

One highlight for this month is Dr. Anne Tabor-Morris's (Georgian Court University) survey on high school physics teaching. Please take a few minutes to complete it if you are currently teaching or have ever taught physics in a high school. It's the first item in the list of events and resources, and I found it quick but interesting.

I've been continuing to update our mailing list, so if this is your first time receiving this newsletter, or you hadn't received one for a while before this, the change is probably due to corrections to the mailing list. Please let me know by email (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.

Sorry to be so annoying about this, but we are still trying to get the complete headcount for the summer meeting. So, if you are a local high school teacher who is planning on attending the AAPT National Meeting this July at the University of Pennsylvania (see description below), I'd like to request that you **REPLY TO THIS EMAIL** if you have not already done so and let me know your interest. In your reply, please indicate whether you're planning on going to the full conference or just the reduced-rate (\$75) high-school teachers' day, if you know yet. We are trying to get a headcount for planning purposes. (Currently the count is around 24 heads.)

By popular request, here is a brief summary of the other topics addressed in this email:

1. Brief Physics Education Survey for HS Teachers (do by 6/30)
2. Free Online MIT Physics Course for Teachers (starts 6/15)
3. Free Teachers Day at Quark Matter 2012 Conference in DC (August 12th)
4. AAPT National Meeting (Advanced Reg Deadline 6/27)
5. High School Teacher Day @ AAPT (\$75 for new attendees only)
6. Call for Poster Abstracts (Undergrad & Grad students @ AAPT, deadline 6/15)
7. University Lab Workshops @ AAPT
8. Save the Date for Fall 2012 Demo Show (10/27/12 @ Harriton)
9. Job Opening at Jack M. Barrack Hebrew Academy (posted 5/10)
10. Part-time Position at Jack M. Barrack Hebrew Academy (posted 6/1)
11. Job Opening at Crefeld School (posted 4/25)
12. Job Opening at Mastery Charter (current as of 6/13)
13. Global Physics Dept (Wednesday nights)
14. Links: AAPT online

I am currently collecting announcements for the next newsletter. We are particularly interested in learning about job openings at any level, in addition to upcoming workshops and events, and online resources.

May the Force(s) Be With You,

Jillian Waldman
Secretary, SEPS AAPT
AP & Honors Physics Teacher
Archmere Academy
Claymont, DE 19703

1. PHYSICS EDUCATION SURVEY FOR CURRENT OR FORMER HIGH SCHOOL TEACHERS

Dr. Anne Tabor-Morris of the Physics Education Group at Georgian Court University in New Jersey is conducting a brief survey about physics teaching. She (and we!) would appreciate it if you could take a few minutes to complete the survey if you are currently teaching or have ever taught high school. She writes:

"Georgian Court University [Physics Education Group](#) is conducting a study on how high school teachers prepare students to visit new material in the classroom. We hope that you will respond to this brief survey. There are ten questions. The first 5 questions are about teaching techniques. The second 5 questions are about work and educational background.

Here is the link for the survey. If you are currently teaching high school OR have ever taught high school physics (retired or currently employed in another area) please respond. If you have any friends or colleagues who might be able to take this survey, please forward it to them. I would like to get the results back by June 30, 2012, but this is a brief survey, so maybe take it right away. If not, then please don't forget! Thank you so much!!!

<http://www.surveymonkey.com/s/89SVBB7>

This survey is voluntary, anonymous and has been reviewed and approved by the Georgian Court University IRRB (Institutional Research Review Board) and deemed as having no risk to participants. The contact person for this survey is Dr. Anne Tabor-Morris, Associate Professor of Physics, Georgian Court University, 900 Lakewood Avenue, Lakewood, NJ 08701, at email tabormorris -at- Georgian.edu and phone number 732-987-2323. This survey is part of a larger ongoing research study on physics education. Please contact Anne with any questions.

Thank you for your participation!"

2. FREE ONLINE MIT PHYSICS COURSE FOR TEACHERS

MIT Professor David Pritchard is running a free online mechanics summer course that is aimed at teachers – to improve their overview of mechanics and their problem solving, and also to let them explore using the ready-to-assign resources in LON-CAPA. Additionally, teachers can inspect our course which (with ~30,000 other physics problems) they can easily blend with their on-campus courses using the free open source LON-CAPA system. Please let any teachers that you work with know of this opportunity through <http://RELATE.MIT.edu/physicscourse>; of course feel free to explore it or take it yourself. They are offering CEU Transcripts through AAPT for high school teachers who want continuing education credits as part of their re-certification. Dave writes:

For your research convenience, we're working to give the LONCAPA.org library much improved search and recommender performance. The problems will be IRT-calibrated, allowing you to determine a nationally-normed skill rating for your students independent of which problems you in fact assign. This can serve as a standard to help you evaluate the learning from any intervention (in-class or using additional online resources). This course is an improved version of the pilot course we offered this past semester. We found that many teachers, primarily HS and TYC teachers, want to "brush up" on their physics knowledge and enjoy tackling the MIT-level problems and discussing them with their fellow students on the discussion posts.

I'd be grateful if you send the attached announcement to colleagues and to your top students who might benefit from it. We encourage you to repost it – the course starts June 15, and runs through Aug 27; registration is open now. The first homework is due on June 22nd, and the first quiz is June 29. Instruction runs through August 31, but all instructional material and quizzes will be available by Aug 10 for those desiring to finish early.

3. TEACHERS' DAY AT QUARK MATTER 2012 CONFERENCE

High school physics teachers are invited to participate in an afternoon workshop as part of the educational outreach activities of the Quark Matter 2012 conference being held in Washington, DC. The program will focus on the physics of smallest constituents of matter - the quarks and the gluons that hold them together. Today quarks and gluons hide in the building blocks of atomic nuclei, protons and neutrons, but during the cosmic Big Bang they roamed freely through the cosmos in a state of matter that has come to be called the quark-gluon plasma (or QGP). The focus of this workshop is the perplexing nature of this state of matter. Topics and speakers include:

- Michael Lisa (OSU): Exploring the properties of quark matter with relativistic heavy ions: Recent results
- Paul Chesler (MIT): Unexpected connections: Hot quark matter, black holes, and superstring theory
- Hannah Petersen (Duke): Visualizing the "little bangs": Simulations and visualizations of relativistic heavy ion collisions
- Michael Lisa (OSU): Measuring the "little bangs": The amazing physics of particle detectors.

The workshop piggy-backs on the larger Quark Matter 2012 conference (<http://qm2012.bnl.gov>), but as an outreach activity, registration is expected to be \$FREE. Please contact Prof. Alice Mignerey at mignerey-at-umd.edu for further information to register to participate. Continuing Education Credit may be obtained through the APS with additional on-line activities.

Sunday, August 12, 2012 from 1-5 PM
Omni Shoreham Hotel
2500 Calvert Street NW
Washington DC

4. AAPT NATIONAL MEETING:

Our national parent organization, the American Association of Physics Teachers, is having its annual conference right here in Philadelphia this summer! (Last year it was in Omaha. The year before that it was in Portland. It hasn't been in Philadelphia since 2002, so this is a rare opportunity, to have it so close!)

The dates will be July 28-August 1, and the theme will be "Physics: The Experimental Core". Lots of information (and registration) is available on the AAPT website: <http://www.aapt.org/Conferences/sm2012/>. The early bird registration deadline has already passed; the advanced registration deadline is June 27th, and prices continue to go up after that.

Registration rates are dramatically lower for undergraduates, and registration is complimentary for any high school student who attends. (They do have to register, though!) Additionally, if you are a high school teacher who's never attended a national meeting before, there is a special one-day reduced rate. (See below.)

Here are links to the registration page and the tentative schedule:

<http://www.aapt.org/Conferences/sm2012/index.cfm>

<http://www.aapt.org/Conferences/sm2012/upload/beta-schedule.pdf>

Things you can definitely expect to happen at the national meeting:

- Plenary talk by Professor Amy Bug (Swarthmore College) on gender in physics
- Meet and mingle with peers from around the country
- Buy awesome things you could otherwise only get on the internet
- Talks, papers, and updates on the state of physics and physics education research
- Vote on the AAPT High School Photo Contest submissions
- Apparatus competition (Application deadline 6/15!)
- Demo show!

5. HIGH SCHOOL TEACHER DAY

If you are a high school teacher who has never attended an AAPT National Meeting, you can attend the July 30th events of the National Meeting this summer for the severely discounted cost of \$75. (Or you can just register for the whole weekend, but this is a lot more affordable!) July 30th is the "High School Teachers' Day", and gatherings and presentations on that day have been promised to particularly focus on the interests of high school teachers. More information here:

<http://www.aapt.org/Conferences/sm2012/hsphysteachday.cfm>

Teachers registering for this day don't have to worry about rates going up after the Early Bird period ends. Registration takes place using a different form, located here:

<http://www.aapt.org/Conferences/sm2012/upload/Phys-Day-Regis2-5-3-12.pdf>

6. CALL FOR ABSTRACTS

The National Meeting is also seeking abstract submissions from local undergraduates and graduate students to present posters about their research or outreach experiences. AAPT has graciously extended the deadline for poster abstracts to June 15th. Abstract submission is free; conference registration once a student's poster has been submitted is very affordable (see below.)

Local **undergraduate** students are encouraged to contribute posters, particularly those relaying details about a research project, a physics outreach event, or a teaching experience. They are then invited to stay and partake in the exciting sessions and discussions at the AAPT Summer Meeting.

Local **graduate** students are encouraged to contribute posters that convey their research and its significance to a general physics audience (including undergraduates and high-school teachers), or that relay details about a physics outreach project or a teaching experience. They are also invited to take advantage of the exciting sessions, discussions, and networking opportunities at the AAPT Summer Meeting. If you're interested in teaching or physics education, this is a meeting you want to attend.

Submission instructions:

Submit your abstract [here](#) by June 15:

Under "Paper Type," select "Poster".

Under "Persons responding to a call for contributed posters, select a session here," choose "SPS Undergraduate Poster Reception" if you are an undergraduate, or "Graduate Research" if you are a graduate student.

Fill in your information, title, and abstract.

Under "Footnotes," write "SEPA Section Poster" if you are an undergraduate, or "SEPA Section Graduate Poster" if you are a graduate student.

Note: It is free to submit an abstract. Once your poster is accepted, you will need to register for the meeting in order to present. Student [registration](#) is only \$50 before June 27th if you are a member of AAPT (normal registration is \$350+). Undergraduates can become members of AAPT for \$24 by joining the [Society of Physics Students](#) and selecting the AAPT as the complementary professional membership. Any full-time student can also [join AAPT directly](#) at the student rate of \$45 (normal membership is \$140+)

7. UNIVERSITY LAB WORKSHOPS

Mary Anne Klassen (Swarthmore College) and Scott Shelley (Haverford College) are pleased to announce two workshops on Physics Labs at the upcoming AAPT conference. Scott is a member of the AAPT National Laboratories Committee. Here are the descriptions of the workshops:

W15: Introductory Laboratories

Saturday, July 28th (1:00 - 5:00)

Whether your lab curriculum is ripe for an overhaul or well-established, this workshop will provide new ideas to bring home to your institution. Six presenters from colleges and universities across the United States will each demonstrate their approach to a favorite introductory lab exercise. Attendees will have the opportunity to work with each apparatus. Documentation will be provided for each experiment, with lab manuals, sample data, equipment lists, and construction or purchase information. This workshop is appropriate primarily for college and university instructional laboratory developers. Organizers: Mary Ann Klassen (Swarthmore College), Scott Shelley Co-Organizer: Scott Shelley (Haverford College)

W36: Intermediate and Advanced Laboratories

Sunday, July 29th (1:00 - 5:00)

This workshop is appropriate for college and university instructional laboratory developers. At each of six stations, presenters will demonstrate an approach to an intermediate or advanced laboratory exercise. Each presenter will show and discuss the apparatus and techniques used. Attendees will cycle through the stations and have an opportunity to use each apparatus. Documentation will be provided for each experiment, with sample data, equipment lists, and construction or purchase information. Organizer: Van Bistrow (University of Chicago)

If either workshop interests you, please register for the workshop along with your conference registration! (If the workshops interest you, but the conference doesn't, you can buy a "Workshops Only" conference registration at a significantly lower rate.) We've had difficulties with good workshops getting cancelled in the past due to lack of registrants, and this one promises to be interesting and informative!

8. SAVE THE DATE FOR THE FALL 2012 DEMO SHOW:

We've picked the time and location for our 2012 Fall Demo Show, which will take place on a Saturday, rather than our usual Friday night time, in order to be accessible to a different/broader range of members. The demo show will take place on October 27, 2012, at Harriton High School in Rosemont, PA, where Bob Schwartz will be our host.

9. JOB OPENING FOR SCIENCE TEACHER AT JACK M. BARRACK HEBREW ACADEMY

A teaching position in the Science department is available. Depending upon final enrollment, there will be a need for either a full time or part time science teacher. The classes will include one or more Middle School science classes and one or two Biology classes. The Middle School science is an integrated curriculum that includes aspects of biology, chemistry, physics, and earth science. There is also a STEM component which will involving the students designing and building a specific devise. In the past, they have build demo motor boats and towers following the Engineering design protocol. Experience working with middle- and high-school students is preferred. If you are interested in the position, please forward your cover letter and resume to resume -at- jbha.org.

<http://careers.nais.org/jobs/4767380/science-teacher>

10. PART-TIME POSITION TEACHING PHYSICS AND ENGINEERING TEACHER AT JACK M. BARRACK HEBREW ACADEMY

A part time position to teach 11th grade Physics and 12th grade Engineering is available for the 2012-12 school year. Teachers who have retired from public school will be considered as well as individuals transitioning from industry. Teachers must be comfortable with inquiry methods and be able to excite students about their studies in science. Applicants need to have experience teaching both Physics and Engineering. Experience with AP Physics is an advantage. A masters degree is preferred. The ability to also teach Chemistry would be a plus. This position may expand to full time in the future.

<http://careers.nais.org/jobs/4792396/physics-and-engineering-teacher>

11. JOB OPENING FOR HS SCIENCE TEACHER AT CREFELD SCHOOL:

The Crefeld School is looking for a High School Science Teacher to begin August 27, 2012. Competitive applicants will be certified in at least two of the following areas: Physics, Chemistry, Biology, and Forensic Science. Certification in math is also a plus. Faculty members at the school also act as advisors as well as lead community service groups and run various activities. Strong communication and organizational skills are important. Competitive benefits. Please send cover letter, resume, and list of three references to Angela Singletary - asingletary -at- crefeld.org.

<http://careers.nais.org/jobs/4749864/high-school-science-teacher>

12. JOB OPENING FOR PHYSICS TEACHER 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."

<http://tbe.taleo.net/NA8/ats/careers/requisition.jsp?org=MASTERYCHARTER&cws=1&rid=262>

13. GLOBAL PHYSICS DEPARTMENT

The Global Physics Department is a group of high school and college physics educators who meet online weekly on Wednesday nights at 9:30 Eastern to discuss physics, physics learning, and physics teaching. They use Elluminate Live to transmit audio, video, white board data, and chat communication. Check them out at <http://globalphysicsdept.posterous.com/#!/>

14. 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>