



*annual  
review*

**AAPT 2007**

Credit:

MARK GARLICK / SCIENCE PHOTO LIBRARY

"First three minutes". Artwork of a timeline of events after the Big Bang up to the first three minutes.

## From our President

This has been an exciting year of change for AAPT. I had the pleasure of working with three different Executive Officers—Toufic Hakim, Charlie Holbrow, and Warren Hein— each of whom brought new and creative ideas to AAPT. Many other new faces have appeared at AAPT: committee members and section representatives, a Chief Financial Officer and auditing firm, staff and Executive Board members, and of course, many new AAPT members. I welcome all of you and hope that each of you will soon find your special place of service at AAPT.

The Governance Review Committee and the Committee on Governance Structure have been working hard to update all policy handbooks and guides and streamline our governance structure. AAPT has been increasing visibility to the public through an improved website, special activities for National Teacher Day, judging at the International Science and Engineering Fair, joint efforts with sister societies, providing workshops with special groups before and after our annual meetings, and gaining corporate sponsorship for AAPT special events. Our fundraising staff is seeking new and productive ways to provide opportunities for individuals and foundations to make donations to AAPT.

Our Meetings and Programs department organized two outstanding annual meetings in Baltimore, Maryland and Edmonton, Canada, with record attendance and submission of papers and posters. Physics Teaching Resource Agents (PTRAs), New Faculty Workshops and Department Chair Conferences are all thriving and growing. Our International Physics Team won one silver and four gold metals this year in Vietnam and came in second over all. The new Diversity Task Force is looking at ways to increase involvement of all physicists in AAPT, and I am working with individual groups to increase services to our middle and high school, two-year and four-year college and graduate school students and teachers.

AAPT is alive and well, growing and planning for the future. I look forward to working with AAPT members and AAPT staff to ensure the mission of AAPT, the dissemination of physics knowledge by way of teaching thrives.

*Lita M. Adair*



# Executive Officer Statement



I am pleased to return to AAPT as of September 1, 2008 as your Executive Officer. I want to thank Charlie and Mary Holbrow for their service to AAPT for the past six months. On behalf of the AAPT membership and the Executive Board, I thank Charlie and Mary for making my transition to the position of Executive Officer smooth.

I served AAPT as Associate Executive Officer from February 1997 through August 2007, when I went to NSF as a Program Officer in the Division of Undergraduate Education where I developed a deeper appreciation for the role NSF and other agencies play in supporting our physics education work.

As a membership-based organization, AAPT depends on member volunteers to serve the organization by sitting on one of our current 18 Area Committees or on a number of other Board committees, by providing leadership and outreach for the organization through AAPT's current 47 sections members, and by providing input, both formal and informal, to the Executive Board and Executive Office. In addition, and maybe more importantly, hundreds, and maybe even thousands of volunteers have served their colleagues by providing workshops at AAPT national and section meetings and many other activities too numerous to mention. AAPT's premier journal, *American Journal of Physics*, and our highly successful journal, *The Physics Teacher*, rely on the volunteer efforts of many editorial committees and peer reviewers.

I am proud to be an AAPT member. I believe anyone who is a physics educator should be an AAPT member and should support the organization in achieving its goal of "enhancing the understanding and appreciation of physics through teaching."

Finally, I thank you, the AAPT membership and my colleagues, for the opportunity to serve you as AAPT Executive Officer. If you have concerns or issues you would like to bring to my attention, or if you have suggestions for ways that AAPT can provide more and better service to physics educators, I encourage you to send those to me at [whain@aapt.org](mailto:whain@aapt.org).

I am looking forward to a great year!

*Warren Hein*

executive

# Former Executive Officer Statement

AAPT's programs and activities continue to be vigorous during a time of change. No longer a small, informal organization, AAPT is expanding its responsibilities. It is evolving to serve its members better and to meet pressing new government demands for accountability.

Over the past year, first Toufic Hakim and then I worked hard to help AAPT deal with these changes. Warren Hein now continues that effort with the advantage of his long familiarity with AAPT and its environment.

AAPT has drawn on its reserves to provide flexibility for dealing with the changes. These expenditures, plus a significant stock market decline, have lowered the value of long-term reserves to \$4.75 million. Discontinuing *Interactions* and redirecting resources to an online e-newsletter have improved the bottom line for the current budget. For 2009, the Executive Board directs that AAPT's budget be balanced without spending endowment income, so that long term reserves can begin to return to their former level.

This belt-tightening is essential, but it limits our ability to fund the new initiatives that are essential to our long-term vitality. To generate income for these we will put new emphasis on increasing Annual Giving and expanding our membership.

During my six months as Executive Officer I saw close up how important to AAPT are careful accounting, lively communications, accurate and complete record-keeping, foresighted negotiation of arrangements for meetings and programs, and all the other work of AAPT's professional staff. But I also saw that the foundation of AAPT's achievements are the enthusiasm, expertise, and dedicated work of AAPT teachers, area committee members, section leaders, scholars, program innovators, and other volunteers. Their skill and their commitment to physics education make AAPT flourish.



office

# Publications

*Having a strong publications program enables AAPT members to access the latest physics research and the teaching methods written by their colleagues. AAPT is fortunate to publish two highly regarded publications.*

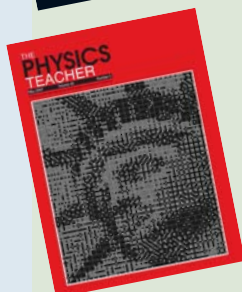
## **American Journal of Physics**

The *American Journal of Physics* (AJP) successfully transitioned to a number of new editors in 2008. Jan Tobochnik returned as Editor on July 1, 2008 after taking a one year leave as Interim Provost at Kalamazoo College. During Tobochnik's absence, John Mallinckrodt served as acting editor. He customized the editorial management software, Editorial Express. Mallinckrodt will continue as a consulting editor for AJP. In the spring of 2008, Hans C. von Baeyer of The College of William and Mary, replaced Dan Schroeder as the Book Review Editor. In 2007, Frank Wolfs of Rochester University took over as the Editor of the Apparatus and Demonstration Notes section, and that section now uses Editorial Express. Karen Cummings stepped down at the end of the summer of 2008 as Editor of the Physics Education Research Section (PERS). Tobochnik will receive new submissions until Charles Henderson of Western Michigan University takes over as PERS Editor on January 1, 2009.

The rate of submission to AJP is stable at approximately 800 submissions per year. The publication rate is about 25%. In the near future we will be upgrading the online AJP web site hosted by AIP's Scitation®, so that many new online tools will be available to subscribers.

## **The Physics Teacher**

Now in its eighth year under the editorship of Karl Mamola, *The Physics Teacher* (TPT) is reaching ever greater numbers of readers. Our total subscribers are increasing, as are the number of downloaded articles and online users. With each issue, we strive to continue supporting, inspiring, and challenging our target audience — high school and college teachers of introductory physics — as well as our many other readers. We have recently expanded our efforts to publish more articles dealing with topics in contemporary physics. Several are in various stages of preparation and should begin appearing in our pages during the coming year. Also look for a new column on student misconceptions that will be introduced in late 2008.



publications

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

The Association continues its efforts to enhance the membership experience through improvements in our benefits and services. Individual dues have been redesigned to meet the professional and academic needs of all members. A new and dynamic membership page provides real time updates to member records and immediate processing of applications and renewals. An ongoing outreach effort has proven highly successful in the recruitment and retention of new members from a diverse and ever growing constituency.

The future demands that we continue to listen and respond to what our members say. Our successful growth over the last 75 years bears witness to this. Above all, it is our pledge and promise in the years ahead.

the core of AAPT's success is the  
*10,000 members worldwide*  
who share a common  
*passion and purpose*



# Major Events

## Conferences

### New Faculty Conference

June 26-29 at ACP,  
organized with AAS and APS  
85 attendees

### Department Chairs Conference

June 6-8 at ACP,  
organized jointly with APS  
117 attendees

## Annual Meetings

Alexander K. Dickison, *Program Committee Chair*

### Winter Meeting: Jan 19–23, 2008 Baltimore, Maryland

#### Plenaries

Paul Hewitt  
Mario Livio  
APS: Large Hadron Collider

### Summer Meeting: July 19–23, 2008 Edmonton, Alberta, Canada

#### Plenaries

Damian Pope  
Robert Wolkow  
“Physics at University of Alberta”:  
Mark Freeman, Roger Moore, Aksel Hallin

#### Honors

Oersted Medal: Mildred Dresselhaus  
Richtmyer Memorial Award: Vera C. Rubin  
Phillips Medal: Judy Franz  
Distinguished Service Citations  
AAPT Presidential Citations:  
Towson University; University of Maryland

#### Honors

Klopsteg Award: Michio Kaku  
Millikan Medal: Eric Mazur  
Excellence in Pre-College Teaching:  
Mark Davids and Corinne Manogue  
Distinguished Service Citations

#### Highlights

Symposium on Physics Education  
High School Teachers Recognition Day  
Screening: “Absolute Zero and the  
Conquest of Cold”

#### Highlights

University of Alberta/Physics Department  
Centenary Demonstration Show:  
Stanley Micklavzina  
Apparatus Competition, sponsored by PASCO  
Winners: Joseph Amato, Roger Williams,  
A. Tomasch and A. Chang, Wayne Peterson  
High School Photo Contest, sponsored by Vernier  
Winners: Contrived: Shilpa Hampole,  
Charles Grimmett, Carly Sobecki  
Natural: Alexis Blanch, Casey Brown,  
Mrinalini Modak

#### Statistics

1229 attendees; 37 exhibitors  
74 sessions; 28 workshops;  
6 tutorials; 66 posters

#### Statistics

931 attendees; 24 exhibitors  
56 sessions; 38 workshops  
1 tutorial; 127 posters

meetings



*The United States Physics Team Program is a physics community initiative organized by AAPT and funded by member societies of the American Institute of Physics and other generous donors. This program encourages excellence in physics education while rewarding outstanding physics students. High school students compete each year to represent the United States at the International Physics Olympiad Competition providing once-in-a-lifetime opportunities for students to enhance their physics knowledge as well as their creativity, leadership and commitment to a goal.*

## Physics Olympiad

**IPhO Traveling Team**

**39<sup>th</sup> International Competition, Hanoi, Vietnam**

**Medalists** (Front row, left to right)

**Silver:** Rui Hu, **Gold:** Edward Gan, Tucker Chan, Joshua Oreman, Danny Zhu

## U.S. Team Members

Andrew Lucas (alternate); Kiranmayi Bhattaram, Sway Chen, Joseph Chu, Alesia Dechkovskaia, Yishun Dong, David Field, Gabriel Karpman, Brian Kong, Kevin Lang, Dan Li, Marianna Mao, Yoon Nam, Anand Natarajan, Thomas Schultz, Jack Wang, James Yang, Alex Zhai, Alex Zorn

## Coaching Staff

**Co-Academic Directors:** Robert Shurtz, Paul Stanley

**Coaches:** David Fallest, David Jones, Andrew Lin, Junior Coach: Elena Yudovina

**Lab Coaches:** Warren Turner, Safa Motesharrei



# Awards & Grants

## **AAPT Distinguished Service Citations**

### **Winter Meeting**

Dewey Dykstra, Andrew Graham,  
Thomas Senior, Chuck Stone,  
Jonathan Reichert/Barbara Wolff-  
Reichert, Mike Wolter

### **Summer Meeting**

Dean Baird, Anne Cox, Harry Manos,  
Karen Jo Matsler, Steve Shropshire,  
Richard Zitto

### **Outstanding Teaching**

**Assistant Awards:** 120

**Outstanding Student Awards:** 233

### **Scholarships and Grants**

Bauder Endowment Fund  
Dodge Fund  
Fuller Fund  
High School Physics Teacher Grant  
Lotze Scholarship Fund  
New Teacher Fund  
Student Fund

## **Programs and Partnerships**

### **Student Competitions**

International Science and  
Engineering Fair (ISEF)  
Team American Rocketry  
Challenge (TARC)

### **AAPT/PTRA: Physics Teaching Resource Agents**

Presenters for 10 Math Science  
Partnership workshops

Leadership Institute and workshops,  
Edmonton, July

Rural PTRAs, 7 Summer Institutes

### **PhysTEC: Physics Teacher Education Coalition partners**

Currently funded sites: 6  
Legacy sites: 6

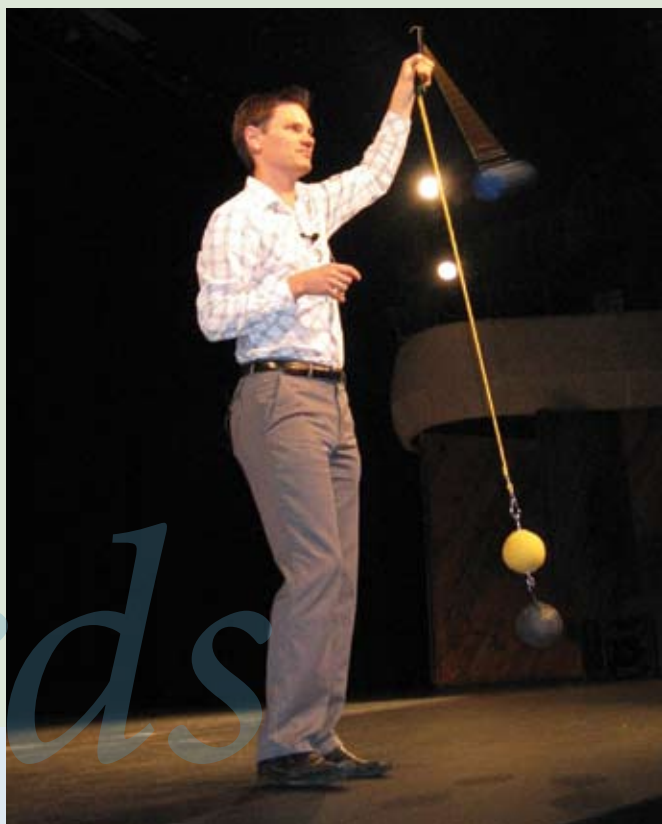
### **Events**

Task Force, May 10–11, Chicago

Workshop with PTRAs, July 18, Edmonton

Summer Meeting programs, July 19–23

Annual Conference, February 29–  
March 1, Austin



awards

## *Invest in Physics Education*

Excellence in AAPT programs and initiatives that is moving the Association to the next level of leadership and distinction cannot be supported nor sustained without constant, external funding from individuals, private foundations and corporations. Hundreds of members and friends of AAPT have invested in programs, scholarships, and initiatives designed to support physics education.

In 2007, the John David Jackson Excellence in Graduate Education Award was established to recognize outstanding achievements by a physics educator who has had serious impact on the field of graduate education, in terms of curricular development and/or classroom teaching. It is named in honor of John David Jackson, the author of a landmark graduate textbook on classical electrodynamics (electromagnetic theory). In just eight months this deservedly popular fund has raised over \$20,000. For online donations, please visit [www.aapt.org/donations](http://www.aapt.org/donations).

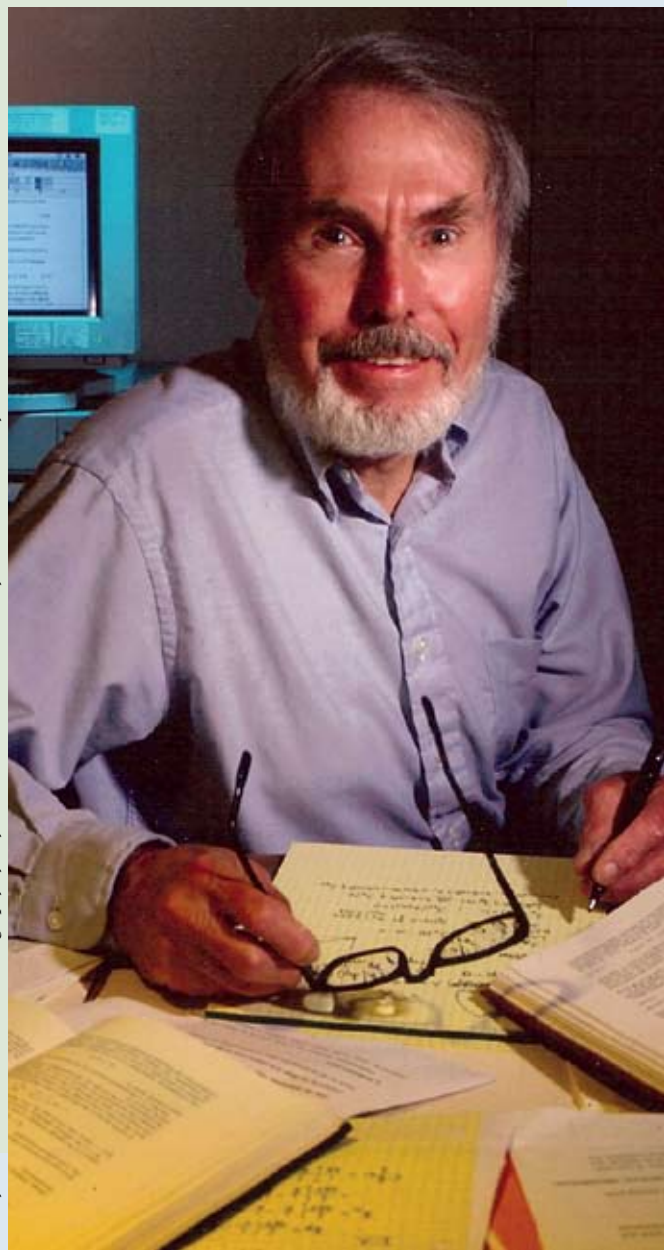
AAPT extends its appreciation to the following corporate sponsors, who continue to provide much needed support to our mission. We give a special thank you to Frey Scientific, John Wiley & Sons, Inc., Mathematica Inc., McGraw-Hill, Inc., PASCO Scientific, Pearson Higher Education, Texas Instruments, Inc., and Vernier Software & Technology.

Other positive news includes a revision of our giving website, which is now more user-friendly.

## *Special Thanks to Our Donors*

<http://www.aapt.org/donations>

Physicist John David Jackson. Photography by Roy Kaltschmidt, Lawrence Berkeley National Laboratory.



# Volunteer Highlights

## **Teaching → Understanding + Appreciation (Physics)**

*Here's another way of expressing AAPT's mission: to encourage understanding and appreciation of physics through teaching. The statement may look unfamiliar in algebraic form, but its meaning is clear — good physics teaching is crucial.*

### **Local, Regional and State Sections**

#### **AAPT Executive Board**

#### **Advisory Committees**

- Meetings
- Programs
- Publications
- Nominations
- Governance
- Membership and Benefits
- Budget, Investments, Finance
- Awards, Grants, Scholarships
- SI Units and Metric Education

#### **Outreach**

- Student Programs and Competitions
- Interest of Senior Physicists
- Minorities in Physics
- Women in Physics

#### **Education**

- Pre-High and High School
- Two-Year College
- Undergraduate and Graduate Education
- International Education
- Research in Physics Education
- Teacher Preparation
- Science Education for the Public
- Educational Technologies
- Apparatus
- Laboratories, Advanced Laboratories
- Space Science and Astronomy

#### **Special Interest**

- History and Philosophy of Physics
- Professional Concerns

AAPT volunteers have been improving  
*physics teaching* for more than *75 years*,  
playing the *key roles* in these areas  
within the organization

*volunteers*

## *Forty-seven sections increase the impact of AAPT at the regional level.*

AAPT currently has 47 sections spread from Alaska and Canada to Puerto Rico. AAPT's Sections vary in population from less than 50 to more than 500 members. 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. The number of sections may increase as we have several groups, including two from outside our current US/Canada boundaries, investigating formation of sections.

The July and August 2008 edition of AAPT Section News gives a great review of section activities. Check out [aapt.org/sections/index.cfm](http://aapt.org/sections/index.cfm) to learn more. You will notice AAPT's Section Meetings featured high quality workshops and invited and contributed talks on current developments in physics and physics education research. Some meetings also included exhibits, show and tell sessions, and make and takes.

Representatives elected by section members convened at the semi-annual national meetings. Their recent discussions have revisited topics from the May 2007 retreat including what it means to be a section, how sections can best provide services to physics teachers, and the relationship between AAPT, AAPT Sections and AAPT Affiliate Organizations.

We hope that all AAPT members will become active in their local sections. Sections provide an outstanding opportunity to interact and network with other local physics educators. Acting together we can be much stronger and have a bigger impact on physics education.



# Financials

**THE AMERICAN ASSOCIATION OF PHYSICS TEACHERS, INC.**  
**STATEMENT OF ACTIVITIES**  
**Year Ended December 31, 2007**  
**(With Comparative Totals for 2006)**  
(unaudited)

	Unrestricted		Temporarily Restricted	Permanently Restricted	2007 Total	2006 Total
	Undesignated	Board Designated				
<b>Support and revenue</b>						
American Journal of Physics	\$ 1,186,127	\$ -	\$ -	\$ -	\$ 1,186,127	\$ 1,205,141
The Physics Teacher	773,092	-	-	-	773,092	769,783
Investment income	337,880	15,452	10,454	-	363,786	990,992
Other publications	312,663	-	-	-	312,663	326,684
Meetings, workshops and projects	774,965	-	-	-	774,965	444,552
Membership	631,514	-	-	-	631,514	619,221
Federal grants	1,475,830	-	-	-	1,475,830	1,779,146
Contributions	66,061	8,440	11,983	208,955	295,439	55,528
International Physics Olympiad	120,432	-	-	-	120,432	94,240
Share in earnings of investment in ACP, Inc.	143,096	-	-	-	143,096	67,348
Miscellaneous income	1,647	-	-	-	1,647	1,927
Releases from restrictions	43,000	(3,905)	(39,095)	-	-	-
<b>Total support and revenue</b>	<b>5,866,307</b>	<b>19,987</b>	<b>(16,658)</b>	<b>208,955</b>	<b>6,078,591</b>	<b>6,354,563</b>
<b>Expenses</b>						
American Journal of Physics	843,619	-	-	-	843,619	730,509
The Physics Teacher	527,694	-	-	-	527,694	712,743
Other publications	1,059,704	-	-	-	1,059,704	607,734
Meetings, workshops and projects	1,779,131	-	-	-	1,779,131	1,267,712
Membership	552,663	-	-	-	552,663	518,826
Federal grants	1,522,862	-	-	-	1,522,862	1,839,419
General and administrative	920,702	-	-	-	920,702	614,726
Fundraising	-	-	-	-	-	2,249
<b>Total expenses</b>	<b>7,206,375</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7,206,375</b>	<b>6,293,922</b>
Increase (decrease) in net assets before effect of adoption of FASB Statement No. 158	(1,340,068)	19,987	(16,658)	208,955	(1,127,784)	60,641
Effect of adoption of recognition and measurement date provisions of FASB Statement No. 158	(63,947)	-	-	-	(63,947)	-
(Decrease) increase in net assets	(1,404,015)	19,987	(16,658)	208,955	(1,191,731)	60,641
Net assets, beginning of year	4,796,841	211,628	70,719	222,730	5,301,918	5,241,277
Net assets, end of year	\$ 3,392,826	\$ 231,615	\$ 54,061	\$ 431,685	\$ 4,110,187	\$ 5,301,918

financials

## *Executive Board*

### **President**

Lila M. Adair  
Piedmont College  
Monroe, GA

### **President-Elect**

Alexander Dickison  
Seminole Community  
College  
Sanford, FL

### **Vice-President**

David M. Cook  
Lawrence University  
Appleton, WI

### **Secretary**

Steven Iona  
University of Denver  
Denver, CO

### **Treasurer**

Paul W. Zitzewitz  
University of  
Michigan - Dearborn  
Dearborn, MI

### **Past President**

Harvey Leff  
California State  
Polytechnic University  
Pomona, CA

### **Chair of Section Representatives**

Alan Gibson  
Connect2Science  
Rochester Hills, MI

### **Vice Chair of Section**

#### **Representatives**

Mary Mogge  
California State  
Polytechnic University  
Pomona, CA

#### **At-Large Board Members**

Gordon Ramsey  
Loyola University Chicago  
Frankfurt, IL

Dwain Desbian  
Estrella Mountain Community  
College  
Buckeye, AZ

Elizabeth B. Chesick  
Baldwin School  
Haverford, PA

#### **Ex-Officio Member Editor**

##### ***American Journal of Physics***

Jan Tobochnik  
Kalamazoo College  
Kalamazoo, MI

#### **Ex-Officio Member Editor**

##### ***The Physics Teacher***

Karl C. Mamola  
Appalachian State University  
Boone, NC

#### **Ex-Officio Member**

##### **Executive Officer**

Warren W. Hein

2007



**AAPT** American Association of  
Physics Teachers

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