

# *NJAAPT Newsletter*

## *October, 2006*

### *President's Message*

It's hard to believe that the first month is over and that we haven't lost a beat. Things are beginning to pick up with our schedule of workshops filled and the thoughts of attending them fresh in our minds.

The first make and take workshop has just been completed and it was a resounding success. Those who attended Jessie and John's workshop took home a small bed of nails and a lot of information about its use and the knowledge of how to construct a larger one for additional demonstration purposes.

At our executive board meeting in late August, Nancy Michaelson brought up the idea of sponsoring a message board for the section and all physics teachers in New Jersey. She showed a preliminary model and has been working on improving the layout so it is easy to use. This type of involvement, bringing new methods by which we can reach our membership, is exactly what we would like to see others contribute. If you have some thoughts as to how improve the Section's importance to you, please contact an executive board member.

Another new member of the executive board, Janet Saylor, was instrumental in our scheduling the spring meeting at Princeton University. Her suggestion to bring experts in the field of Physics Education Research was a departure from the topics we have had in the past. Once it was decided to pursue the subject, Yitzhak Sharon contacted individuals that are nationally recognized as leaders in the field of Physics Educational Research and obtained commitments from them to participate at our March meeting.

Finally, there is the New Jersey Science Convention this month. We are sponsoring four Demo Dens under the direction of Borislav Bilash, a round table discussion, and a QuarkNet presentation. There will be a table with information about our events and we have some give away items. Why not stop by and see what more we have to offer. Better yet, why don't you make us an offer of helping out with some form of activity? And don't forget, renew your membership – you may get something more than a newsletter.

**Let's make this a great year for all physics teachers and students in New Jersey.**

***Ray Polomski***

*North Jersey Regional  
Science Fair  
March 16-17, 2007*

The North Jersey Regional Science Fair (NJRSF) is a non-profit organization that holds an exhibition of student science projects and is affiliated with the Intel International Science and Engineering Fair (ISEF). The NJRSF covers 10 counties in Northern New Jersey: Bergen, Essex, Hunterdon, Middlesex, Morris, Passaic, Somerset, Sussex, Union, and Warren. Students exhibit their projects in competition for a wide variety of awards. Most of the projects are investigative in nature, posing and attempting to answer some question or problem, either through experimentation and design or in a theoretical sense. Projects may be done individually or in a small group. All areas of science, math, and engineering are included.

Note: Students in other NJ counties not covered by another ISEF affiliated fair, may enter the NJRSF. At this time, all counties south of Mercer are covered by the Delaware Valley Regional Science Fair, run by Henry Disston, [disstonh@drexel.edu](mailto:disstonh@drexel.edu).

There are two important deadlines for entering the fair. The first is the Certification Deadline, December 1, 2006, for approval of projects involving human or animal subjects, pathogens, or recombinant DNA. The second is the Registration Deadline, February 2, 2007. Student's research plans must be reviewed and approved by an advisor, such as a parent or teacher. The advisor must also review the safety certification checklist with the student to guarantee the student has qualified supervision for potentially hazardous work.

There is a wide array of awards and prizes offered by the NJRSF, including: A Four Year Academic Award for NJIT; Summer Research Opportunities; Summer Science Programs at Stevens and NJIT; and 300 Other Awards Worth up to \$5000 in Cash and U.S. Savings Bonds; Category awards range from \$500 to \$8000. The grand prize is an expense paid trip for four students and their advisors to the Intel International Science and Engineering Fair, which is being held May 13 - 19, 2007, in Albuquerque, NM. The NJRSF provides the only route from the 10 counties to gain entry to the Intel International Science and Engineering Fair (ISEF). Last year, the NJRSF gave over \$30,000 in cash and prizes. ISEF awards are over 1 million in prizes.

For more information, please contact either:

Rose Kopf (908) 582-5280 [rek@lucent.com](mailto:rek@lucent.com)

Bill Suits (908) 234-9240 [billherits@earthlink.net](mailto:billherits@earthlink.net)

You may also visit our website at <http://www.njrfsf.org>. For more information about ISEF and its affiliated fairs, visit the Science Service website at <http://www.sciserv.org>.



Occasionally some websites come my way that I would like to share with you. Here are a few with some description of what the website allows you to do:

dedicated to online scientific and engineering computations, graphics and data:

[www.mycalculations.com](http://www.mycalculations.com)

[www.mycalculations.com/phys](http://www.mycalculations.com/phys)

convert from one unit into another in any area of physics:

<http://www.asknumbers.com>

physics applets in waves, optics, mechanics, and atomic physics from Northwestern University:

<http://www.physics.northwestern.edu/ugrad/vpl>

*NJAAPT Demo Dens at the  
NJSC Oct. 10 - 11*

Once again the NJAAPT is sponsoring four sessions at the NJSC. The Demo Dens have been a tremendous hit with the attendees since their inception under the leadership of Harry Rheam. This year Borislav Bilash from Pascack Valley HS in Hillsdale, NJ will be the coordinator of the programs.

Come in and see fellow physics teachers put on demonstrations that you can use in your classroom. This year's topics include: **Forces and Newton's Laws of Motion and Essential Physics Demonstrations** on Tuesday and **Fluids – Pour It, Float It, Sink It and Toys, Props, and Other Everyday Stuff** on Wednesday.

The team could use your help, so if you can help out by presenting a couple of your favorite demonstrations, contact Borislav Bilash at:

[bbilash@pascack.k12.nj.us](mailto:bbilash@pascack.k12.nj.us)

Stop by our table for a give away item to take back to your class and learn what we are doing for the membership. You will be able to preview the upcoming spring meeting at Princeton University and get some further information on membership in AAPT.

## President's Message

The year is off to a flying start and is only going to get more exciting in the coming months. As you are well aware from the previous newsletter, there are numerous opportunities for you to participate in the life of this section. Think again about attending a workshop or the sectional meeting or our trip down the Delaware River. All of these events are discussed in articles in the newsletter.

I had the opportunity to attend the Winter AAPT Meeting in Seattle, WA in early January. Participating in the national gathering is an exciting experience that every teacher should have. The hours are long and the schedule is packed with meetings, plenary sessions, workshops, and good times that are shared with new found friends from every part of the country. (See article in this newsletter)

We are entering the most productive part of the year filled with workshops, our steamboat trip, and the spring meeting at Princeton. (See info on each in the newsletter) Think about joining your fellow physics teachers and enjoy the camaraderie that comes from talking to others and exchanging ideas.

## Spring Sectional Meeting Princeton University March 16 – 17, 2007

Our annual Spring Meeting will take place on Friday and Saturday, March 16 – 17, 2007 at Princeton University. The program and registration form are printed in the newsletter. Please take the opportunity to consider coming to the Friday evening dinner, the Saturday session, or both. The focus of the meeting is **Physics Education Research and What It Tells Us**. The topic should be of interest to teachers of all levels of physics.

Since this is our only sectional meeting during the year, why not attend and hear from some of the leading experts in the field and from a couple of current exciting high school physics teachers.

Here is your chance to participate in a sectional meeting that will be entertaining and informative. The way we teach and the expectations of our students is influenced by how we adapt to the innovative methods of understanding how students learn. Why not take the opportunity to hear how some have turned students "on" to physics in different approaches. Who know, maybe this is what you can employ to increase the enrollment in your school and don't forget, there is the Science component of the NJ HSPA.

**All attending will receive a certificate indicating the hours attained toward the 100 hour requirement as stipulated by the Department of Education in NJ for continuing professional development.**



## AAPT Winter Meeting Report

The annual Winter Meeting was held in Seattle, WA from January 5 -10 in conjunction with the American Astronomical Society. This was the second time since 2000 that the two organizations cooperated in scheduling their events together. There were about 3000 in attendance that made for an n entertaining time. What was unusual about the format was that the workshops began on a Friday with the poster and oral sessions starting on Sunday. This also meant that the business portion of the meeting commenced on Saturday.

Acting as our section representative, I attended the section officers meeting at which the new executive officer of the AAPT, Tunic Hakim, addressed the assembly. He presented his vision for AAPT and the role of the sections in attaining it. This was followed by the section reps meeting that continued the discussion of the AAPT's role in the life of the section and the role of the section in the AAAPT. He elaborated upon the question he raised in his remarks: "What can the AAPT do for you and what can the sections do for the AAPT?" There are as he stated no definitive answers to the questions but there needs to be more communication between the two entities. Also at this meeting, our section rep, Joe Spaccavento, was elected to the section reps nominating committee.

On Sunday the Bauder Fund meeting was held and I along with Dave Maiullo, who represented our section rep, and John Roeder, a section member and executive board member of the AAPT attended. The purpose of the Fund is to provide financial support for proposals that will assist individuals who conduct workshops or other outreach programs. Proposals have to be voted upon and the level of support may be altered if it exceeds the committee's guidelines. The section reps council meeting was conducted for the purpose of approving the site of the 2009 summer meeting and to discuss the business of advising the executive board of the AAPT of decisions made to various committees.

Sunday morning found the official beginning of the business portion of the meeting with a plenary session and the poster and oral session. It was at this time that the exhibit hall was opened for the attendees to meet and talk to various vendors and organizations related to both physics and astronomy. The format continued for the next three days before the end of the meeting on Wednesday afternoon.

The hours may be long, but the friendships you can make and the information you can attain is priceless. You may start before 8 AM and not finish until around 10 PM depending upon the importance you place on attending.

It was discussed and there is much truth that to attend a national meeting may just be the thing that jump starts a member's increased involvement in the activities of the section or the national organization. Why not try attending a summer meeting and make it an opportunity for a family vacation – many members do just that. (See listing of sites for AAPT Winter and Summer Meetings in this newsletter)

Ray Polomski

## Future AAPT Meetings and Sites

Summer 2007 –	University of North Carolina – Greensboro
Winter 2008 -	Baltimore, MD
Summer 2008 -	Edmonton, Alberta, Canada
Winter 2009 -	Chicago, IL with APS
Summer, 2009 -	University of Michigan at Ann Arbor
Winter 2010 -	Washington, DC

## Congratulations

We are proud that the following NJAAPT members have achieved recognition from the AAPT :

<b>John Roeder</b>	Executive Board member
<b>Joe Spaccavento</b>	Section Reps Nominating Committee
<b>Dave Maiullo</b>	Apparatus Committee Chair

## Calendar of Events

<b>Feb. 9</b>	Dave's Dazzling Demo Night – Rutgers University
<b>Feb. 28</b>	Sharing Session – Passaic HS – 4 PM
<b>Mar. 16-17</b>	Sectional Meeting – Princeton University
<b>Mar.</b>	Sharing Session – Bergen Academies Hackensack – See website
<b>Mar. 31</b>	Electrostatics Workshop – Chatham HS
<b>Apr.</b>	Sharing Session – Pascack Valley Reg. HS Hillsdale – See website
<b>Apr.</b>	Bergen Co. Meeting – Bergen Comm. Coll. – See website
<b>May 5</b>	Delaware River Steamboat Trip

Please visit [www.njaapt.org](http://www.njaapt.org) for further information and updates relating to events for the rest of this school year and for the next school year.



# Section Meeting Schedule of Events

## Friday March 16, 2007 Jadwin Hall

- 5:00 – 6:00 p.m. Registration, Hors d'oeuvres  
6:00 – 7:15 p.m. Dinner – Joseph Henry Room  
7:15 – 8:15 p.m. Guest Speaker:  
**Alan van Heuvelen**  
*“Physics Education and the Needs of the Future Workplace”*  
8:15 – 8:45 p.m. Dessert and Visiting  
8:45 – 9:30 p.m. Tour of Princeton University Observatory (weather permitting)

## Saturday March 17, 2007 McDonnell Hall

- 8:30 – 9:00 a.m. Registration, Coffee  
9:00 – 9:15 a.m. Welcome:  
**Ray Polomski** President of NJAAPT  
**Toufic Hakim** Executive Director of the AAPT  
9:15 – 10:05 am Guest Speaker – Joe Redish – University of Maryland  
*History and Trends in Physics Education Research”*  
10:10 – 11:00 am Guest Speaker – Eugenia Etkina – Rutgers University  
*” Investigative Science Learning Environment: Using the Processes of  
Science and Cognitive Strategies to Help Students Learn Physics ”*  
11:00 – 11:10 am Break  
11:10 - 12:00 am Guest Speaker – Rachel Scherr – University of Maryland  
TBA  
12:00 – 12:15 pm Section Meeting  
12:15 - 1:15 pm Lunch  
1:15 - 2:05 pm Guest Speaker – Bob Goodman – NJ Teacher of the Year 2005-06  
Bergen County Technical HS  
*Teaching Physics First in High School*  
2:10 - 3:00 pm Guest Speaker – Michael Lawrence – West Orange HS  
*Applying the Results of PAER in Classroom Physics Teaching and  
Formative Assessment*

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## Message from the AAPT

### From Teachers to Teaching—A Stronger AAPT

Organizations, like organisms, must adapt to their evolving environment. This is especially true in today's socio-political, technological, and academic setting. With the prospect of significant changes in funding support for science education, in electronic publishing, and in global competition, AAPT must constantly review its priorities and initiate actions that reflect its core beliefs.

Our tradition gives us a rich heritage as an association that values the teaching of physics, and knows how to do it. AAPT must remain a vibrant membership-based association, serving the professional needs of its members, while at the same time increasing its role as a dynamic resource for all physics educators and becoming a leading voice of physics education. Motivated by our passion for physics, our experience in teaching, and our knowledge of physics education, we will find new ways to expand the reach of our programs and services. We must be a strong contributor—and soon the leader—in a national effort to improve physics education.

Together we must work to broaden and deepen the impact of AAPT and the influence of its members on physics education. To this end:

- We must analyze the effect of our many significant initiatives, programs, and publications and disseminate widely the most successful among them.
- We must continue to support the new ideas and techniques in teaching that our members have produced and work to combine these best practices in ways that could precipitate systemic change in the nation's schools and universities.
- We must increase the effectiveness of communications to and among our members while reaching out to a much larger community of scientists, educators, administrators, and policymakers.
- We must facilitate public dialogs on science education that lead to meaningful conversations on issues of regional and national significance.

To realize this vision, AAPT is embarking on Phase II of a comprehensive planning process that, when completed, will establish AAPT's strategic directions and refine its agenda to effectively address them. AAPT will establish ambitious goals and develop the appropriate infrastructure to meet them. All stages of this planning process will engage the membership and leadership of the Association.

Our AAPT of the twenty-first century will build on the strengths that characterize its growth through the twentieth century. It may become

larger and more international. It may have new types of members and turn some of its attention to national policy. It will surely engage in fundraising and be widely recognized by scientists and educators as the voice of physics education. Above all, AAPT will continue to be anchored in our knowledge that good physics is at the core of effective physics teaching. In turn, effective physics teaching is critical to advancing physics research and development, as well as the physics literacy of our entire population so necessary for survival in an increasingly technological world.

Your Board at its October meeting embraced this vision. A number of key decisions were made (see the upcoming AAPT News) which will help shape AAPT into a stronger organization that provides tangible benefits to those teaching physics, while advancing the “cause” of physics education.

As you will see, your Board addressed issues in communications and publications, governance, meetings, development, teacher preparation, awards, and programs for new teachers. The minutes of the meeting will soon be posted on AAPT.org. We urge you to review these areas of emphasis, let us know your ideas, and consider where you would like to contribute.

We are moving toward a vision of AAPT as a leading voice for physics education and a leading resource for physics educators. We invite you to join us on this journey that promises to be exciting and challenging. The rewards for AAPT are significant. The rewards for physics education are greater. We can only get there if we work together. After all, the dedication of our members who rise to a challenge is a hallmark of AAPT—a characteristic that the national office will wholeheartedly support.

Ken Heller, President  
Toufic Hakim, Executive Officer  
AAPT

## ***Important Request – Please Respond***

The National AAPT is requesting that all of its sections provide them with information on the membership of the section. This is an effort to cross reference the national and sections to determine which members belong to the national only, the section only, or both. Before we as a section provide this contact information about you, we believe that we must receive your permission to do so. **If you do not wish your membership information provided to AAPT please send an email with that request to: Ray Polomski at r7429@optonline before Feb. 15, 2007. If no response is received by that date your information will be forwarded to the AAPT.**

**NJAAPT  
189 Richard Drive  
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