

Hi everyone!

Ray Polomski of the NJ section of the AAPT wanted me to make sure to let you guys know about their upcoming spring meeting, which will be at Princeton March 15th and 16th. The topic is "Hot Topics in Physics", students can register for the Saturday talks for a reduced rate, and the registration deadline is March 9th. Check it out! (But don't miss ours in April, either!)

Here's a summary of the remaining contents of this newsletter:

1. Register now for NJAAPT's annual meeting at Princeton (3/15-3/16, deadline 3/9)
2. Save the date for SEPS AAPT's annual spring meeting at Drexel (4/26-4/27)
3. Wondergy seeks charismatic science presenter for traveling skateboarding assemblies (posted 2/4)
4. AIM Academy seeks Secondary Science Teacher (posted 2/4)
5. Penn Monthly Outreach Lectures for Science Teachers at LRSM (3/14, 4/4, 5/16)
6. Penn LRSM Science Cafes in Wilmington and Philadelphia (2/18, 3/11, 3/13, 4/1, 4/10)
7. Army-funded High-School and Undergraduate Apprenticeship Programs accepting applications (due 4/1/13)
8. AMTA offers Modeling Workshops this summer in PA and NJ (deadline 6/1 for South Jersey Institute)
9. Southeastern PA Physics League seeks judges for competition 2/23 at Harriton HS
10. AAPT Physics Bowl (registration deadline 3/4; contest in April)
11. Useful Links
12. SEPS AAPT online

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 -at- archmereacademy.com](mailto:jwaldman-at-archmereacademy.com)) if you would like me to change your subscription, or if you have friends or colleagues who would like to be added.

Best,

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1. REGISTER NOW FOR NJAAPT'S ANNUAL MEETING

NJAAPT's annual meeting will occur March 15-16, with a theme of "Hot Topics in Physics."

The registration deadline is March 9th, and students are welcome to register for the Saturday portion at a reduced rate. It's a good opportunity for them to get some exposure to cutting-edge physics and meet experts in the field. The full schedule is attached.

Highlights include the following speakers:

Friday, March 15, 7:30 PM -- Andrew Zwicker, Princeton Plasma Physics Lab

"Fusion 2013: Just How Close Are We to Creating a Star on Earth"

Saturday, March 16, 9:30 AM -- Saurabh Jha, Rutgers University

"The Expanding Universe"

12:25-2:15 PM -- Nima Arkani-Hamed, Institute of Advanced Study

"The Inevitability of Physical Laws: Why the Higgs Has To Exist"

2:30-3:30 PM -- E&M Demo Show, Chris Tully, Princeton University

For more information, please check out the following links:

<http://njaapt.org/mainframe.htm>

<http://njaapt.org/CalendarOfActivities/2012-2013/Registration%20NJAAAPT%20Spring%20Meeting%202013.pdf>

<http://njaapt.org/CalendarOfActivities/2012-2013/Schedule%20for%20NJAAAPT%20Spring%20Meeting.pdf>

2. SEPS AAPT's ANNUAL SPRING MEETING AT DREXEL

Our annual spring meeting will take place Friday, April 26 and Saturday, April 27. (Note that this is different from the originally intended weekend, due to space conflicts.) It will be a joint meeting with their Society of Physics Students (SPS) section, and the theme will be "Communicating Physics".

For our Saturday evening plenary, we will be partnering with the Philadelphia Science Festival, with an "Iron Physics Teacher" competition: participants are challenged to use some specific ingredient (e.g. a dollar bill or a marshmallow peep) to communicate a physics concept in 5 minutes or less, and then the audience will vote on the winner. The event will be open to the public and publicized through the Science Festival -- it should be a good thing to invite our students to! We are seeking volunteers to present in the competition.

3. WONDERGY SEEKS CHARISMATIC SCIENCE PRESENTER FOR SKATEBOARDING SCIENCE ASSEMBLIES

<http://philadelphia.craigslist.org/sci/3593348756.html>

Travel the country with a professional skateboarder, presenting exciting school assemblies where audiences truly LEARN. Lie across a bed of nails, make pigs fly, levitate students, and explore the science behind skateboarding tricks.

Based in Philadelphia, Wondergy uses science to educate, change attitudes, and affect behavior. The Wondergy team brings knowledge, experience, and personal excitement about science to create exciting, inviting interactions that empower people to learn about the phenomena that matter to them. Through promoting learning, we build a stronger workforce, smarter consumers, and more informed stewardship of our world.

For academic year 2013-14, we are proud to launch another cross-country tour of our Skate Science show.

Duties

- Guide hands-on and minds-on science exploration; encourage questioning and discovery
- Present 8-12 one-hour science of skateboarding assembly programs each week

- Travel with a world-champion professional skater
- Share your excitement about how things work, athletics, physics, and staying healthy with diverse communities
- Drive from school to school - may involve substantial driving
- Help unpack, setup, re-pack folding ramps and physics demo equipment
- Communicate with schools to coordinate arrival and setup
- Train in Philadelphia and possibly follow this year's tour for a short time to prepare for next year

Qualifications of an Ideal Candidate

- Comfortable with basic physical science concepts
- Creative and able to improvise, not thrown off by audience questions. On the contrary, you should welcome questions, ideas, and jokes!
- Comfortable in front of large audiences - performance or public speaking experience a big plus
- Charismatic and passionate, with strong communication skills
- Able to articulate complex concepts in a simple yet accurate manner
- Teaching experience a plus
- Science, engineering, or education degree (or major or minor) strongly preferred
- Clean, valid drivers' license
- Skateboarding experience welcomed, but not required
- Able to lift and carry over 50lbs

How to Apply:

Email us your resume with a cover letter and your availability for an interview. We will have a phone interview, which may be followed by an in-person "audition". You should come to your audition prepared to get us excited while teaching us a short (5-10 minute), kid-friendly lesson on the science topic of your choosing. We'll (pretend to) be kids. Teach us something really cool!

Occasional Part-Time Positions also Available!

We are also seeking help with local science presentations. The local science presenter position (occasional part time) is similar to the description above and involves presenting a variety of different topics. Blow stuff up, freeze stuff with liquid nitrogen, play with powerful lasers and high voltage electricity, and generally convince people that the world is a great toy! Local science presenters start as part of our "festival team" and help with informal walk-up education

If you would like to help us build new programs, grants, clients, and partnerships, please let us know what you can offer. Sales and development positions are generally commission- or project-based.

4. AIM ACADEMY SEEKS SECONDARY EDUCATION SCIENCE TEACHER

<http://careers.nais.org/jobs/5122799/secondary-education-science-teacher>

AIM Academy (AIM), a school for children who learn differently, is seeking a full time Secondary Education Science Teacher. Since its launch in 2006, in conjunction with The Lab School of Washington® in DC, AIM has become one of the fastest growing private schools and teacher training centers in the Greater Philadelphia region. This role is a key position at AIM and is ideal for the person who is passionate about improving education for children with learning disabilities.

The candidate who most uniquely qualifies for this position will possess the following:

1. Creativity, a positive outlook, pro-active orientation, coupled with the ability to act as a team player while interacting with students, parents, and peers
2. Entrepreneurial spirit and approach – must enjoy fast-paced environment
3. Unique ability to inspire others to embrace the cutting-edge vision of AIM
4. Highly collaborative approach to developing a cross-curricular, arts-based learning environment for students
5. Extracurricular expectation with our athletic, advisory and activity programs.
6. At least 3 years teaching experience; experience teaching students with learning disabilities a plus
7. PA Certification in Secondary Science Education or Special Education with Praxis test completion in Science areas
8. Expertise in IEP development and progress monitoring using AIMSweb and curriculum-based measurements a plus
9. Exceptional communication skills with parents
10. Experience with a variety of research-based curricula and programs a plus
11. An interest in gaining experience in conducting seminars for educators/administrators; interest in presenting at conferences, writing articles
12. Keen interest in exploring the latest research in learning disabilities and for promoting the dissemination of best practices in the Greater Philadelphia region
13. Established contacts with other educational institutions a plus
14. Exceptional interpersonal skills
15. Exceptional skills in follow-through, organization, writing
16. PA Child Abuse, Criminal Background Check and FBI Fingerprinting required for school employment

Send resume, cover letter and references to Pat Roberts, Executive Director at jobs@aimpa.org

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:

- March 14 -- Ivan Dmochowski, Chemistry "Supramolecular Chemistry with Xenon"
- April 4 -- Karen Winey, Materials Science and Engineering "Supramolecular Chemistry with Xenon"
- May 16 -- David Pope, Materials Science and Engineering "Metals: Are They Going Out of Fashion?"

More information is available at the link below, and in the attached PDF. If you are interested in attending, please contact Andrew R. McGhie at 215-898-6461 or at [mcghie -at- lrsm.upenn.edu](mailto:mcghie-at-lrsm.upenn.edu). <http://www.lrsm.upenn.edu/outreach/teachers.htm>

6. PENN OUTREACH SCIENCE CAFE PROGRAM FROM LAB ON THE RESEARCH OF THE STRUCTURE OF MATTER

In October 2010, the LRSM (see above) also began a monthly series of materials-based Science Cafes. These are popular science talks on specific aspects of materials, such as fuel cells or solar power, given by affiliated faculty at a local restaurant or bar in a relaxed setting conducive to setting up a dialogue between the speaker and the audience. These talks begin at 6:30 PM, and are open to the general public, not just to science teachers. The 2013-2013 series has two primary regional locations -- at Stoney's British Pub in Wilmington, Delaware, and at the World Cafe Live in Philadelphia.

Upcoming talks include:

February 18, 2013 -- Mark Jones, Fraunhofer Center for Biomolecular Technology, Newark, DE, "Plants for better health: The role of plant biotechnology in the generation of new vaccines and therapeutics."

6:30 PM, Stoney's British Pub, 3007 Concord Pike, Wilmington DE

March 11, 2013 -- Jennifer Maas, Conservator, Winterthur Museum, DE

"Using synchrotron radiation to study Matisse: Hand-held x-ray fluorescence in Art & Archaeology"

6:30 PM, Stoney's British Pub, 3007 Concord Pike, Wilmington DE

March 13, 2013 -- Peter Collings, Physics, Swarthmore College

"Liquid Crystals: An Oxymoron Necessary for Life and the Basis of Modern Displays"

Liquid crystals are a phase of matter just like the more familiar phases of matter (solids, liquids, and gases). Yet the properties of liquid crystals are so unique that they are both the fundamental building blocks of biological structure and the basis for the displays found in laptop computers and flat panel televisions (LCDs). The reason for these extraordinary properties is that liquid crystals represent a natural, delicate balance between the absence of all molecular ordering found in liquids and the high degree of molecular ordering found in solids. Additional applications are already in use and more are on the way.

6:30 PM, World Cafe Live, 3025 Walnut Street, Philadelphia PA

April 1, 2013 -- Bill Berner, Physics, University of Pennsylvania

"Free fall and more: the physics of getting down"

6:30 PM, Stoney's British Pub, 3007 Concord Pike, Wilmington DE

April 10, 2013 -- Robert Johnson, Physics & Astronomy, University of Pennsylvania

"Ultrafast DNA sequencing: speed-reading the blueprint of life."

6:30 PM, World Cafe Live, 3025 Walnut Street, Philadelphia PA

For more information, see the attached PDF, or check out the LRSM's website:

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

7. 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 ..."

8. MODELING WORKSHOPS OPEN THIS SUMMER IN NJ AND PA

The American Modeling Teachers Association (AMTA) is sponsoring a number of workshops this summer for Biology, Chemistry and Physics teachers interesting in learning more about Modeling Instruction. A listing of these workshops can be found at:

<http://modelinginstruction.org/teachers/workshops-2013/> The AMTA website also contains other information pertaining to modeling instruction.

The Spring meeting will also feature a mini-workshop on Modeling, which will be an excellent opportunity to learn more about this effective instructional strategy.

I've attached the flyer and the application for the closest Modeling Workshop to Philadelphia, which I (Jillian) actually attended last summer, at Clearview Regional High School in New Jersey, near Rowan University. It was a FREE, interesting, and useful experience, and helped me rethink some of how I teach first-year physics. CRHS is about about a forty-minute drive from my house near Center City. Workshops are also available for Chemistry and Biology, although the Physics program is the oldest and most thoroughly developed.

Gwendolyn Hehemann <[wendy -at- modelinginstruction.org](mailto:wendy-at-modelinginstruction.org)> is the outreach person for the Modeling Workshops, and can also answer any questions you might have.

9. SOUTHEASTERN PA PHYSICS LEAGUE SEEKS COMPETITION JUDGES

The Southeastern Pennsylvania Physics League is holding its final competition on Saturday, February 23rd, at Harriton High School. The League is looking for some help for the final event of the competition, known as the Physics Relay. About eight people with a knowledge of physics, (i.e., physics teachers) are needed to help judge the event by checking the correctness of problems that the competing students must solve as part of the relay. If you could volunteer to help, you would meet in the main gym of Harriton High School at 10 AM on that Saturday morning, though you could drop by sooner if you'd like to

see some of the other events...perhaps even get some ideas for your own classes. If you are willing to help out, please contact Bob Schwartz at schwarr-at-lmsd.org. Thank you very much!

10. AAPT PHYSICS BOWL REGISTRATION NOW OPEN

Registration is open for the 2013 PhysicsBowl taking place April 3 - April 17, 2013. The registration deadline is March 4, 2013.

Michael Faleski, PhysicsBowl Coordinator and Associate Professor of Physics at Delta College, and the PhysicsBowl Advisory Board are seeking physics educators interested in joining the Board and assisting in preparing the exams. This is a fun and unique way of getting high school students excited about physics. If you are interested in joining the PhysicsBowl Advisory Board, please send a message expressing your interest to eo-at-aapt.org.

For more information, or to register for the Physics Bowl:

<http://www.aapt.org/Programs/contests/physicsbowl.cfm>

11. LINKS

Want to integrate news articles and figures into your physics class? Check out this webpage of physics applications in the New York

Times: <http://cisephysics.homestead.com/files/NYT.htm>

12. 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=166735829132>