## 2010 in Summary

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**Ex-Officio Member**
Warren W. Hein  
Executive Officer  
College Park, MD
The year 2010 has been both challenging and rewarding for AAPT. I will begin by commenting on several accomplishments of the past year. Other ways in which AAPT strives to fulfill its mission are described later in this report.

First, and most significantly, we hired a new executive officer to succeed Warren Hein. The search, begun during the 2009 presidential term of Alex Dickison, concluded in April 2010 when the Board voted to extend an offer to Beth A. Cunningham, Ph.D. Her background and qualifications are described at the URL http://www.aapt.org/aboutaapt/Beth-Cunningham-New-EO-Announcement.cfm. Beth began as Executive Officer Designate on 1 October 2010 and officially became AAPT’s Executive Officer on 1 January 2011. Many of you have had a chance to get acquainted with Beth, either through her internet visits to a few section meetings, at the 2011 Winter Meeting in Jacksonville, or in other venues. I am confident those who have already met her share the enthusiasm with which the Board looks forward to her leadership as AAPT moves forward.

Second, in July 2010, the Board adopted a strategic plan, which is available on the AAPT website from links at the URL http://www.aapt.org/aboutaapt/organization. This plan has been evolving for several years, starting with an Executive Board Retreat in June of 2006 and culminating with a mini-retreat of Area Chairs and Section Representatives at the Washington meeting in January 2010. Special thanks go to former AAPT President Karen Johnston, whose wisdom and guidance as a facilitator at several steps in the generation of the plan helped keep the process moving smoothly forward. This \textit{AAPT Strategic Plan 2010–2013} will provide a focus for AAPT over the next few years. At the same time, we recognize that such plans need to be periodically reviewed and probably adjusted. In Jacksonville, the AAPT Executive Board converted the Committee on Governance Structure, which as a \textit{temporary} committee has shepherded the creation of this strategic plan, into a \textit{permanent} AAPT Advisory Committee. Among the responsibilities of this new Committee will be the periodic review and updating of the Strategic Plan. As in the past, this Committee will be sure to seek broad input each time it addresses that charge.

Third, also in Jacksonville, the Board adopted an updated AAPT Executive Board Handbook. This manual consolidates all information, guidelines, and policies that impact the activities of the Board and the Area and Advisory Committees. It includes:

- the AAPT Constitution and By-Laws (revised in 2000),
- an update of the previous handbook to reflect actions recorded in the minutes of Board meetings and changes in practice since that previous handbook was adopted in 1994,
- a compilation of adopted AAPT Public Policy Statements,
- several appendices containing supplementary information, and
- a section containing a number of historically significant documents and policies.

The Board has charged the AAPT Secretary with updating the handbook annually, thus guaranteeing that the formally adopted handbook will remain current. This was a project of the ad hoc Governance Review Committee, lovingly and extremely competently chaired by Melba Phillips Medal Recipient and past AAPT secretary Mary Beth Monroe. I am confident that this 150-page document (and its annual updates) will be immensely valuable in educating new Board members and in reminding all Board members of their responsibilities. I am also confident that Board members will regularly bless Mary Beth and her Committee for their tireless efforts to research past documents and all Board minutes, meticulously bringing all this information together in one place and alerting the Board to a number of inconsistencies and gaps that have now been addressed.

Fourth, during the past couple of years, current and recent AAPT Program Chairs Jill Marshall, David Sokoloff, and I have been working with Terrence Hunt, Chad Phillips, Marilyn Gardner, Tiffany Hayes, and Cerena Cantrell in the AAPT office to rethink the procedures for gathering information about events planned for national meetings by our Area Committees. Both the underlying data base and the several on-line forms used in the process have been significantly redesigned. In particular, the changes eliminate major opportunities for inconsistent and confusing items to creep into the submitted information. We are confident that, starting with the planning of the winter meeting in 2012, these new forms will make the process much less burdensome for Program Chairs, AAPT staff, and Area Chairs.

Fifth, in the last year, the AAPT Awards Committee has reviewed the descriptions of our awards and, at the recommendation of that Committee, the Board has adopted the slightly revised descriptions that now appear on the AAPT website. Further, thanks to initiatives undertaken by now-retired Executive Officer Warren Hein and to the generosity of the donors, John Wiley and Sons have endowed the David Halliday and Robert Resnick Award for Excellence in Undergraduate Physics Teaching and Paul and Barbara Zitzewitz have endowed the Paul W. Zitzewitz Award for Excellence in Pre-College Physics Teaching. Henceforth these annual awards will no longer be underwritten by funds from the AAPT operating budget.

Sixth, increasingly, AAPT is providing support for appropriate activities funded by governmental and other agencies, frequently in the form of financial management. In some cases, the Executive Officer has the authority to decide whether AAPT should be involved in a particular proposal; in other cases proposals must be reviewed by a Board Advisory Committee named the Review Board, which,
operating under a recently revised charge, recommends a final decision about AAPT involvement to the Board. At the time of the Jacksonville meeting, there were eight active grants and eight submitted and pending proposals. In addition, three proposals were in preparation for submission shortly after that meeting. In particular, AAPT generally receives allocation of indirect costs. Thus, beyond enhancing the AAPT presence in a number of valuable contexts, AAPT involvement provides some income to support the home office.

Finally, during 2010 after a decade of service, Jan Tobochnik communicated to the Board his intention to resign as editor of AJP at the end of his contract. I thank Jan both for his exemplary service as editor and for his kindness in announcing his intention in a way that gives the Board ample time to conduct a thorough and thoughtful search for his successor.

Last year, in his final report, then President Alex Dickison indicated some of the financial challenges that AAPT was facing. AAPT has run a deficit for several of the most recent past years and 2010 was no exception. These financial woes reflect those afflicting many other institutions and are not going away quickly. While the situation is brighter now than it was a year ago, it is still not in absolute terms really bright. Be assured that the Board and our dedicated home office staff are addressing the situation responsibly and effectively. The adopted 2011 budget is an austerity budget, but it does preserve the essential programs and services that define AAPT. Several details of AAPT’s financial situation are revealed on the last few pages of this annual report.

I need to express thanks to a number of individuals who have served AAPT well during the past year, many of whom have served AAPT in past years as well.

- Warren Hein has provided much stability and good sense in the past couple of years especially as the challenges have occasionally seemed daunting. I wish for him a satisfying and relaxing retirement as he moves into the role of senior statesman and valued consultant to AAPT.
- The dedicated staffers in the AAPT home office regularly go the second mile and sometimes even the third mile to make sure that AAPT programs are the best that they can be. I suspect that a very large fraction of our members have no idea how much these staffers do on behalf of AAPT. I urge you to take every opportunity you have to express your thanks.
- AAPT would be much less than it is without numerous dedicated volunteers. I can’t mention them all, but I do want particularly to thank:
  - Marina Milner-Bolotin for her service as Vice-chair of Section Representatives.
  - High School Member-At-Large Elizabeth Chesick
  - Mary Mogge, outgoing Chair of the Section Representatives,
  - Past President Alex Dickison
  all of whom rotated off the Board at the end of the Jacksonville meeting. Each received a framed certificate of appreciation in recognition of his or her now completed service on the Board.
- All those who have served on and those now becoming members of AAPT Area Committees, especially those who have been or will be Chair or Vice-Chair.
- All those who have served or will be serving as Section Officers and Section Representatives.

And I want to welcome a few individuals now joining the Board, specifically:

- Newly elected High School Member-At-Large Diane Rendeau, newly elected AAPT Vice-President Gay Stewart, and newly elected Vice-Chair of Section Representatives Greg Puskar.
- AAPT Secretary Steve Iona, who was elected this past fall for a third—and constitutionally mandated final—two-year term.
- New Chair of Section Representatives Marina Milner-Bolotin, who has already served two years on the Board as Vice-Chair of the Section Representatives.
- New AAPT Executive Officer Beth Cunningham. I am confident that we all stand ready to work with her as together we craft the future of AAPT.

Now I have two requests: First, please vote in our national elections. I am quite surprised that, year after year, only about 1500 of our 9000-10000 members bother to vote. I really hope that the AAPT election of 2010 will be the last election characterized by such a dismal turn out.

Second, please become involved in AAPT, especially in our Area Committees. We depend on the members of our Area Committees to advise the Board on matters related to their areas of focus and for planning events to be mounted at national meetings. In the course of conversations at the recent joint meeting of the Wisconsin and Minnesota AAPT Sections, I was surprised to learn that many of our members are not fully aware that involvement in Area Committees provides a valuable way to contribute to AAPT, that “friends” of the Committees are welcome at Committee meetings, that Area Committees provide the starting point for those who wish to mount sessions or workshops at a national meeting, and that the planning for a given meeting begins a full year ahead of the meeting.

I realize that I am probably making these two requests by preaching to the choir—so please help pass these two requests on to all those you know.

Thanks for allowing me to serve as your President during 2010. It has been a challenging and time-consuming but also rewarding and very pleasant experience. AAPT is blessed with a large number of very committed individuals, and it is a joy to work with them for the future of our organization.
The AAPT Executive Office is pleased to bring you this 2010 Annual Report. This report fulfills several important roles for our organization. First and foremost, it provides a report of the financial status of the organization as of December 31, 2010. Second, it provides a permanent record of the organizational structure as of December 31, 2010, and recognizes the contribution of the many volunteers who give of their time to continue the many programs of AAPT and serve in governance roles in the organization. Third, it is an opportunity to recognize the many donors to AAPT whose contributions support our awards and many of our programs such as the International Physics Olympiad, Physics Days at NSTA Area Conferences, student memberships, and new teacher workshops. Finally, the annual report gives us an opportunity to highlight several of our funded projects and the portfolio of AAPT activities including our meetings and publications.

The Annual Report provides some of the information that previously was provided through the Announcer. Other information that used to appear in the Announcer is now included in the online and onsite Program Guides for each of the annual meetings. The eNOUNCER provides a timely monthly update of information that is useful to our members and provides links to materials that are easily accessible on the AAPT web site or the web sites of other organizations. All electronic information is archived for a permanent record of the association’s activities.

Financial Status
I am pleased to report that AAPT’s financial picture has improved considerably, even though 2010 was still a deficit year in terms of operating budget. The 2010 deficit was significantly smaller than the 2009 deficit and less than a third of the deficits of 2007 and 2008. Much of the 2010 deficit can be traced to economic factors that reduced our institutional subscription revenue due to library cancellations and slower than expected growth in membership. The 2011 operating budget is again a deficit budget, but could easily be balanced if additional grant funds are received through proposals that have recently been submitted. This continues to be a significant concern of the Executive Board and the Executive Office and a number of painful decisions were made that affected Board members and staffing in the office. The 2010 AAPT Audited Financial Report can be found on pages 34-37.

2010 Organizational Structure
AAPT would not exist as an organization without the dedicated services of our many volunteers. In addition to the members of our Executive Board and the Section Representatives who serve on the AAPT Council, AAPT’s 18 Area Committees involve over 160 members in the activities of the organization. Many other volunteers donate their time to conduct various activities such as the High School Photo Contest, the Physics Bowl, the International Physics Olympiad, and serve on committees such as the Committee on Meetings, the Nominating Committee, and the Membership and Benefits Committee. The list of committee members, section representatives and other volunteers begins on page 30.

Donors and Contributors
AAPT depends heavily on the donations of its members to a number of designated funds that support various AAPT programs such as the AAPT awards, the New Teacher Fund, the Student Fund, and to support activities such as the International Physics Olympiad. All of the AAPT awards were established without an endowment for the awards which means that cash prizes and expenses associated with the awards had to come from operating funds or reserves. The Executive Office has begun the process of raising endowments for each of the awards but must rely on donations to the Annual Fund until they are fully endowed. I am very pleased to announce that AAPT received a donation from John Wiley & Sons which substantially endows the Award for Excellence in Undergraduate Physics Teaching. The award has been renamed the David Halliday and Robert Resnick Award for Excellence in Undergraduate Physics Teaching. In addition, we have received a donation from Barbara S. and Paul W. Zitzewitz that fully endows the Award for Excellence in Pre-College Physics Teaching. This award has been renamed the Paul W. Zitzewitz Award for Excellence in Pre-College Physics Teaching.

Although 2010 was a difficult financial year for many of our members, AAPT still received many generous contributions that helped reduce the operating fund deficit beyond what it would have been without your generosity. A list of donors for 2010 can be found on pages 27-29 of this report.

Portfolio of Projects and Programs
On pages 6-26 you will find highlights of a number of our current activities and projects. In addition to our
Retirement Message to AAPT Members

It has been my privilege to serve you, the members of AAPT, for 14 years; first as Associate Executive Officer and as Executive Officer for 28 months. As members of AAPT and as physics educators, we all share the belief that an understanding of physics will enrich the education and future employment prospects of all students. Member, volunteer, and donor support of the organization's goal of "Enhancing the understanding and appreciation of physics through teaching" makes our programs and publications in support of physics education possible. Thank you again for your support.

Sincerely,
Warren H. Hein

It has been my privilege to serve you, the members of AAPT’s NSF-funded projects. Many of these are collaborative projects such as the Workshop for New Physics and Astronomy Faculty that is collaborative with AAS and APS, ComPADRE, which is collaborative with APS and AIP, and PhysTEC which is collaborative with APS. For some of these collaborations AAPT is the fiduciary agent and the recipient of the grant (ComPADRE and new faculty workshop), in other cases APS is the fiduciary agent and recipient of the grant (PhysTEC and Noyce Scholarship). In all cases AAPT works closely with the other physics and astronomy organizations to make the best use of funding received from government agencies and private donors to advance physics and astronomy education at all levels.
The Association completed and approved a new 2010-2013 Strategic Plan. The plan, available in two versions, with strategies (http://www.aapt.org/aboutaapt/organization/upload/101105-Strategic-Plan-Adopted-July-2010-with-strategies_1.pdf) and without strategies (http://www.aapt.org/aboutaapt/organization/upload/101105-Strategic-Plan-AdoptedJuly-2010-without-strategies.pdf), is available for members, sections, and committees to review as they align their programs and activities with the goals of AAPT.

The document reaffirms AAPT’s commitment to its:

**Mission** — To enhance the understanding and appreciation of physics through teaching.

**Vision** — Aspiring to advance the greater good through physics, AAPT strives to be the leading voice, primary resource, advocate of choice, and driving force in physics education, serving professionals who teach physics and support physics teaching at all levels.

**Core Values** — As a member-driven volunteer organization, the AAPT is guided by and committed to the following:

- Promoting excellence in physics education by supporting AAPT members and reaching out to all teachers of physics in their efforts to provide an effective physics learning experience for all students at all levels and in all teaching and learning environments—in the classroom, in the laboratory, and in public settings.
- Publishing exemplary journals (American Journal of Physics and The Physics Teacher) and providing other physics teaching resources that adhere to the highest standards in content, pedagogy, and technology.
- Providing and supporting quality professional development for physics teachers at all levels through meetings, topical conferences, and workshops.
- Supporting and disseminating research into how students learn physics.
- Ensuring excellence in physics instruction by promoting research-based education of future teachers of physics at all levels, elementary through graduate.
- Advocating for physics education at local, state, and national levels.
- Keeping aware of the main issues facing the physics world and of the overarching questions to be tackled by the physics community, and providing a forum for discussion of these issues at National Meetings.

**STRATEGIC GOALS**

The 2010-2013 Strategic Plan includes goals that support the Mission, Vision, and Core Values in key operational areas:

**AAPT MEMBERSHIP** — To be a vibrant professional organization for those who teach physics at all levels. In broad terms, we seek to increase the net number of full dues paying regular members by 2.5% per year for the next five years, from 7,500 regular members in 2009 to 8,485 regular members in 2015.

**AAPT PORTFOLIO: JOURNALS, MEETINGS, PROGRAMS AND AWARDS** — To ensure that AAPT is providing the highest quality member services to support excellence in physics education and meeting the needs of its members. The AAPT will provide regular electronic communications, grants, journals, National Meetings, and awards. In addition to these primary services, the AAPT, individually and in cooperation with other physics and related professional associations, will undertake initiatives that advance the mission and vision of AAPT.

**AAPT OPERATIONAL AND FINANCIAL HEALTH** — To achieve and sustain a balanced operating budget by 2011; Build the Long Term Unrestricted Financial Reserve equal to one year of operating expenses; and Improve the operation and efficiency of the association.

**AAPT SECTIONS AND AFFILIATE GROUPS** — To be a vibrant professional organization dedicated to improving physics education at all levels by working with sections, affiliates, and other local groups.

**AAPT AREA COMMITTEES** — To expand the function that Area Committees serve in the Association to include advising the Executive Board on policy and on development of quality resources (e.g., Guidelines for …) consistent with the Committees’ areas of interest, while continuing the traditional Committee role of developing quality programs for the annual meetings of the Association.
Having a strong publications program enables AAPT members to obtain greater insight into physics and learn about new teaching methods.

**American Journal of Physics**

The *American Journal of Physics* (AJP) continued to inform physics education globally with member subscriptions, institutional subscriptions, such as libraries and physics departments, and consortia agreements. The 6,110 subscriptions served the following education sectors:

- Pre-College 22.1%
- College/University 53.1%
- Student/Unemployed 11.6%
- Non-Teaching 12.2%
- Other 1.0%

The rate of submission to *AJP* is stable at approximately 800 submissions per year. The acceptance rate is about 25%. The upgrade of the online *AJP* website (http://ajp.aapt.org/) hosted by AIP’s Scitation® has been completed.

**Editors**

Jan Tobochnik, *Editor, Kalamazoo College*
Harvey Gould, *Associate Editor, Clark University*

**Resource Letters**

*AJP* periodically publishes Resource Letters on topics that are of interest to college and university physicists, astronomers, and other scientists who wish to improve their courses or to serve as bridges for those who are moving into new areas of teaching or research. Five were published in 2010. Resource Letters Editorial Board: Kimball A. Milton, Rosemary Wyse, Amy Joanne Kolan, Harvey S. Leff, Richard W. Peterson, Jean-Francois S. Van Huele

**Research in Physics Education**

*AJP* also includes research papers that describe findings in the area of physics education research (PER) and are accessible to a broad physics readership. A special section is further devoted to PER papers. In 2010 there were eight papers published.

**Apparatus and Demonstration Notes**

In this section, *AJP* publishes brief communications reporting new demonstrations, laboratory equipment, techniques, or materials of interest to teachers of physics. In 2010, *AJP* published six such reports.

**Book Reviews**

In addition, *AJP* publishes book reviews regularly on physics topics including the history of physics. Twenty-three book reviews appeared in 2010.

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The Physics Teacher

Now in its eleventh year under the editorship of Karl Mamola, 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. Several papers, this year, were supplemented by computer models from the Open Source Physics Collection at ComPADRE’s National Science Digital Library. These articles included a link to the accompanying Java simulation, along with a brief explanation about and screenshot of the model. Work has begun with potential authors to create interactive articles that utilize the next-generation capabilities of the new platform and tools offered with the online version of TPT at http://tpt.aapt.org/

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The Physics Teacher Statistics

- 9 issues—January–May, September–December 2010 (Volume 48)
- 625 pages, 221 reviewers, 116 papers, and 104 contributions to monthly columns (31 international authors/co-authors)—38% acceptance rate
- 9, 276 subscriptions
- Approximately 43% of subscribers teach at the college and university level and 44% teach at the high school level. The remaining 13% are scientists at research facilities, students, and other interested members of the physics community.
- 221 referees
Physical Review Special Topics - Physics Education Research

AAPT is pleased to cosponsor Physical Review Special Topics - Physics Education Research (PRST-PER), a peer-reviewed online open-access journal sponsored by the American Physical Society (APS), the American Association of Physics Teachers (AAPT) and the APS Forum on Education (APS FEd). The articles are published by the American Physical Society under the terms of the Creative Commons Attribution 3.0 License.

The journal covers the full range of experimental and theoretical research on the teaching and/or learning of physics. PRST-PER is distributed without charge and financed by publication charges to the authors or to the authors’ institutions. The criteria for acceptance of articles include the high scholarly and technical standards of our other Physical Review journals. Authors may submit review articles, replication studies, and descriptions of the development and use of new assessment tools. Presentations of research techniques and methodology comparisons/critiques will be considered. You can find PRST online at http://prst-per.aps.org/.

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Term ending 31 December 2013
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- Stamatis Vokos

Physical Review Special Topics 2010 Statistics

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Having strong online publications offers AAPT members convenient access to physics education resources, news, and member benefits. AAPT.org, redesigned in 2009, 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 “Welcome” box that gives new and returning visitors quick links to information that may be pertinent to them. 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 redesign of The Physics Store, and the birth of 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 session/workshop process, area committee reports, awards nominations, online advertising, and member recruitment.
An effort to record, share, and preserve audiovisual “Story Files” is in the works for the 2011 Summer Meeting.

For 2010 aapt.org had:
• 304,412 visits
• 1,244,877 pageviews
• 4.09 pages per visit
• 180,000 new visitors
All from 195 countries/territories
1. U.S.
2. Canada
3. India
4. Pakistan
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:
• www.facebook.com/physicsteachers
• www.twitter.com/physicsteachers
• www.flickr.com/physicsteachers
• www.youtube.com/physicsteachers
• www.ustream.tv/physicsteachers

Google Search
A new google search feature at the top right of every page allows for easy searches yielding more robust results.

Executive Dashboard
A web-based executive dashboard system is being developed to provide AAPT with a method to compare performance goals to actual results. This will allow users to monitor and analyze data originating from the efforts of various departments. Data will be displayed on the user’s desktop using a variety of graphical plots and lists. Data from membership, marketing, finance, programs & conferences, and communications will be available to inform strategic decisions.
eNNOUNCER

The online news publication and email newsletter eNNOUNCER began regular monthly distribution in 2009. The newsletter is published monthly on our website, and distributed to members by e-mail. Issues are published at the beginning of each month. This online-only publication 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. Major sections include organization specific items, action items and notable dates, News from the National Office, Member News, Section News, Recommended Reading, and Science and Education News.

2010 Top AAPT News Stories

Listed below are highlighted news stories for 2010 from the eNNOUNCER. To read the full story go to http://www.aapt.org/aboutaapt/ennouncer/index.cfm.

January
AAPT Executive Office Search
“Why Take Physics” Poster Available

February
Joint AAPT/APS Winter Meeting
Betty Preece SEES Memorial Fund Established

March
President Alex Dickison’s Farewell Address Recorded on UStream
A Call to Action for Teacher Education at 2010 Education Symposium

April
AAPT eMentor Program Announced
Call for Authors for Next Generation Manuscripts

May
New Faculty Training Experience for Two-Year College Faculty Announced

June
2010 U.S. Physics Team Chosen
Summer Meeting Preview

July
Summer 2010 Meeting in Portland, OR
Physics Education Research Conference 2010

August
2010 U.S. Physics Team Wins One Gold, Two Silver, and Three Bronze Medals
2010 High School Photo Contest Winners Announced
Department Chairs Conference

September
AAPT eMentoring Program Launch
AAPT Board Motion on Conceptual Frameworks for New Science Education Standards
Winter Meeting Preview

October
AAPT National Election
Winter Meeting Awards Announced

November
UStream, Meet and Greet the Executive Officers
2010 Nobel Prize
Grant and Scholarship Deadlines

December
AAPT National Election Results
Barbara Lotze Scholarships

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
Membership Statistics
for December 31, 2010

Membership by Member Type

<table>
<thead>
<tr>
<th>Member Type</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
<td>7,130</td>
</tr>
<tr>
<td>Life Member</td>
<td>117</td>
</tr>
<tr>
<td>Student</td>
<td>821</td>
</tr>
<tr>
<td>Sustaining</td>
<td>22</td>
</tr>
<tr>
<td>Associate</td>
<td>63</td>
</tr>
<tr>
<td>Retired/Emeritus</td>
<td>1,288</td>
</tr>
</tbody>
</table>

Current Membership: 9,441

Student 8.7%
Retired/Emeritus 13.6%
Life Member 1.2%
Sustaining 0.2%
Regular 76.2%
Total: 100.0%

Membership Comparison by Month and Year

<table>
<thead>
<tr>
<th>Month</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec - 2007</td>
<td>11,400</td>
</tr>
<tr>
<td>Dec - 2008</td>
<td>10,259</td>
</tr>
<tr>
<td>Dec - 2009</td>
<td>10,041</td>
</tr>
<tr>
<td>Dec - 2010</td>
<td>9,441</td>
</tr>
</tbody>
</table>

Year to Date Membership Trends

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.
Winter Meeting—Joint AAPT/APS Winter Meeting 2010

February 13–17, 2010, Washington, DC

David R. Sokoloff, Program Committee Chair

Paper Sorters: Jeff Marx, Lili Cui, Diane Riendeau, and Gerald Feldman

Local organizers: Beverly Karplus Hartline, Hakeem Fahm, Pat Chisley, Gebretensae Tzadu, Bill Touhy, Mykhaylo Panarin, Abdi Darai, Hailemichael Seyoum, Daryao Khatri, Angelyn Flowers, and the UDC campus security team.

Statistics: There were 929 attendees, 41 exhibitors, 74 sessions, 28 workshops, 4 tutorials, and 130 posters


Highlights

When we remember this meeting we will remember great mounds of snow. Just prior to the Joint AAPT/APS Winter Meeting in Washington, DC the mid-Atlantic area was covered with snow from two separate record-breaking storms leaving the city with more than four feet of snow to remove from airport runways, streets and sidewalks. Thousands of residences and businesses were without power and Washington, DC was, literally, closed down for a week. Thanks to the heroic efforts of an army of road and power crews the main roads were opened and power restored to most of the area just days before the meeting was scheduled to begin.

The AAPT’s Meetings team worked closely with communications to provide the latest news on area conditions while working with vendors to circumvent problems created by the remains of the storm. David Sokoloff, Program Chair and the National Office Staff chaired an outstanding learning opportunity. The sharing of sessions, plenaries, hotel, and exhibit space provided extraordinary opportunities to attendees from both organizations.

In spite of record snowfalls, more than 2,000 physicists and physics educators gathered at the Washington Marriott Wardman Park Hotel, to share and learn from an outstanding and diverse program that included invited and contributed paper sessions, poster presentations, workshops, and plenary sessions.

Mayor Adrienne Fenty declared February 14-20 Physics Education Week in Washington, DC! AAPT and several attendees tweeted their experiences during the meeting, and three events were broadcast live on UStream.

The event started with more than 30 workshops at the University of the District of Columbia on topics selected by the AAPT Area Committees such as Behind the Scenes at the Smithsonian, Multimedia Modern Physics for High School Teachers, Tutorials in Introductory Physics, Using Easy Java Simulations for Physics Teaching, and Laboratories with Biomedical Applications.

Additionally, much of the business of AAPT took place at this meeting with Executive Board meeting several days to receive reports, consider recommendations, and provide direction to the association that will strengthen our community as we move to enhance physics education and inspire physics educators. Area Committee members and Section Representatives met to share information and plan new initiatives that will benefit the association and the larger physics community.

Poster Sessions continued to be very popular and were presented at two separate times with presenters available to answer questions for 1/2 hour during each Session. The Monday posters addressed Labs and Apparatus, Teacher Training, and Lecture/Classroom. Tuesday posters focused on Physics Education Research, Technologies, Astronomy and Energy, and Environment Courses.

Popular Paper sessions included “Teaching with Technology,” “PER: Topical Understanding and Attitudes,” “Unconventional Laboratories,” “The Things Accomplished
Teachers Do in Their Classrooms-Who Prepares Them?, "Exploring the Nation’s Attic,” “How To Advocate for Science Locally, Regionally, and Nationally,” and “Physics Education Research Around the World.”

The Symposium on Physics Education, Educating Physics Teachers: A Call to Action for Physics Departments, presided over by Phillip (Bo) Hammer, was dedicated to the memory of Dr. E. Leonard (Len) Jossem. The session presenters discussed Teacher Preparation through UTeach, Science Teaching as a Profession, and Transforming the Professional Preparation of Physics Teachers in the United States: Findings and Recommendations of the T-TEP Report.

AAPT’s awards program was showcased in the presentation of two awards, the Melba Newell Phillips Medal was presented to Mary Beth Todd Monroe and the J. D. Jackson Excellence in Graduate Education Award to Eugene Commins. Distinguished Service Citations were presented to Beverly T. Cannon, Karen Williams, and Patrick Whippey. The Society of Physics Students Presented the Outstanding Chapter Advisor Award to Diane Jacobs of Eastern Michigan University.

Mary Beth Monroe’s Melba Phillips Medal address, “The Faces of AAPT,” reflected on the contributions that Phillips and previous recipients of the Medal have made to AAPT. She honored all of those who have mentored her though her career noting that, “AAPT’s greatest resource is its members. Among our 10,000 members, only 1000 attend national meetings and a few hundred more only attend section meetings and/or publish in AAPT journals. Yet, all of us need to exchange ideas and know about one another’s work. Therefore, it behooves you and me to reach out to a colleague, a new faculty member, or even a student and persuade them to ‘interact with colleagues to engender collegiality.’ The AAPT will be stronger, the faculty member will be a better teacher, the student will be a more-informed student, and the physics education community will be richer.” She closed with a reminder that the Melba Newel Phillips Medal is really a tribute to the many physics educators who have consolidated their skills and talents as physicists and as teachers “to enhance the understanding and appreciation of physics through teaching.”

“The Some Personal Reflections on Physics Graduate Education” was the title of Eugene D. Commins’ talk as he received the J.D. Jackson Excellence in Graduate Education Award. He reflected on his life as a graduate student and then as an instructor in the Columbia University Physics Department, and as a mentor of Berkeley physics graduate students.

The Joint APS/AAPT Plenary on Monday, February 15, featured Norman R. Augustine, Retired Chairman and CEO of Lockheed Martin Corporation speaking on “A Space Program Worthy of a Great Nation”; Naomi Makins of the University of Illinois, Urbana-Champaign, speaking on “Nucleon Spin Puzzle”; and Judith Lean from the Naval Research laboratory who spoke on “Surface Temperature Responses to Natural and Anthropogenic Influences: Past, Present, and Future.”


The LaserFest Lecture, given by Nobel Prize winner, Theodore Hänsch, Director of the Max-Plank-Institute Fur Quantenoptik and Professor, Ludwig Maximilians Universität, München Germany, was “From Edible Lasers and the Search for Earth-Like Planets: Five Decades of Laser Spectroscopy.”

The final plenary session of the Winter Meeting was the presidential transfer session with outgoing President, Alexander K. Dickison, handing over the responsibilities of AAPT leadership to David M. Cook. President Dickison noted the great progress the organization has made and that he was leaving office with most of his goals reached.
Summer Meeting 2010
July 17–22, Hilton Portland and Portland State University, Portland, Oregon
David R. Sokoloff, Program Committee Chair

Paper Sorters: Paula Engelhardt, Kathleen Falconer, Jill Marshall, and David Strum

Local organizers: Eric Bodegon, Chair, Portland State University, Department of Physics; Will Porter, Portland State University Department of Physics; PSU volunteers

Statistics: There were 1171 attendees, 35 exhibitors, 80 sessions, 42 workshops, 2 tutorials, and 166 posters

Meeting Highlights
The first impression received upon arriving in Portland was how the physics of flight made it possible for us to almost shake hands with the summit of Mt. Hood. After hours of looking at the earth far below us, our view was suddenly filled by this prodigious snow covered volcanic peak and it was breathtaking!

Founded in 1843 on the banks of the Willamett River, Portland was incorporated in 1851 and was home to 800 inhabitants, a steam sawmill, a log cabin hotel, and a newspaper, the weekly Oregonian. The city’s location made it a favored port in the Pacific Northwest for much of the 19th century. In 2010 Portland and Portland State University were perfect hosts for the AAPT physics education community. Governor Theodore R. Kulongski declared July 18-24 Physics Education Week in recognition of the collective contributions of physics education and research to Oregon’s technology-based economy.

Prior to the meeting the Physics Teacher Resource Agents (PTRA) held a National Summer Institute. Workshops were held focusing on Engineering Design, Magnetism, Perimeter Institute Explore & GPS, E-mentoring, Amusement Park Physics, Energy Choices, and Radioactivity. David Vernier of Vernier Software & Technology hosted Physics and Engineering Education – Past, Present, and Future along with a tour of Vernier and a PTRA Group Picnic. The 25th Anniversary of PTRA was celebrated as part of the Summer Meeting.

The Two-Year College community within AAPT hosted a special full day meeting on the campus of Portland State University designed to meet the needs of faculty serving physical science students in Two-year and Community Colleges. Nearly 40 educators enjoyed meeting with colleagues and being provided professional development from sessions on The Role of the TYC in Teacher Training, Adopting and Adapting PER-based Curriculum, Innovations in the Introductory Laboratory, and Creating a Virtual TYC Physics Community.

The Summer 2010 meeting was a resounding success; so much so that a motion was entertained to have the meeting in Portland every summer! There was universal agreement that the Portland State staff and students, and the AAPT meeting staff went well beyond the call of duty to facilitate the meeting.

The meeting included more than 40 workshops including hands on learning opportunities about Lasers, Astronomy, Physics Instructional Resource Association (PIRA) demonstrations, Modeling, and many other topics. The workshops were held at Portland State University. Attendees soon came to recognize the gray t-shirts with large green PSU lettering that, together with a smile, meant guidance around campus was only a few steps away.

5k Walk/Run, Columbia Gorge Tour, Walking Tour, and Pub Crawl
AAPT initiated a number of new networking events in response to attendee requests. The first annual AAPT 5k Walk/Run was a resounding success. Thanks are due to the volunteers who donated time to the event and to the brave troop of nearly 50 runners and walkers whose $20 race fee helped raise funds to offset the costs of the meeting. The weather was perfect and the Oregon scenery was beautiful. It was a great way to start the day and plans are underway to make the 5k Walk/Run an AAPT tradition.

No trip to Portland would be complete without a tour of the Columbia River Gorge. This waterway cuts through basalt bluffs that rise up to 4,000 feet above the river and features breathtaking views of some 75 waterfalls, including Multnomah Falls, the highest waterfall in the United States.

Portland is known for its local breweries and attendees were able to get a taste of the local brews at the popular pub crawl on Sunday night following the Opening Reception.

Picnic and Demo Show
“WOW” and “best ever” were comments heard about the demo show, which took on a unique twist this year, with the Physics of Vaudeville. We had a hint of what was to come at the urban picnic; Portland rolled out the red carpet for us, shutting down an entire city block. Picnickers were visited
by giant walking flowers, cyclists on the smallest bicycle ever seen, and aerial ballet of streamers- and did I mention chamber of commerce picture perfect weather as promised?

The evening started with a 21 balloon salute to Dr. Warren Hein, retiring AAPT EO, and announcement of the photo and apparatus contest winners. That was followed by stunning performances by kite dancers, acrobats, jugglers, unicyclists, and a human pendulum, attached to a 40 foot silk streamer by friction alone with no net. The grand finale of the evening was a spectacular laser show sponsored by APS. Thanks go to Christine and David Vernier for sponsoring this enchanted evening and to Stanley Micklavzina for making the local arrangements!

**Celebrating 50 Years of the Laser**

**APS/DLS Symposium on Laser Physics**—This session was recorded and the talks can be viewed on 2010 Summer Meeting USTREAM Channel.

Warren Warren, from Duke University, started his plenary address by thanking us for our appreciation of our plenary speakers; he had seen the “Thanks Warren!” ribbons and added his appreciation of the service Warren Hein has given to AAPT. His talk, *Breasts and Brains, Similarities and Differences: Using Novel Physics to Enhance Clinical Molecular Imaging* focused on the rapid growth of molecular imaging in biomedical science.

**Femtosecond Optical Frequency Combs** was the title of Steven T. Cundiff’s talk. Steven is from NIST and University of Colorado. He discussed the basic concepts of femtosecond combs, their current applications, and their future possibilities.

**Lasers and the Eye**—Vasudevan Lakshminarayanan from the University of Waterloo talked about laser applications in ophthalmology and laser-tissue interaction, laser safety, and more recent work on photorefractive procedures.

**Celebrating 50 Years of Laser**—This video had its screening during Laser Day. A production of SPIE, the international society for optics and photonics, the video addressed the history of the laser and its current and future applications in medicine, material processing, communications, research, and astronomy.

**Sessions of Note**

Nearly every seat in the house was taken for the Gender session. This topic continues to be of great concern within the physics community. Each of the Physics Education Research and Technology Education sessions had standing room only. The *High School Share-a-Thon* was an extremely popular session as were the other interactive sessions. Mentoring was also a hot topic and AAPT introduced a beta e-mentoring project to PTRAs for testing.

**Awards**

The awards sessions were recorded and the talks can be viewed on the 2010 Summer Meeting USTREAM Channel.

**Millikan Medal**

The 2010 Millikan Medal was presented to Patricia Heller, Associate Professor of Curriculum and Instruction at the University of Minnesota and a founding member of the Physics Education Research (PER) Group. Her talk, *Guiding the Future: Developing Research-based Physics Standards*, focused on the questions physics educators need to address in the development of K-12 physics standards for college success.

**Klopsteg Award**

Robert Scherrer, Chair of the Department of Physics and Astronomy at Vanderbilt University, Nashville, TN received the 2010 Klopsteg Award. As a practicing physicist who has written science fiction, he explored the similarities and differences between the process of writing science fiction...
and the process of producing science, specifically theoretical physics, and examined whether a background as a research scientist provides any advantage in writing science fiction.

**Excellence in Undergraduate Physics Teaching Award**

William P. Hogan, Professor of Physics at Joliet Junior College, was the recipient of the 2010 Excellence in Undergraduate Physics Teaching Award. In his talk, “Stumbling on a Tightrope,” he talked about the professional struggle he faced in dealing with contradictory goals in his early teaching and the mistakes he made along the way to finding what works.

**Excellence in Pre-college Physics Teaching Award**

The recipient of the 2010 Excellence in Pre-college Physics Teaching Award was Diane Rendeau, a physics teacher at Deerfield High School, Deerfield, IL. Her talk, “Who’s In?” focused on mentoring as the key to success in all phases of her career. Being a mentor is a vital role that all physics teachers should play. Being a mentee is equally important. She challenged beliefs on the importance and benefits of mentoring relationships and encouraged the audience to respond to the question, “Who’s In?” with a resounding, “I am!”.

**Distinguished Service Citations**

Distinguished Service Citations are presented to AAPT members who have provided extraordinary service to the organization. The Summer 2010 recipients were Chris Chiaverina, Harvey Leff, and N. Sanjay Rebello.

**Meeting Statistics**

Approximately 1000 physics educators, researchers, and students attend the Annual AAPT Meetings.

These National Meetings, held each winter and summer, are opportunities for members, colleagues, and future physicists from around the world to:

- participate in physics workshops
- meet and greet other physics educators
- form networks nationally and locally
- engage exhibitors and learn about the latest physics resources
- discuss innovations in teaching methods
- share the results of research about teaching and learning.

AAPT also hosts or supports smaller workshops and conferences and symposia throughout the year to provide further opportunities for professional development and knowledge sharing.
Workshop for New Physics and Astronomy Faculty

June 28–July 1 and Nov. 5–17, 2010 at the American Center for Physics
AAPT, in conjunction with the American Astronomical Society (AAS) and the American Physical Society (APS), held one workshop for new physics and astronomy faculty members at the American Center for Physics and a Reunion meeting for past workshop participants. These workshops helped nearly 200 new faculty understand how students learn physics and astronomy and suggested how this information can impact a new professor’s teaching methods. The workshops are intended for faculty in the first few years of their initial tenure-track appointment at a four-year college or university.

Physics Teacher Resource Agents (AAPT/PTRA) Program

In 2010 the PTRA Program celebrated its 25th Anniversary with a special session at the Summer Meeting.

PTRA accepts applications and provides training at the AAPT/PTRA Leadership Institute, held just before the Summer Meeting.

The AAPT/PTRA Project also supported section mini-grants in Hawaii, Illinois, Kentucky, New York, and Texas.

2010 PTRA Directors:
George Amann, Jan Mader, Karen Jo Matsler, Jim Nelson
2010 United States Physics Team

Twenty students from across the U.S. emerged through a rigorous exam process that began in January with approximately 4,000 students who participated in the Fnet=ma exam to become the 2010 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 41st International Physics Olympiad, held July 17 to 25 in Zagreb, Croatia. The 2010 Training Camp included a visit to Capitol Hill and meetings with the congressional physicists.

U.S. Team Members
Christina Brasco, Weston CT; Kevin Chen, Sugar Land TX; Lucy Chen, Aimes IA; Stephen Face, Wilmington DE; Yale Fan, Portland OR; David Field, Andover MA; Daniel Li, Alexandria VA; Jonathan Li, San Juan Capistrano CA; Yi Li, Arcadia CA; James Lim, Andover MA; Bowei Liu, Fremont CA; Jenny Lu, Southbury CT; Anand Oza, Silver Spring MD; Mihika Prabhu, West Lafayette IN; Ante Qu, Princeton Junction NJ; Eugene Rabinovice, Solon OH; Alok Saxena, Monmouth Junction NJ; Eric Spieglan, Naperville IL; Brian Zhang, Palo Alto CA; Andrew Zhou, San Jose CA

Co-Academic Director: Paul Stanley
Academic Coaches: Jia Jia Dong, David Fallest, and Andrew Linn
Lab Coaches: Warren Turner, Senior Lab Coach; Qui Zi Li, Assistant Lab Coach

AAPT Physics Bowl

This year there were almost 4500 students participating from approximately 225 schools across the United States and Canada as well as a school in China. Michael C. Faleski served as the PhysicsBowl Academic Coordinator.

The following prizes are awarded:

To schools
- 1st place in each region & division: $100 gift certificate from Frey Scientific and $25 AAPT Physics Store gift certificate
- 2nd place in each region & division: $50 gift certificate from Vernier Software & Technology and $25 AAPT Physics Store gift certificate

To students
- 1st place in each region & division, the book Chasing the Rainbow from Robert Greenler.
- TI-30 XS MultiView Scientific Calculator awarded to the students and schools placing first and second in each region and division from Texas Instruments.
- T-shirts awarded to the five top students in the top scoring school in each region from AAPT.

AAPT Physics Bowl Advisory Board
Michael Bush, Beverly Trina Cannon, Michael C. Faleski, Andrzej Sokolowski, and Courtney Willis
Collaborative Projects

Team America Rocketry Challenge

AAPT is proud to be 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/scores10.cfm. AAPT sponsors the TARC Lesson Plan Contest (http://www.aapt.org/Contests/rocket.cfm).

International Science and Engineering Fair

May 9-14, 2010 in San Jose, CA

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.

Judges: Roger R. McNeil, Terry L. Schalk, Alexander A. Grillo, Thomas Himel

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.

First Award of $1,200: Experimental Study of Viscosity Using Stokes’ Law: Examining and Correcting Stokes’ Law's Limitations in Viscometry
Katrina Hui, Richland High School, Richland, WA

Second Award of $800: Efficiency of Thermoelectric Power Conversion in Bi2Te3
Daniela Flaz, Lincoln Park High School, Chicago, IL

Third Award of $500: Measurement of the Earth-Moon Distance by a Dynamic Method
Lucas Andres Conci and Juan Jose Velasco, Instituto Parroquial Bernardo D’Elia, Villa Carlos Paz, Cordoba, Argentina

Certificate of Honorable Mention
Clockwork in M1, Travis Nathaniel Crockett, V. Sue Cleveland High School, Rio Rancho, NM
An Improved Metric for Visual Differentiation Using Colour-Modified Clinical Eye Charts, Jonathan David Sapolinski, Redeemer Baptist School, North Paramatta, New South Wales, Australia
Galaxy in a Bucket: Understanding Spiral Galaxy Formation Using a Simple Modeling System, Nikita Michael Bogdanov, Albuquerque Academy, Albuquerque, NM

Physics Days at NSTA

Local AAPT Sections hosted Physics Day at nearby NSTA area meetings held in Kansas City, MO, Baltimore, MD, and Nashville, TN.

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 sent a representative to each event, shared appropriate materials, and recruited science teachers as members of the association.
ComPADRE
The AAPT is the lead institution in the ComPADRE Pathway of the NSF National STEM Digital Library. ComPADRE is a network of free online resource collections supporting faculty, students, and teachers in Physics and Astronomy Education.

Highlights, activities, and expansions for ComPADRE in 2010 include:

• More than 10,000 resources are now cataloged in ComPADRE collections
• More than 20,000 members have created ComPADRE accounts
• Traffic on ComPADRE has grown to over 1 million visitors per month
• Special collections and member networking tools have been created and improved
• The partnership with The Physics Classroom has resulted in new features for students and teachers
• Partnerships with researchers and curriculum developers continue to grow
• Design of the online PER User’s Guide has progressed

Improvements to the ComPADRE Resource Collections include:

• Broader content delivery is now in use through the Open Source Physics, Statistical Physics, and Introductory Physics collections
• The Physics To Go resource collection for informal education is now on an automated update schedule
• The Physics Careers, PTEC, Statistical Physics, Nucleus, and Physics Classroom web sites have had design updates

Physics Education Research (PER)
PER Conference 2010—Portland, Oregon
Theme: Uncovering the hidden curriculum: Research on scientific, critical, and reflective thinking in the physics classroom

229 attendees

Invited sessions:
“Uncovering the hidden decisions that shape curriculum”
Danielle Harlow, University of California, Santa Barbara
“Rethinking our goals: What will our students remember when they forget everything?”
Eugenia Etkina, Rutgers University
“Development of functional understanding in physics: Promoting ability to reason”
Lillian C. McDermott, University of Washington

Plenary sessions:
“Toward meaning and scientific thinking in the traditional freshman laboratory: Opening the “idea space”
Saalih Allie, University of Cape Town, South Africa
“Introducing students to the culture of physics: Explicating elements of the hidden curriculum”
Edward F. Redish, University of Maryland
“What we learned by moving beyond content understanding and diversifying our research agenda”
Mel Sabella, Chicago State University

PER Leadership
Organizing Council
Rachel E. Scherr, Chair
Noah Finkelstein
John Thomson
Eugenia Etkina
Sanjay Rebello
Jose Mestre (Treasurer)
ex officio (Chair of AAPT Research in Physics Education Committee): Mel Sabella
Task Force Releases Findings on Teacher Education

The National Task Force on Teacher Education in Physics released a set of findings and recommendations at the 2010 PhysTEC Conference during the joint APS/AAPT Meeting. The document, which summarizes more than two years of research on physics teacher preparation programs at U.S. universities, is the synopsis of a report the task force plans to publish in early 2011.

The task force was jointly sponsored by the APS, AAPT, and the American Institute of Physics, and is composed of physics and education faculty, university administrators, and high school teachers who have been closely involved in national physics education efforts. Its charge was to survey the U.S. physics teacher preparation scene, identify best practices for increasing the number of qualified physics teachers, and establish research, funding, and policy priorities for improving the situation.

The task force found that, “Except for a handful of isolated pockets of excellence, the national system of preparing physics teachers is largely inefficient, mostly incoherent, and massively unprepared to deal with the current and future needs of the nation’s students.” The authors identified a number of areas in which they felt improvement was needed, including collaboration between physics and education departments, physics-specific pedagogical preparation of teachers, induction and mentoring support for new physics teachers, and professional development for physics teachers coming from other disciplines.

The authors also drew a connection between the state of U.S. physics teachers and the country’s challenges in the science and engineering labor market, stating that, “An effective precollege physics education is indispensable in preparing U.S. students for global competition.” To address these challenges, the authors stressed the importance of “every high school student having the opportunity to learn physics with a qualified teacher.”

Stamatis Vokos, professor of physics at Seattle Pacific University and the task force’s chair, said that while the situation is grim, there is potential for improvement. “We hope that our report will serve as a wake-up call for universities, foundations, and government agencies around the country. The problem is very serious, and any significant progress will require a focused and coordinated effort from all corners.”

Five New Supported Sites Join PhysTEC

The PhysTEC project recently began funding five universities to develop their physics teacher education programs into national models. The new awardees are California State University, Long Beach; Chicago State University; Middle Tennessee State University; Towson University; and the University of California, Davis. Funding for the awardees began in Fall 2010 and will last for three years. The new sites will join the fourteen institutions that have already received money from the project since it began in 2001.

The winning institutions were selected during a two-stage review process that began with a pool of 52 applicants, which were evaluated based on their capacity for large increases in the number of physics teachers graduating from their programs, as well as strong departmental and institutional support for teacher preparation efforts. The review process also considered applicants’ ability to address recognized demographic and geographic shortages of qualified physics teachers. The panel that reviewed the applications included representatives of APS and AAPT as well as external reviewers.
Apparatus Competition

Whether developed to pique the interest of students, used in lecture and demonstration, or simply used to help teach physics in new or fascinating ways, teachers are continually engineering apparatus to aid physics instruction.

The Apparatus Competition was established to recognize, reward, and publicize worthwhile contributions to physics teaching through demonstration and experiment. There are two categories of entrants: (1) Low Cost—an apparatus costing less than $65 to build (excluding exempt equipment) (2) Unlimited Cost.

The Apparatus Competition is held annually during AAPT’s summer meeting and is open to all members. It is sponsored by the AAPT Area Committee on Apparatus and PASCO Scientific.

See http://www.aapt.org/Programs/contests/apparatus.cfm for information on 2010 winners.

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 approximately 900 submissions, the 100 finalist photos were selected, displayed, and judged during the 2010 Summer Meeting.

See http://www.aapt.org/Programs/contests/pc10.cfm for information on the following overall winners of 2010.

Categories

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

**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.

*Photos with multiple images* or other computer manipulation will be placed in a separate category. They may be displayed at the national meeting and judged for Special Recognition ribbons, but not for prizes.
Awards and Citations

Paul E. Klopsteg Memorial Award
2010 Awardee: Robert Scherrer, Vanderbilt University

Science and Science Fiction

Robert Scherrer, Chair of the Department of Physics and Astronomy at Vanderbilt University, Nashville, TN, is a well-known cosmologist, and has made major contributions in the study of element production in the early universe, particle physics in the early universe, the clustering of galaxies, and dark energy. Scherrer has published widely in this field.

An accomplished teacher and an outstanding speaker, Scherrer received the 1999 Alumni Award for Distinguished Teaching at Ohio State University, Ohio State’s top teaching award. He is also the author of a well respected quantum mechanics textbook, Quantum Mechanics, an Accessible Introduction (Pearson, 2006). He is also a science fiction author, having written several short stories, mostly published in Analog Magazine. His talk on Science and Science Fiction focused on the way in which new ideas are introduced in physics, and compares this to the way they are developed in the process of writing a science fiction story.

The Klopsteg Memorial Award acknowledges outstanding contributions in the communication of the excitement of contemporary physics to the general public.

J. D. Jackson Excellence in Graduate Education Award
2010 Awardee: Eugene D. Commins

Some Personal Reflections on Physics Graduate Education

Commins is Professor Emeritus at the University of California–Berkeley, Dept. of Physics. His talk presented a picture of his life as a graduate student and then instructor in the Columbia University Physics Department of the 1950s, and how that influenced his subsequent experiences as a mentor of Berkeley physics graduate students during the last five decades.

The J. D. Jackson Excellence in Graduate Education Award is presented to physicists and physics educators who, like John David Jackson after whom the award is named, have made outstanding contributions to curriulum development, mentorship, or classroom teaching in graduate physics education.

Excellence in Undergraduate Physics Teaching Award
2010 Awardee: William P. Hogan, Joliet Junior College

Stumbling on a Tightrope

This award recognizes outstanding achievement in teaching undergraduate physics.

Bill Hogan is Professor of Physics at Joliet Junior College, Joliet, IL. He accepted an appointment as a post-doctoral research associate with Rutgers University stationed at Fermi National Acceleration Laboratory after finishing his graduate studies. While working at Fermilab, he began teaching physics as an adjunct faculty member at several Chicago-area two-year colleges and decided to pursue a career teaching physics. In 1997, he joined the physics faculty at Joliet Junior College.

Hogan has been active in physics teaching organizations. He is a member and officer of both the Illinois Section and the Chicago Section of the American Association of Physics Teachers (AAPT) and has presented many papers at Illinois Section meetings.

He was instrumental in the success of TYC21 (an NSF-sponsored project to build networks among two-year college physics teachers) in Illinois. He has served and is now serving another term on the American Association of Physics Teachers Committee on Physics in the TYCs and was Editor for the AAPT Guidelines for Two-Year College Physics Programs (2001).
Excellence in Pre-College Physics Teaching Award
2010 Awardee: Diane Riendeau, Deerfield High School

Who’s In?
This award recognizes outstanding achievement in teaching pre-college physics.

Diane Riendeau teaches physics at Deerfield High School in Deerfield, IL. One of her philosophies is that high school physics curricula should be concepts driven instead of math driven and hands-on instead of lecture-based. This way students walk away with lived physics experiences. This philosophy is especially applicable to high school freshmen who are still children at heart and enjoy learning by doing and playing.

She received the Innovative High School Teaching Award, 1992, from the AAPT, and the AAAS Leadership in Science Education for High School Teachers, 2008, and was a finalist in the Presidential Award for Excellence in Math and Science Teaching, 2008, Illinois. She is a frequent author for The Physics Teacher, a former Editorial Board member for the journal, peer reviewer for TPT, and currently a TPT column editor for “YouTube Physics.”

AAPT Distinguished Service Citations
The program recognizes AAPT members for their exceptional contributions (e.g., committee, section, or editorial work) to physics education.

Winter Meeting 2010
Karen Williams is Professor of Physics at East Central University in Ada, OK. Through her work with the Society of Physics Students, Williams has influenced thousands of future physics teachers. An AAPT member for 20 years, she has been extremely active in the Arkansas-Oklahoma-Kansas Section, having held every office, including President, and hosting a section meeting at East Central University. Williams has presented several workshops at section meetings, attended countless workshops herself, and been involved as Co-PI or lead teacher in two NSF grants training teachers in teaching physical science. She has generously donated her time and shared her expertise as a presenter at numerous AAPT national meetings.

Patrick Whippey, University of Western Ontario physics professor emeritus, is a very knowledgeable and dedicated physics teacher who is a role model to both educators and students. A willing and effective mentor to new and experienced teachers, he is well respected among all of the OAPT Section members and hundreds of physics teachers and students across the province.

Whippey's service to AAPT, the physics profession, and the physics students and teachers of the Ontario section of the AAPT has spanned over 40 years. He has made significant contributions to the Ontario section as a member of the Executive Board, OAPT section representative, and web master. He has made contributions to numerous activities for physics teachers such as a physics contest; physics photo contest; science shows and presentations for elementary, middle school, and high school students; science olympics; and science fairs. He is an OAPT member at large, organizer of the section and national conferences (one of them was the Canadian Association of Physicists – AAPT joint conference), and contributor to the Science Teachers Association of Ontario events.

Beverly “Trina” Cannon has actively sought to spread her enthusiasm for physics as a high school teacher and as a Physics Teaching Resource Agent in Texas where she regularly gives workshops to help high school teachers.

For nearly three decades she devoted her time to serving in AAPT. Perhaps her most unique and respected contribution is her heroic efforts for the AAPT’s video contest. Every year, there were new technological issues as students got more and more sophisticated and Trina dealt with these changes in a timely and professional manner. AAPT is an organization of volunteers, and Trina is one of our organization’s best.
Summer Meeting 2010

Chris Chiaverina, Winnetka, IL

Chris is a frequent contributor to *The Physics Teacher* and also has served several terms on its Editorial Board. He is currently editor of the TPT “Little Gems” column. He has been a co-author or contributor to several physics textbooks, including *Light Science* (Springer-Verlag, 1999), as well as a reprint book on *Teaching Light and Color* (AAPT, 2001). He was a contributing author in the “Active Physics” curriculum project of AAPT.

Chris has served AAPT in a number of roles on both the local and national levels, becoming AAPT Vice President, President Elect, President, and Past President (2001–2004).

Harvey Leff, Cal Poly State University

Harvey served as an officer and Section Representative of the Southern California Section of AAPT from 1987 to 2005, Associate Editor of the American Journal of Physics 1992-95, Chair of AAPT’s Professional Concerns Committee 1999-2000, and Chair of the AAPT Nominating Committee 2003-04. He was elected to the AAPT Presidential Chain (2005–2008). Among Harvey’s six dozen scientific publications, primarily related to thermal physics, include articles in the *American Journal of Physics* and *The Physics Teacher*. Serving the wider physics-teaching community, Harvey was an organizer of the Gordon Research Conference on Physics Education and Research on Quantum Mechanics in 2002.

Sanjay Rebello, Kansas State University

An active member of the AOK Section, Rebello brings his graduate students to section meetings where they always present the latest physics education research that the Kansas State University PER group is conducting. He is the kind of “champion” that a local AAPT section needs to maintain its presence in the greater organization.

Rebello promotes good educational practices in the classroom and he practices what he preaches. Many of his graduate students have continued the tradition of physics education as they have moved on to their own teaching careers, giving talks at various AAPT meetings around the nation. This is probably the most significant and essential part of what Sanjay Rebello has meant to AAPT.

Grants and Scholarships

**AAPT Venture Fund**
The Venture Fund is a resource for AAPT members, created to promote the development of innovative teaching products and services for physics and other sciences. The fund provides one project up to $25,000 in total support. The Venture Fund focuses on assuring a marketable product and its timely availability to the teaching community.

http://www.aapt.org/Grants/venturefund.cfm

**Barbara Lotze Scholarship for Future Physics Teachers**
AAPT awards this scholarship to high school seniors or undergraduate students who plan to become physics teachers and who are U.S. citizens attending a U.S. school. Two successful applicants will each receive a stipend of up to $2,000.

http://www.aapt.org/Grants/lotze.cfm

**Frederick & Florence Bauder Endowment**
This endowment makes it possible for AAPT members to receive funding to support special activities in the area of physics teaching. Activities include local workshops, grant projects, distribution of innovative apparatus for physics teaching, etc.

http://www.aapt.org/Grants/bauderfund.cfm

**High School Physics Teacher Grant**
The grant(s) are given each year to teachers whose proposal meets the goal of the grant. That is, the procedure should result in better teaching practice, student understanding and interest, and/or increased enrollment. Awardees will receive anywhere from $100 to $500 per award.

http://www.aapt.org/Grants/hsgrant.cfm

**Harold Q. & Charlotte Mae Fuller Fund**
This endowment fund was created to enhance the internationalization of AAPT membership and is intended to benefit physics teachers in developing countries. The individual(s) who are selected will have their full membership dues paid and receive *The Physics Teacher* (or the *American Journal of Physics*, if they prefer) for a period of two years.

http://www.aapt.org/Grants/fullerfund.cfm
Medals

Robert A. Millikan Medal
The Robert A. Millikan Medal recognizes those who have made outstanding scholarly contributions to physics education.
2010 Awardee: Patricia M. Heller, University of Minnesota

Guiding the Future: Developing Research-based Physics Standards
Pat Heller is Associate Professor of Curriculum and Instruction at the University of Minnesota and a founding member of the Physics Education Research (PER) Group. She has been at the forefront of PER for most of her career, taking on problems and issues that later bloom into entire research areas. One example of this is her work with instructor beliefs. She recognized that no instructional change will happen unless the individual instructor believes in the value of the change. This means we need to know what instructors believe and how those beliefs can change. Her work on cooperative group problem solving has also been of great importance and has not only established a firm research base on the topic in university level physics education, but she and her research group have created (and freely disseminated) materials that are widely used and have influenced many instructors to bring more group problem solving into their classrooms.
Her research program has produced a number of students who are now leaders in the physics education and PER communities. The University of Minnesota Physics Education Research and Development website developed by her research group in physics education is a primary resource for physics teachers and contains first rate materials that have been highly influential for many physics instructors.

Melba Newell Phillips Medal
The Melba Newell Phillips Medal is presented to AAPT leaders who, like Melba Newell Phillips after whom the medal is named, have provided creative leadership and dedicated service that resulted in exceptional contributions to AAPT.
2010 Awardee: Mary Beth Todd Monroe, Southwest Texas Junior College, Uvalde, TX

The Faces of AAPT
As a long-time AAPT member, Monroe has quietly and tenaciously served the organization at the state and national level for more than three decades. She served as AAPT Secretary and Chair of the Publications Committee from 2001-2007, as a member of the Committee on the Interests of Senior Physicists, and as Chair of the Governance Review Committee. She has played a leading role in developing networks among physicists teaching in two-year colleges that have led both to their increasing involvement in AAPT and better teaching for the quarter of all introductory physics students who are students in the Two-Year Colleges.
She is a dedicated proponent of quality physics education in two-year and community colleges. She served on the AAPT Executive Board as Member at-Large Representing Two-Year colleges, and as a member of the Committee on Physics in the Two-Year College. Additionally, she served as Principal Investigator and Project Director for TYC21 and as Co Principal Investigator for Strategic Programs for Innovations in Undergraduate Physics at Two Year Colleges from 2002-2005.

Hans Christian Oersted Medal
The Hans Christian Oersted Medal recognizes those who have had an outstanding, widespread, and lasting impact on the teaching of physics. This award was not presented in 2010.

Award and medal nominations can be submitted online at: http://www.aapt.org/Programs/awards/upload/Awards_Nomination_Form2011-4.pdf
Fundraising

Invest in Physics Education  http://www.aapt.org/donations

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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 Sections

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.

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Vincent H. Kuo, Section Rep.

Florida Section
Jane Bray Nelson, President
Sherry L. Savrda, Section Rep.

Hawaii Section
Michael F. Weber, President

Idaho-Utah Section
Duane Merrell, President
Harold Taylor Stokkes, Section Rep.

Illinois Section
Carl J. Wenning, President
Zak A. Knott, Section Rep.

Indiana Section
Tracy G. Hood, President
Elaine Gwinn, Section Rep.

Iowa Section
Diane May, President
John W. Zwart, Section Rep.

Kentucky Section
Akhtar Mahmood, President
Richard Gelderman, Section Rep.

Long Island Section
Ed McDaniels, President
Tania Entwistle, Section Rep.

Louisiana Section
John Thacker, President
Richard Perrin, Section Rep.

Mexico Section
Hugo Alarcon, President
Garon Zavala, Section Rep.

Michigan Section
Michael Faleski, President
Alan M. Gibson, Section Rep.

Minnesota Section
Andy Rundquist, President
Leonardo Hsu, Section Rep.

Mississippi Section
Brady Garrett, President
James A. Dunne, Section Rep.

Missouri Section
Sunder Balasubramrian, President
James M. Borgwald, Section Rep.

Montana Section
Wayne Mangold, President
Rich McFate, Section Rep.

Nebraska Section
Kendra Sibbernsen, Section Rep.

New England Section
Laura M. Nickerson, Section Rep.

New Jersey Section
Raymond A. Polomski, President
Joseph Spaccavento, Section Rep.

New York Section
Joseph L. Zawicki, President
John D. FitzGibbons & Cindy Schwarz, Section Rep.

North Carolina Section
Tatlock Lauten, President
Mario J. Belloni, Section Rep.

North Dakota Section
Donald L. Hoff, Section Rep.

Northern California-Nevada Section
Claudia Winkler, President
Paul Robinson, Section Rep.

Ohio Section
Charles P. Deremer, President
Myra West, Section Rep.

Ontario Section
David W. Doucette, President
Tetyana Antimirova, Section Rep.

Oregon Section
Dedra N. Demaree, President
Patrick S. Keefe, Section Rep.

Quebec Section
Taha Mzoughi, President
Ntungwa Maasha, Section Rep.

South Dakota Section
Taha Mzoughi, President
Ntungwa Maasha, Section Rep.

Southern California Section
Jeffrey A. Phillips, President
Mary Elizabeth Mogge, Section Rep.

Southern Nevada Section
Doug Lombardi, President
Janelle M. Bailey, Section Rep.

Southern Ohio Section
Kathleen M. Koenig, President

Southwestern Section
Alex F. Burr, Section Rep.

St. Louis Section
Jennifer M. Meyer, President
Gary E. Taylor Section Rep.

Tennessee Section
Benito T. Szapiro, President
Spencer L. Buckner, Section Rep.

Texas Section
Tony Sauny, President
Thomas L. O’Kuma, Section Rep.

Washington Section
Krishna M. Chowdary, President
Robert Hobbs, Section Rep.

Western Pennsylvania Section
David Groh, President
Dyan McBride, Section Rep.

Wisconsin Section
Steven C. Sahyun, President
A. James Mallmann, Section Rep.
Details of the financial status and activities of the AAPT are on the following pages. To help you understand those reports, consider first the activities that the AAPT supports:

1. **Communications.** The AAPT publishes three journals, the eNNOUNCER, and maintains a website.
2. **Meetings.** It organizes two major meetings each year.
3. **Grants.** It provides financial and administrative services to members for grants. Among these are twenty-five years of PTRA grants, grants that support ComPADRE, the Advanced Lab Topical Conference, PhysTEC, the SPIN-UP programs, and the National Taskforce on Undergraduate Physics.
4. **Programs.** It sponsors the US Physics Team, Physics Bowl, Team America Rocketry Challenge, International Science and Engineering Fair, High School Physics Photo Contest, Apparatus Competition, Workshops for new four-year college/university faculty members and the new workshop for new two-year college faculty members.

As shown in the preceding pages, the AAPT conducts these activities with both professionals in the Executive Office at the American Center for Physics and volunteer work by a large number of its members, including the Executive Board, Committees, Area Committees, and Sections.

The two major sources of revenue are membership dues and journal subscriptions. Membership dues pay much of the cost of publication of the journals as well as the Executive Office. Journals are also supported by subscriptions from libraries and consortia.

Income for the annual meetings comes from registration fees and fees paid by exhibitors, but the costs of these meetings have exceeded income for many years. The Association charges overhead costs for grants that pay for the time spent by office members who perform the services for the grants. Some programs receive support from other organizations and grants, but the Association pays most of the costs of the programs.

For at least ten years the Association's operating budget has been in the red. The income sources described above have not been sufficient to pay for the costs of the activities the Association provides for its members. For several years income and capital gains from its reserve funds were sufficient to over the deficits, but in recent years the decline in the market has meant that we cannot continue to withdraw funds from the reserves without endangering our future.

The Board and Executive Office have worked hard to increase income. Several programs have been tried to recruit new members, to retain present members, and to recover those who have dropped membership. Some of these have been successful, but have not produces significant increased revenue. The revenue from non-member subscriptions has increased over the last five years despite the decrease in library budgets and increase in libraries joining consortia. We continue to be cognizant of the changing external conditions that may impact our publications. We have also worked hard to reduce expenses and increase income from the winter and summer meetings and to make programs self-supporting.

The Board has adopted a 2011 budget that is very close to balanced. It includes no raises and benefit cuts for members of the Executive Office, reduced support for Executive Board members and Section Representatives, and replacement of face-to-face spring and fall Board meetings with video conferences. Two positions in the office have been eliminated, one in development and one in member services, and the hiring of an Associate Executive Officer has been delayed until next summer. The Executive Office is working with other organizations in the American Center for Physics to reduce technology costs. The Board is considering either changing the structure of the winter meeting or cancelling it.

On the positive side, the AAPT has received funds to endow the two awards for excellence in teaching: pre-college and undergraduate, and has transferred funds from the Dodge Fund to endow the Millikan, Klopsteg, Richtmeyer, and Oersted awards at $60,000 each. As a result, the costs of these awards will no longer be charged to the operations budget.

![Signature]

Paul W. Zitzewitz  
AAPT Treasurer
### The American Association of Physics Teachers, Inc.
#### Balance Sheet
#### Year Ended December 31, 2010
(With comparative totals for 2009)

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>December 2010</th>
<th>December 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and Cash Equivalents</td>
<td>$575,451</td>
<td>$700,024</td>
</tr>
<tr>
<td>Investments</td>
<td>3,190,735</td>
<td>3,236,556</td>
</tr>
<tr>
<td>Receivables, Net</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants</td>
<td>190,809</td>
<td>158,366</td>
</tr>
<tr>
<td>Due from affiliate</td>
<td>54,972</td>
<td>35,000</td>
</tr>
<tr>
<td>Membership</td>
<td>58,892</td>
<td>6,026</td>
</tr>
<tr>
<td>Other</td>
<td>9,655</td>
<td>9,655</td>
</tr>
<tr>
<td>Inventory</td>
<td>78,454</td>
<td>129,033</td>
</tr>
<tr>
<td>Prepaid Expenses</td>
<td>59,729</td>
<td>89,272</td>
</tr>
<tr>
<td>Investment in ACP</td>
<td>134,626</td>
<td>47,487</td>
</tr>
<tr>
<td>Property and Equipment, Net</td>
<td>23,333</td>
<td>53,793</td>
</tr>
<tr>
<td><strong>TOTAL ASSETS</strong></td>
<td>$4,376,656</td>
<td>$4,465,212</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIABILITIES &amp; NET ASSETS</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LIABILITIES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts Payable and Accrued Expenses</td>
<td>265,555</td>
<td>372,283</td>
</tr>
<tr>
<td>Accrued Payroll and Related Liabilities</td>
<td>287,532</td>
<td>394,534</td>
</tr>
<tr>
<td>Unearned Revenue</td>
<td>1,903,458</td>
<td>2,089,931</td>
</tr>
<tr>
<td>Capital Lease Obligation</td>
<td>16,146</td>
<td>6,610</td>
</tr>
<tr>
<td>Deferred Compensation Obligation</td>
<td>-0-</td>
<td>38,896</td>
</tr>
<tr>
<td>Accrued Postretirement Benefit Obligation</td>
<td>356,573</td>
<td>347,832</td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES</strong></td>
<td>$2,829,264</td>
<td>$3,250,086</td>
</tr>
</tbody>
</table>

| NET ASSETS                                  |               |               |
| Unrestricted                                 |               |               |
| Undesignated                                | 674,064       | 424,496       |
| Board designated                            | 173,278       | 184,415       |
| **Total Unrestricted**                      | 847,342       | 608,911       |

| Temporarily Restricted                      |               |               |
| Permanently Restricted                      |               |               |
| **TOTAL LIABILITIES & NET ASSETS**          | $4,376,656    | $4,465,212    |
The American Association of Physics Teachers, Inc.
Statement of Activities
Year Ended December 31, 2010
(With Comparative Totals for 2009)

<table>
<thead>
<tr>
<th>Unrestricted</th>
<th>Board</th>
<th>Temporary</th>
<th>Permanently</th>
<th>2010</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undesignated</td>
<td>Designated</td>
<td>Restricted</td>
<td>Restricted</td>
<td>Total</td>
<td>Total</td>
</tr>
</tbody>
</table>

Revenue & Support:
- **American Journal of Physics**: $1,481,751 - - - $1,481,751 $1,419,540
- **The Physics Teacher**: 869,418 - - - 869,418 881,933
- **Investment Income (Loss)**: 371,500 - 107,415 - 478,915 694,008
- **Other Publications**: 157,938 - - - 157,938 18,343
- **Meetings, workshops and projects**: 767,339 - - - 767,339 827,845
- **Membership**: 833,368 - - - 833,368 594,735
- **Federal Grants**: 740,614 - - - 740,614 951,713
- **Contributions**: 150,129 859 - - 150,988 71,751
- **International Physics Olympiad**: 64,800 - - - 64,800 30,722
- **Share in earnings of investment in ACP**: 87,139 - - - 87,139 39,865
- **Miscellaneous Income**: 2,235 - - - 2,235 21,542
- **Net assets released from restrictions**: 25,576 (11,996) (13,580) - - 332,266 -62,178

**Total revenue and support**: 5,551,807 (11,137) 93,835 - 5,634,505 5,511,997

Expenses:
- **American Journal of Physics**: 807,339 - - - 807,339 796,888
- **The Physics Teacher**: 622,893 - - - 622,893 716,549
- **Other Publications**: 769,008 - - - 769,008 658,402
- **Meetings, workshops and projects**: 1,042,468 - - - 1,042,468 1,175,040
- **Memberships**: 873,960 - - - 873,960 849,516
- **Federal Grants**: 757,468 - - - 757,468 1,048,712
- **General and administrative**: 320,354 - - - 320,354 274,309
- **Fundraising**: 108,749 - - - 108,749 94,759

**Total Expenses**: 5,302,239 - - - 5,302,239 5,614,175

**Change in net Assets**: 249,568 (11,137) 93,835 - 332,266 (62,178)

Net Assets:
- **Beginning**: 424,496 184,415 174,530 431,685 1,215,126 1,277,304
- **Transfers**: - - - - - -

**Ending**: $674,064 $173,278 $268,365 $431,685 $1,547,392 $1,215,126
## The American Association of Physics Teachers, Inc.
### Schedule of Functional Expenses
#### Year Ended December 31, 2010

(With Comparative Totals for 2009)

<table>
<thead>
<tr>
<th></th>
<th>Program Services</th>
<th>General &amp; Administrative</th>
<th>Fundraising</th>
<th>2010 Total</th>
<th>2009 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation expense</td>
<td>$1,264,813</td>
<td>$910,201</td>
<td>$61,895</td>
<td>$2,236,909</td>
<td>$2,135,689</td>
</tr>
<tr>
<td>Travel</td>
<td>222,671</td>
<td>102,295</td>
<td>-</td>
<td>324,966</td>
<td>272,000</td>
</tr>
<tr>
<td>Publication costs</td>
<td>323,013</td>
<td>-</td>
<td>-</td>
<td>323,013</td>
<td>274,720</td>
</tr>
<tr>
<td>Editorial office expense</td>
<td>250,673</td>
<td>-</td>
<td>-</td>
<td>250,673</td>
<td>367,510</td>
</tr>
<tr>
<td>Debt Service</td>
<td>-</td>
<td>245,794</td>
<td>-</td>
<td>245,794</td>
<td>251,355</td>
</tr>
<tr>
<td>Computer supplies and maintenance</td>
<td>6,141</td>
<td>182,174</td>
<td>-</td>
<td>188,315</td>
<td>188,118</td>
</tr>
<tr>
<td>Participant travel and stipends</td>
<td>185,125</td>
<td>-</td>
<td>-</td>
<td>185,125</td>
<td>288,797</td>
</tr>
<tr>
<td>Rental operating expenses</td>
<td>-</td>
<td>174,713</td>
<td>-</td>
<td>174,713</td>
<td>174,594</td>
</tr>
<tr>
<td>Consultants, contracts and temporary</td>
<td>165,780</td>
<td>2,596</td>
<td>3,703</td>
<td>172,079</td>
<td>194,397</td>
</tr>
<tr>
<td>Online journal services</td>
<td>158,159</td>
<td>-</td>
<td>-</td>
<td>158,159</td>
<td>146,580</td>
</tr>
<tr>
<td>Conferences, meetings, and workshops</td>
<td>107,882</td>
<td>19,950</td>
<td>-</td>
<td>127,832</td>
<td>94,605</td>
</tr>
<tr>
<td>Postage, packaging and shipping</td>
<td>115,043</td>
<td>-</td>
<td>-</td>
<td>115,043</td>
<td>193,863</td>
</tr>
<tr>
<td>Audio/visual</td>
<td>76,947</td>
<td>6,188</td>
<td>-</td>
<td>83,135</td>
<td>162,308</td>
</tr>
<tr>
<td>Professional Fees</td>
<td>15,497</td>
<td>65,411</td>
<td>-</td>
<td>80,908</td>
<td>102,879</td>
</tr>
<tr>
<td>Exhibit and meeting expenses</td>
<td>65,314</td>
<td>-</td>
<td>-</td>
<td>65,314</td>
<td>80,385</td>
</tr>
<tr>
<td>Bank fees</td>
<td>60</td>
<td>61,570</td>
<td>-</td>
<td>61,630</td>
<td>54,033</td>
</tr>
<tr>
<td>Publishing services</td>
<td>60,658</td>
<td>-</td>
<td>-</td>
<td>60,658</td>
<td>54,319</td>
</tr>
<tr>
<td>Dues and memberships</td>
<td>57,948</td>
<td>206</td>
<td>-</td>
<td>58,154</td>
<td>53,407</td>
</tr>
<tr>
<td>Honoraria</td>
<td>55,130</td>
<td>-</td>
<td>-</td>
<td>55,130</td>
<td>76,322</td>
</tr>
<tr>
<td>Awards</td>
<td>48,065</td>
<td>1,635</td>
<td>-</td>
<td>49,700</td>
<td>39,555</td>
</tr>
<tr>
<td>Depreciation</td>
<td>-</td>
<td>44,797</td>
<td>-</td>
<td>44,797</td>
<td>84,351</td>
</tr>
<tr>
<td>Photocopying and printing</td>
<td>32,767</td>
<td>4,254</td>
<td>6,858</td>
<td>43,879</td>
<td>74,936</td>
</tr>
<tr>
<td>Office services</td>
<td>-</td>
<td>43,079</td>
<td>-</td>
<td>43,079</td>
<td>45,822</td>
</tr>
<tr>
<td>Advertising</td>
<td>38,053</td>
<td>-</td>
<td>-</td>
<td>38,053</td>
<td>52,403</td>
</tr>
<tr>
<td>Materials and supplies</td>
<td>24,853</td>
<td>1,635</td>
<td>233</td>
<td>26,721</td>
<td>40,454</td>
</tr>
<tr>
<td>Other</td>
<td>8,134</td>
<td>12,897</td>
<td>-</td>
<td>21,031</td>
<td>10,647</td>
</tr>
<tr>
<td>Investment expenses</td>
<td>-</td>
<td>15,875</td>
<td>-</td>
<td>15,875</td>
<td>15,394</td>
</tr>
<tr>
<td>Insurance</td>
<td>310</td>
<td>15,271</td>
<td>-</td>
<td>15,581</td>
<td>19,912</td>
</tr>
<tr>
<td>Other facility costs</td>
<td>15,492</td>
<td>-</td>
<td>-</td>
<td>15,492</td>
<td>30,532</td>
</tr>
<tr>
<td>Telephone</td>
<td>3,792</td>
<td>6,432</td>
<td>-</td>
<td>10,224</td>
<td>13,774</td>
</tr>
<tr>
<td>Storage</td>
<td>6,544</td>
<td>559</td>
<td>-</td>
<td>7,103</td>
<td>8,794</td>
</tr>
<tr>
<td>Security</td>
<td>2,709</td>
<td>-</td>
<td>-</td>
<td>2,709</td>
<td>4,050</td>
</tr>
<tr>
<td>Royalty expense</td>
<td>-</td>
<td>445</td>
<td>-</td>
<td>445</td>
<td>813</td>
</tr>
<tr>
<td>Equipment and maintenance</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,857</td>
</tr>
<tr>
<td>Allocation of indirect costs</td>
<td>1,561,563</td>
<td>(1,597,623)</td>
<td>36,060</td>
<td>(0)</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td><strong>$4,873,136</strong></td>
<td><strong>$320,354</strong></td>
<td><strong>$108,749</strong></td>
<td><strong>$5,302,239</strong></td>
<td><strong>$5,614,175</strong></td>
</tr>
</tbody>
</table>