Anderson from Richfield, Utah in the Manti Temple of the Church of Jesus Christ of Latter-day Saints on September 2, 1959.

They spent the next nine years at Yale University where Robert was the recipient of the Boltwood scholarship. In 1963 Robert received his bachelor's degree, with honors, as a double major in physics and mathematics. At Yale he also played on the Ivy League championship and Lambert Trophy winning football teams and completed his Master of Philosophy and Doctor of Philosophy degrees in theoretical elementary particle physics.

During their 32 years living in Texas, Robert served as Regents Professor of Physics and Associate Dean of the College of Science at Texas A&M University. Robert spent the last nine years of his academic career as a Professor of Physics at Brigham Young University.

He was also elected as a fellow of both the American Physical Society

(APS) and American Association of Physics Teachers (AAPT) and was honored as the recipient of both the Oersted (1995) and Melba Newell Phillips (2004) Medals and served as the treasurer (1978-84) and president of the AAPT (1988-89) and the Homer L Dodge Citation for Distinguished Service to AAPT. In 2014 he was named an AAPT Fellow.

He served as a member of the Governing Board of the American Institute of Physics and the Executive Committee of the Council of Scientific Society Presidents. In 2004 he became He started a popular summer program at Texas A & M teaching high school teachers to boost their science teaching skills.

Marles Lee (Mac) McCurd

JANUARY 19, 2022

Mac was born on May 7, 1949 in West Frankfort, Illinois to Clifton Earl and Irene McCurdy. Mac served in the United States Air Force and was stationed in Wichita Falls, TX where he met and married the love of his life, Sandra Kilpatrick in 1970. They were married for 51 years. Mac was a devoted husband, a loving father, and a very proud grandfather and great-grandfather.

Mac completed his Bachelor's degree at Midwestern State University and then went on to finish his Masters and PhD at The University of North Texas. He devoted his life to education and was a Professor of Physics and Astronomy at Tarrant County College for over 38 years. Mac was a major influence in the use of computers in the two-year college instructional physics laboratory. Mac's passion for education included many donations over the years to various science programs and scholarships in order to help countless kids develop the same love of science that he had.

Of all his incredible achievements, none compared to the love he had for his family. His wife, children and grandchildren were the center of his world and were his proudest accomplishments. He was present at every birthday, performance, graduation, and major event, beaming with pride over the ones who held his heart.

