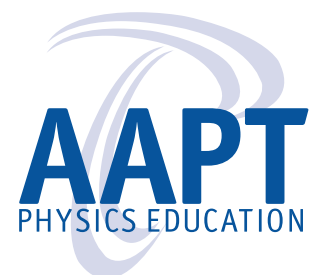




American Association of Physics Teachers

2015 ANNUAL REPORT



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President's Report

MARY ELIZABETH MOGGE



The year 2015 has been a good year for the AAPT. Finances were sound (thank you, Michael Brosnan and Beth Cunningham) and the new by-laws were put into effect. The organization is in a position to strengthen and grow. Many of the year's accomplishments are described in other parts of this report. I would like to highlight some of the things that occurred during my term as president, tell why I think that they are important, and encourage their continuation. These accomplishments and achievements are not individual, but group accomplishments and achievements and I would like to thank my fellow board members and the AAPT staff for all their hard work and support.

The necessary governance changes were a major effort that dominated the first part of the year. AAPT was incorporated in New York state in 1957 and is subject to the state's laws such as the New York State Nonprofit Revitalization Act which took effect July 1, 2014. The By-Laws revision involved much board discussion, reading, rereading, questioning, and re-questioning the revised By-Laws – and lawyers. We all learned more about New York nonprofit law than we ever wanted to learn.

The AAPT considered this an opportunity to reflect on how we have done things in the past. Was there anything else we could do better? The AAPT Council was effectively disenfranchised by the New York law – only the Board or the members, acting directly, had any power. Rather than preserve Council, we replaced it with a Meeting of the Members (MoM), removing the insulating level between the members and the Board. Direct is good. Reimbursement policies were updated yielding support for both Section Representatives and Area Chairs to attend the MoM and increasing meeting support for some volunteers.

Because of the new nonprofit law, the Executive Board had to change its name to the Board of Directors. The by-law revision necessitated a major revision of the Board of Directors Handbook, a new Conflict of Interest statement, and a new audit policy. It increased Board responsibilities, since only the Board could work as a fiduciary agent.

The final revised by-laws were approved by the Board of Directors in July. After Board approval, they were presented to the Section Representatives and Area Chairs and to the membership as a whole via two topical discussions at the 2015 Summer Meeting and a posting on aapt.org. They were finally approved by the membership during the AAPT election ending in November 2015.

As an organization, AAPT needs to invest in the next generation of physicists and scientifically literate citizens. 2015 saw a major fund-raising drive for the Betty Preece Fund. Betty Preece was a long-time AAPT member and volunteer who started the Students Exploring Engineering and Science (SEES) program about 20 years ago. The fund is used to bring approximately 100 socio-economically disadvantaged middle school students to a winter meeting where they experience three hours of hands-on activities led by AAPT and Society of Physics Students (SPS) volunteers. The fund-raising

drive brought the fund close to endowment.

Other diversity-related policy changes included an updated diversity statement written with help from the area committee on diversity. It was then sent to area chairs for suggestions and comments and finally approved by the Board. Members of the National Society of Black Physicists and the National Society of Hispanic Physicists are now invited to attend all our national meetings at AAPT members' rates. Additional reciprocal relationships are being investigated.

It is important to provide resources and professional development for teachers at all levels. To implement this, AAPT created the new staff position of K-12 Program Manager Position and hired

"Other diversity related policy changes included an updated diversity statement written with help from the Area Committee on Diversity in Physics."

Rebecca Vieyra to fill it. At its summer meeting, the Board looked at some of the current professional development programs available to high school teachers: PTRAs, e-Mentoring, American Modeling Teachers Association, High School Teacher camp (debuted in 2015 and led by Steve Iona, Martha Lietz, Diane Reindeau, and Kelly O’Shea), local workshops (organized by sections), and blog and micro-blogging for teachers. Some of these programs involve very little travel and very few time constraints. It is hoped that the suite of available programs has something to appeal to most high school teachers – including early career teachers.

AAPT has continued its involvement in PhysTEC. A grant for a third program, PhysTEC III, was submitted in conjunction with APS in 2015. It was not funded but, with reviewer comments addressed, it has been resubmitted in 2016.

“One outcome of the SRDC was the revival of competitive section grants for a three-year trial period. A section may apply for a grant of up to \$1000.”

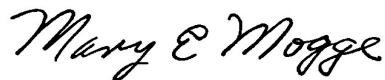
The Sections are our leadership training ground and are easier for early career physicists to attend and become involved in. About one quarter of AAPT’s 51 sections are inactive and in need of help. If they fail, we fail. The Section Representatives Development Committee (SRDC) was reconstituted under the co-chairmanship of Elaine Gwinn and Dyan Jones in order to envision ways to revitalize the sections. One outcome of the SRDC was the revival of competitive section grants for a three-year trial period. A section may apply for a grant of up to \$1000. Preference is given to those proposals which will have a lasting effect and help to invigorate the section (or another section). Some activities that might lead to funding are: hold a joint meeting

with another section; set up local alliances within the section; bring in a PTRA to present a workshop; or become a 501(c)3. Sections that receive grants agree to submit an article about the activity to AAPT Section News and report on the activity at Section Officers/Section Representatives at a future national meeting.

Many other policies and projects were started that may take several years to reach fruition. Look for exciting changes in the future.

I would like to conclude by thanking everyone for the honor and trust they gave me by allowing me to serve in the presidential chain. I’ve enjoyed my time on the Board and I think I’ve done some good.

Sincerely yours,



Mary E. Mogge

Executive Officer's 2015 Annual Report

BETH A. CUNNINGHAM



Another successful year has passed! The 2015 Annual Report provides a report of a number of important aspects of AAPT: the financial status of AAPT as of December 31, 2015; a permanent record of the organization as of December 31, 2015 including recognition of the many volunteers who generously give their time in support of AAPT; an opportunity to recognize our donors whose contributions support many of our programs and awards; a way to highlight grant-funded projects, programs, and meetings; and, finally, an introduction to new AAPT staff. In addition to the summary below and in this report, much more can be found on aapt.org and in the monthly newsletter, the eNNOUNCER.

Financial Status

AAPT continues to have very healthy finances. AAPT now has had five years of a surplus in operations and the reserves continue to grow. We are nearing the end of paying off the bonds for our headquarters, the American Center for Physics, which we share with the American Institute of Physics and the American Physical Society. AAPT is in good shape to continue to support our programs and projects.

"AAPT continues to have very healthy finances. AAPT now has had five years of a surplus in operations and the reserves continue to grow."

Organizational Structure

One of the main projects for 2015 was focused on updating AAPT's By-Laws. Although AAPT's executive office is currently located in College Park, MD, the Association has been incorporated in the state of New York since 1957. The New York state legislature passed the Nonprofit Revitalization Act of 2013 and several parts of the act directly affect AAPT governance procedures. The changes outlined in the new law modernize nonprofit governance and reporting and require nonprofit organizations to follow best practices for their governance. Much of AAPT's governance was in compliance with parts of the new act. However, AAPT needed to make some important changes in order to be compliant with the new act as well as with previous New York nonprofit laws. In addition, the AAPT Executive Board took this opportunity to review the governance structure, especially Council and its role. The new By-Laws were on the fall ballot and were approved by AAPT's members. A full outline of the changes is at <http://www.aapt.org/aboutaapt/organization/AAPT-Governance-Changes-2014.cfm>.

Donors and Contributors

AAPT depends substantially on the donations of its members to support a number of programs such as the AAPT awards, the New Teacher Fund, the Betty Preece "Students Exploring Engineering and Science" (SEES) program for middle school students at the Winter Meeting, and the U.S. Physics Team which competes in the International Physics Olympiad. We were successful in 2015 in endowing the SEES program with the assistance of a match from an anonymous donor. Furthermore, we received a generous contribution from the family of Robert L. Lipton to establish a fund to support the professional development of new high school physics teachers. Although awards are not currently being granted from this new fund, we expect to start making awards in the near future. A list of donors for 2015 can be found in this report.

New Projects and Programs

We have had an exciting year of new projects and programs to support the physics education

community. We continue to revise current programs and introduce new ones to address the needs of the AAPT membership and other physics educators. We received funding from NSF for several new programs. We received two grants to support computational physics in the undergraduate curriculum, one to support faculty development workshops on the local level at Section meetings and the other to support week-long faculty development workshops at the national level.

Another new NSF grant will create mutual mentoring electronic alliances for women physics and astronomy faculty members who are isolated in a variety of ways – because they are minorities, or the only single mother in their department, or they are responsible for taking care of their parents, etc. Additionally, we received funding to support the work of the AAPT-APS Joint Task Force on Undergraduate Physics which is charged with developing guidelines and recommendations for enhancing undergraduate physics programs to meet the needs of students' diverse careers.

We have also enhanced the eMentor program for new high school physics teachers by adding an “instant mentor” option for teachers who need assistance with a short turn around. Finally, the diversity statement on aapt.org has been updated. Look for these as well as other new programs as we continue to serve the entire physics education community.

"The association continues to provide leadership through the work of many AAPT members and volunteers to enrich the education and future employment prospects of all students."

New Staff

We are very pleased that the following individuals joined the AAPT staff in 2015.

Executive Assistant: Richard Ballentine

Graphic Designer: Ashauni Lennox

Marketing Coordinator: Stefanie Wills

K-12 Program Manager (new position): Rebecca Vierya

Finally, it has been my privilege to serve you, the members of AAPT, in 2015 as Executive Officer. The association continues to provide leadership through the work of many AAPT members and volunteers to enrich the education and future employment prospects of all students. All of this is done in support of the organization's mission of “Enhancing the understanding and appreciation of physics through teaching.” It is truly a joy to work with you. Thank you again for your support.

Sincerely yours,



Beth A. Cunningham

AAPT Governance Changes

The Executive Board undertook the task of modernizing AAPT's governance structure in accordance with changes in New York nonprofit law. The new By-Laws are online at <http://aapt.org/aboutaapt/AAPT-By-Laws-2015.cfm>

Although AAPT's executive office is currently located in College Park, MD, the Association has been incorporated in the state of New York since 1957. Recently, the New York state legislature passed the Nonprofit Revitalization Act of 2013. Most of that act became effective on July 1, 2014 and several parts of the act directly affected AAPT governance procedures. In 2015 AAPT acted to complete the process begun in 2014 for compliance with New York state law.

At the 2015 Winter Meeting the membership voted on changes to the Certificate of Incorporation to allow for the adoption of motions and elections by less than unanimous votes when the votes are carried out electronically.

During the 2015 Summer Meeting the Board forwarded recommended changes in the By-Laws to the membership. As part of the Fall 2015 Executive Board Election the membership voted on the Board-recommended changes in the By-Laws.

The issues addressed and actions taken based on member approval are:

Issue 1: No quorum for elections by members was in the AAPT Constitution or By-Laws. New York state law then assumes the quorum is a majority of all members eligible to vote (approximately half of our 6,500 voting members). In the past, approximately 15% or about 1,000 AAPT members have participated in elections. So expecting 3,000+ to vote is unrealistic.

Action Taken: At the November Executive Board meeting, the Board approved an addition to the current By-Laws that specifies the quorum for votes taken by the membership. The new By-Laws language approved by the Board defines a Quorum of Members as: Members entitled to cast 100 votes or one-tenth of the total number of votes entitled to be cast thereat, whichever is less, present in person or by proxy, shall constitute a quorum at a meeting of members for the transaction of any business. A majority of the members present at any meeting may adjourn the meeting despite the absence of a quorum.

Issue 2: The previous AAPT Whistle Blower Policy and Conflict of Interest Policy were not fully in compliance with New York state law.

Action Taken: The Board approved a new Whistle Blower Policy and Conflict of Interest Policy at the November 2014 Board meeting.

Issue 3: The previous Audit Committee membership and charge did not conform to New York state law.

Action Taken: The Executive Board approved the new Audit Committee membership and charge at the November 2014 Board meeting. All members of the Audit Committee must be members of the Executive Board. Additional oversight responsibilities were added to the charge.

Issue 4: Since the Certificate of Incorporation does not state otherwise, Association elections or motions conducted electronically require unanimous votes according to New York state law. Therefore, the Certificate of Incorporation will need to be revised to allow non-unanimous electronic voting by the membership or Executive Board.

Action Taken: Changes to the Certificate of Incorporation were approved by the membership during a special vote at the Annual Meeting of the Association at the 2015 Winter Meeting. This procedure required a minimum of 100 members eligible to vote to be present in order for a quorum to be met. More than one hundred affirmative votes were cast and this change was approved.

Issue 5: Revise and update the AAPT Constitution and By-Laws to conform to best practices and combine the Constitution and By-Laws into one document (titled "By-Laws"), as is the current standard for nonprofits.

Action Taken: The proposed changes were presented to the Executive Board and approved at the Summer Meeting 2015. They were then presented to the membership for approval in fall 2015 as part of the general election.

Issue 6: Council's power to resolve a tie in an election and to remove an elected member of the Executive Board was in conflict with New York law which states that only the Executive Board may have these powers.

Action Taken: Dissolve Council and replace with meeting of the members.

As a result of the vote the following additional changes were approved:

1. The AAPT Constitution and By-Laws were combined into one document called the AAPT By-Laws. This follows a best practice in governance.
2. By Board action, Section Representatives will continue to receive support for attending the national meeting in which the Meeting of the Members takes place. Area Chairs will also receive the same support for attending the Meeting of the Members.
3. The AAPT Executive Board is renamed AAPT Board of Directors, but the current membership of the Board will not change. However, the Board will have the option to add new members in the future. Any new Board members will be non-voting until affirmed by the membership.
4. The new By-Laws include a clarification of the Committees of the Board and Committees of the Association.
5. The New York nonprofit law allows the Board to meet via videoconference and to use email as an official form of communication with members. By-Laws are online at <http://aapt.org/aboutaapt/AAPT-By-Laws-2015.cfm>

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)

David P. Jackson, Editor, Dickinson College
Daniel V. Schroeder, Associate Editor, Weber State University
Thomas J. Bensky, Assistant Editor

AJP continued to inform physics education globally with member subscriptions, institutional subscriptions, such as libraries and physics departments, and consortia agreements. Beginning in 2015, all shorter-format items, such as Editorials, Letters to the Editor, Award Papers, Notes and Discussion articles, and Book Reviews, are free online.



AMERICAN JOURNAL OF PHYSICS STATISTICS

- 12 issues—January–December 2015 (Volume 83)
- 1064 pages, 719 reviewers, 104 papers published—13% acceptance rate
- 6 open access articles
- 9,179 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

Roger Stuewer stepped down as Resource Letters editor after 37 years of service. Mario Belloni will serve as the new editor. Resource Letters Editorial Board: Rexford E. Adelberger, Ruth W. Chabay, Ryan E. Doezema, Amy S. Mulin, William I. Newman, and Gordon Ramsey

Research in Physics Education - 10 articles

Computational Physics - 3 articles

Apparatus and Demonstration Notes - 7 articles

Book Reviews - 19 reviews

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THE PHYSICS TEACHER (TPT.AAPT.ORG)

Gary D. White, Editor, The George Washington University

The Physics Teacher (TPT) continues the mandate of supporting, inspiring, and challenging our target audience—high school and college teachers of introductory physics—as well as our many other readers. In the fall of 2015 a special collection on “The Art, Craft, and Science of Physics Teaching” was featured including several articles from prominent physicists and physics educators. See the editorial in the October 2015 issue of TPT for more details.



COLUMN EDITORS

And the Survey Says...

Susan C. White, AIP, College Park, MD

AstroNotes

Joe Heafner, Catawba Valley Community College, Hickory, NC

Book Reviews

John L. Hubisz, North Carolina State University, Raleigh, NC

Fermi Questions

Larry Weinstein, Old Dominion University, Norfolk, VA

Figuring Physics

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

For the New Teacher

Diane Riendeau, Deerfield High School, Deerfield, IL

iPhysicsLabs

Jochen Kuhn, University of Kaiserslautern, and Patrick Vogt, University of Education Freiburg, Germany

Little Gems

Chris Chiaverina, New Trier High School, Winnetka, IL

Physics Challenge for Teachers and Students

Boris Korsunsky, Weston High School, Weston, MA

WebSights

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

Visual Physics

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THE PHYSICS TEACHER STATISTICS

- 9 issues—January–May, September–December 2015 (Volume 53)
- 576 pages, 553 reviewers, 114 papers, and 90 contributions to monthly columns (97 international authors/co-authors)—34% acceptance rate
- 8,801 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



2015 saw important and exciting new tools and content in the AAPT Physics Library, PhysPort, and projects supported by the AAPT/ComPADRE. These expansions, and the wealth of physics education resources available in the library, have increased the number of visitors using the library and these services. In 2015, more than 900,000 visitors used the collections.

PhysPort - <https://www.physport.org>

The PhysPort team brought online the Data Explorer for the use of physics faculty and researchers. This tool provides a place to upload the results of research-based student assessments, and have PhysPort analyze the results. In addition to providing details regarding the performance of students in a particular class, the Data Explorer and Data Visualizer provide comparisons to assessment results from around the world. This service makes available important information that can be used to improve student learning and physics pedagogy.

Open Source Physics - <http://www.compadre.org/osp>

The Open Source Physics Project, including Easy Java/Javascript Simulation (EJSS) and AAPT/ComPADRE, developed new tools and content delivery methods for interactive, simulation-based content. This work provides content that runs on a wide range of devices, from computers to tablets to e-readers to mobile phones. An example of the wide range of content delivery methods now available is the “Asset Exchange Model Package”, <http://www.compadre.org/osp/items/detail.cfm?ID=13337>, by Christian, Tobochnik, and Gould. This material can be run from the library or through a ComPADRE Book, accessed through ePub or Android versions, or downloaded for local use.

AAPT/ComPADRE Books

A new way of delivering resources on the library, the AAPT/ComPADRE Books, provides a new way of publishing electronic content. This tool provides the means for AAPT members to organize resources from just a few or many different sources and make them available to others. Initial examples of how this new publishing service can be used include a simulation-based tutorial on waves, <http://www.compadre.org/books/wavesintut>, and resources to support lessons on biophysics and body density, <http://www.compadre.org/books/bodyscience1>.

Physics Education Conference Proceedings

The AAPT/ComPADRE library continues to host the proceedings of a number of different physics education conferences. In 2015, the third in a series of topical conferences on the physics laboratory beyond the first year was held in College Park, MD. The content from this conference is archived on the library, including both the formal proceedings and all abstracts, posters, and workshop materials. Similarly, AAPT/ComPADRE continues to publish the proceedings of the annual Physics Education Research Conference, making them available for future reference. The library provides a similar archive for conferences and workshops of PhysTEC, <http://www.phystec.org/conferences/>.

Continuing Collaborations

Partnerships with other projects and efforts continue as part of the service provided by the AAPT/ComPADRE library. The library hosts the online interface for the Adopt-A-Physicist events run by the Society of Physics Students. The Interactive Video Vignettes collection, <http://www.compadre.org/ivv>, provides a growing number of interactive video-based lessons for students. PER-Central, a ComPADRE Collection, continues to work with the Physics Education Research community to provide a place for communications and sharing.

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 home page includes a “Features” area with photos and information pertaining to upcoming or ongoing programs, projects, events, and resources; and a box with buttons to donate, nominate, and send suggestions. Further down the page is a “navigation by audience” that guides visitors based on their role in the physics education community. The bottom half of the home page is split into a news section, and sections that encourage visitors to get involved with the association and provide information about what AAPT does.

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 project called “HERStories” which promotes women in the sciences
- With the addition of a K-12 Program Manager on AAPT’s staff a new K-12 Portal was organized providing easier access to resources available to members who teach elementary and high school science and physics.

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 2015 aapt.org had:

- 467,422 visits • 1,440,066 pageviews • 3.08 pages per visit
- 271,570 new visitors All from 209 countries/territories
#1 U.S., #2 India, #3 Brazil, #4 Canada, #5 Pakistan

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

AREA COMMITTEE WEBSITES

AAPT has begun to create a new membership website (RISE)

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.

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



eNNOUNCER August 2015

AAPT News

AAPT Governance Change Moves to Vote of the Members

At the AAPT Summer Meeting, the Executive Board voted to move the proposed changes to the AAPT Governance to a vote of the membership for approval in the Fall as part of the general election. [Read more.](#)

2015 Summer Meeting

As the dust settles on this summer's meeting in College Park, Maryland attendees will take away renewed connections, new ideas, and enthusiasm that will carry them into the new academic year. This was the largest meeting in AAPT's recent history and attendees enjoyed outstanding plenaries, congratulated award winners, and won prizes in the Exhibit Hall. Watch for highlights on the Summer Meeting website in the near future.

2016 Winter Meeting

The 2016 Winter Meeting website will open for Abstract Submissions on August 5 with a deadline of September 9. Watch the WM16 website for additional information.

AAPT Members Named as Recipients of the Presidential Award for Excellence in Mathematics and Science Teaching

Seven AAPT members were honored as the 2015 recipients of the prestigious Presidential Award for Excellence in Mathematics and Science Teaching (PAMST). [Read more.](#)

In this issue

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- Connections Matter: Win a Trip to the 2016 Summer Meeting
- AAPT's upcoming Webinar Series
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- Inclusive Excellence: 2017 Undergraduate Science Education Grants
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- How About To Graduate - Webinar
- Job Announcements from the Career Center
- More Physics Resources and...
- Seeking Fellows: Applicants for OUNG

2015 TOP AAPT NEWS STORIES

Listed below are highlighted news stories for 2015 from the *eNNOUNCER*. To read the full story go to <http://www.aapt.org/aboutaapt/ennouncer/index.cfm>.

JANUARY

- AAPT Election Results
- AAPT Governance Changes

FEBRUARY

- 2014 Committee of the Year announced
- AAPT Statement on High School Physics Courses

MARCH

- Robert Morse to receive 2015 Millikan Medal
- 2014 Lotze Scholarship Winners
- Recommendations for Undergraduate Physics Lab Curriculum

APRIL

- Dwain Desbien to receive Halliday and Resnick Award
- David Weintraub named as Recipient of Klopsteg Memorial Lecture Award
- Gillian Winters to receive the Paul W. Zitzewitz Award

MAY

- Fellows for 2015 Announced
- A Study in Light: In Celebration of the International Year of Light

JUNE

- 2015 U.S. Physics Team Announced
- 2015 Physics Bowl Results

JULY

- High School Physics Teachers Camp
- Update on Governance Changes

AUGUST

- U.S. Physics Team Earns 4 Gold Medals and 1 Silver Medal at 46th IPhO
- Successful 2015 Summer Meeting

SEPTEMBER

- Election Candidates Announced
- Connections Matter Campaign Introduced
- New Faculty Workshop Set for November
- Executive Board Election Opens

OCTOBER

- John W. Belcher to Receive 2016 Oersted Medal
- Derek Muller Named as 2016 Richtmyer Memorial Lecture Award Winner

NOVEMBER

- 2016 Winter Meeting Service Awards
- Neutrino Resource in Celebration of the 2015 Nobel Prize in Physics

DECEMBER

- 2016 Winter Meeting Plenaries
- Two-Year College New Faculty Experience Applications
- 2016 Experienced Faculty Workshop

National Meetings

International Year of Light



International
Year of Light
2015



WINTER MEETING

January 3–6, 2015, San Diego, CA

Statistics:

There were 730 attendees, 27 exhibitors, 58 sessions, 24 workshops, 3 Tutorials, 5 Topical Discussions, and 110 posters.

Program Committee Chair

Janelle M. Bailey

Paper Sorters:

Sean Bently, Society of Physics
Students

Andrew Gavrin, Indiana University–
Purdue University Indianapolis

Jan Mader, Great Falls High School,
Great Falls, MT

Daryl McPadden, Florida International
University, Miami, FL

Eleanor Sayre, Kansas State University
Manhattan, KS

Local organizer:

Greg Severn, University of San Diego

Plenaries

As Nobel Laureate, Ahmed Zewail put it, “Light is life.” We started 2015, the International Year of Light, in sunny San Diego with the AAPT Winter Meeting, filled with workshops, engaging sessions on a variety of topics, posters, plenary talks, awards, and special events. The exciting and invigorating four-day program was designed to meet the professional development needs of physics, astronomy, and physical science teachers of all levels.

Eugene G. Arthurs, SPIE CEO, spoke on “How Light Has Changed Our Lives,” noting that our existence and evolution have depended on and been shaped by light from the Sun. During 2015, The International Year of Light, SPIE hopes to get a better sense of how much we rely on light and the rich promise for future masters of light.

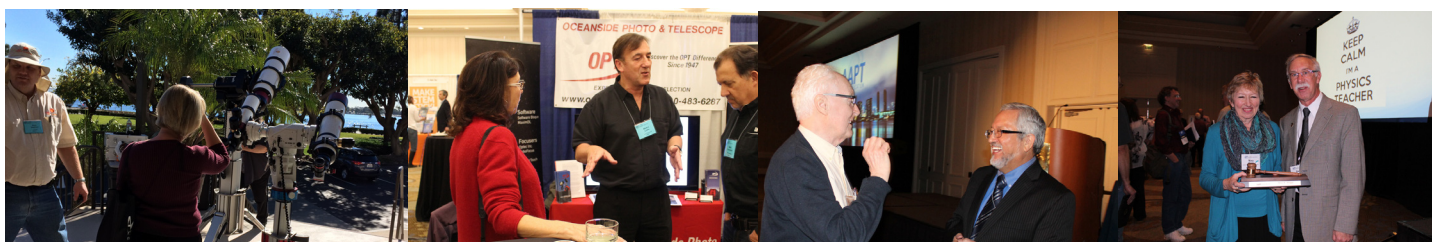
The AAPT Symposium on Physics Education and Public Policy brings together individuals who play pivotal roles in helping to shape policies and who provide information to policy makers. The 2015 symposium speakers were Shirley Malcom, Education and Human Resources Programs at the American Association for the Advancement of Science (AAAS), and Lee L. Zia, Deputy Division Director of the Nations Science Foundation.

The first plenary speaker, Adrian Bejan, J. A. Jones Professor of Mechanical Engineering at Duke University, spoke on “Evolution, Life, and Sustainability, as Physics—What the Constructal Law is, and how it gives us a new worldview.”

Thomas L. O’Kuma of Lee College, Baytown Texas, was awarded the Melba Newell Phillips Medal in recognition of his creative leadership and dedicated service that have resulted in exceptional contributions within AAPT. His talk, “Growing with AAPT,” reviewed this long association with AAPT and the many leaders who were formational to his career. He included programs like Spin-Up and the TYC21 projects which played a role in the increased number of students taking physics and in the number of physics degrees awarded since the 1980s.

The Oersted award recipient Karl Mamola, Appalachian State University delivered his special presentation during the Ceremonial Session. His talk, “AAPT, TPT, and Me,” reviewed his years working to maintain the quality and integrity of the journal while positioning it to be relevant moving into the 21st century.” Sir Michael Berry University of Bristol emeritus, spoke on How Quantum Physics Democratized Music in his Richtmyer Memorial Lecture Award address.

The Homer L. Dodge Citation for Distinguished Service to AAPT was presented to Andrew D. Gavrin, David M. Cook, Elizabeth C. Holsenbeck, and Elisha Huggins.



Highlights

The 2015 Winter Meeting in San Diego celebrated the International Year of Light. The San Diego area provided a wealth of opportunities to enjoy the history and culture of sunny Southern California, including Old Town, Balboa Park, Sea World, and the USS Midway Museum.

AAPT President Steve Iona used a cleverly developed infomercial as he spoke about AAPT and his time as president. He then turned the gavel over to Mary Mogge, the incoming president.

Later that day attendees participated in the annual Symposium on Physics Education and Public Policy. The 2015 Symposium was partially sponsored by funds contributed to the Memorial fund in memory of Mario Iona, a long-standing and dedicated AAPT member. Sunday's High School Teachers' Day was packed with events and sessions of particular interest to high school teachers.

Attendees also participated in the First Timers Gathering, Early Career Professionals Speed Networking, the SPS Awards Reception, and the semi-annual Fun Run/Walk.

Poster sessions are always popular and this Winter Meeting provided opportunities for presentations as part of poster sessions, part of regular sessions, and part of the SPS Undergraduate Research and Outreach Poster Reception.

Continuing the tradition begun by Betty L. Preece, the Students Exploring Engineering and Science (SEES) Program provided a morning of hands-on learning for more than 100 students from minority, low socio-economic schools. The activities were under the direction of the Society of Physics Students.



PHYSICS EDUCATION RESEARCH (PER)

PER LEADERSHIP ORGANIZING COUNCIL

Leslie Atkins, Chair

Stephen Kanim, Vice Chair

Stamatis Vokos, Treasurer

Myla Kryjevskaja, ex officio
(chair of AAPT Research in Physics
Education Committee)

ORGANIZING COMMITTEE

Benjamin Zwickl - Rochester Institute of
Technology

Eugenia Etkina - Rutgers University

Heather Lewandowski - University of
Colorado Boulder

MacKenzie Stetzer - University of Maine

PER Conference 2015—College Park, Maryland

July 29 - 30, 2015

Critical examination of laboratory-centered instruction and
experimental research in physics education
(391 attendees)

Plenary Sessions:

Developing Quantitative Critical Thinking in the Introductory Physics Lab, Natasha G. Holmes,
Stanford University

Challenges and Opportunities for Measuring Student Outcomes of Undergraduate Research, Sandra L.
Laursen, University of Colorado Boulder

The conference highlighted key areas of existing lab-focused research and established priorities for new PER related to laboratory and research experiences. Attendees were encouraged to gain a deeper understanding of how laboratory and research experiences influence student learning and to consider what PER can do to assist physics departments to incorporate these learning experiences into their curricula. This year's conference presented 214 contributed posters over two sessions, six symposium sessions with 22 talks and five poster presentations, three workshops, and a "custom format" on Bridging Education Research and Practice: Supporting Undergraduate Research in Physics.

National Meetings



SUMMER MEETING

July 25–29, College Park, MD

Statistics:

There were 1,334 attendees, 31 exhibitors, 99 sessions, 47 workshops, 11 topical discussions, and 248 posters.

Program Committee Chair

Janelle Bailey

Paper Sorters:

Janelle Bailey, AAPT Vice President

George Amann, AAPT President Elect

Sean Bentley (SPS Contributions)

Dan Crowe (High School Committee)

Andrew Duffy (Executive Programs Committee)

Kathleen Falconer (Programs Committee)

Joe Heafner (Committee on Physics in Two-Year Colleges)

Mike Loverude (RiPE Committee)

Ellie Sayre (PER Leadership Organizing Council)

Local organizers:

Andrew Baden, Richard Berg, and Donna Hammer, University of Maryland, College Park

Special thanks to John Layman, Emeritus Professor, University of Maryland and American Association of Physics Teachers



Plenaries

The Klopsteg Memorial Lecture Award was given to David A. Weintraub from Vanderbilt University. His talk, “Exoplanets: The Pace of Discovery and the Potential Impact on Humanity,” showcased his longstanding interest in the impact of science on human society, combined with his excellent popular science writing.

The APS Plenary, co-sponsored by the American Physical Society Forum on Education and the Division of Particles and Fields, featured S. James Gates, Jr., Distinguished University Professor, University Regents Professor, and John H. Toll Professor of Physics from the University of Maryland, College Park. Dr. Gates delivered a memorable plenary, “Is SUSY the Guardian of Our Reality from Oblivion?”

Robert A. Morse of St. Albans School, Washington, DC, received the Millikan Medal for his notable and creative contributions to the teaching of physics. His talk, “Facets of Physics Teaching—Pedagogical Engineering in the High School Classroom,” was delivered to a theater full of enthusiastic physics participants.

The Halliday and Resnick award for Excellence in Pre-College Teaching was presented to Dwain Desbian from Estrella Mountain Community College. His talk was “Introductory Physics: What We Teach, How We Teach it, and What We Should be Doing.”

The 2015 Paul W. Zitzewitz Award for Excellence in Pre-College Physics Teaching was presented to Gillian Winters from Smithtown Central School District. Her talk was “Carp Diem, Seize the Opportunity!”

Highlights

Chartered in 1856 as the Maryland Agricultural College, the University of Maryland presented a unique perspective of the old and new for this unsurpassed opportunity to interact as a physics education community. Dean Jayanth Banavar, of the UMD Department of Physics, welcomed AAPT to campus and served as host for this outstanding meeting.

Attendees were able to participate in some great pre- and post-meeting events. PTRA celebrated their 30th anniversary and held their pre-conference Summer Leadership Institute. The first High School Physics Teacher Camp was an experimental opportunity for high school physics teachers to discuss topics such as inquiry labs, standards-based grading, video analysis, and computer-based labs. The positive feedback indicates that the program was a success. The Second Conference on Laboratory Instruction Beyond the First Year of College with the theme, “Constructing Great Instructional Lab Experiences,” consisted of plenary speakers, panel discussions, breakout discussion sessions, and posters were presented in two sessions. Proceedings will be available on AAPT/ComPADRE.

The Two-Year College Leadership Institute and Two-Year College Tandem Meeting included workshops, presentation and discussions focused on the issues and needs of the two-year college physics teaching community.

Attendees enjoyed a tour of the NASA Goddard Visitor Center. The tour also included stops at the James Webb Space Telescope clean room window, one of the largest clean rooms in the world, and the Testing and Integration facility.

The Summer 2015 recipients of the Homer L. Dodge Citations for Distinguished Service to AAPT were Kathleen A. Harper, The Ohio State University; Jill Marshall, University of Texas-Austin; Marie Plumb, Jamestown Community College (Retired); Scott Schultz, Delta College; and Albert A. Thompson, Ponderosa High School (Retired).

Five new AAPT Fellows were presented, Frank Cascarano, Anthony Escudero, Paul “Joe” Heafner, William Waggoner, and Paul Williams.

Workshops and Programs

WORKSHOP FOR NEW PHYSICS AND ASTRONOMY FACULTY

*June 22-25, 2015 and
November 19-22, 2015*

AAPT, in conjunction with the American Astronomical Society (AAS) and the American Physical Society (APS), held two workshops for new physics and astronomy faculty members at the American Center for Physics. These workshops helped 251 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/



PHYSICS TEACHER RESOURCE AGENTS (AAPT/PTRA) PROGRAM

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



In 2015 PTRAs celebrated its 30th anniversary.

Workshops were held during the AAPT 2015 Summer Institute in conjunction with the AAPT Summer Meeting in College Park, MD.

AAPT maintains a nationwide cadre of more than 150 accomplished high school teacher-leaders who are trained and continually involved in professional development. These teacher-leaders are certified as PTRAs by AAPT to lead workshops throughout the country.



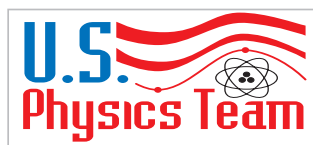
2015 PTRAs COMMITTEE

Karen Jo Matsler, Program Director

OVERSIGHT COMMITTEE

Pat Callahan, Larry Cook, Elaine Gwinn, Lillian C. McDermott, Robert Morse, Ed Price, Steve Shropshire, Beth A. Cunningham, Ex Officio

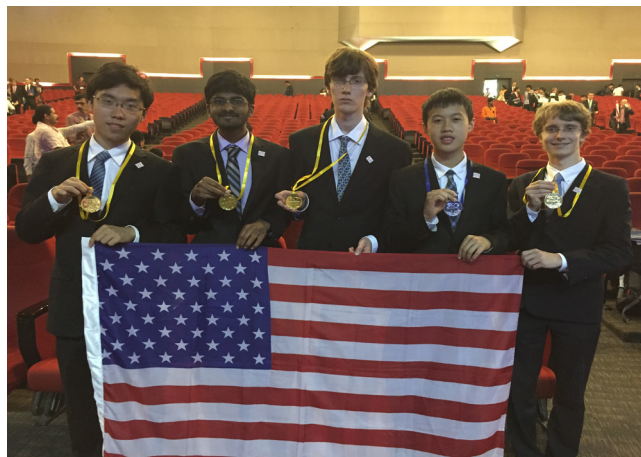
2015 UNITED STATES PHYSICS TEAM



Read more at: www.aapt.org/physicsteam/2015

The United States Physics Team tied for second place at the 46th International Physics Olympiad that was held in Mumbai, India, July 5 -12, 2015. The ten-day competition among the world's top high school physics students consisted of a five-hour theory exam and a five-hour experimental exam, as well as several cultural outings and visits to local Indian manufacturing industries. The participants representing the 2015 U.S. Physics Team were:

- Adam Busis, Montgomery Blair High School, Silver Spring, MD, Gold, tied for tenth place overall
- Zachary Bogorad, Solon High School, Solon, OH, Gold, tied for fifth on experimental exam
- Saranesh Prembabu, Dougherty Valley High School, San Ramon, CA, Gold, tied for 13th on theoretical exam
- Kevin Li, West Windsor-Plainsboro High School South, Princeton Junction, NJ, Gold
- Jason Lu, Adlai Stevenson High School, Lincolnshire, IL, Silver, won the highest Silver medal



The traveling team, from left to right, Kevin Li, Saranesh Prembabu, Zachary Bogorad, Jason Lu, Adam Busis

DIRECTOR

Paul Stanley, Beloit College

ACADEMIC COACHES

Lucy Chen, David Falles, Quizi Li, Andrew Lin, and Mariana Mao

2015 US PHYSICS TEAM

Shankar N. Balasubramanian, Thomas Jefferson High School for Science & Technology, Alexandria, VA; Zachary A. Bogorad, Solon High School, Solon, OH; Adam R. Busis, Montgomery Blair High School, Silver Spring, MD; Kevin Chen, The Bishop's School, La Jolla, CA; Allen Y. Cheng, Thomas Jefferson High School for Science and Technology, Alexandria, VA; Hannah M. Field, EPGY Stanford University, Bronx, NY; Ben Hannel, Westlake High School, Thousand Oaks, CA; Rohan S. Kodialam, High Technology High School, Lincroft, NJ; Abijith Krishnan, BASIS Scottsdale, Scottsdale, AZ; Kevin Q. Li, West Windsor-Plainsboro High School South, Princeton Junction, NJ; Celine K. Liang, Saratoga High School, Saratoga, CA; Allen Liu, Penfield High School, Penfield, NY; Jason D. Lu, Adlai Stevenson High School, Lincolnshire, IL; Jonathan Ma, The Harker School, San Jose, CA; Advait Parulekar, Westwood High School, Austin, TX; Saranesh Prembabu, Dougherty Valley High School, San Ramon, CA; Videh Seksaria, Lexington High School, Lexington, MA; Brian C. Tseng, Mission San Jose High School, Fremont, CA; Charles Wang, Thomas Jefferson High School for Science and Technology, Vienna, VA; Brian B. Xie, Mission San Jose High School, Fremont, CA.

PHYSICS BOWL SPONSORS

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CPO Science
Vernier Software & Technology
Texas Instruments
Princeton University Press
John Wiley & Sons
Educational Innovations, Inc
WebAssign

PHYSICSBOWL

AAPT PHYSICS BOWL

Read more at: www.aapt.org/Programs/contests/physicsbowl.cfm

This year there were almost 4500 students participating from more than 280 schools across the United States and Canada, China and Spain. Michael C. Faleski served as the PhysicsBowl Academic Coordinator. China participated for the second year.

2015 TOP 10 OVERALL WINNERS

| # | SCORE | STUDENT, SCHOOL, CITY, STATE |
|----|-------|---|
| 1 | 33 | Xiaoxuan Zhang, Wuhan Foreign Language School, Hubei China |
| 2 | 33 | Xiaoling Liu, The Experimental High School Attached To Beijing Normal University, Beijing China |
| 3 | 32 | Shuangyi Zhang, Nanjing Foreign Language School, Jiangsu China |
| 4 | 32 | Jinxuan Luo, Xi'an Gaoxin NO.1 High School, Shaanxi China |
| 5 | 32 | Brian B. Xie, Mission San Jose High School, CA |
| 6 | 31 | Siqin Feng, Hainan Middle School, Hainan China |
| 7 | 31 | Yiran Liu, Nanjing Foreign Language School, Jiangsu China |
| 8 | 31 | Le Ge, The High School Affiliated to Renmin University of China Beijing China |
| 9 | 31 | Tianshu Ren, Xi'an Gaoxin NO.1 High School, Shaanxi China |
| 10 | 31 | Geoffrey Zheng, Lincoln Park Academy, FL |

PHYSICSBOWL ADVISORY BOARD

Michael Bush, Beverly Trina Cannon, Michael C. Faleski, Sean Flaherty, Warren Hein, Thomas Herring, Joel Klammer, Andrzej Sokolowski, and Courtney Willis

2015 High School Physics Photo Contest

The High School Physics Photo Contest is open to high school students in grades 9-12 (or equivalent international grade level). Photos may be entered in one of the categories described below, and are judged on the quality of the photo and the accuracy of the physics in the explanation that accompanies the photograph. Out of over 700 submissions, the 100 finalist photos were selected, displayed, and judged during the 2015 Summer Meeting. See www.aapt.org/Programs/contests/winners.cfm?theyear=2015 for information on the following overall winners of 2015.



Contrived photos are those that are set up to show a particular physics concept or related set of concepts. Contrived photos represent non-spontaneous events.

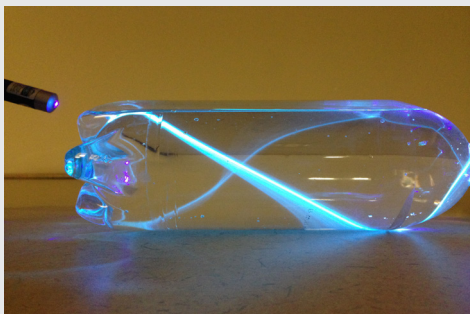


FIRST



SECOND

THIRD



Natural photos are those that involve everyday situations that may demonstrate a variety of physics concepts. Any spontaneous event is considered natural.

FIRST



SECOND

THIRD



Collaborative Projects

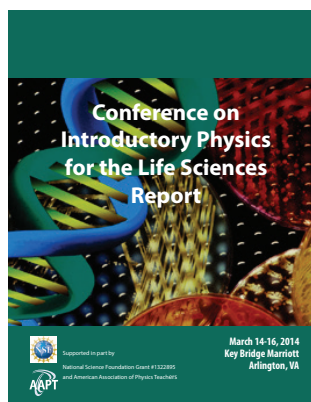
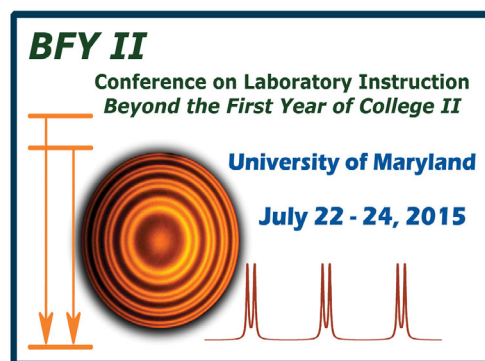
TEAM AMERICA ROCKETRY CHALLENGE

AAPT continued its support as the sole educational partner for the world's largest rocket contest, the Team America Rocketry Challenge (TARC). TARC is also sponsored by the Aerospace Industries Association (AIA), the National Association of Rocketry (NAR), NASA, the Defense Department, and AIA member companies. TARC is an opportunity for science enthusiasts to work together as teams to build and launch rockets, with a chance to win more than \$60,000 in scholarships and prizes. Winners: <http://www.rocketcontest.org/scores11.cfm>.

CONFERENCE ON LABORATORY INSTRUCTION BEYOND THE FIRST YEAR OF COLLEGE (BFYII)

July 22-24, 2015 in College Park, Maryland

The Conference on Laboratory Instruction Beyond the First Year of College II, which was co-sponsored by AAPT and ALPhA, drew over 140 participants from over 75 different institutions. The BFY II Conference Proceedings are available at <http://advlabs.aapt.org/BFY/Proceedings/2015/> thanks to Editor Melissa Eblen-Zayas and co-editors Ernest Behringer and Joe Kozminski.



REPORT ON THE CONFERENCE ON INTRODUCTORY PHYSICS FOR THE LIFE SCIENCES

Supported in part by the National Science Foundation Grant #1322895 and American Association of Physics Teachers

<http://www.compadre.org/ipls/> and https://www.aapt.org/Resources/upload/IPLS_report_2015_v2.pdf

In March 2014 the American Association of Physics Teachers (AAPT) with support from the National Science Foundation hosted the Conference on Introductory Physics for the Life Sciences (IPLS). The purpose of the conference was to discuss ways to enhance introductory physics courses taken by life science students, to make recommendations to the physics community to enhance IPLS courses, and to nurture and expand the IPLS community, a network of faculty and administrators working to enhance the physics curricula used to prepare life science students and scientists. Through discussions in working groups and reflection on the plenary talks, the 161 participants (mostly physics faculty members with a few biology and chemistry faculty members) developed the recommendations published in the 2015 report.

PHYSICS DAYS AT NSTA

Local AAPT Sections hosted Physics Day at nearby NSTA area meetings held in Reno, Nevada, Philadelphia, Pennsylvania, and Kansas City, Kansas.

The Physics Day programs offered a full day of physics content at each NSTA area conference. Physics Day consists of presentations on physics topics of current interest, physics demonstrations for the pre-college classroom, and a make 'n take session where participants can construct a piece of physics apparatus for use as a demonstration or laboratory experiment. AAPT was represented at each event by the local section, shared appropriate materials, and recruited science teachers to become members.

COMPREHENSIVE SITES OFFER NEW MODELS FOR TEACHER PREPARATION

In 2015 PhysTEC added four new Comprehensive sites that offer new models for physics teacher preparation. Comprehensive sites are funded for three years and receive up to \$100,000 per year to address the entire teacher education spectrum. The capacity of an institution to sustain these programs beyond the award period is a critical factor in the selection process.

The sites selected are: West Virginia University, Rowan University, Texas State University, the Colorado School of Mines (CSM) and the University of Northern Colorado (UNC).

The PhysTEC project works to increase the number of highly qualified physics teachers. To do this, the project provides substantial support to select colleges and universities to develop their physics teacher preparation programs into national models. Collectively, PhysTEC-supported sites have more than doubled the number of physics teachers they graduate.



SOLVING THE PHYSICS TEACHER SHORTAGE

The United States is facing a crisis in science and mathematics education. The severe shortage of qualified STEM teachers, necessary to educate and inspire the future technical workforce, undermines the nation's economic competitiveness and technological leadership. The situation in physics is particularly alarming—most secondary physics teachers have neither the deep content knowledge nor the subject-specific pedagogical training needed to teach effectively.

Each year more than 1400 new teachers are hired to teach physics, but only about 600 of these teachers have a major or minor in physics or physics education. Colleges and universities must educate 800 additional new physics teachers per year to meet the national need. There are about 750 institutions in the United States that grant a bachelor's degree in physics. If each institution educated one more physics teacher per year, the problem would be solved. The solution to the nationwide physics teacher shortage is within reach if physics departments become more engaged and see teacher education as part of their mission. The key to realizing this solution is a physics faculty member who cares about teacher education and is supported to take leadership in this area.

2015 PHYSTECH CONFERENCE

The 2015 Physics Teacher Education Coalition Conference, a joint effort of AAPT and APS, was held February 5-7, 2015, in Marriott Seattle Waterfront, Seattle, Washington. The 2015 PhysTEC conference was held in conjunction with the Building a Thriving Undergraduate Physics Program Workshop, where teams of physics faculty worked to develop plans for increasing the numbers of majors in their departments, a significant concern at many smaller colleges and universities. The program was informed by strategies from the SPIN-UP (Strategic Programs for Innovations in Undergraduate Physics) Project Report. Increasing the number of physics majors is critical to increasing the number of physics teachers, especially at bachelor's degree granting physics departments, which collectively prepare over half of the new physics teachers in the nation. Attendee Josee Vedrine-Pauleus praised the conferences, saying, "The conferences served as an eye opener on the reality of physics programs across the nation and provided working models that really increase the number of physics graduates who can enter the field of teaching."

The Joint Plenary with Building a Thriving Undergraduate Physics Program Workshop, *Increasing Involvement in the Physics Major by Targeting Careers*, was given by Ron Henderson, Middle Tennessee State University.

PhysTEC plenaries were given by Monica Plisch, American Physical Society; Rachel E. Scherr, Seattle Pacific University; and Joseph Wilson, Teach for America.

2015 Awards and Grants



HANS CHRISTIAN OERSTED MEDAL

Karl C. Mamola, Appalachian State University, Boone, NC

AAPT, TPT, and Me

The Oersted Medal for 2015 was presented to Karl C. Mamola in recognition of his roles as editor of *The Physics Teacher* and as mentor for students, prospective authors, column editors, reviewers, and others.

Mamola earned his BS in physics in 1963 at the Stony Brook University, his MS in physics in 1965 at Florida State University, and his PhD in physics in 1973 at Dartmouth College. In 1963 Mamola began his career as Instructor of Physics at Appalachian State University. His responsibilities grew as he was promoted, first to Assistant Professor, then to Associate Professor, Chair of the Department of Physics & Astronomy (1977) and Professor (1978). He served as Department Chair for 21 years, and was the recipient of a number of teaching and service awards.

Throughout his career, Mamola touched a multitude of lives, as a physics teacher, a prolific author, a presenter at national and local meetings, as editor of the "Apparatus for Teaching Physics" column in *The Physics Teacher*, and as editor of *The Physics Teacher*, AAPT's signature publication. He consistently produced an extraordinary publication with content accessible to and usable by physics teachers at all levels.

He has always served AAPT well at the section and national levels. As an active member of the Executive Board, he was also supportive of the national officers and took an active role in working on new Association initiatives. He gave freely of his time, using his leadership and writing skills in service to the physics teaching community. Mamola's involvement in AAPT in a wide range of capacities has made it a better organization and its members more effective educators. His contributions to physics and physics teaching continue to have an outstanding and widespread impact on the teaching of physics.

The full press release is available at <http://www.aapt.org/aboutaapt/Karl-Mamola-Oersted-pr-9152014.cfm>.

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



MELBA NEWELL PHILLIPS MEDAL

Thomas L. O'Kuma, Lee College, Baytown, TX

Growing with AAPT

The Melba Newell Phillips Medal for 2015 was awarded to Thomas L. O'Kuma, Physics Faculty, Lee College, Baytown, TX, in recognition of his creative leadership and dedicated service that have resulted in exceptional contributions within AAPT.

O'Kuma received both his BS degree in physics and mathematics from Louisiana Tech University, Ruston, LA, and his MS in physics (research field, statistical mechanics). He did additional graduate work in physics and mathematics at the University of Florida and the University of Houston Clear Lake.

A Life Member of AAPT, O'Kuma has served in numerous roles for AAPT, including the role of AAPT President. He has served on 13 AAPT committees, including the Two Year College Committee, Nominating Committee (chair in 2007), the Executive Officer Search Committee, the TPT Editor Search Committee (chair in 2000), AAPT Council (chair in 1999), and numerous review committees and area committees. Most recently he completed a term as the chair of the Meetings Committee. The parameters for the committee were being refined and its future was not clear. Tom led AAPT through the transition from meetings for a smaller organization to the recognition that the current size requires considerable coordination to manage the logistics of a campus meeting. The success of the recent summer meetings in Philadelphia and Minneapolis and the success of the new format for the winter meeting has its origin in the work O'Kuma did with the Meetings Committee.

The full press release is available online at <http://www.aapt.org/aboutaapt/Tom-O-Kuma-Recognized-with-AAPT-2015-Melba-Newell-Phillips-Medal.cfm>.

THE MELBA NEWELL PHILLIPS MEDAL IS PRESENTED TO AAPT LEADERS WHO, LIKE MELBA NEWELL PHILLIPS, HAVE PROVIDED CREATIVE LEADERSHIP AND DEDICATED SERVICE THAT RESULTED IN EXCEPTIONAL CONTRIBUTIONS TO AAPT

2015 Awards and Grants (cont.)



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

Dwain Desbien, Estrella Mountain Community College, Avondale, AZ
Introductory Physics: What We Teach, How We Teach It, and What We Should Be Doing!

The 2015 David Halliday and Robert Resnick Award for Excellence in Undergraduate Physics Teaching was presented to Dwain Desbien, in recognition of his contributions to undergraduate physics teaching and his extraordinary accomplishments in communicating the excitement of physics to students.

Desbien earned a BA in Physics at Grinnell College and his MS in Physics at the University of Kansas. While at the University of Kansas he began his teaching career as a Teaching Assistant and did research in nuclear physics. While working on his PhD at ASU, Desbien taught at Chandler-Gilbert Community College where much of his data was collected for his dissertation. While working on his degree, he was a teaching/research assistant in Physics Education Research. Desbien was hired by Estrella Mountain Community College to start their physics program in 2001 and completed his PhD in 2002. As a physics professor and former division chair, he has built a premier physics teaching program, recognized as one of the 10 best two-year college programs in the United States by the Spin-Up/TYC Project.

He has served as Co-PI on the Two-Year College Physics Workshop Project. At these workshops, he presented on modeling discourse management, MBL, simulations, computational modeling, and other student-tested curricular ideas and activities that have worked successfully in introductory physics. He has been a primary presenter at the Two-Year College New Faculty Training Experiences, and led a series of workshops dedicated to developing new laboratory activities for introductory physics. His continued efforts to help others develop these skills have made a major contribution to physics education.

Read the full press release at http://www.aapt.org/aboutaapt/pressreleases/DwainDesbien_2015HallidayResnickAward.cfm



THE PAUL W. ZITZEWITZ AWARD FOR EXCELLENCE IN PRE-COLLEGE PHYSICS TEACHING

Gillian Winters, Smithtown Central School District, Smithtown, NY
Carpe Diem. Seize the Opportunity!

The 2015 Paul Zitzewitz Excellence in Pre-College Physics Teaching Award was presented to Gillian Winters, a New York State Master Teacher and high school physics teacher. This award is in recognition of contributions to pre-college physics teaching and awardees are chosen for their extraordinary accomplishments in communicating the excitement of physics to their students.

Winters earned her BS and MS in Physics at the McGill University in Montreal. Her PhD in Physics is from the University of Delaware. She began her career as a physics teacher at Sachem Central School District in Holbrook, NY. In 2005 she moved to the Smithtown Central School District in Smithtown, NY, where she teaches Regents, AP-B or AP-1 Physics, and AP-C Physics with Calculus.

Winters is a master of incorporating practical applications to physics content instruction. She routinely goes the extra mile for her students and for physics. Her students are exposed to a variety of rich academic experiences. For example, she conducts a Particle Physics MasterClass as an outreach program of CERN. Her students gather a few afternoons to learn how to analyze data prior to conferencing with students in other countries to participate in a discussion moderated by a physicist from CERN.

She is active in the Women in Science and Engineering workshops at Stony Brook University, the Teslamania, a physics Demonstration competition, and the CERN Physics MasterClass.

Read the full press release at <http://www.aapt.org/aboutaapt/pressreleases/Gillian-Winters-to-Receive-2015-Paul-W-Zitzewitz-Excellence-in-PreCollege-Teaching-Award.cfm>

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 TEACHING RECOGNIZES OUTSTANDING ACHIEVEMENT IN TEACHING UNDERGRADUATE PHYSICS, WHICH MAY INCLUDE THE USE OF INNOVATIVE TEACHING METHODS.

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.

2015 Awards and Grants (cont.)

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 CONTEMPORARY 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.

KLOPSTEG MEMORIAL LECTURE AWARD

David A. Weintraub, Vanderbilt University, Nashville, TN
Exoplanets: The Pace of Discovery and the Potential Impact on Humanity



David A. Weintraub of the Vanderbilt University Department of Physics and Astronomy is the 2015 recipient of the Klopsteg Memorial Lecture Award.

Weintraub earned his BS at Yale, and both his MS and PhD from the University of California, Los Angeles. He was a postdoctoral research associate at the University of Florida before joining the Astronomy faculty of Vanderbilt University in 1991.

Weintraub excels at presenting science to the public in an entertaining and comprehensible manner, as well as exploring the humanistic aspects of science with his students. He is the author of three popular astronomy books: *Is Pluto a Planet?* (Princeton University Press 2006), *How Old is the Universe?* (Princeton University Press 2011), and *Religions and Extraterrestrial Life: How Will We Deal With It?* (Springer Praxis Books 2014). All three of these books successfully convey the excitement of astronomy to the general public. He has presented numerous public lectures in connection with these books.

A further example of Weintraub's interest in the communication of science to the general public is his role, for the past nine years, as director of the Communication of Science & Technology Program at Vanderbilt. He leads an extremely successful undergraduate program designed to teach students to present scientific ideas in an accessible way to the general public.

His own research area is the study of debris disks around stars, but Weintraub also has a deep interest in the impact of science on human society. He has taught an honors seminar on "The Tangled Web of Astronomy and Religion," covering such topics as cosmology and the trial of Galileo. He regularly teaches a related course "Theories of the Universe," which explores the overlap between astronomy, religion, and philosophy throughout the ages.

Read the full press release at <http://www.aapt.org/aboutaapt/pressreleases/David-Weintraub-Named-as-Recipient-of-2015-Klopsteg-Award.cfm>

ROBERT A. MILLIKAN MEDAL

Robert A. Morse, St. Albans School, Washington, DC
Facets of Physics Teaching – Pedagogical Engineering in the High School Classroom



THE ROBERT A. MILLIKAN MEDAL, ESTABLISHED IN 1962, RECOGNIZES TEACHERS WHO HAVE MADE NOTABLE AND CREATIVE CONTRIBUTIONS TO THE TEACHING OF PHYSICS.

The Robert A. Millikan Medal for 2015 was presented to Robert A. Morse for his notable and creative contributions to the teaching of physics. Morse is co-chair of the AP Physics 1 Development Committee and assistant editor of the Davidson AP Physics EdX project. He got his BA in physics at Cornell University, his MEd in Science Education at Boston University, and his PhD in Science Education at the University of Maryland, College Park.

He started his career as a physics educator in 1967 as a physics teaching assistant at Massachusetts Institute of Technology. He started teaching high school physics at Masconomet Regional High School in Topsfield, MA, where he taught physics, honors physics, AP Physics, Applied Physics, Electronics, Physical Science, and Stagecraft and Lighting.

In 1982 he joined the staff of St. Albans School in Washington, DC, teaching Physics and AP Physics C. He also served as Science Department Chair and Technology Committee Chair. He was trained as an AAPT Physics Teaching Resource Agent in 1985 and has presented or hosted workshops locally and nationally.

A Life Member of AAPT, Morse has served on the committees on Physics in High Schools, Laboratories, and History and Philosophy of Physics. He is a current member of the AAPT PTRS Oversight Committee and served on the Next Generation Science Standards Review Panel. To all of his endeavors, he brings passion, inquisitiveness, creativity, and deep understanding of how students learn.

Read the full press release at <http://www.aapt.org/aboutaapt/pressreleases/2015-Millikan-Medal-Awarded-to-Robert-Morse.cfm>

2015 Awards and Grants (cont.)

HOMER L. DODGE CITATIONS
RECOGNIZE AAPT MEMBERS
FOR THEIR EXCEPTIONAL
CONTRIBUTIONS TO THE
ASSOCIATION AT THE NATIONAL,
SECTIONAL, OR LOCAL LEVEL.

HOMER L. DODGE CITATIONS FOR DISTINGUISHED SERVICE TO AAPT

Winter Meeting 2015



David Cook retired Professor of Physics and Philetus E. Sawyer Professor of Science, Lawrence University, served as AAPT Vice President (2008), President-Elect (2009), President (2010), and Past President (2011). Currently, he chairs the AAPT Meetings Committee. Cook earned his BS in physics at Rensselaer. Both his AM and PhD in physics were earned at Harvard. While serving on the Physics faculty at Lawrence University, Appleton, WI, he taught nearly every undergraduate physics course. His focus, however, was on computation in the upper-level curriculum. He served several terms as Physics Department Chair. His AAPT service includes more than four decades of meeting attendance, leadership on at least eight committees, and representing AAPT on the AIP Governing Board. While serving on the AAPT Executive Board, he generated detailed manuals for members of the presidential chain, and he took on the task of formatting and indexing the 250-page Executive Board Handbook compiled over several years by the Governance Review Committee. Another enduring legacy of his service is PAC Tools. Cook was the impetus and leader of the advisory group that worked with staff to develop AAPT's online program for planning meetings from abstract submission through the paper sort, to export into the final meeting program.



Andrew D. Gavrin, Associate Professor and Chair of the Physics Department at Indiana University-Purdue University Indianapolis (IUPUI), is currently serving as AAPT Chair of the Committee on Physics in Undergraduate Education, as a member of the Undergraduate Curriculum Task Force, and as a member of the Programs Committee. He earned his BS in physics at the Massachusetts Institute of Technology. Both his MA and PhD in physics were earned at Johns Hopkins University. His research interests are in Physics Education and Magnetic Materials. His AAPT service includes Committee on Educational Technologies (2005-2006), Nominating Committee (2008), Advisory Committee for Photo Contest (2009-present) and Video Contest (2009-2010), Special Projects and Philanthropy Committee (2012-2014), and the Committee on Instructional Media (2000-2002). A member since 1997, Gavrin has been a fixture at AAPT meetings for almost 20 years. During that time he has given numerous presentations. His committee service has given him the opportunity to organize numerous sessions contributing to the overall quality of the meetings



Elizabeth C. (Tommi) Holsenbeck, Physics Specialist for Alabama Science In Motion, Alabama State University Region, 2006-2014, is recognized for her work with PTRA and the AAPT High School Physics Photo Contest. Holsenbeck earned her BS at Auburn University and her Certification in Comprehensive Science from the University of Alabama. She began working as a high school physics teacher in 1997 at Jefferson Davis High School in Montgomery, AL. Joining AAPT during her first year teaching, she was mentored by members in the Alabama Section. Additionally, she accepted opportunities to develop as a teacher through PTRA, PTRA for Rural Workshop at Auburn University 2005-2007, PRISMS (Physics Resources and Instructional Strategies to Motivate Students)-Trainer 1988-1993, C3P (Comprehensive Conceptual Curriculum in Physics)-Trainer 1996-1999, Labnet (TERC)-Mentor 1990-1994, ASPIRE (Alabama Supercomputer Program to Inspire Computational Research in Education) where she was Regional Coordinator 1995-2002, and PS4ET (Physical Science for Elementary Teachers) Trainer, funded by Alabama Commission on Higher Education Eisenhower Grant, 1992-1995. Her service to AAPT includes Secretary/Treasurer of the Alabama Section 2007-2015, Coordinator of the High School Physics Photo Contest 2011-2015, Chair of the Committee on Physics in High Schools 2013-2015, Friend of the Committee on Educational Technologies, and Friend of the Pre-High School Committee.



Elisha Huggins was an early pioneer in the use of computers as physics instructional tools. He has authored a number of introductory physics textbooks including *Physics 2000* which promotes the teaching of special relativity in the first week of an introductory physics course. Professor Huggins is also the developer of the award-winning software program MacScope which allows a computer to be used as a powerful storage oscilloscope. Huggins has taught Physics at Dartmouth College since 1961. He was an undergraduate at MIT and got his PhD at Caltech. His PhD thesis was under Richard Feynman, where he found a number of terms representing the lack of uniqueness of energy momentum tensors. The scalar field term, which now plays a major role in conformally invariant field theories, was named the "Huggins term" by Murray Gell-Mann. His AAPT service includes contributions to *American Journal of Physics* and *The Physics Teacher*, commercial workshops at AAPT meetings where he presented his innovative teaching ideas, and Sustaining Membership in the Association since 2000. He currently serves as a member of the editorial board of *The Physics Teacher*.

2015 Awards and Grants (cont.)

HOMER L. DODGE CITATIONS FOR DISTINGUISHED SERVICE TO AAPT

Summer Meeting 2015

Kathleen A. Harper, Senior Lecturer, Engineering Education Innovation Center, The Ohio State University, served as chair of the AAPT Nominating Committee and as Section Representative for the Southern Ohio Section of AAPT. Her AAPT service includes the Membership and Benefits Committee and the Committee on Research in Physics Education. A member since 1994, Harper has been the Southern Ohio Section Representative since 2007. (More at: <http://www.aapt.org/aboutaapt/pressreleases/2015-Dodge-Citation-presented-to-Kathleen-Harper.cfm>.)



Jill Marshall, University of Texas, Austin, Department of Physics, is recognized for her work at the section and national level of AAPT. She has been active in the Texas Section of AAPT for many years. She was elected to the Texas presidential chain in 2004 and served from 2005 through 2008. During those four years, she led the section with distinction solidifying its relationship with the Texas Science Teachers Association and their large CAST conference. She also helped keep the section meetings joint with the Texas Section APS and SPS Zone 13. Prior to working in Texas, she was an active member of the Idaho-Utah Section of AAPT, serving as President, 1999-00. At the national level her service includes: AAPT Past President (2013), Program Chair of the 2011 Winter and Summer Meetings, National Nominating Committee (2005-06), Committee on Women in Physics (2006-09), presenter and session organizer at national meetings 1998-to present. (More at: <http://www.aapt.org/aboutaapt/pressreleases/SM15HLDCJillMarshall.cfm>)



Marie Plumb, Professor of Physics (Retired) at Jamestown Community College, Jamestown, NY, has served as a member of Steering Committee and Co-chair of a national meeting for the Two Year Colleges in the 21st Century Project; PI and co-PI on several NSF Grants; instituted an ongoing outreach program to bring hands-on science activities to a local elementary school; served as reviewer of grants for NSF; participated in PEPTYC program at Texas A&M; and hosted TYC workshops. (More at: <http://www.aapt.org/aboutaapt/pressreleases/Marie-Plumb-to-Receive-the-2015-Homer-Dodge-Citation-for-Distinguished-Service-to-AAPT.cfm>)



Scott Schultz, Science Division Chair and Professor of Physics at Delta College, University Center, MI, joined AAPT in 1993, while in grad school at North Carolina State University. He has served on the AAPT Nominating Committee twice, once as chair, as well as on the Committee on Educational Technology, and the Committees on Physics in Two-Year Colleges. Schultz has taught physics at Jamestown Community College, Ravenscroft High School, and has been at Delta College for 17 years. He has served the AAPT physics education community in many ways over the years. (More at: <http://www.aapt.org/aboutaapt/pressreleases/Scott-Schultz-2015-Dodge-Citation.cfm>)



Albert Thompson earned his BA in Physics with a minor in Education at The Colorado College. His MA in Secondary School Administration was earned at the University of Colorado at Boulder, and his EdD in K-12 School Administration at the University of Northern Colorado. He began PTRAs training in 1992 and continued in the program through 2010. He retired as a Physics, Physical Science, Astronomy, and Global Science teacher at Ponderosa High School in Parker, CO. Thompson, an emeritus member, first joined AAPT during 1961 when AAPT recognized him for "An Outstanding Program in Physics" at Cherry Creek High School in Englewood, CO, then rejoined in 1984 after returning to teaching physics. He has been actively involved in the Colorado-Wyoming Section and is the founding Coordinator of the AAPT eMentor Program. (More at: <http://www.aapt.org/aboutaapt/pressreleases/Albert-Thompson-Dodge-Citation.cfm>)



AAPT 2015 Fellows Award

In May 2015 AAPT announced the 2015 recipients of the AAPT Fellow Award. The association's Fellow awards were presented during the Summer Meeting in College Park, Maryland.

The 2015 recipients, selected from AAPT's Two-Year College community were:

Frank Cascarano, Foothill College, Los Altos Hills, California

Anthony Escudro, Harold Washington College, Chicago, Illinois

Paul "Joe" Heafner, Catawba Valley Community College, Hickory, North Carolina

William Waggoner, San Antonio College, San Antonio, Texas

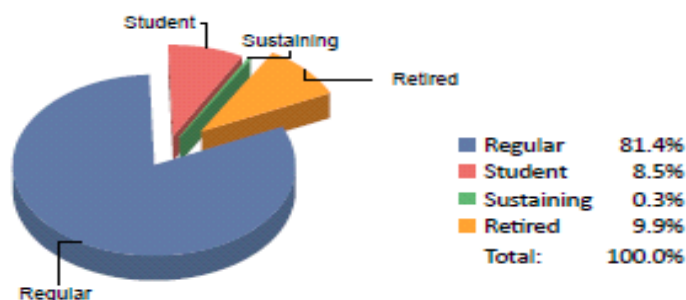
Paul Williams, Austin Community College, Austin, Texas

Membership

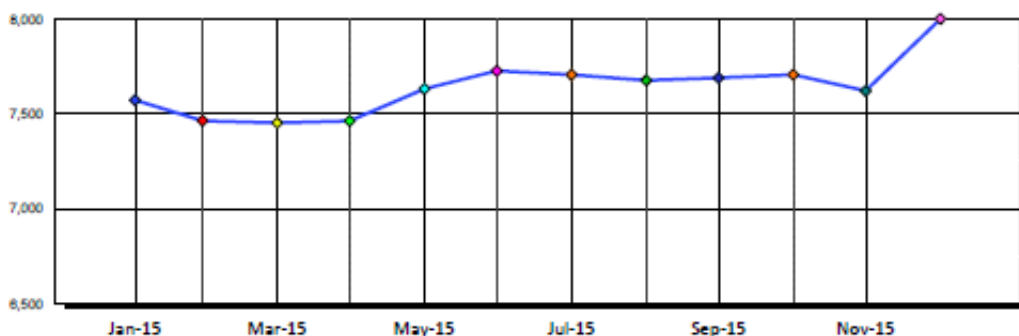
Spanning academia, research, and industry; comprised of educators, Nobel Prize winners, and students alike; our members bring a wealth of experience, diversity, and individual recognition. Most importantly, all share the same dedication to physics and the physics education community.
(December 31, 2015)

MEMBERSHIP BY MEMBER TYPE

| | |
|----------------|--------------|
| Regular | 6,256 |
| Student | 652 |
| Sustaining | 20 |
| Retired | 757 |
| Current | 7,685 |



MEMBERSHIP TRENDS YEAR TO DATE



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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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AAPT Physics Education Funds

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 AAPT/ComPADRE website.
- Memorial Fund—Discretionary 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 Section Representatives

Fifty-one local sections increase the impact of AAPT programs and resources.

AAPT Sections spread from Alaska and Canada to Puerto Rico. 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 and, together with the Executive Board, they make up the AAPT Council.

| | | | |
|--|---|--|---|
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Financials

THE AMERICAN ASSOCIATION OF PHYSICS TEACHERS, INC.

Balance Sheet—Year Ended December 31, 2015 (With comparative totals for 2014)

| | DECEMBER 2015 | DECEMBER 2014 |
|---|--------------------|--------------------|
| ASSETS | | |
| Cash and Cash Equivalents | \$2,150,692 | \$590,291 |
| Investments | 5,367,177 | 5,404,892 |
| Receivables, Net | 745,101 | 1,597,916 |
| Inventory | 107,547 | 99,446 |
| Prepaid Expenses | 73,370 | 175,694 |
| Investment in ACP | 523,196 | 433,823 |
| Property and Equipment, Net | 58,782 | 29,399 |
| TOTAL ASSETS | \$9,025,865 | \$8,331,461 |
| | DECEMBER 2015 | DECEMBER 2014 |
| LIABILITIES & NET ASSETS | | |
| LIABILITIES | | |
| Accounts Payable and Accrued Liabilities | \$485,119 | \$326,361 |
| Accrued Payroll and Related Liabilities | 128,825 | 116,457 |
| Unearned Revenue | 2,595,922 | 2,413,951 |
| Capital Lease Obligation | 10,490 | 12,600 |
| Accrued Postretirement Benefit Obligation | 346,809 | 465,295 |
| TOTAL LIABILITIES | 3,567,165 | 3,334,664 |
| NET ASSETS | | |
| Unrestricted | | |
| Undesignated | 3,290,126 | 2,850,996 |
| Board designated | 1,143,965 | 1,148,909 |
| | 4,434,091 | 3,999,905 |
| Temporarily Restricted | 536,374 | 508,657 |
| Permanently Restricted | 488,235 | 488,235 |
| Total Net Assets | 5,458,700 | 4,996,797 |
| TOTAL LIABILITIES & NET ASSETS | \$9,025,865 | \$8,331,464 |

Statement of Activities—Year Ended December 31, 2015 (With Comparative Totals for 2014)

| | UNRESTRICTED | | | 2015 TOTAL | 2014 TOTAL |
|---------------------------------------|--------------------|---------------------|--------------------|------------------|--------------------|
| | UNDESIGNATED | BOARD DESIGNATED | TEMP RESTRICTED | | |
| REVENUE & SUPPORT | | | | | |
| American Journal of Physics | \$1,700,407 | - | - | \$1,700,407 | 1,664,091 |
| The Physics Teacher | 962,544 | - | - | 962,544 | 1,005,762 |
| Membership | 801,952 | 96,958 | - | 898,910 | 902,189 |
| Meetings, workshops and projects | 923,675 | 7,684 | - | 981,359 | 896,639 |
| Grants | 755,256 | - | - | 755,256 | 680,077 |
| Investment Income (Loss) | (38,748) | (10,127) | (14,736) | (63,611) | 296,646 |
| Other Publications | 63,909 | 85,497 | - | 149,406 | 221,410 |
| International Physics Olympiad | 136,971 | - | - | 136,971 | 132,164 |
| Earnings of investment in ACP | 89,779 | - | - | 89,779 | 78,600 |
| Contributions | 21,921 | 29,627 | 53,790 | 105,338 | 60,758 |
| Miscellaneous Income | 12,732 | - | - | 12,732 | 3,700 |
| Net assets released from restrictions | 11,337 | - | (11,337) | - | - |
| TOTAL REVENUE AND SUPPORT | 5,441,735 | 259,639 | 27,717 | 5,729,091 | 5,942,036 |
| EXPENSES | | | | | |
| Program Services: | | | | | |
| American Journal of Physics | \$464,386 | - | - | \$464,386 | \$441,526 |
| The Physics Teacher | 462,279 | - | - | 462,279 | 463,105 |
| Memberships | 521,073 | 55,655 | - | 576,728 | 567,223 |
| Meetings, workshops and projects | 833,407 | 85,498 | - | 918,905 | 743,910 |
| Grants | 624,056 | - | - | 624,056 | 562,645 |
| Other Publications | 293,557 | 96,974 | - | 390,531 | 426,092 |
| Support services: | | | | | |
| General and administrative | 1,799,067 | 26,456 | - | 1,825,523 | 1,786,222 |
| Fundraising | 4,780 | - | - | 4,780 | 3,485 |
| TOTAL EXPENSES | 5,002,605 | 264,583 | - | 5,267,188 | 4,994,208 |
| CHANGE IN NET ASSETS | 439,130 | (4,944) | 27,717 | 461,903 | 947,828 |
| Net Assets: | | | | | |
| Beginning | 2,850,996 | 1,148,909 | 508,657 | 488,235 | 4,996,797 |
| ENDING | \$3,290,126 | \$1,143,965 | \$536,374 | \$488,235 | \$5,458,700 |

2015 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.

Robert L. Carovillano

OCTOBER 15, 2015

Dr. Robert Carovillano was an internationally-recognized theoretical space physicist. The son of first-generation Italian immigrants, he was the first in his family to attend college. He received his BS degree from Rutgers University, and MS and PhD degrees in theoretical physics from Indiana University. He joined the Boston College faculty as an Assistant Professor of Physics in 1959, was promoted to Professor in 1966, and chaired the Department of Physics from 1969 to 1982. He joined AAPT in 1971 and remained active for 30 years. He retired from Boston College in 2003.

Carovillano served on and sometimes chaired numerous advisory committees for the National Academy of Sciences, the National Center for Atmospheric Research, the National Aeronautics and Space Administration (NASA), and the National Science Foundation (NSF). He was an officer and trustee of the Universities Space Research Association, where he twice served as chairman of the Council of Institutions, and an officer of the American Geophysical Union. Robert was principal investigator on many research grants and contracts funded by the NSF, NASA, the Office of Naval Research, and the Air Force. He was a visiting senior scientist at NASA Headquarters in the Office of Space Science where he was responsible for the supervision of several programs and research initiatives in space physics. He served on NASA's Space Science Advisory Committee and reviewed numerous space shuttle and satellite projects. He was a prodigious scholar who published numerous articles and books on the magnetosphere, ionosphere, solar wind, and related topics. (<http://scitation.aip.org/content/aip/magazine/physicstoday/news/obituaries>)

Leo Kadanoff

OCTOBER 26, 2015

Theoretical physicist, Leo Kadanoff, transformed theory and practice across scientific disciplines. He received the 1999 National Medal of Science, the nation's highest science honor, from President Bill Clinton in a White House ceremony. Kadanoff was cited "for leadership in fundamental theoretical research in statistical, solid-state and nonlinear physics, which has led to numerous and important applications in engineering, urban planning, computer science, hydrodynamics, biology, applied mathematics and geophysics."

A skilled teacher of colleagues, graduate students and undergraduates, one of his contributions was to use and to show others how to use computer models and simplified conceptual models for better understanding the world.

Kadanoff became a professor of physics at UChicago in 1978 and was named the John D. and Catherine T. MacArthur Distinguished Service Professor of Physics and Mathematics in 1982. He directed UChicago's Materials Research Center from 1981 to 1984 and from 1994 to 1997.

He also had served as a visiting professor at Cambridge University in 1965, and as the Lorentz Professor at the University of Leiden in The Netherlands in 2003. He retired as professor emeritus in 2003 but remained professionally active.

George Patteson (Jack) Williams, Jr.

NOVEMBER 8, 2015

Following a distinguished Naval career Williams returned to college on the GI Bill and earned his Bachelor of Science degree from the University of Richmond in 1947. He earned his PhD from UNC-Chapel Hill in 1958.

He joined the Physics Department of Wake Forest University in Winston-Salem, NC in 1958 where he developed his unique teaching style which inspired his students. He served as Chairman of the Physics Department from 1974 to 1990. Under Williams' leadership and vision, the department significantly increased in size. He increased the diversity of the department by hiring its first woman faculty member. In this case, he had the foresight to solve a logistical two-body problem by also by convincing the administration to hire her biophysicist spouse, setting a high standard for the family-friendly environment at Wake Forest University.

Williams facilitated the development of the PhD program in the Physics Department. Since 1994, Wake Forest University has granted more than 70 Ph. D. degrees in Physics. In addition to his inspiration to generations of physics students, one of his most enduring legacies is Olin Physical Laboratory, made possible by his successful efforts to obtain a grant from the F.W. Olin Foundation and completed in 1989. After retiring in 1999, Williams attended Physics Department events including the weekly colloquia. He was beloved by his colleagues and students alike.

Robert James Swenson

DECEMBER 26, 2015

Robbert (Bob) Swenson was professor emeritus of physics at Montana State University and former Vice President for Research and Development. His academic achievements and honors are many. He received the Governor's Award for Outstanding Service on the Science and Technology Council, the Montana State University (MSU) Alumni Excellence Award in 1986 and 1990, and National Science Foundation's (NSF) Award for Outstanding Contribution to the "Experimental Program to Simulate Competitive Research" (EPSCoR).

Swenson received a BS from Montana State in Engineering Physics in 1956 and a PhD in Physics from Lehigh University in 1961. After a postdoctoral fellowship at Lehigh, he accepted a NAS Fellowship and spent two years at the University of Brussels working with Nobel Laureate Ilya Prigogine.

Following the fellowship, he took a joint appointment between the Physics Department and the Joint Institute for Laboratory Astrophysics at the University of Colorado followed shortly by a five year stint at Temple University where he built up one of the strongest groups in Statistical Physics in the country. In his third year, he was elected Chair of the Physics Department.

Beginning in 1968, with support from NSF, Bob started organizing theoretical physics workshops at Montana State University each summer. Then on July 1, 1970, Bob returned to Montana full-time as head of the MSU Department of Physics. He held that position from 1970 to 1990. He became Vice President for Research and Development in the summer of 1990, serving until 1998.

the 1990s, the number of people in the UK who are employed in the public sector has increased from 10.5 million to 12.5 million, and the number of people in the public sector who are employed in health care has increased from 2.5 million to 3.5 million (Department of Health 2000).

There are a number of reasons for this increase. One of the main reasons is the increasing demand for health care services. The population of the UK is ageing, and there is a growing number of people with chronic conditions such as heart disease, diabetes, and asthma. This has led to an increase in the number of people who are hospitalised and the length of their stays. In addition, there has been a growing emphasis on preventive care, which has led to an increase in the number of people who are seen by their general practitioners and other health care professionals.

Another reason for the increase in the number of people employed in the public sector is the increasing demand for health care services in the private sector. The private sector has grown significantly in the last few years, and this has led to an increase in the number of people who are employed in the private sector. However, the public sector still remains the largest employer in the health care sector.

There are a number of challenges facing the public sector in the future. One of the main challenges is the increasing demand for health care services. The population of the UK is ageing, and there is a growing number of people with chronic conditions. This will lead to an increase in the number of people who are hospitalised and the length of their stays. In addition, there will be a growing emphasis on preventive care, which will lead to an increase in the number of people who are seen by their general practitioners and other health care professionals.

Another challenge is the increasing demand for health care services in the private sector. The private sector has grown significantly in the last few years, and this has led to an increase in the number of people who are employed in the private sector. However, the public sector still remains the largest employer in the health care sector.

There are a number of ways in which the public sector can meet these challenges. One way is to increase the number of people who are employed in the public sector. This can be done by recruiting more people to the public sector and by providing training and development opportunities for existing staff. Another way is to improve the efficiency of the public sector. This can be done by reducing the length of hospital stays and by increasing the number of people who are seen by their general practitioners and other health care professionals.

There are a number of other ways in which the public sector can meet these challenges. One way is to increase the number of people who are employed in the private sector. This can be done by recruiting more people to the private sector and by providing training and development opportunities for existing staff. Another way is to improve the efficiency of the private sector. This can be done by reducing the length of hospital stays and by increasing the number of people who are seen by their general practitioners and other health care professionals.

There are a number of other ways in which the public sector can meet these challenges. One way is to increase the number of people who are employed in the public sector. This can be done by recruiting more people to the public sector and by providing training and development opportunities for existing staff. Another way is to improve the efficiency of the public sector. This can be done by reducing the length of hospital stays and by increasing the number of people who are seen by their general practitioners and other health care professionals.

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