

First things first:

SEPS AAPT's Fall Demo Day is coming up fast, on Saturday, October 27th from 10 am-1 pm. (Breakfast is served at 10, demos start at 11.)

Because we are providing free breakfast, we need to have a headcount in order to get the right amount of food. A number of people have signed up, but suspect that we currently have an extreme undercount of attendees, and it will be awkward when everyone has to fight over a single bagel. If you are planning on coming, PLEASE EMAIL BOB SCHWARTZ ASAP at schwarr -at- lmsd.org.

IF YOU ARE PLANNING TO SHOW A DEMONSTRATION or other presentation (it's okay if you aren't, but awesome if you are), please ALSO TELL BOB the title of your demo and whether you will need any special equipment such as computer projection, internet, electrical power, etc. Demos should be kept around 10 minutes in length.

Second things second:

Martha Takats, our inestimable webmaster, is trying to update the website with recent AAPT exploits. If you have any pictures or comments from this summer's National Meeting, or from any other recent AAPT event, which you would like included on our website, please email them to Martha at mtakats -at- ursinus.edu.

Here's a summary of the remaining contents:

1. Sign up for SEPS AAPT's Fall Demo Day
2. AP Physics B Redesign finally posted
3. Nobel Prize in Physics: Haroche and Wineland
4. Free AIP Journal Content in October
5. Penn Monthly Outreach Lectures for Science Teachers at LRSM (11/8, 12/13)
6. FAME Delaware Seeks Part-time Science Teachers
7. Opening for Adjunct Instructor at Moravian College
8. Sign Ups Open for AAPT PTRA Workshops (deadline 11/0 for 11/16 workshop)
9. Opening for physics teachers at Mastery Charter
10. Opening for physics teacher at Ursuline Academy
11. Army-funded High-School and Undergraduate Apprenticeship Programs accepting applications (due 4/1/13)
12. 2012 Humans in Space Youth Art Competition (Deadline 10/21/12)
13. Save the Date for SEPS AAPT's joint spring meeting with SPS (4/19-4/20 at Drexel)
14. Publish Student Climate Research in Harvard's JRE (deadline 11/30)
15. Links: SEPS AAPT online

As always, please continue to let me know about any exciting events, professional development opportunities, or resources you come across that you'd like to share with the rest of the Southeastern PA Section! I'd especially be interested in getting more resources that will

be useful to college faculty, since most of the mailing lists I am personally on pertain to my own grade level, and I'd like this list to be useful for everybody on it.

And as always, please let me know by email (jwaldman@archmereacademy.com) if you would like me to change your subscription, or if you have friends or colleagues who would like to be added.

Yours with negligible mass and friction,

Jillian Waldman
Secretary, SEPS AAPT
AP & Honors Physics Teacher
Archmere Academy
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1. SIGN UP FOR SEPS AAPT's FALL DEMO DAY AT HARRITON HIGH SCHOOL

Do you have a neat physics demonstration or teaching technique you want to share? Are you an experienced teacher, but still love to learn from your colleagues? Are you a recently-minted physics teacher looking for ideas? Come to SEPS AAPT's Fall Demo Day on Saturday, October 27th! It's fun, free, and pedagogically useful. Spread the word to colleagues at your school or college! (A flyer is attached for your posting convenience.)

Where: Harriton High School, 600 North Ithan Avenue, Rosemont, PA 19010

When: 9:30 AM for Executive Board Meeting (you know who you are); 10:00 AM for FREE BREAKFAST and chat; 11:00 AM - 1:00 PM for DEMOS

We ask that you please register by emailing Bob Schwartz at [schwarr -at- lmsd.org](mailto:schwarr-at-lmsd.org) by October 20th (that's next Saturday) if you plan to attend, so that we can be sure to bring enough breakfast for everyone. SEPS AAPT annual dues of \$10/person/year will also be collected at the meeting, for those who have not paid within the past year. (Yes, I know I already said this at the top of the email.)

2. AP PHYSICS (B) REDESIGN POSTED

Guided by National Research Council and National Science Foundation recommendations, the AP Program spent several years collaborating with master AP teachers and eminent educators from universities and colleges to evaluate and revise the AP Physics B course. This collaboration led to a decision to replace AP Physics B with two new courses, AP Physics 1: Algebra-based and AP Physics 2: Algebra-based. The new courses were endorsed enthusiastically by higher education officials and will benefit all members of the AP community. AP will begin offering the eagerly awaited courses in the 2014–15 academic year, and it will discontinue the AP Physics B program following the 2013–14 academic year. Click the link for more information on the differences between Physics B and the new Physics 1 & 2 sequence.

<http://advancesinap.collegeboard.org/science/physics>

3. NOBEL PRIZE IN PHYSICS AWARDED TO SERGE HAROCHE DAVID J. WINELAND

The Nobel Prize in Physics 2012 was awarded jointly to Serge Haroche and David J. Wineland "for ground-breaking experimental methods that enable measuring and manipulation of individual quantum systems."

http://www.nobelprize.org/nobel_prizes/physics/laureates/2012

The Swedish Academy has produced the following two press releases, although there are of course a million popular science articles floating around the 'net.

Info for the public:

http://www.nobelprize.org/nobel_prizes/physics/laureates/2012/popular-physicsprize2012.pdf

Info for physicists:

http://www.nobelprize.org/nobel_prizes/physics/laureates/2012/advanced-physicsprize2012.pdf

4. FREE AIP JOURNAL CONTENT IN OCTOBER

To recognize the winners of the 2012 Nobel Prize in Physics, which were announced Tuesday, October 9, and to celebrate the achievements of the global physics community, AIP Publishing has made all journal content open to the public during October 2012. This month everyone has free online access to all AIP journals and Conference Proceedings as far back as 1999!

Readers can use this opportunity to get more out of the JCP Spotlight Collections "Perspectives" articles by enjoying free access to the highlighted references, or to get an overview of the hottest research trends in different fields by reading review articles—a great resource or people looking for a comprehensive view of a specific topic. Readers are encouraged to explore each of the AIP journal sites this month, but the links below will get you started.

JCP Spotlight Collections: <http://jcp.aip.org/about/spotlight>

Most recent "Perspectives" article:

http://jcp.aip.org/resource/1/jcpsa6/v137/i12/p120901_s1?bypassSSO=1

Physics of Plasmas review articles: http://pop.aip.org/review_articles

5. PENN OUTREACH LECTURES AT THE LAB FOR RESEARCH ON THE STRUCTURE OF MATTER (LRSM)

Since 1994, the LRSM has presented a monthly series of materials-based lectures during the school year to science teachers. These are given by faculty and staff associated with the LRSM. The lectures are free, take place on Thursday evenings at 5:30 pm and are followed by food and refreshments during which teachers can engage the speaker in conversation about the talk or other aspects of education. Teachers can also receive Act 48 credit. The theme for this year's lectures is "Advanced Materials: Synthesis, Characterization, and Properties."

All lectures take place at the LRSM, which is located at 3231 Walnut Street, in Philadelphia. Upcoming lectures include:

November 8 -- John Vohs, Chemical and Biomolecular Engineering "Recent Advances in Fuel Cell Technology"

December 13 -- Alain Plante, Earth and Environmental Science: "The Carbon Beneath Our Feet"

More information is available at the link below. If you are interested in attending, please contact Andrew R. McGhie at 215-898-6461 or at mcghie -at- lrsm.upenn.edu.

<http://www.lrsm.upenn.edu/outreach/teachers.html>

6. FAME DELAWARE SEEKS PART-TIME SCIENCE TEACHERS

<http://famedelaware.org/2012/10/faculty-positions-announcement/>

The Forum to Advance Minorities in Engineering, Inc. (FAME, Inc.) is currently offering teaching positions. FAME is a pre-college enrichment program that prepares and motivates students in grades 7-12 to enter college and complete a baccalaureate degree in engineering, science, math or technology related fields of study. I can personally vouch for the quality of preparation FAME provides -- one of my freshmen attends the FAME program, and her level of knowledge and interest in science are both superior.

The candidate should have a four year degree from a college or university, subject teaching credential or certification, with knowledge of relevant technology. The applicant must show excellent communication and organizational skills. Applicant must be able to plan a program of study, employing a variety of instructional techniques and instructional media that meets the individual needs, interests and abilities of the students.

Interested candidates must be committed to the FAME Program timeline, which consists of 16 sessions during the Fall/Spring, held the first and third Saturdays from 8:30 AM to Noon, October through May. Openings are available in middle and high school math, science, and technology.

If interested send letter of interest, resume and three (3) references to:

FAME, Inc., Community Service Bldg., Suite 409, 100 W. 10th Street, Wilmington, DE 19801, Attn: Mr. Donald L. Baker, II, Executive Director, (302) 777-3254

7. OPENING FOR ADJUNCT INSTRUCTOR AT MORAVIAN COLLEGE

Adjunct instructor wanted to teach two courses (sophomore level Modern Physics and upper level Electricity and Magnetism) with associated labs in the spring term of 2013. Ph. D in physics and some teaching experience desired.

Send CV and cover letter to Kelly Kriebel, Chair, Department of Physics and Earth Science, Moravian College, Collier Hall of Science, 1200 Main St., Bethlehem, PA 18018. Phone at 610 861 1437 or send inquiries/information via e-mail at: kriebelk -at- moravian.edu

8. SIGN UPS OPEN FOR AAPT PTRS WORKSHOPS (11/16/12 and 3/8/13)

Each year the Central PA Section of AAPT offers two workshops primarily aimed at high school teachers. This year's fall workshop is themed around Kinematic Measurement and scheduled for Friday, November 16 at Misericordia University (near Wilkes-Barre). The spring workshop is scheduled for Friday, March 8 at Millersville University (near Lancaster). Copies of the announcements for the workshops are attached, with further details, registration information, and contact information for the coordinators. Please post and share the announcements, and sign up for the workshops! Registrations for the November 16th workshop are due by November 9th.

9. OPENING FOR PHYSICS TEACHERS AT MASTERY CHARTER

Mastery Charter Schools is seeking dynamic and passionate secondary (7-12) physics teachers. Mastery teachers will work together to create a warm, welcoming school culture driven by student achievement. Teachers will be responsible for implementing Mastery's curriculum and utilizing classroom routines and procedures with consistency. Teachers will also be responsible for developing rigorous lesson plans, homework assignments and assessments. Working closely with school leaders, teachers will analyze student assessment data and use data to inform instruction. Teachers will collaborate in grade level teams to discuss student work, share best practices, and ensure student mastery of standards. Teachers will be expected to maintain close relationships with families, including phone calls and conferences, and will participate in on-going professional development in the spirit of continuous improvement. Mastery is looking for teachers committed to high expectations for students, teamwork, and our motto of "Excellence. No Excuses."

Qualifications: Bachelor's Degree in subject matter or at least two years relevant teaching experience; Must have or be working towards Pennsylvania Teacher Certification; Must be able to work collaboratively in a high-stakes environment; Outstanding instructional skills, including the ability to motivate and challenge students and maintain an orderly classroom environment; Demonstrated expertise in physics instruction; A strong sense of personal accountability for student achievement; A belief that all students should be held to high academic standards; The ability to communicate effectively with parents; Demonstrated professionalism, responsibility, and a strong work ethic; A positive attitude and a drive for personal excellence; The ability to problem-solve; A commitment to Mastery's core values of joy and humor

To apply: Please visit the "Careers" tab of our website: www.masterycharter.org

10. OPENING FOR PHYSICS TEACHER AT URSULINE ACADEMY

Ursuline Academy seeks to hire a physics teacher who is qualified to teach all levels including AP and Environmental Science. If interested, send a cover letter, resume, and three references to uaemployment@ursuline.org.

<http://www.ursuline.org/content/employment-opportunities>

11. ARMY-FUNDED HIGH SCHOOL & UNDERGRADUATE APPRENTICESHIP PROGRAMS ACCEPTING APPLICATIONS

<http://www.usaeop.com/programs/HSAP/index.htm>

The High School Apprenticeship Program (HSAP) is a commuter program for high school juniors and seniors who demonstrate an interest in science, technology, engineering, or mathematics (STEM) to work as an apprentice in an Army funded university research laboratory. Students apprentice with experienced scientists and engineers full-time during the summer or part-time during the school year.

Likewise, the Undergraduate Research Apprenticeship Program (URAP) has the SAME description and the SAME application form.

Students should apply online NOW, and specify which HSAP/URAP locations they are interested in. The nearest locations to Philadelphia include Penn State and the University of Delaware, but students may have relatives with whom they could stay for the summer in other locations. All applications are due by 1 April 2013. Don't wait: apply NOW!

GOALS: Provide hands-on research experiences to high school and undergraduate college students; Educate students about the Army's interest and investment in science; Foster mentorship by a university researcher; Inspire students to continue pursuit of STEM interests.

Another Army program at Penn State and other universities nationwide is the JUNIOR SCIENCE AND HUMANITIES SYMPOSIA

<http://www.usaeop.com/programs/JSHS/locations.htm>

It "promotes original research and experimentation in the sciences, engineering, and mathematics at the high school level". Students compete in a regional symposium by orally presenting the results of their original research. Teachers participate with them. It "encourages the success of high school teachers in addressing the attainment and mastery of state and national performance and process skills standards ..."

12. 2012 HUMANS IN SPACE YOUTH ART COMPETITION

The international 2012 Humans in Space Youth Art Competition invites students ages 10-18 to express their ideas about the future of human space exploration through visual, literary, musical or digital art.

Artwork submissions will be judged on creativity, skill and demonstration of meaning relevant to expressing "How will humans use science and technology to explore space, and what mysteries will we uncover?"

Winning art will be showcased at displays and multimedia performances worldwide from 2013 to 2014, as well as in an online gallery. Submissions must be received by Oct. 21, 2012.

For additional information and a complete list of guidelines, visit

www.humansinspaceart.org. Inquiries about this opportunity should be directed to Jancy McPhee at jancy.c.mcphee@nasa.gov.

13. JOINT SPRING MEETING WITH SOCIETY OF PHYSICS STUDENTS

Save the date for SEPS AAPT's joint spring meeting with the Society of Physics Students Zone 3, on the theme of "Communicating Physics". The meeting will be held at Drexel University in Philadelphia on Friday, April 19 and Saturday, April 20, 2013.

14. OPPORTUNITY TO PUBLISH STUDENT CLIMATE RESEARCH IN HARVARD'S JEI

Harvard University's *Journal of Emerging Investigators*, or *JEI*, has formed a collaboration with the Institute for Earth Science Research and Education to publish a series of peer-reviewed, climate-related research papers authored by middle- and secondary-school students.

JEI is an open-access peer-reviewed online journal whose mission is to encourage and publish authentic student research. In addition to standalone research papers, *JEI* also encourages students who are developing science fair projects to submit journal articles based on those projects. Guidelines for articles, including some practical suggestions for converting a science fair project into a journal article submission, can be found at www.instesre.org.

The initial deadline for an intent to submit a manuscript email is Nov. 30, 2012. For more information, including submission instructions and other deadlines, please contact David

Brooks at brooksdr -at- instesre.org.

15. SEPS AAPT ONLINE

For news, upcoming events, and photos of past events, check out the SEPS AAPT web presence online and on Facebook!

Website: <http://www.physics.upenn.edu/~aapt/>

Facebook: <https://www.facebook.com/?ref=logo#!/group.php?gid=166735829> 132