

American Association of Physics Teachers

2014 ANNUAL REPORT

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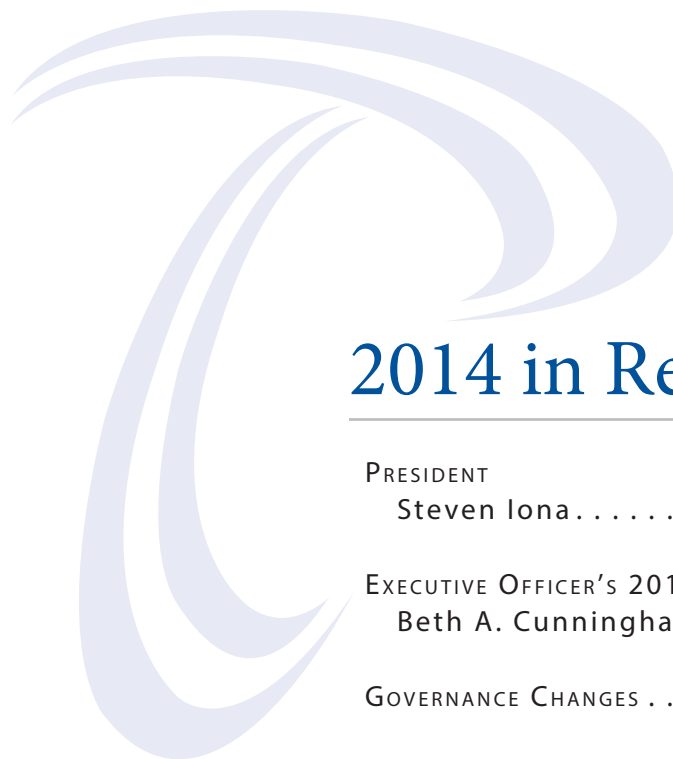
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2014 in Review

PRESIDENT

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President



STEVEN IONA

There was a Facebook posting that circulated recently entitled “Message to My Freshman Students.”¹ Portions of the message emphasized that college is different from high school in that in college the faculty are not held responsible for student failures. The author emphasizes the point by stating, “I have no obligation whatsoever to make sure that you pass or make any particular grade at all.” This statement was in made the context of distinguishing between a “teacher” and a “professor.” For the author, “a teacher’s job is to make sure that you learn”... “no part of a professor’s job is to make you learn” ... “my job is to lead you to the fountain of knowledge. Whether you drink deeply or only gargle is entirely up to you.”

I found little in the article that I could agree with, primarily because the premise was that students are objects in the education system, not people. They are not individuals with whom you can have a relationship. They are not considered as individuals with needs and aspirations. My approach to students is different than the author’s, consequently rather than feeling that students are out of synch with me, I enjoy the rewards of teaching – helping students make sense of the world around them.

I have been fortunate to have been a part of AAPT for many years, and it has been easy to serve on the Executive Board because my approach with students and AAPT’s approach with teachers mirror one another: Enhancing the understanding and appreciation of physics through teaching. As part of this mission statement, AAPT makes it clear that students and teachers are not objects to be filled or led, they are individuals in which appreciation should be fostered.

AAPT offers many resources to help meet the needs of teachers and students in their quest to appreciate physics. Everyone has needs, but what is often not considered is how a professional organization can met these needs

- I need collaborators.
- I need commiseraters.
- I need new ideas.
- I need to improve as an educator.
- I need to make a difference with students.
- I need to make a difference in the community.

This Annual Report describes the multitude of products, opportunities and resources through which AAPT can help you meet your needs.

“AAPT makes it clear that students and teachers are not objects to be filled or led, they are individuals in which appreciation should be fostered.”

AAPT offers two national meetings (Winter and Summer) to bring together teachers of physics from throughout the world to exchange ideas and to share new approaches to teaching and learning. AAPT also collaborates in offering special conferences for physics education researchers, physics teacher educators, department chairs, and those working with special populations such as teachers of physics courses for life science students, those working with advanced laboratory activities, teachers new to the profession (through the eMentoring Program and the New Faculty Workshop), leadership development, The Physics Teaching Resource Agent Program (PTRA), and the New Faculty Experience targeted at the two-year college community.

AAPT publishes two unique journals: *The Physics Teacher* and *The American Journal of Physics*. Their monthly article offerings include ones such as: The plucked string: An example of non-normal dynamics; The puzzle of the steady-state rotation of a reverse sprinkler; How an Air Stream Can Support a Cupcake; Modern Gravitational Lens Cosmology for Introductory Physics and Astronomy Students; An Interdisciplinary Approach to Drag Forces: Estimating Floodwater Speed from Displaced Riverbed Boulders.

The Association also offers many awards honoring accomplishments in helping the public better understand physics, teaching excellence, serving as a Teaching Assistant and as a Learning Assistant, accomplishments for scoring well on examinations and in competitions, and as part of the Photo Contest and Apparatus Competition.

While this Report highlights the national aspects of AAPT, there are many local and regional groups that share AAPT's mission. Their activities in Sections often directly impact physics teachers by providing another venue for collaboration, networking, and learning. Like all AAPT activities these bring together undergraduates, graduate students, high school teachers, teachers from two-year colleges, and those four-year schools. They are events that help everyone better appreciate physics.

The future within AAPT looks bright as we work to modernize some of our governance documents and work to implement additional items outlined in our Strategic Plan. We have been fortunate that careful stewardship over the last few years has provided additional funds that can be used to implement new and exciting projects in the coming years.

"The future within AAPT looks bright as we work to modernize some of our governance documents."

While my time on the Executive Board of AAPT has spanned more than a decade, my time in the Presidential Chain has been brief. With the passing of Mary Beth Monroe, I was elected by the membership to serve as President and Past President. This meant that many others including Mary Mogge (President 2015) has had to fulfill extra duties during the transition. My thanks go to her for her dedication to the organization and

her willingness to give extra to the cause. I also want to thank Beth Cunningham, AAPT Executive Officer, who has made my journey as President go very smoothly as she has tirelessly worked to keep the Executive Office focused on member services both for our current members and for an expanding membership in the future.

At AAPT our members are considered as individuals not as objects. We are a caring, responsive, and dedicated community working in many different ways to help members along their professional journey to help students better appreciate physics.

Sincerely yours,



Steven Iona

¹ http://www.huffingtonpost.com/keith-m-parsons/message-to-my-freshman-st_b_7275016.html?ir=Go+od+News&ncid=fcblklnkushpmsg00000023

Executive Officer's 2014 Annual Report

BETH A. CUNNINGHAM



2014 was another good year for AAPT. We had near record attendance at the Summer Meeting in Minneapolis, the AAPT-APS-AAS Workshop for New Physics and Astronomy Faculty received continuing support from the National Science Foundation, AAPT participated in the White House College Opportunity Day of Action in December, plus many more exciting events and activities described in this Annual Report. AAPT continues to be the leader in physics education and the provider of professional development for physics teachers at all levels.

I extend a special thank you to President Steve Iona who was able to quickly step into this leadership position without missing a beat. He was elected by the membership to serve as President and Past President to complete the term of Mary Beth Monroe who passed away before she could serve as President. Steve helped initiate the process to update AAPT's governance documents including the By-Laws (described in more detail later), led a Board retreat on effective governance, and continued the work to implement the 2013 AAPT Strategic Plan. I appreciate his leadership and dedication to AAPT and the many conversations we had throughout the year on how we can work to better serve AAPT's members and the physics education community.

"I extend a special thank you to President Steve Iona who was able to quickly step into this leadership position without missing a beat."

Many members do not know the activity that occurs behind the scenes at the Executive Office. The Executive Office is responsible for all aspects of the Association's infrastructure. The AAPT Executive Office works closely with the Executive Board and member volunteers to manage the operations, carry out

directives, and create and uphold general association policies. The Executive Office represents the Association at public venues. It provides leadership and services for all AAPT activities and programs. The Executive Office further manages all external grant projects on behalf of AAPT. Responsibilities by department include:

- Communications: website development and maintenance; press releases for important news such as the USA Physics Team results and recipients of AAPT awards; obtaining copyright permission; and interacting with the publisher of AAPT's journals, AIP Publishing, LLC.
- Programs & Conferences: works closely with the Programs Chair and the Meetings Committee in planning all aspects of the two AAPT National Meetings; organizes and manages the physics exhibit shows; plans other programs such as the AAPT-APS-AAS Workshop for New Physics and Astronomy Faculty, the PhysicsBowl, and the High School Physics Photo Contest.
- Membership: is responsible for the recruitment and retention of AAPT members and institutional subscribers to the AJP and TPT journals; assists the local sections in dissemination of AAPT resources; and oversees the Physics Store and fulfillment of orders.
- Finance & Administration: manages the fiscal aspects of the operation including external funding; prepares budget reports and all financial statements; and maintains important records of the Association.
- Technology & Information Services: maintains software including the membership database, web content management system, listserves, etc; maintains AAPT's servers; and oversees purchase and upgrades of the office computing equipment.

For more information about the departments and the staff that support the work of AAPT, see <http://aapt.org/aboutaapt/organization/contactus.cfm>. The broad range of responsibilities and high volume of work accomplished by the AAPT staff are truly outstanding, and their dedication and hard work contribute to the success of the Association. If you interact with one of AAPT's staff members, please let them know how much you appreciate the work that they do.

I include a few items that may be of interest to you:

- 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 affect AAPT governance procedures. The major features that are required by the new law include having a Whistle Blower Policy and a Conflict of Interest Policy, specific audit procedures and financial reporting requirements, Board independence, and a disclosure of related party transactions. In addition, the new act allows nonprofits to use modern methods of communication including conducting videoconferencing of board meetings and allowing email to be the official form of communication with members. These changes modernize nonprofit governance and reporting, and require nonprofit organizations to follow best practices for their governance. Much of AAPT's governance is in compliance with parts of the new act. However, there are some important changes that AAPT needs to make in order to be compliant with the new act as well as with previous New York nonprofit laws. We started the process in 2014 to bring AAPT in compliance with the new law by updating AAPT's Whistle Blower Policy, Conflict of Interest Policy, and Audit Committee procedures and membership. This process will continue through 2015.
- The AAPT-APS Joint Task Force on Undergraduate Physics Programs met for the first time in November at the American Center for Physics. The task force is charged with preparing a report that will engage and inform physicists in answering the question "What skills and knowledge should the next generation of undergraduate physics degree holders possess to be well prepared for a diverse set of careers?" The task force will issue a report that will provide guidance for physicists considering revising the undergraduate curriculum to improve the education of a diverse student population. The report will include recommendations on content, pedagogy, professional skills, and student engagement. For more information see <http://www.compadre.org/jtupp/>.
- The AAPT Executive Board at the Winter Meeting in Orlando signed an agreement with the Groupe International de Recherche sur l'Enseignement de la Physique (GIREP) to cooperate to promote physics education and physics education research. In particular, the AAPT and GIREP will exchange information through websites and newsletters, send informational posters about each organization's conferences to each other and offer member registration rates at their conferences to members of either organization. Thus, GIREP members will be able to attend AAPT conferences at AAPT member rates and vice versa.
- The Laboratory Goals Subcommittee, a subcommittee of the American Association of Physics Teachers (AAPT) Committee on Laboratories, has reviewed the state of the undergraduate physics laboratory curriculum and related physics education research on the physics laboratory and has made recommendations that foster the development of many key 21st century skills and competencies. The resulting document (available at http://www.aapt.org/Resources/upload/LabGuidelinesDocument_EBendorsed_nov10.pdf) can be used by all physics departments to improve student learning. The intent is that students will graduate with the ability to think like a physicist and construct knowledge along with a variety of highly transferable skills.
- I had the privilege of being a part of the US Delegation that attended the 5th IUPAP International Conference on Women in Physics in Waterloo, Canada. The experience was very transformative not only for me but for the other members of the US Delegation. Several of the US Delegates spearheaded the creation of a video with funding from the National Science Foundation. "HERStories" (<http://aapt.org/resources/Herstories.cfm>) is a video that shares words of wisdom and encouragement from women physicists from around the world who attended the conference. I encourage you to share this inspiring video with your students.

Finally, It has been my privilege to serve you, the members of AAPT, in 2014 as Executive Officer. AAPT 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 another year of your strong 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.

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 affect AAPT governance procedures. The major features that are required by the new law include having a Whistle Blower Policy and a Conflict of Interest Policy, specific audit procedures and financial reporting requirements, Board independence, and a disclosure of related party transactions. In addition, the new act allows nonprofits to use modern methods of communication including conducting videoconferencing of board meetings and allowing email to be the official form of communication with members. These changes modernize nonprofit governance and reporting and require nonprofit organization to follow best practices for their governance.

Much of AAPT's governance is in compliance with parts of the new act. However, there are some important changes that AAPT needs to make in order to be compliant with the new act as well as with previous New York nonprofit laws. In 2014 AAPT began the process of bringing our governance into full compliance with New York law as detailed at <http://www.venable.com/new-york-nonprofit-revitalization-act-signed-into-law-12-19-2013/>

In November 2014 the AAPT Executive Board amended the By-Laws to establish rules for quorums for membership votes. They approved a new Whistle Blower Policy and a Conflict of Interest Policy, and they changed the membership and charge for the Audit Committee. This work will continue into 2015.

AAPT Fellowships Established

In January 2014 the AAPT Executive Board approved a motion to create the AAPT Fellow award. At the inauguration of the Fellowship program, all previous award winners (other than Klopsteg and Richtmyer awardees) who are current members of AAPT and have been members for the last seven years were automatically made Fellows. Inaugural fellows were recognized collectively at 2014 Summer Meeting. The members of the inaugural cohort are:



Lila M. Adair	Dewey I. Dykstra, Jr.	Robert C. Hilborn	Jan Landis Mader	Gordon P. Ramsey	Beverly Ann P. Taylor
George A. Amann	Ronald D. Edge	Russell K. Hobbie	David P. Maiullo	N. Sanjay Rebello	Edwin F. Taylor
Gordon J. Aubrecht, II	Robert Ehrlich	Marsha M. Hobbs	John Mallinckrodt	Edward F. Redish	Gerald R. Taylor, Jr.
Ralph F. Baierlein	Arthur Eisenkraft	William P. Hogan	A. James Mallmann	Jonathan Freiberg Reichert	Ronald K. Thornton
Dean A. Baird	Steve D. Ethen	Charles H. Holbrow	David Maloney	Frederick Reif	Robert F. Tinker
Robert J. Beichner	Eugenia Etkina	Donald F. Holcomb	Corrine Manogue	Richard J. Reimann	Jan Tobochnik
Mario J. Belloni	Kenneth W. Ford	Peter Hopkinson	Harry C. Manos	Deborah J. Rice	Lee S. Trampleasure
Richard E. Berg	William R. Franklin	Ruth H. Howes	Steven Laurens Manly	Diane M. Riendeau	Carol Ann Tripp
Ann M. W. Brandon	Judy R. Franz	John L. Hubisz	Bruce A. Mason	John L. Roeder	R. Steven Turley
Robert W. Brown	Jose D. Garcia	Roland A. Hultsch	Karen Jo Matsler	Robert H. Romer	Raymond C. Turner
Patrick T. Callahan	J. D. Gavenda	Steven Iona	Eric Mazur	Thomas Rossing	Yvette A. Van Hise
Beverly T. Cannon	Alan M. Gibson	John W. Jewett, Jr.	Sarah McKagan	Deborah Roudebush	Christine Vernier
Delma R. Carpenter, Jr.	Gary Gladding	John B. Johnston	Lillian C. McDermott	Philip M. Sadler	David Vernier
James Cederberg	Fred M. Goldberg	Brian Jones	Joe P. Meyer	Samuel M. Sampere	Jearl D. Walker
Elizabeth B. Chesick	Harvey Gould	John G. King	Stanley J. Micklavzina	Matthew Sands	Carl E. Wieman
Christopher J. Chiaverina	Roderick M. Grant, Jr.	Larry D. Kirkpatrick	James A. Minstrell	Thomas J. Senior	Gerald F. Wheeler
Wolfgang Christian	Robert G. Greenler	Kenneth S. Krane	Mary Elizabeth Mogge	Steven Shropshire	Gary Dane White
Robert Beck Clark	Thomas B. Greenslade, Jr.	Paul D. Lane	Taha Mzoughi	Robert H. Shurtz	Karen A. Williams
Anne J. Cox	David J. Griffiths	Lee E. Larson	James H. Nelson	Chandralekha Singh	Courtney W. Willis
Mark Davids	Thomas F. Haff	Priscilla W. Laws	Jane Bray Nelson	Chuck Stone	Jack Willis
Irving E. Dayton	Jack G. Hehn	John W. Layman	Thomas L. O'Kuma	David R. Sokoloff	Jack M. Wilson
Dwain M. Desbien	Patricia M. Heller	Kevin M. Lee	Francis C. Peterson	Gabriel C. Spalding	Mary M. Winn
Alexander K. Dickson	David Hestenes	Harvey S. Leff	Richard W. Peterson	Frieda A. Stahl	Michael Zeilik, II
Joseph Drenchko	Paul G. Hewitt	Todd R. Leif	Daniel H. Phelps	James H. Stith	Richard J. Zitto
Michael A. Dubson	James L. Hicks	Peter Lindenfeld	Edward E. Prather	Paul A. Stokstad	Dean A. Zollman
Jacques L. Duranceau	Curtis J. Hieggelke	Barbara Lotze	Gregory Puskar	Roger H. Stuewer	Earl Zwicker

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 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.



AMERICAN JOURNAL OF PHYSICS STATISTICS

- 12 issues—January–December 2013 (Volume 82)
- 1204 pages, 799 reviewers, 98 papers published—20% acceptance rate
- 9,099 individual and institutional subscriptions
- Approximately 56% of subscribers teach at the college and university level and 24% teach at the high school level. The remaining 20% are scientists at research facilities, students, and other interested members of the physics community.

Resource Letters - 2 letters

Resource Letters Editorial Board: Rexford E. Adelberger, Ruth W. Chabay, Ryan E. Doezema, Amy S. Mulin, William I. Newman, and Gordon Ramsey

Research in Physics Education - 9 articles

Computational Physics - 5 articles

Apparatus and Demonstration Notes - 6 articles

Book Reviews - 18 reviews

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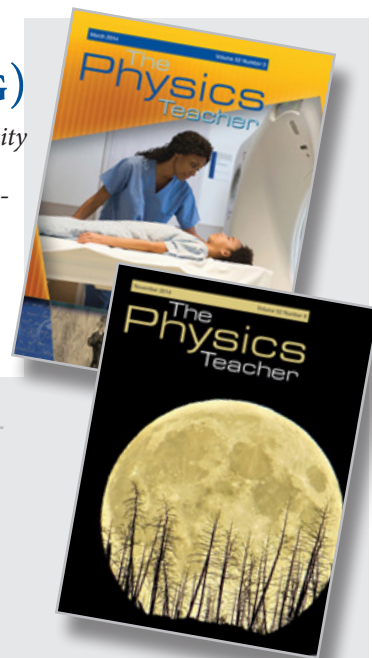
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THE PHYSICS TEACHER (TPT.AAPT.ORG)

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. A new column, “AstroNotes”, edited by Joe Heafner was added to the journal.



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

iPhysics Labs

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

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 Maclsaac, SUNY-Buffalo State College, Buffalo, NY

YouTube Physics

Diane Riendeau, Deerfield High School, Deerfield, IL

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THE PHYSICS TEACHER STATISTICS

- 9 issues—January–May, September–December 2014 (Volume 52)
- 570 pages, 164 reviewers, 130 papers, and 96 contributions to monthly columns (79 international authors/co-authors)—34% acceptance rate
- 8,822 individual and institutional subscriptions
- Approximately 49% of subscribers teach at the college and university level and 37% teach at the high school level. The remaining 14% are scientists at research facilities, students, and other interested members of the physics community.

Electronic Communications



In 2014, the AAPT Physics Library, PhysPort, and projects supported by the AAPT/ComPADRE technology developed new resources for the physics education community and continued to strengthen our support and collaboration with our partners.

PhysPort

Some of the biggest changes involved PhysPort, the re-named and updated PER User's Guide. The most exciting new feature on PhysPort was the hosting and delivery, securely, of a wide range of research-based and research-validated learning assessment tools. Physics educators no longer have to search across the literature and the web for these assessments. Along with the delivery of the tests, PhysPort also created the foundation for a data analysis service to help educators understand the results of these tests. As the breadth of materials provided by the User's Guide grew, it was clear that enhanced organization and a new design was needed. This update was completed this year, providing more immediate access to the many helpful resources on the site.

Physics Education Research Conference Proceedings

This year was also the first time the Physics Education Research Conference (PERC) proceedings were hosted entirely online on PER-Central. Working closely with the PERC Proceedings editors and the PERC organizers, AAPT/ComPADRE and AAPT processed and published the papers, registered ISBN, ISSN, and DOI identifiers, and started the ISI indexing process for the 2013 PERC proceedings. Similar work on the 2014 proceedings was also underway.

Live Photo Physics

A new content collection developed by the Live Photo Physics group, including Priscilla Laws and Robert Teese, was developed and hosted on AAPT/ComPADRE. Interactive Video Vignettes, <http://www.compadre.org/ivv>, provides video-based lessons for students where they can interact with the video and answer questions, providing a more engaged learning activity. The IVV project also provides educators with the software to create their own video lessons.

And More

Other highlights from 2014 involve collaborations with several other physics education projects. AAPT/ComPADRE provided the web hosting for two topical conferences in 2014, one on the Introductory Physics for Life Sciences, <http://www.compadre.org/ipls>, and the other on the Status of the Upper-Division Physics Curriculum, <http://www.compadre.org/supc>. For both of these conferences, the web sites provide continuing access to the presentations and resources from the conferences and the conference reports. AAPT/ComPADRE continued the collaboration with the PhysTEC project, hosting resources and conference web sites. There was also another successful session of Adopt-a-Physicist, led by the Society for Physics Students and hosted by AAPT/ComPADRE.

Looking at the numbers, these AAPT online resource services helped more than 700,000 visitors over the course of the year.

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 The Physics Store, and the eMentoring program. The Physics Store acquired a new look with a logo and layout incorporating a product title search and featured sales and products. The eMentoring program connects high school physics educators who desire additional guidance with experienced high school physics educators—online and FREE of charge.

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.

A new diversity project called “HERStories” which promotes women in the sciences has begun.

For 2014 aapt.org had:

- 409,683 visits • 1,358,876 pageviews • 3.32 pages per visit
- 235,084 new visitors All from 212 countries/territories
#1 U.S., #2 India, #3 Canada, #4 Philippines, #5 China



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 January 2014

New AAPT Executive Board Members take Office

Four new Executive Board members take office at the end of the 2014 Winter Meeting in Orlando, Florida. The winter meeting will run from January 4 - 7. The new members who will assume the office are Steve Iona, University of Colorado, Boulder as AAPT President; Janelle Bailey, Temple University, as Vice President; Steve Turley, Brigham Young University, as Treasurer; and Jan Mader, Great Falls Montana High School, as At-Large High School Representative.

2014 AAPT Winter Meeting

It's not too late to register for the winter meeting and to join us in Orlando. On-site registration will be open on Saturday, January 4th from 7:00a.m. - 4:00p.m. [Learn more »](#)

Stop by the AAPT Booth for a Chance to Win!!

Make sure to visit the AAPT Booth during the Welcome Reception to pick up your Exhibitor Passport. Those who participate will be entered for a chance to win a \$200 AMEX gift card. Stop by the booth to learn more.

Can't make it to the meeting?

- Make sure to follow [@AAPT HQ](#) and join the conversation at [#AAPTWM14](#).
- Watch the [streaming video](#) of our plenary speakers and award winners.

Submit Your Abstract for the 2014 AAPT Summer Meeting

Abstract submission will go live on January 27, 2014.

2014 AAPT Winter Meeting Awards

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2014 TOP AAPT NEWS STORIES

Listed below are highlighted news stories for 2014 from the *eNNOUNCER*. To read the full story go to <http://www.aapt.org/aboutaapt/ennouncer/index.cfm>.

JANUARY

- AAPT-ALPhA Award
- AAPT 2014 Winter Meeting

FEBRUARY

- AAPT Fellowships
- 2013 Lotze Scholarship Winners

MARCH

- Donald W. Olson to receive Klopsteg Memorial Lecture Award
- Ruth Chabay and Bruce Sherwood Share David Halliday and Robert Resnick Award
- AAPT and GIREP Agreement
- Women In Physics Book

APRIL

- Eugenia Etkina to Receive the 2104 Millikan Medal
- Bradford Hill Named as Recipient of the Paul W. Zitzewitz Award

MAY

- 2014 Summer Meeting
- Mary Beth Monroe Memorial Scholarship

JUNE

- May AJP available as an ePUB
- 2014 Physics Bowl Results

JULY

- 2014 U.S. Physics Team
- 2014 International Year of Crystallography

AUGUST

- U.S. Physics Team Earns 5 Medals at 45th IPhO
- Successful 2014 Summer Meeting

SEPTEMBER

- Danielle Spaete and Rebecca Vieyra Appointed as eMentor Coordinators
- New Faculty Workshop Set for November

OCTOBER

- Winter Meeting Preview and Awards Announced
- Executive Board Election Opens

NOVEMBER

- 2015 Winter Meeting Service Awards
- Her Stories Video Released

DECEMBER

- AAPT Governance Changes
- AAPT Executive Board Election Results

National Meetings



WINTER MEETING

January 4–7, 2014, Orlando, FL

Statistics:

There were 709 attendees, 24 exhibitors, 59 sessions, 21 workshops, and 60 posters.

Program Committee Chair

Mary E. Mogge

Paper Sorters:

Daryl McPadden, Committee on Research in Physics Education
Toni Sauncy, Society of Physics Students

Adrienne Traxler, Committee on Research in Physics Education
Connie Wells, Committee on Teacher Preparation

Local organizer:

Anne Murdaugh, Rollins College

Plenaries

The annual Physics Education Public Policy Symposium addressed issues concerning K-12 physics and STEM Education. The speakers were Juan-Carlos Aguilar from the Georgia Department of Education and Paula Heron, from the University of Washington. They provided an inside look at the process of policy making and discussed actions educators might take to contribute to decisions about policies affecting physics and STEM education.

Philip Metzger addressed a “standing-room-only” audience on Monday night, with his talk entitled “Preparing Physicists for the Industrial Revolution of Space.”

Our AAPT award recipients delivered their special presentations during the Ceremonial Sessions. Dean Zollman, Kansas State University, recipient of the Oersted Medal, spoke on “Physics Education Research and Teaching Modern Modern Physics.” Sir Michael Berry University of Bristol emeritus, spoke on How Quantum Physics Democratized Music in the Richtmyer Memorial Lecture Award address.

The Homer L. Dodge Citation for Distinguished Service to AAPT was presented to Jan Mader, Taha Mzoughi, Gabriel Spalding, and Lee Trampleasure in recognition of their exceptional service to the AAPT Physics Education community.

Highlights

The 2014 Winter Meeting in Orlando celebrated the wonder that is physics. The Orlando area is filled with excitement and magic—and the physics behind the magic, whether it’s space flight or thrill rides. Attendees were able to visit the Kennedy Space Center and some of the theme parks.

The Rosen Plaza, the conference hotel, was across the street from Pointe Orlando, a major dining, entertainment, and shopping complex. Harris Rosen, owner of the conference hotel and humanitarian director of the Harris Rosen Foundation, greeted attendees and welcomed them to Orlando. We enjoyed a taste of alligator bites and key lime shots in honor of our Florida meeting site as we greeted colleagues and visited exhibitors during the Saturday evening Opening Reception.

Attendees became familiar with the “polar vortex” that found its way as far south as Orlando causing some changes to plans, including those of Sunday’s plenary speaker, Don Pettit. Pettit is a NASA astronaut who, while aboard the International Space Station, conducted out-of-this-world physics demos that appear as the 14-episode Science off the Sphere video series. Weather related travel cancellations made it impossible for him to attend the meeting. The APS team members, Becky Thompson and James Roche, were able to present information on Pettit’s work and shared some of his videos.



Sir Michael Berry received the Richtmyer Memorial Lecture Award recognizing his communication of the beauty of quantum mechanics to broad audiences. His lecture, *How Quantum Physics Democratized Music*, was an entertaining and historic look at connections between physics and technological invention and aspects of human life with examples ranging from music to the color of gold. At the end of the session AAPT member, Sharon Rosell from Central Washington University, received the SPS Outstanding Chapter Advisor Award.

Phillip Metzger, a NASA physicist and lab manager at Kennedy Space Center, spoke on *Preparing Physicists for the Industrial Revolution in Space*. He projects that advances in robotics during the coming decades will revolutionize the human experience in many ways including explosive economic growth, resulting in a civilization that goes far beyond a single planet. Physicists are already playing a central role and this expansion will make teaching physics more important than ever.

The Oersted Medal was presented on Dean Zollman on Tuesday. In his talk, *Physics Education Research and Teaching modern Modern Physics*, Zollman addressed the use of the term “modern” and the differences in perspective for older physicists and students who were born after 1995. When teachers consider teaching Modern Physics they are challenged with deciding what the content should be, how to adjust for the ever increasing information on how students learn physics, and the constantly changing tools that are available for teaching and learning.

The Presidential Transfer session began with the recognition of four members who received Homer L Dodge Citation for Distinguished Service to AAPT. President Gay Stewart spoke about ways AAPT has grown and changed during her time as president then turned the gavel over to Steve Iona, the incoming president.

Later that day attendees participated in the annual Symposium on Physics Education and Public Policy. The 2014 Symposium was partially sponsored by funds contributed to the Memorial fund in memory of Mario Iona. 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, and SPS Awards Reception and the semi-annual Fun Run/Walk, benefiting the Melba Phillips Medal Fund.

Poster sessions are always popular and this Winter Meeting provided opportunities for posters 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

MacKenzie Stetzer, Chair

Stephen Kanim, Vice Chair

Stamatis Vokos, Treasurer

Hunter G. Close, ex officio

(chair of AAPT Research in Physics
Education Committee)

ORGANIZING COMMITTEE

Leslie Atkins, California State University
Chico

Mel Sabella, Chicago State University

Eleanor C. Sayre, Kansas State University

Ben Van Dusen, University of Colorado-
Boulder

PER Conference 2014—Minneapolis, Minnesota

July 30 - 31, 2014

Outpacing New Technologies with Novel Pedagogies: The Role of PER in the Transforming Landscape of Higher Education

(305 attendees)

Plenary sessions:

AAPT/PERC Bridging Session: *Apples and Oranges: Comparing a MOOC with a Standard Class*, Michael Dubson, University of Colorado Boulder

Technology and Instructional Reform in STEM Education: Beyond the Classroom, James S. Fairweather, Michigan State University

From Cognitive Science to Physics Education and Back, Kenneth R. Koedinger, Carnegie Mellon University

A Synthesis and Wrap Up of PERC 2014, Carl E. Wieman, Stanford University

National Meetings

JULY 26-30
AAPT 2014
PHYSICS EDUCATION
SUMMER MEETING MINNEAPOLIS, MN

SUMMER MEETING

July 26–30, Minneapolis, MN

Statistics:

There were 1,225 attendees, 235 exhibitors, 75 sessions, 46 workshops, 2 tutorials, and 230 posters.

Program Committee Chair

Mary E. Mogge

Paper Sorters:

Janelle Bailey, Vice President of AAPT
Kathy Harper, Committee on Research in Physics Education
Leon Hsu, Committee on Research in Physics Education
Toni Saucy, Society of Physics Students
Kendra Sibbernson, Committee on Physics in Two-Year Colleges

Local organizers:

Ken Heller, Sean Albiston, Brian Andersson, and Leon Hsu,
University of Minnesota

Plenaries

James Kakalios, Professor, University of Minnesota, the author of “The Physics of Superheroes” and “The Amazing Story of Quantum Mechanics,” delivered a memorable plenary, *The Uncanny Physics of Superhero Comic Books*. His talk was followed by an author signing event for those who wanted to purchase copies of his books.

The APS Plenary, sponsored by the Division of Particles and Fields, featured three speakers from the University of Minnesota School of Physics and Astronomy, “Physics at the CERN Large Hadron Collider, the Past, the Present, and the Future” by Roger Rusack; “Explorations in the Cosmic Frontier: Shedding Light on the Dark?” by Clem Pryke; and “The Turn of the Screw: A Chilling Ghost Story of Nature’s Most unusual Fermion,” by Dan Cronin-Hennessy.

Eugenia Etkina, Rutgers University Professor of Physics received the Millikan Medal for her notable and creative contributions to the teaching of physics. Her talk, Students of Physics: Listeners, Observers, or Collaborative Participants, was delivered to a full house of enthusiastic physics participants.

The Klopsteg Memorial Lecture Award was given to Donald Olson from Texas State University, San Marcos. He spoke on, *Celestial Sleuth: Using Physics and Astronomy to Solve Mysteries in Art, History and Literature*.

The David Halliday and Robert Resnick Award for Excellence in Undergraduate Physics Teaching was shared by Bruce Sherwood and Ruth Chabay. Their talk was *Inviting Students Into the 21st Century*.

Bradford Hill from Southridge High School in Beaverton Oregon was the recipient of the Paul W. Zitzewitz Award for Excellence in Pre-College Physics Teaching. His talk, *Citizen Science: Harnessing Physics to Advance Science and Mathematical Literacy*, encouraged teachers to actively promote the Citizen Science program.

The Summer 2014 recipients of the Homer L. Dodge Citations for Distinguished Service to AAPT were Paul J. (Joe) Heafner, Catawba Valley Community College; Martha Lietz, Niles West High School; Dyan Jones, Mercyhurst University; and Evelyn Restivo, Texas AAPT.

Highlights

The 2014 Summer Meeting celebrated the fun of physics and physics teaching. The University of Minnesota was a great on-campus venue, with workshops and sessions being held in university buildings. The meeting was a time to meet with old friends and make new ones.

Attendees were able to participate in some great pre- and post-meeting events. PTRA held a pre-conference Summer Leadership Institute, the Two-Year College community held a New Faculty Training Experience and the Workshop for Experienced Physics and Astronomy Faculty brought together faculty and workshop leaders in an interactive learning opportunity.

The post-meeting PER Conference was focused on the theme, “*Outpacing New Technologies with Novel Pedagogies: The Role of PER in Transforming Landscape of Higher Education*.” Special events began Sunday with the evening Opening Reception. Monday was the High School Teachers’ Day and the schedule was packed with events and sessions of particular interest to high school teachers. Also on Monday were the First Timers Gathering, Early Career Professionals Speed Networking, and the Melba Toast Book Signing event featuring authors in AAPT’s *Women In Physics* publication. Tuesday included the semi-annual Fun Run/Walk, Trolley Tour of Minneapolis, Pub Crawl and Demo Show featuring the University of Minnesota K-12 outreach program, Physics Force.



Workshops and Programs

WORKSHOP FOR NEW PHYSICS AND ASTRONOMY FACULTY

*June 23-26, 2014 and
November 13-16, 2014*

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 248 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/



workshop for
new physics and
astronomy faculty

PHYSICS TEACHER RESOURCE AGENTS (AAPT/PTRA) PROGRAM

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



In 2014 PTRAs launched a new website on aapt.org that includes history and contact information, a blog, a Facebook page, and links to teaching resources, projects, institutes, and workshops.

Workshops were held during the AAPT 2014 Summer Institute held in conjunction with the AAPT Summer Meeting in Minneapolis, Minnesota.

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.

**AAPT
PTRAs**

2014 PTRAs COMMITTEE

Karen Jo Matsler, Program Director

OVERSIGHT COMMITTEE

Pat Callahan, Larry Cook, Elaine Gwinn, Lillian C. McDermott, Robert Morse, Steve Shropshire, Chitra Solomonson,

2014 UNITED STATES PHYSICS TEAM

Read more at: www.aapt.org/physicsteam/2014

The top twenty physics students from across the U.S. were identified through a rigorous exam process that began in January with approximately 4,000 students who participated in the Fnet=ma exam to become the 2014 U.S. Physics Team (<http://www.aapt.org/physicsteam/team.cfm>). These students continued to train at a 10-day Training Camp for the mentally grueling exams and lab tests they faced at the 45th International Physics Olympiad, held July 13 to 21 in Astana, Kazakhstan.

Medals were won by Kevin Fei, Gold; Calvin Huang, Gold; Vikram Sundar, Gold; Alexander Bourzutschky, Silver; and Michael Winer, Gold.

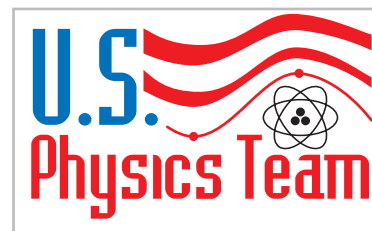
U.S. TEAM MEMBERS

Alexander Bourzutschky, Montgomery Blair High School, Silver Spring, MD; Eric Chen, Canyon Crest Academy, San Diego, CA;

Kevin Fei, Carmel High School, Carmel, IN; Calvin Huang, Henry M. Gunn High School, Palo Alto, CA; Youbin Kim, Stuyvesant High School, New York, NY; Rohan Kodialam, High Technology High School, Lincroft, NJ; Celine Liang, Saratoga High School, Saratoga, CA; Grace Lin, Palo Alto High School, Palo Alto, CA; Kelvin Lu, Mission San Jose High School, Fremont, CA; Christina Pan, Monta Vista High School, Cupertino, CA; Jared Schaumann, John Foster Dulles High School, Sugar Land, TX; Rahul Sridhar, The Harker School, San Jose, CA; Vikram Sundar, The Harker School, San Jose, CA; Alexandr Wang, Los Alamos High School, Los Alamos, NM; Michael Winer, Montgomery Blair High School, Silver Spring, MD; Andrew Zhang, The Harker School, San Jose, CA; Liang Zhou, John W. North High School, Riverside, CA; Kevin Zhu, The Harker School, San Jose, CA; Licheng Zhu, Adlai Stevenson High School, Lincolnshire, IL



The traveling team, from left to right, Coach Paul Stanley, Calvin Huang, Alexander Bourzutschky, Vikram Sundar, Kevin Fei, Michael Winer, David Fallest. The team brought home three gold medals and two silver medals.



DIRECTOR

Paul Stanley, Beloit College

ACADEMIC COACHES

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

PHYSICS BOWL SPONSORS

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Klammer, Andrzej Sokolowski, and
Courtney Willis

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. 2014 was the first year China participated.

2014 TOP 10 OVERALL WINNERS

#	SCORE	STUDENT, SCHOOL, CITY, STATE
1	40	Aneesh V. Samineni, The King's Academy, Sunnyvale, CA
2	39	Karan Singhal, Brown Academy, Great Neck, NY
3	38	Kelvin Lu, Mission San Jose HS, Fremont, CA
4	36	Stephen Liu, Bayview Secondary School, Richmond Hill, ON
5	36	Junhao Liang, Guangdong Country Gardne School, Foshan, China
6	36	Justin H Yim, Vernon Hills HS, Vernon Hills, IL
7	35	Leon M Kim, Thomas Jefferson HSST, Alexandria, VA
8	35	Ross Dempsey, Thomas Jefferson HSST, Alexandria, VA
9	35	Taowen Huang, China-UK College, Shenzhen, China
10	35	Brendan S Yap, Carmel HS, Carmel, IN

2014 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 nearly 1,000 submissions, the 100 finalist photos were selected, displayed, and judged during the 2014 Summer Meeting. See www.aapt.org/Programs/contests/winners.cfm?theyear=2014 for information on the following overall winners of 2014.



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

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

FIRST



SECOND



SECOND

THIRD



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>.



INTERNATIONAL SCIENCE AND ENGINEERING FAIR

May 11-16, 2014 in Los Angeles, California

AAPT/APS Special Awards in Physics and Astronomy at the International Science and Engineering Fair (ISEF) were announced during the awards ceremony at the conclusion of the fair. The competition, held in a different city each May, is the only international science project competition for students in grades 9 through 12. Students qualify to compete by participating in school, local, regional, and/or state science fairs.

Top award winners receive a one-year AAPT and APS student membership, a certificate from both AAPT and APS, as well as subscriptions to AAPT's *The Physics Teacher* and select APS journals. Each sponsoring teacher of a student who receives an AAPT and APS award also receives a certificate.

Judges: Donald Franklin and Dwain Desbien

FIRST AWARD OF \$1,200

First Award of \$1,200

Spectral Smartphone: Rapid Prototyping Mobile Platform Diffraction Spectrophotometry

*Allen Jiang, 16,
DuPont Manual High School,
Louisville, Kentucky*

SECOND AWARD OF \$800

Nova Delphini 2013: A Backyard Analysis of a Classical Nova

*Piper Michelle Reid, 17,
Dripping Springs High School,
Dripping Springs, Texas*

THIRD AWARD OF \$500

Holes Can Lift: A Continuing Study of the Separation Effects of Airfoil Slots

*Sarah Nicole Hancock, 16,
Clear Horizons Early College
High School, Houston, Texas
Kate Rutherford, 17,
Clear Horizons Early College
High School, Houston, Texas*

CERTIFICATE OF HONORABLE MENTION

Rocks of the Rainbow: Asteroid Classification Using SDSS Filters

*Stephanie Hiromi Spear, 16, Henry J. Kaiser High School,
Honolulu, Hawaii*

Novel Automated Next-Generation Multijunction Quantum Dot Solar Panel Designs Using Monte Carlo-Based Modeling

Valerie S. Ding, 17, Catlin Gabel School, Portland, Oregon

Piezoforce Imaging of Confined Oxide Nanowires

*Akash Levy, 17, Taylor Allderdice High School, Pittsburgh,
Pennsylvania*

PHYSICS DAYS AT NSTA

Local AAPT Sections hosted Physics Day at nearby NSTA area meetings held in Richmond, Virginia, Orlando Florida and Long Beach, California.

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.

FIVE NEW FUNDED SITES JOIN PHYSTECH PROGRAM

PhysTEC recently selected nine sites to receive recruiting grants in order to explore a new approach for engaging institutions in increasing the number of high school physics teachers. Recruiting grants of up to \$10,000 per year for three years were awarded with a goal of establishing a cohort of institutions focused solely on developing successful recruiting strategies that can be implemented at a wide variety of institutions, especially those with bachelor's granting physics departments.

The sites awarded include Boise State University; Bowdoin College; East Tennessee State University; Indiana University, South Bend; Northwest Oklahoma State University (a multi-institution site); Salisbury State University; Sonoma State University; University of Massachusetts Dartmouth; and University of Wyoming.

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.



PHYSTECH GRADUATES ARE MORE DIVERSE THAN PHYSICS TEACHER WORKFORCE

PhysTEC teachers are more racially and ethnically diverse than the overall US physics teacher workforce. A survey of PhysTEC graduates indicates they include 12% underrepresented minorities (URM), as shown in the upper bar graph on the right. The American Institute of Physics reports that only 5% of US physics teachers are URM (lower graph), which is out of step with the rapidly growing population of URM students taking physics. (Following the AIP convention for sake of comparison, those who do not self-identify as White or Asian are considered to be URM.) According to the Integrated Postsecondary Education Data System (IPEDS), URM students earn 9.5% of physics bachelor's degrees and 21% of all bachelor's degrees. The PhysTEC project has worked with minority-serving institutions to improve physics teacher education; eight of the 41 supported sites fall into this category.

2014 PHYSTECH CONFERENCE

Building Leadership

The 2014 Physics Teacher Education Coalition Conference, a joint effort of AAPT and APS, was held May 19-20 in conjunction with the UTeach Institute Annual Conference in Austin Texas. The conference is the largest gathering in the country dedicated to physics teacher preparation, and was attended by 100 physics teacher educators, most of whom were physics faculty.

The theme of the conference was "Building Leadership." Session leaders brought the theme to life with examples of programs that provide preservice physics teachers with valuable teaching and research experiences.

Arthur Levin of the Woodrow Wilson Foundation presented the joint plenary talk for both conferences, focusing on the power of forces such as demographics, government policy, and technology privatization to shape the future of STEM teacher preparation.

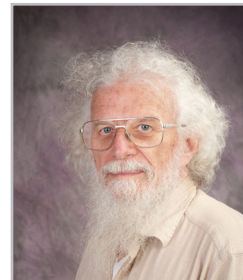
PhysTEC plenaries were given by David Meltzer of Arizona State University, Nicole Gillespie of the Knowles Science Teaching Foundation (KTSF), and Susan Singer of the National Science Foundation. Presentations from the conference are available at <http://www.ptec.org/conferences/2014/schedule.cfm>.

2014 Awards and Grants

HANS CHRISTIAN OERSTED MEDAL

Dean Zollman, Kansas State University

Physics Education Research and Teaching Modern Modern Physics



The Oersted Medal for 2014 is presented to Dean Zollman in recognition of his significant contributions to physics education research and mentoring of a generation of PER researchers. Zollman earned his BS and MS in Physics from Indiana University, Bloomington. His PhD in Theoretical Nuclear Physics was earned at the University of Maryland, College Park. He started his career as Assistant Professor at Kansas State University in 1970, becoming Associate Professor (1977), Professor (1982), Distinguished University Teaching Scholar (1997), University Distinguished Professor (2001), and Head of the Department of Physics and William and Joan Porter Professor from 2001 to 2011.

Zollman has achieved many of the milestones considered indicative of an intellectual giant in the physics education field—rising up the academic ladder to spend over 30 years as a full professor, authoring an extensive record of research publications with dozens of co-authors, securing an impressive record of consistent extramural funding for over three decades, and mentoring a long list of students and postdocs who have gone on to establish themselves in the field.

His contributions to physics are threefold—a dedicated pursuit to the application of advanced technologies to bring the beauty of physics to all learners, an unwavering commitment to mentoring his protégés long after they leave school to find their own way in the world, and continuing physics education research and the impact of that research on the teaching and learning of physics.

The full press release is available at http://www.aapt.org/aboutaapt/zollman_oersted-pr20130930.cfm.

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

ROBERT A. MILLIKAN MEDAL

Eugenia Etkina, Rutgers University

New Brunswick, NJ

Students of Physics: Listeners, Observers, or Collaborative Participants?



The Robert A. Millikan Medal for 2014 is presented to Eugenia Etkina for her notable and creative contributions to the teaching of physics. Etkina started her teaching career as a high school physics teacher in Moscow, Russia, where she taught for 13 years before coming to the U.S. In 1995-1997 she taught physics courses for at-risk students at Rutgers University. In 1997 she received her PhD in physics education from Moscow State Pedagogical University and was appointed an assistant professor at the Rutgers University Graduate School of Education. She became an associate professor in 2003 and a full professor in 2010 and served as the chair of the Department of Learning and Teaching from 2011 to 2014.

Since 2003 she has been running one of the largest programs in physics teacher preparation in the United States. Professional learning community of the program graduates now has over 60 physics teachers. Her pivotal role in sustaining and expanding this community is evidenced by the moniker that her New Jersey physics teachers use for themselves. Etkina is involved in reforms in undergraduate physics courses and in the professional development programs for in-service middle school science and high school physics teachers. The full press release is available online at http://www.aapt.org/aboutaapt/EugeniaEtkina_2014Millikan.cfm

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

2014 Awards and Grants (cont.)



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

Ruth Chabay and Bruce Sherwood
Inviting Students Into the 21st Century



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.

The 2014 David Halliday and Robert Resnick Award for Excellence in Undergraduate Physics Teaching was presented jointly to Ruth Chabay and Bruce Sherwood, in recognition of their contributions to undergraduate physics teaching and their extraordinary accomplishments in communicating the excitement of physics to students. John Wiley & Sons is the principal source of funding for this award.

Both Chabay and Sherwood have made great contributions to the modernization of the introductory, calculus based Physics curriculum by authoring the Matter & Interactions textbook published by John Wiley & Sons, which integrates contemporary and classical physics by making macro-micro connections and emphasizing fundamental principles. They have played a major role in developing the VPython interactive 3D programming environment and integrating computational modeling into the introductory physics curriculum. Their goal has been to help students acquire the conceptual and computational skills to be able to apply fundamental physical principles to complex real-world systems. The full press release is available at http://www.aapt.org/aboutaapt/Chabay_Sherwood_2014-Halliday-Resnick-Award.cfm.

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

Bradford Hill, Southridge High School, Beaverton, Oregon
Citizen Science; Harnessing Physics to Advance Science and Mathematical Literacy



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.

Hill began teaching physics at Southridge High School in 2006. He now facilitates a district-wide collaboration of physics teachers. He was a Knowles Science Teaching Mentor from 2009-2011 and was selected to help draft, align, create and test rubrics for the new Oregon state science Standards in 2009. He currently is on the Oregon Science Content Panel as Oregon considers adopting the Next Generation of Science Standards. He received the 2013 Outstanding Classroom Science Teacher Award from the Oregon Science Teachers Association.

From 2012 – 2014 he performed original research in the Physics Department at Portland State University on characterizing dark current in Charged-Coupled Devices, under a Partners in Science Grant from the M. J. Murdock Charitable Trust.

Bradford develops, tests, and openly shares a curriculum he calls the Patterns Approach which meets the high standards of the NGSS. This approach introduces students to the power of recognizing patterns to make sense of novel situations from the very beginning of the course and engages them in high level inquiry and problem solving. He was so successful using this approach with ninth grade students, that it was adopted district wide.

Read the full press release at http://www.aapt.org/aboutaapt/BradfordHill_2014Zitzewitz.cfm.

2014 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

Don W. Olson, Texas State University, San Marcos, TX
Celestial Sleuth: Using Physics and Astronomy to Solve Mysteries in Art, History, and Literature



Don Olson is nationally known for his ability to apply physics to solve mysteries in art, history, and literature - and to communicate the results to the public in a coherent, exciting way. His work has been published in more than thirty articles in *Sky & Telescope* magazine and has been featured in the *Smithsonian Magazine*, *Scientific American*, and a host of major newspapers. Olson's recent book, *Celestial Sleuth* (Springer, 2014), collects his research in chapters devoted to night sky paintings by Vincent van Gogh, Edward Munch, Claude Monet, and J. M. W. Turner, moonrise photographs by Ansel Adams, events from military history ranging from the Battle of Marathon to moonlight and tides during World War II, and references to celestial phenomena by Chaucer, Shakespeare, Mary Shelley, Walt Whitman, and James Joyce.

Olson earned his BS in physics from Michigan State University, receiving upon graduation the Thomas H. Osgood Undergraduate Physics Award—an award named after the professor who was an early editor of the *American Journal of Physics* and the inspirational teacher in the first physics courses that Olson took at MSU. After earning his PhD in physics from the University of California-Berkeley, Olson studied galaxies and cosmology for four years at Cornell University and two years at the University of Texas at Austin, and he then began teaching at Texas State University in 1981. He has received many teaching awards during his career, including the 2011 Presidential Award for Excellence in Teaching, Texas State's top teaching award.

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 2014



Jan Mader has been a physics instructor in the Great Falls Public Schools, where she has also taught physical science, chemistry, and mathematics, for more than 30 years. She has been one of the catalysts for increasing high school enrollment in physics in the United States for the past 15 years. It is no understatement to say that due to her work with the PTRA program, Prisms, and other physics education initiatives, Jan is probably the best known and most widely respected high school physics teacher in the Northwest United States. Her willingness to share her expertise has helped develop a cadre of new teachers that will continue to improve physics education in the United States. Her service to AAPT has included service as President of the Montana Section, as a Physics Teaching Resource Agent (PTRA) since 2002, membership on the Committee on Physics in Pre-High School Education, Committee on Science Education for the Public, the AAPT Nominating Committee, and the Committee on Physics in High Schools, which she has chaired twice. She was the first female recipient of the AAPT Excellence in Pre College Physics Teaching Award and co-recipient of American Physical Society (APS) 2011 Excellence in Physics Education Award given to PTRA “for providing peer-led professional development for 25 years to more than 5000 physics and physical science teachers nationwide through a network of more than 500 master teachers.”

2014 Awards and Grants (cont.)



Taha Mzoughi is Professor of Physics at Kennesaw State University. He earned his PhD in Physics from the University of South Carolina, Columbia in 1990. He is devoted to the cause of physics literacy and has been energetically working in physics education for the last two decades. His experience covers both high school physics teaching and university teaching. Before moving to the Atlanta area as a faculty member at Kennesaw State, he was the co-PI of the National Science Foundation (NSF) funded “WebTOP” project which involved 3D interactive simulations of optical phenomena at the Mississippi State University. Taha has been a long-time member of AAPT and served as a member of the Committee on Educational Technologies, which he chaired in 2010-2011 and the Committee on Research in Physics Education. He worked with ComPADRE for which he helped start The PhysicsSource, the collection for undergraduate physics teaching. He also served in the Mississippi Association of Physicists, the Mississippi section of AAPT. Upon moving to Atlanta, he became an integral part of the Southern Atlantic Coast Section-AAPT serving as the webmaster and, most recently as president of this section. He is also very involved with the Metropolitan Atlanta Physics Teacher Group. He has been the most involved with both pre-service and in-service physics high school teachers and this is, perhaps, the greatest need to promote sustainable physics literacy in our society.



Gabriel C. Spalding is Professor of Physics at Illinois Wesleyan University, where his recent work has utilized holographically textured fields to trap and manipulate matter. Besides being a past member and Chair of the AAPT Committee on Laboratories, he has been active on multiple AAPT committees as either a committee member or friend of the committee. He has been an organizer or contributor to a session at nearly every AAPT semi-annual national meeting for years. He has also been active behind the scenes and on task forces and subcommittees, and served on the AAPT Nominating Committee during 2012-13. His time and energy support advances in physics education and lab education in particular. In July 2012, he chaired the conference on laboratory instruction Beyond the First Year (thereby introducing the “BFY” acronym) at the University of Pennsylvania and Drexel University. This was an extremely unusual opportunity for hands-on exposure to a broad assortment of contemporary instructional labs appropriate to Modern Physics Labs, Electronics, Optics, Advanced Labs, as well as key instructional labs in Statistical Physics, Condensed Matter and Materials Physics, Quantum Mechanics, etc.



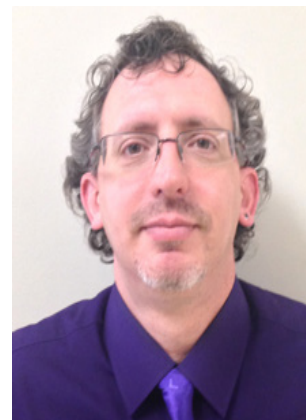
Lee Trampleasure teaches physics and physical science at Carondelet High School in Concord, CA. A practitioner of the Modeling Method of Instruction and an experienced Modeling Workshop leader, he uses model construction, testing, and application in his classroom to frame student thinking and learning. He identifies his major classroom accomplishments as integration of computers and technology in teaching, development of labs and field trips, and integration of music and theater into course curricula. He serves as Section Representative for the Northern California/Nevada Section. In this role he not only represents the members of his section at AAPT National Meetings, he also serves as a valued and contributing member of the Section Representatives group. This group is part of the AAPT Council, part of the association’s governance. He has volunteered to assist other sections in setting up section websites. Lee has attended several National AAPT meetings and has presented sessions and led workshops at both the local and national level. He is not only committed to teaching physics well, he is committed to supporting his fellow physics teachers through his leadership in NCNAAPT and mentoring new teachers.

2014 Awards and Grants (cont.)

HOMER L. DODGE CITATIONS FOR DISTINGUISHED SERVICE TO AAPT

Summer Meeting 2014

Paul J. (Joe) Heafner is Instructor of Astronomy and Physics at Catawba Valley Community College, Hickory, NC. He earned his Master of Science degree in physics at the University of North Carolina at Greensboro and his BA in astronomy at the University of North Carolina at Chapel Hill. An AAPT member since 2000, Heafner has been active in the North Carolina Section, and has served on the AAPT Committee on Space Science and Astronomy, chairing the committee in 2013. He served on the Programs Committee in 2013 and is an active member of the Committee on Physics in Two-year Colleges.



Dyan Jones, Assistant Professor of Physics at Mercyhurst University, Erie, PA, has been an active member of AAPT for nearly a decade. She did her undergraduate work at Edinboro University of PA, which is where she attended her first AAPT regional meeting. She graduated from Edinboro with a bachelors in theoretical physics in 1999. Following graduation she started her graduate studies at Miami University, working with Dr. Perry Rice on theoretical cavity QED. Jones received her MS in Physics in 2005.



While she loved theoretical quantum physics, she preferred being in the classroom and went on to doctoral studies at Kansas State University under the advisement of Dr. Dean Zollman in the physics education research group. She received her PhD in 2009. Jones has served as a member, Vice Chair, and Chair of the AAPT Committee on Professional Concerns, as a member and Chair of the Nominating Committee, and as a Committee Member of the Committee on Physics in Undergraduate Education. She serves as a member of the AAPT Membership & Benefits Advisory Committee and is active in the Western Pennsylvania Section as the Section Representative.

Matha Lietz, a National Board Certified Teacher (Adolescents and Young Adults: Science-Physics) has her MS in Physics from Carnegie Mellon University. She teaches science at Niles West High School in Skokie, IL, and serves as an AP Consultant for the College Board and Educational Testing Service. A member of AAPT since 1989, Lietz has served on the Committee of Computers in Physics Education, the Committee on Educational Technologies, the Committee on Physics in High Schools, and as a member of the Editorial Board for *The Physics Teacher*. She has also served as President and Section Representative for the Chicago Section. Lietz has presented workshops at AAPT national meetings, local section meetings, through the PTRA program and for the College Board. She has presented numerous papers and published articles in *The Physics Teacher*.



Evelyn Restivo has been an active member of AAPT since 1985 serving as a role model for pre-service and inservice teachers through many different venues. She teaches students at all levels from high school through college in both chemistry and physics. She has worked tirelessly for PTRA, TSAAPT, and AAPT through countless workshops as both a leader and a co-presenter.

A dedicated contributor to physics teaching in Texas for decades, she has served the Texas Section as President and as the TSAAPT liaison to Science Teachers Association of Texas. She has presented the Physics strand annually at the Conference for the Advancement of Science Teaching, a gathering of several thousand science teachers in Texas. She has also been a major contributor to Quarknet. In 2012, Restivo was the recipient of the Texas Section of the American Association of Physics Teachers Katherine Mays Award for Outstanding Contributions to Physics Education.



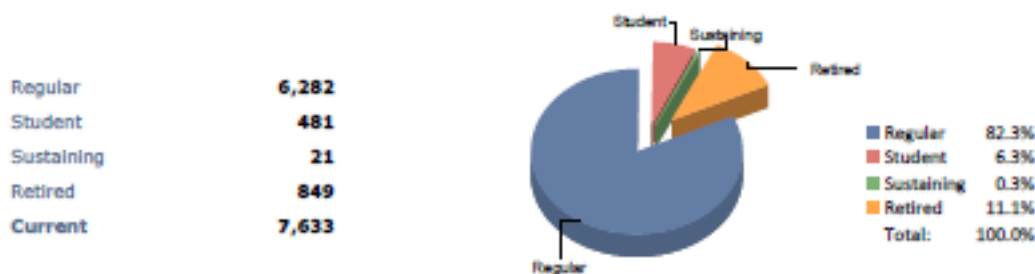
AAPT-ALPHA Award

AAPT and ALPhA (Advanced Laboratory Physics Association) announced the AAPT-ALPhA Award. The award was established to recognize outstanding work in the development of an advanced laboratory apparatus/experiment by an undergraduate physics student at his/her home institution within the greater United States. The award will go to a student (or team of students) who build an experiment new to their own department. National recognition of these projects will encourage their proliferation and help build the next generation of experimental physicists and educators, and leaves a legacy for future students an advanced laboratory experiment. It is anticipated that the first award will be presented at the 2016 AAPT Winter Meeting in New Orleans. More information about the award is available at http://www.aapt.org/Programs/grants/aapt_alpha_award.cfm.

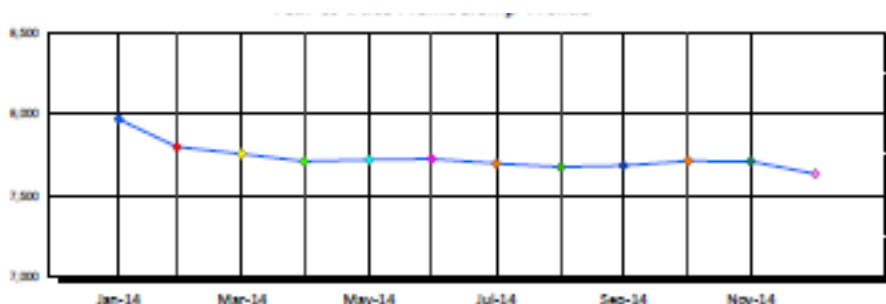
Membership

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, 2014)

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Committees are essential to AAPT.

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

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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, 2014 (With comparative totals for 2013)

	DECEMBER 2014	DECEMBER 2013
ASSETS		
Cash and Cash Equivalents	\$590,291	\$604,759
Investments	5,404,895	4,836,042
Receivables, Net		
Grants	596,678	485,393
Due from affiliate	39,831	43,580
Membership	961,407	738,872
Inventory	99,446	85,092
Prepaid Expenses	175,694	79,878
Investment in ACP	433,823	355,223
Property and Equipment, Net	29,399	21,813
TOTAL ASSETS	8,331,464	7,250,652
	DECEMBER 2014	DECEMBER 2013
LIABILITIES & NET ASSETS		
LIABILITIES		
Accounts Payable and Accrued Expenses	284,606	\$242,525
Accrued Payroll and Related Liabilities	158,214	130,139
Unearned Revenue	2,413,952	2,377,018
Deferred Compensation Obligation	12,600	477
Accrued Postretirement Benefit Obligation	465,295	451,524
TOTAL LIABILITIES	3,334,667	3,201,683
NET ASSETS		
Unrestricted		
Undesignated	3,805,564	2,902,480
Board designated	194,341	192,427
	3,999,905	3,094,907
Temporarily Restricted	508,657	465,827
Permanently Restricted	488,235	488,235
	4,996,797	4,048,969
TOTAL LIABILITIES & NET ASSETS	\$8,331,464	\$7,250,652

Statement of Activities—Year Ended December 31, 2014 (With Comparative Totals for 2013)

	UNRESTRICTED			2014 TOTAL	2013 TOTAL
	UNDESIGNATED	BOARD DESIGNATED	TEMP RESTRICTED		
REVENUE & SUPPORT					
American Journal of Physics	\$1,664,091	-	-	1,664,091	\$1,677,302
The Physics Teacher	1,005,762	-	-	1,005,762	1,006,231
Membership	902,420	-	-	902,420	915,129
Meetings, workshops and projects	897,356	-	-	897,356	862,128
Grants	680,077	-	-	680,077	680,241
Investment Income (Loss)	225,645	5,795	65,207	296,647	607,815
Other Publications	213,258	-	-	213,258	232,840
International Physics Olympiad	132,164	-	-	132,164	118,758
Share in earnings of investment in ACP	78,600	-	-	78,600	66,925
Contributions	55,444	681	14,114	70,239	61,076
Miscellaneous Income	1,427	-	-	1,427	3,668
Net assets released from restrictions	41,053	(4,562)	(36,491)	-	-
TOTAL REVENUE AND SUPPORT	5,897,297	1,914	42,830	5,942,041	6,232,113
EXPENSES					
Program Services:					
American Journal of Physics	\$698,389	-	-	\$698,389	\$720,604
The Physics Teacher	732,522	-	-	732,522	697,076
Memberships	897,370	-	-	897,370	834,455
Meetings, workshops and projects	1,176,696	-	-	1,176,696	1,114,421
Grants	680,339	-	-	680,339	695,186
Other Publications	704,380	-	-	704,380	959,662
Support services:					
General and administrative	99,004	-	-	99,004	105,516
Fundraising	5,513	-	-	5,513	13,325
TOTAL EXPENSES	4,994,213	-	-	4,994,213	5,140,245
CHANGE IN NET ASSETS	903,084	1,914	42,830	947,828	1,091,868
Net Assets:					
Beginning	2,902,480	193,427	465,827	4,048,969	2,957,101
ENDING	\$3,805,564	\$194,341	\$508,657	\$4,996,797	\$4,048,969

2014 In Memoriam

AAPT Member & Physics Community Obituaries

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

Mostafe Mark Dokhanian

JANUARY 25, 2014

Alabama A&M professor, Mostafe Dokhanian, professor of physics for more than 22 years died of natural causes. Dokhanian wrote the grant proposal that resulted in an \$8 million award from the National Science Foundation in 2012 to fund the Alliance for Physics Excellence (APEX) project.

Robert Resnick

JANUARY 29, 2014

Bob served in the Presidential Chain of the American Association of Physics Teachers from 1986 to 1989. He was instrumental in helping to train the US Team in the International Physics Olympiad where as Jack Wilson puts it “he was given rock star status.” He was committed to social justice as he quietly and without fanfare significantly increased the diversity of the AAPT leadership by appointing under-represented minorities and women to committee chair positions and to membership on the association’s standing committees.

In his lifetime, Bob received a host of honors and awards including the Oersted Medal (1974) and the Distinguished Service Citation (1967) given by AAPT. In his nomination letter for the Oersted Medal, Harry Meiners, in writing about his influence wrote “..Many, profoundly affected by his example and personality and the articulate nature of his views, and trained by participation in his programs, have already begun to contribute strongly to physics education.” AAPT’s award for Excellence in Undergraduate Physics Teaching was renamed in 2010 as the David Halliday and Robert Resnick Award in recognition of the team’s work on a very successful college-level textbook in introductory physics.

John M. Fowler

APRIL 8, 2014

John had a broad career within the Science Education Community, both as a leader, and author. He was a major influence within the AAPT and within the National Science Teachers Association (NSTA) as well as the science education community at large. He was the recipient of the AAPT Millikan Medal in 1969.

John was the Director of the Commission on College Physics for its eleven-year period. He was also the Founder and Executive Director of the Triangle Coalition for Science and Technology Education as well as Director of Special Projects of the NSTA.

Victor Philippe Henri

APRIL 11, 2014

Victor P. Henri was born in Zurich, Switzerland in 1922. During World War II his work with the Resistance movement led him to Paris and Frederic Joliot-Curie who allowed him to join his lab at the Collège de France. He assisted Joliot with experiments, learned to prepare radioactive elements for Irène Curie’s work, and took courses taught by Joliot and others. He was a member of the American Physical Society, the American Association of Physics Teachers, the European Physical Society, and the Sigma Xi honor society.

John David FitzGibbons

APRIL 27, 2014

John David FitzGibbons (Fitz) joined AAPT in 1956, and attended his first national meeting just a few years after in Chicago. Fitz was extremely active in physics education at the local, state, national, and international levels.

Fitz began his teaching career after serving in the military as a radio operator between the Korean and Vietnamese Wars. He served as a physics education consultant to the New York State Department of Education. Fitz retired in 1992, and along with Joe Drenchko, took over the lecture demonstration and instructional labs at Syracuse University for a year, then graduated to become the world’s oldest TAs. Together, they taught physics to hundreds Syracuse University students over the next ten years. Fitz was a co-founder of the Syracuse University High School Physics Teacher Saturday Morning Workshops, which started in 1993 and continue today.

John G. King

JUNE 14, 2014

Professor emeritus John G. King was an experimental physicist, transformative physics educator, and leader of the MIT Molecular Beams Laboratory in the Research Laboratory for Electronics for 42 years.

A member of AAPT since 1961, John King was the recipient of many honors and awards for contributions to physics and physics education. These include the AAPT Robert Millikan Medal (1965) and the Oersted Medal (2000), the most prestigious award of the American Association of Physics Teachers. Shortly before his death, he was recognized in the inaugural cohort of AAPT Fellows.

Marvin L. Goldberger

NOVEMBER 26, 2014

Goldberger began his career during World War II working on the Manhattan Project as a particle physicist. He worked as a teacher at Princeton University before being named President of California Institute of Technology in 1978. He was a member of AAPT from 1995 until his death.

The Niels Bohr Library and Archives has an interview with Dr. Marvin Goldberger done on February 12, 1986.

American Association of Physics Teachers
One Physics Ellipse • College Park, MD 20704-3845
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