

Hi everyone! I hope you've survived the torrential downpours of the last few days, and this email finds you safe and dry!

This newsletter's offerings include job openings for an adjunct at Thomas Jefferson University, a senior Lecturer at Penn State Harrisburg, and an adjunct at Chestnut Hill College. There are also a number of in-person and online opportunities from NASA, and two outreach offerings from Penn's Lab for the Research of the Structure of Matter later this week. Here's the full list:

1. NASA offering flight experiences for high school teachers, with stipend (6/17-21)
2. National AAPT is holding a t-shirt design contest (deadline 6/20)
3. Opportunity to playtest Google Play for Education
4. NASA High School Exploration Design Challenge (registration deadline 3/14/14)
5. Online Resources about the International Space Station
6. Aerospace Education Services Project offers free Webinars (June-August)
7. NASA's Launch Systems Challenge 2013 (early bird 6/15, final deadline 7/15)
8. Undergrad & graduate internships at Langley Research Center (deadline 6/26 for fall session)
9. Student Spaceflight Experiments Program (deadline 6/30)
10. NASA/LEGO Design & Build Competition (deadline 7/31)
11. Save the date for CSAAPT's Fall 2013 Meeting (11/8-9)
12. AAPT National Summer Meeting July 13-17 in Portland, OR (next deadline 6/12; dorm accommodations ARE available)
13. Rutgers University offers free Physics Union Mathematics Workshop (6/24-6/28) 14. Teacher Workshops at Penn LRSM (August)
14. Materials Science Workshops for Teachers at Penn LRSM
15. 2013 Lunar workshops for Educators in Greenbelt, MD (6/24-28, 7/8-12)
16. Astrobiology for Educators at Penn State Abington (7/22-26)
17. Opening for Adjunct Faculty at Thomas Jefferson University (posted 6/10)
18. Full-time opening for Senior Lecturer at Penn State Harrisburg (posted 5/21)
19. Physics job opening for adjunct at Chestnut Hill College (fall 2013, posted 5/20)
20. Job opening for Physics teacher at Delaware County Christian School (posted 5/10)
21. Job opening for Physics teacher at Jack M Barrack Hebrew Academy (posted 5/13)
22. Job opening for Chemistry teacher at Friends Select (posted 5/20)
23. Westtown School seeks Summer Science Institute Director (part-time)
24. Resources & Workshops available at NASA Teacher Center in NJ
25. Free teacher professional development workshops at NASA Teacher Center (6/26, 6/27)
26. LRSM Science Cafe & Outreach Lectures about Liquid Crystals (6/12, 6/13)
27. National Aerospace Training and Resource Center: Free Summer 2013 Teacher Programs (July 2013)
28. Online Interactive Multivariable Calculus Course (Fall 2013)
29. Online Interactive Digital Electronics Course (Summer 2013)
30. Cool physics links: Physics Careers, Dielectrics, Baseball
31. 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,

Jillian Waldman
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1. NASA OFFERING FLIGHT EXPERIENCES FOR HIGH SCHOOL STEM EDUCATORS: WALLOPS ROCKET ACADEMY FOR TEACHERS (WRATS)

NASA Wallops Flight Facility will host the third Wallops Rocket Academy for Teachers June 17 – 21 at NASA Wallops Flight Facility (WFF) located on the Eastern Shore of Virginia near Chincoteague Island. We would appreciate your help in disseminating this information to high school STEM educators including science, technology, engineering and mathematics immediately. Due to government sequestration, all education programs required approval before soliciting for participants. There is a very brief turnaround time on this workshop. Spaces are limited to 20 teachers so please do not delay sharing the information.

The workshop will provide a *\$1000 stipend to offset the expenses of attending the weeklong workshop. Participants will work alongside NASA's Sounding Rocket Program Office engineers to build and launch a payload aboard a 'WRATS' model rocket. In addition, this unique rocketry workshop culminates with the launch of a Terrier-Orion rocket on Thursday, June 20. Arrangements have been made for a block of rooms on-site at the Wallops dorms at a cost of \$49.00 per night for a single room (non-taxable total for 5 nights = \$245). Once we have confirmed your registration, information regarding accommodations will be provided.

Anyone interested in attending this authentic rocketry workshop should contact Linda Sherman, Education Specialist, linda.a.sherman@nasa.gov or 757-824-2634. Please be sure to include an email address and phone number where you can be reached outside of the normal school day/year. We encourage Earth science, physics, astronomy, chemistry, biology, environmental and general science educators to attend as well as all mathematics, computer science, engineering and technical educators.

More information at: <http://education.wff.nasa.gov/>

Please feel free to share this information with your friends and colleagues.

* Requirements to receive the \$1000 stipend are completion of the full weeklong experience, a classroom implementation plan, workshop survey, and evaluation. Stipends will be issued within a few weeks after the end of the workshop.

2. NATIONAL AAPT IS HOLDING A T-SHIRT DESIGN CONTEST

Would you like to win \$100? Well, we're looking for creative people of all ages to submit designs for our Summer Meeting T-Shirt Design Contest. The winning design will be placed on our new t-shirt which will be sold during the 2013 AAPT Summer Meeting in Portland, OR.

We are accepting submissions from the following:

- * Current AAPT members
- * Former AAPT members
- * Students (Any level and do not have to be members of AAPT)

If you're not a designer, don't worry. We'd love for you to invite your students to submit a design. Please download and post the contest flyer.

http://www.aapt.org/Programs/contests/upload/TShirtContest_0513_FLYER.pdf

Also, please do us a favor by forwarding this email to your colleagues as well as art and design instructors and encourage them to pass on the information to their students. Students do not have to be physics or science majors to participate. It's open to all majors and concentrations and to students of all ages!

We will produce a limited number of summer meeting t-shirts and a portion of the proceeds will go towards the AAPT Student Fund.

For the complete description and submission information for the Summer Meeting T-Shirt Design Contest, please click here:

<http://www.aapt.org/Programs/contests/2013tshirtcontest.cfm>

3. OPPORTUNITY TO PLAYTEST GOOGLE PLAY FOR EDUCATION

Google is rolling out a new program for schools called Play for Education. The presentation is available at <http://www.youtube.com/watch?v=U5d6SjmU7MI>, but the summary is that Play for Education allows teachers to manage their students tablets en masse, including restricting unwanted content and distributing educational apps. They are currently looking for new schools to use these tools in the next school year. They haven't told us exactly what this would entail, but it's probably free or subsidized software and hardware in exchange for your feedback.

If you or your school are interested, the link to apply is: <http://www.google.com/edu/android/>

4. NASA EXPLORATION DESIGN CHALLENGE

Audience: K-12 Educators and Students

Virtual Crew Registration Deadline: March 14, 2014

Students from Kindergarten through 12th grade will have the opportunity to play a unique role in the future of human spaceflight through participation in NASA's Exploration Design Challenge, or EDC. NASA EDC invites students around the world to think and act like scientists in order to overcome one of the major hurdles of deep space long-duration exploration -- the dangers associated with space radiation. Students taking part in the challenge will discover how to plan and design improved radiation shielding aboard the Orion Multi-Purpose Crew Vehicle, currently being developed by NASA, Lockheed Martin and other partners to carry astronauts to space, venturing farther than humans have ever gone before.

Through a series of science, technology, engineering and mathematics, or STEM, engagement activities, students in grades K-8 will analyze different materials that simulate space radiation shielding and recommend materials that best block radiation and protect astronauts. Students in grades 9-12 will think and act like engineers as they apply what they learn to design shielding to protect a sensor on the Orion crew module from space radiation. After a review of the design solutions submitted by teams in the grades 9-12

challenge, five finalist teams will be selected and matched with a mentor from NASA to test their designs in a virtual simulator. The winning team will build a prototype radiation shield that will be analyzed and submitted to Lockheed Martin for flight certification on the inaugural flight of the Orion Exploration Flight Test, or EFT-1.

The five U.S. finalist teams from the grades 9-12 challenge will be invited to attend the EFT-1 launch, currently scheduled for November 2014. The names of all students, grades K-12, participating in the NASA EDC will fly aboard the spacecraft as honorary virtual crewmembers for Orion's first flight. The deadline to register students for the virtual crew is March 14, 2014.

For more information and to register online, visit <http://www.nasa.gov/education/edc>. For more information about Orion, visit <http://www.nasa.gov/orion>. Email any questions about this opportunity to [nasaedc -at- nianet.org](mailto:nasaedc-at-nianet.org).

5. ONLINE RESOURCES ABOUT THE INTERNATIONAL SPACE STATION

International Space Station Science: Get up to Speed and in the Know!

As educators you bring the excitement of science and exploration to your students each day in the classroom. But how can you find the latest information about what is taking place aboard the International Space Station, or ISS, especially with all of the science and research taking place every day? Here are five effective ways you can keep current and feel more confident in talking to students about the space station and what is happening in the orbiting laboratory.

1.) Subscribe to the ISS Program Science Listserv. Subscribers receive twice-weekly emails with compelling stories about important space station research conducted each day.

<https://lists.nasa.gov/mailman/listinfo/iss-program-science-group>

2.) Read the information-rich ISS Research and Technology Web page

(<http://www.nasa.gov/iss-science/>) and the engaging ISS research blog, A Lab Aloft

(<http://go.usa.gov/atl>).

3.) Know the ISS research benefits for humanity. Find them at

http://www.nasa.gov/mission_pages/station/research/benefits/.

4.) Follow timely ISS research updates on Twitter (https://twitter.com/ISS_Research) and

Facebook (<https://www.facebook.com/ISS>).

5.) Learn how to get research aboard the ISS (or refer those interested)

http://www.nasa.gov/mission_pages/station/research/ops/research_information.html.

Questions about space station research and guidance on where to find additional information should be directed to the ISS Research Helpline at

[jsc-iss-research-helpline -at- mail.nasa.gov](mailto:jsc-iss-research-helpline-at-mail.nasa.gov)

6. AEROSPACE EDUCATION SERVICES PROJECT OFFERS FREE WEBINARS

The Aerospace Education Services Project is presenting a series of free webinars throughout June 2013. All webinars can be accessed online. Join aerospace education specialists to learn about activities, lesson plans, educator guides and resources to bring NASA into your classroom.

Engineering Design Process: Introduction (Grades 3-9)

Tuesday, June 11, 2013, 1-2 pm EDT

Solar System Mission Exploration: The Past, Present, and Future (Grades 4-8)

Tuesday, June 11, 2013, 4-5 pm EDT

Weather and Climate Introductory Webinar (Grades 3-8)

Wednesday, June 12, 2013, 3-4 pm EST

Classroom Lunacy: Studying the Moon (Grades 3-8)

Thursday, June 13, 2013, 4-5 pm EDT

Engineering Design Process: Part 2 - Create, Experiment and Improve (Grades 6-12)

Friday, June 14, 2013, 12-1 pm EDT

Exploring NASA Climate Change Resources (Grades 3-12)

Monday, June 17, 2013, 4-5 pm EDT

Missions to Planet Earth: Remote Sensing (Grades 4-8)

Tuesday, June 18, 2013, 3-4 pm EDT

Hands-On Weather Science Activities (Grades 4-9)

Thursday, June 20, 2013, 1-2 pm EDT

Satellite Meteorology: Demonstrations and Activities for Science (Grades 6-12)

Thursday, June 20, 2013, 4-5 pm EST

Exploring the Surface of Mars: Searching for Clues of Life: Past and Present (Grades 5-12)

Friday, June 21, 2013, 4-5 pm EST

Our Solar System: A Model Overview (Grades 4-8)

Tuesday, June 25, 2013, 1-2 pm EDT

Satellite Meteorology: How Clouds Form (Grades 4-9)

Wednesday, June 26, 2013, 4-5 pm EDT

Exploring Our Earth From Above (Grades 4-9)

Thursday, June 27, 2013, 1-2 pm EDT

My NASA Data: Using Live Access Weather and Climate Data (Grades K-12)

Friday, June 28, 2013, 3-4 pm EDT

For more information about these webinars, and to see a full list of webinars taking place through August 2013, visit <http://aesp.psu.edu/programs/webinars/> .

Questions about this series of webinars should be directed to Chris Gamrat at gamrat-at-psu.edu.

7. NASA's LAUNCH SYSTEMS CHALLENGE 2013

Audience: Higher Education Educators and Students

Early Bird Entry Deadline: June 15, 2013

Final Entry Deadline: July 15, 2013

NASA, the U.S. Agency for International Development, the U.S. Department of State and Nike recently announced a challenge to identify 10 game-changing innovations that could transform the system of fabrics to one that advances equitable global economic growth, drives human prosperity and replenishes the planet's resources.

Challenge organizers are interested in innovations with potential to scale in two years, as well as game-changing early stage technologies and prototypes. Innovations can be business models, financial instruments, technologies and programs that accelerate research, education and capacity building.

The LAUNCH Systems Challenge 2013 is open through July 15, 2013 . Early bird submissions are due June 15, 2013. Ten innovators that apply by the June 15 early submission deadline will be selected to qualify for professional advice on submissions. The first 10 innovators will receive a special message from an astronaut or elite athlete.

Forum partners will select 10 innovators to present their technology solutions at the LAUNCH Systems Challenge 2013 forum, which will be held Sept. 26-29, 2013, at NASA's Jet Propulsion Laboratory in Pasadena, Calif.

NASA and the LAUNCH Council -- thought leaders representing a diverse and collaborative body of entrepreneurs, scientists, engineers, government, media and business -- will participate in the forum and help guide these innovations forward. The selected LAUNCH innovators will receive networking and mentoring opportunities from influential business and government leaders, as well as portfolio presentations.

LAUNCH was created to identify, showcase and support innovative approaches to global sustainability challenges. LAUNCH searches for visionaries whose ideas, technologies or programs show great promise for making tangible impacts on society in the developed and developing worlds.

For more information about the LAUNCH Systems Challenge 2013 and how to enter, visit <http://www.launch.org/challenges/systems-2013> .

Inquiries about this challenge should be directed to <http://www.launch.org/contact>.

8. UNDERGRADUATE AND GRADUATE INTERNSHIPS AVAILABLE AT LANGLEY RESEARCH CENTER

Audience: Higher Education Students

Application Deadline for Fall 2013 session: June 26, 2013

Langley Aerospace Research Student Scholars, or LARSS, is offering a 15-week fall internship at NASA's Langley Research Center in Hampton, Va. Internships are available for rising undergraduate juniors, seniors and graduate students at accredited U.S. colleges, universities and community colleges. Students of all majors are encouraged to apply. The grade point average requirement is a 3.0 out of a 4.0.

The internship includes doing a research project under the supervision of a researcher, attending technical lectures by prominent engineers and scientists and presenting project results at a poster session. Additional elements include tours of Langley wind tunnels, computational facilities and laboratories, as well as several networking activities.

Applicants must be U.S. citizens. Applications are due June 26, 2013 .

Note: Spring and summer sessions are also offered. Please see the website for details.

For more information and to apply online, visit <http://www.nianet.org/LARSS-2012/index.aspx> .

Please email any questions about this opportunity to Debbie Murray at Deborah.B.Murray@nasa.gov .

9. STUDENT SPACEFLIGHT EXPERIMENTS PROGRAM

Student Spaceflight Experiments Program -- Mission 5 to the International Space Station
Audience: School Districts Serving Grades 5-12, Informal Education Institutions, Colleges and Universities

Inquiry Deadline: June 30, 2013

The National Center for Earth and Space Science Education and the Arthur C. Clarke Institute for Space Education, in partnership with NanoRacks LLC, announce an authentic science, technology, engineering and mathematics, or STEM, opportunity for school districts across the U.S. and space station partner nations. The newest flight opportunity, Mission 5 to the International Space Station, or ISS, gives students across a community the ability to design and propose real experiments to fly in low Earth orbit on the International Space Station. This opportunity is part of the Student Spaceflight Experiments Program, or SSEP.

Each participating community will receive a real microgravity research mini-laboratory capable of supporting a single microgravity experiment, and all launch services to fly the mini-lab to the space station in spring 2014 and return it to Earth. An experiment design competition in each community -- engaging typically 300+ students -- allows student teams to design and propose real experiments vying for their community's reserved mini-lab. Content resources for teachers and students support foundational instruction on science in microgravity and experimental design. Additional SSEP programming leverages the experiment design competition to engage the community, embracing a learning community model for science, technology, engineering and mathematics, or STEM, education.

This competition is open to students in grades 5-12 and college. Informal education groups and organizations are also encouraged to participate. Interested communities must inquire about the program no later than June 30, 2013 . The National Center for Earth and Space Science Education is available to help interested communities in the U.S. secure the needed funding.

To learn more about this opportunity, visit the SSEP Mission 5 to International Space Station National Announcement of Opportunity at <http://ssep.ncesse.org/2013/05/to-school-districts-announcing-student-spaceflight-experiment-program-ssep-mission-5-to-the-international-space-station-for-2013-14/> .

SSEP is enabled through a strategic partnership with NanoRacks LLC working with NASA under a Space Act Agreement as part of the utilization of the International Space Station as a national laboratory. The Center for the Advancement of Science in Space (<http://www.iss-casis.org/>) is a national partner on SSEP. To view a list of all SSEP national partners, visit <http://ssep.ncesse.org/national-partners/> .

If you have any questions about this opportunity, please email SSEP National Program

Director Jeff Goldstein at jeffgoldstein@ncesse.org .

10. NASA/LEGO DESIGN AND BUILD COMPETITION

Audience: Anyone Age 13 or Older

Entry Deadline: July 31, 2013

NASA and the LEGO Group are partnering to inspire the next generation of aerospace engineers by offering a new design competition. The competition will spur students of all ages to use the toy bricks in building models of future airplanes and spacecraft.

The "NASA's Missions: Imagine and Build" competition is now open with an entry deadline of July 31, 2013 . Winners in each category will be selected by a panel of NASA and LEGO officials and announced Sept. 1, 2013.

The first category in the contest is "Inventing Our Future of Flight." In this challenge, participants will design and build their idea for an aircraft of the future based on real concepts and new technology NASA's aeronautics innovators are working on to increase fuel efficiency and reduce harmful emissions and noise.

In addition to building a model from LEGO bricks or using the LEGO Digital Designer computer program, participants in this category also must prepare and write a technical paper. The paper will explain how the contest design takes advantage of NASA's ideas and potentially improves on them.

This category divides entrants into two groups: young student builders ages 13 to 18 and an open group for anyone age 13 and older. The two winners will receive a custom-made LEGO trophy and a collection of NASA memorabilia.

The second contest category is "Imagine Our Future Beyond Earth." In this challenge, participants will use their imaginations to design and build a futuristic vehicle from LEGO bricks that might travel through the air or in space. It could be an airplane, rotorcraft, rocket, spacecraft, satellite, rover or something else. The design can be based in reality or purely a flight of fancy. This competition is open to entrants 16 or older. The grand prize is a LEGO set signed by the set's designer and a collection of NASA memorabilia. There also is a runner up prize.

To read the complete rules and guidelines for submitting the LEGO model and technical paper, visit <http://rebrick.lego.com/> .

LEGO Systems, Inc. is the North American division of The LEGO Group, a privately-held, family-owned company based in Billund, Denmark. The company is one of the world's leading manufacturers of creatively educational play materials for children. For more information and to visit the virtual LEGO world, go to <http://www.LEGO.com> .

For more information about NASA aeronautics research and space exploration, visit <http://www.nasa.gov> .

11. SAVE THE DATE FOR CSAAPT'S FALL 2013 MEETING

Our southern neighbors in the Chesapeake Section of the AAPT (<http://www.csaapt.org/>) have set the date for their 2013 Fall Meeting. The meeting will be Friday-Saturday, November 8-9, 2013 in Virginia Beach, VA. The local contact will be David Wright ([dwright -at- tcc.edu](mailto:dwright-at-tcc.edu)) of Tidewater Community College. The conference hotel is the Barclay Towers (809 Atlantic Beach Avenue), right on the oceanfront. To make reservations, call and ask for the AAPT block of rooms. This block will be reserved until about a month prior to the meeting. The price including all taxes will be \$78.97.

Friday's events will include a workshop (topic TBD) and a 3D planetarium show "Dawn of the Space Age" at the Tidewater Community College Planetarium. On Saturday, there have contributed talks and demos, along with a luncheon with a guest speaker.

The contact person for the CSAAPT in general is Dr. Rhett Herman, Professor of Physics at Radford University, and communications officer for the CSAAPT. The Chesapeake Section serves the states of Delaware, Maryland, and Virginia.

12. AAPT NATIONAL MEETING THIS JULY IN PORTLAND

The 2013 AAPT Summer Meeting will be held this July 13-17 in Portland, Oregon at the Hilton Portland and Executive Tower with weekend workshops at Portland State University. The theme will be "Going Green with Portland". The early bird registration deadline of May 10 has passed; the next deadline is the Advanced Deadline on June 12, at a rate of \$484 for members. Accommodations in dorms at Portland State University WILL in fact be available at a rate of \$56/room for up to two people; email shc@pdx.edu with your arrival and departure dates to reserve a room if interested.

Much more information is available here: <http://www.aapt.org/Conferences/SM2013/>

13. RUTGERS UNIVERSITY OFFERS FREE PHYSICS UNION MATHEMATICS WORKSHOP

Physics Union Mathematics (PUM) Workshop

Rutgers University June 24th –28th

To sign up click on (the workshop is free)

<https://sites.google.com/a/gse.rutgers.edu/pumworkshop/>

Rutgers invites high school physics teachers, physical science teachers, and middle school physical science teachers to spend a week in June learning how to implement Physics Union Mathematics (PUM) curriculum. This workshop is offered at no cost.

Students learn physics by engaging in practices similar to that of physicists constructing and applying knowledge.

- Special focus on mathematical reasoning that strengthens students' reasoning abilities in both math and physics.
- Students learn to collect data and to represent them in multiple ways, to use proportional reasoning to find patterns in the data, to explain them and to test their explanations in new experiments.
- Students work in groups designing their own experiments and have ample opportunities to pose and answer their own questions.
- PUM materials help teachers build a learning community in the classroom.
- Integrated videos of concept-developing physics experiments from the award winning website Rutgers Physics Teaching Technology Resource <http://paer.rutgers.edu/pt3>
- Pervasive use of the award winning PhET simulations from the University of Colorado

<http://phet.colorado.edu>

PUM modules contain lesson activities, homework questions, daily quiz questions and final tests. They use simple equipment that any school is likely to have. In case of the lack of needed equipment, Rutgers has a small lending library. The modules work with any textbook and can be implemented “as is” or used to supplement any materials that the teacher already uses.

During the workshop the participants will:

- Improve their understanding of physics content, process, and specifically different productive representations such as motion diagrams, force diagrams, energy bar charts, graphs, and mathematical representations.
- Improve their understanding of student ideas and productive ways to help students learn.
- Learn about PUM philosophy and general module structure.
- Do most of the module activities for the modules kinematics, dynamics, momentum, energy, and electrostatics (including design labs) and reflect on the process.

During the subsequent school year the participants will:

- meet every two months to discuss their class progress
- have a listserv to share their ideas, questions, etc.

Logistics

Who: The workshop will be led by R. Zisk and S. Brahmia (Rutgers) and NJ high school and middle school teachers who participate in the development of the PUM modules and use them in their instruction (D. Bugge, and J. Flakker)

When and Where: The workshop will run from 9 am to 4 pm June 24th through June 28th at the Graduate School of Education, room 25A.

Cost: \$0. Lunch is not included, but we will have coffee and pastries in the mornings.

Parking: The participants will have a permit for the week of the workshop.

Your administration is welcome to visit any time but the best time is the morning of the first day of the workshop.

If you are interested, please contact Rob Zisk at [robert.zisk -at- gse.rutgers.edu](mailto:robert.zisk-at-gse.rutgers.edu)

14. MATERIALS SCIENCE WORKSHOPS FOR TEACHERS AT PENN LRSM

The University of Pennsylvania's Lab for Research on the Structure of Matter is offering summer Teachers Workshops on (inexpensive) materials-related experiments for schools. Three one-day workshops will be given in August (dates to be determined) on thermal properties of materials, mechanical properties of materials, and culinary materials.

For details go to Penn LRSM's website www.lrsm.upenn.edu/outreach, or contact Andrew R. McGhie: 215-898-6461 or at [mcghie -at- lrsm.upenn.edu](mailto:mcghie-at-lrsm.upenn.edu)

15. 2013 LUNAR WORKSHOPS FOR EDUCATORS IN GREENBELT, MARYLAND

NASA's Lunar Reconnaissance Orbiter, or LRO, mission is sponsoring a pair of workshops for educators of students in grades 6-9. These workshops will focus on lunar science, exploration and how our understanding of the moon is evolving with the new data from current and recent lunar missions.

The Lunar Reconnaissance Orbiter has allowed scientists to measure the coldest known place in the solar system, map the surface of the moon in unprecedented detail and accuracy, find evidence of recent lunar geologic activity, characterize the radiation

environment around the moon and its potential effects on future lunar explorers and much, much more!

Workshop participants will learn about these and other recent discoveries, reinforce their understanding of lunar science concepts, gain tools to help address common student misconceptions about the moon, interact with lunar scientists and engineers, work with LRO data and learn how to bring these data and information to their students using hands-on activities aligned with grades 6-9 National Science Education Standards and Benchmarks.

Workshops will take place: June 24-28 and July 8-12, 2013, at NASA's Goddard Space Flight Center in Greenbelt, Md. Workshop participants will have the opportunity to tour the LRO Mission Operation Center and the Goddard spacecraft testing facilities.

Each workshop will be limited to 25 participants. Interested educators are encouraged to apply early to secure a spot. Qualified applicants will be accepted in the order they apply. For more information and to register for the workshops, visit

<http://lunar.gsfc.nasa.gov/lwe/index.html>

Questions about these workshops should be directed to Katie Hessen at Katie.K.Hessen@nasa.gov

16. ASTROBIOLOGY FOR EDUCATORS AT PENN STATE ABINGTON

Is There Life Beyond Our Planet? And How Would We Know? This course is designed to provide teachers in grades 4-12 with science content related to the cutting-edge field of astrobiology. Explore the latest discoveries in the search for conditions needed to support life on other planets, and learn how to integrate this multidisciplinary topic into existing curricula while still meeting state science requirements. This workshop will be held July 22-26th at Penn State Abington.

To learn more about this opportunity, see <http://www.abington.psu.edu/continuing-education/astrobiology-educators>

Questions about the workshop should be directed to Eva Klein at evaklein@psu.edu

17. OPENING FOR ADJUNCT FACULTY AT THOMAS JEFFERSON UNIVERSITY

Job Title: Physics Adjunct Instructor at Jefferson Graduate School of Biomedical Sciences

Responsibilities Thomas Jefferson University is seeking adjunct faculty members with extensive experience in undergraduate teaching for appointments in the new Postbaccalaureate Pre-Professional Program. The program is designed for students with non-science undergraduate degrees to complete the pre-requisite courses for health professions schools in an accelerated one-year format or a two-year format. Current needs include faculty lecturers for Physics. Physics courses will consist of (2) 1.5-hour lectures and (1) 2-hour lab per week over the course of (2) 12-week terms. Both lectures and lab sessions will be held during the day.

Position Requirements

- Terminal degree in a scientific field (preferably, in one of the core sciences).
- A strong track record of teaching undergraduates in lecture and lab in the basic sciences at the community college or 4 year college/university level is mandatory.*
- Solid written and oral communication skills. Faculty members in the program may need to compose letters of recommendation for students.

- Must be comfortable using technology to complement in-classroom teaching.
- For Physics applicants: Experience with online laboratory simulations preferred, especially simulation suites such as PhET from the University of Colorado (<http://phet.colorado.edu/en/search?q=physics>).

*Please note that candidates without undergraduate teaching experience will not be considered for the position. Research experience and publications will not be viewed as a substitute for undergraduate teaching experience.

Interested candidates should apply online at Thomas Jefferson University Office of Human Resources with Job ID #112341. Individuals should include a CV and a one-page cover letter when applying.

18. FULL-TIME OPENING FOR SENIOR LECTURER AT PENN STATE HARRISBURG

Penn State Harrisburg, School of Science, Engineering, and Technology invites applications for a full-time, non-tenure track Senior Lecturer/Lecturer position in Physics effective August 2013. The successful candidate is expected to teach a broad range of undergraduate Physics, Astronomy, and/or Earth Science courses and laboratories. In addition, all full-time faculty are expected to engage in scholarly activities, participate in University/College/Program and professional service activities, and advise undergraduate students. The minimum qualification is a Ph.D. in Physics or a closely related discipline plus relevant experience. Preference will be given to individuals who have demonstrated a commitment to excellence in college teaching. Information about the College may be found at www.hbg.psu.edu. This is a fixed-term appointment eligible for continuation.

Applicants should submit current curriculum vitae, three letters of reference, and a personal statement of teaching philosophy to Physics Senior Lecturer/Lecturer Search Committee, c/o Mrs. Dorothy J. Guy, Director of Human Resources, Penn State Harrisburg, Box AAPT-39576, 777 W. Harrisburg Pike, Middletown, PA 17057-4898 or via email to HBG-HR@LISTS.PSU.EDU. Position is open until filled. Employment will require successful completion of background check(s) in accordance with University policies. Review of applications will begin immediately and continue until the position is filled. Penn State is committed to affirmative action, equal opportunity and the diversity of its workforce.

19. PHYSICS JOB OPENING FOR ADJUNCT AT CHESTNUT HILL COLLEGE

Chestnut Hill College is seeking an adjunct to teach a calculus-based college physics course starting in fall 2013. If you are interested, please send your resume to: Kathleen Duffy, SSJ, PhD, Professor of Physics
Chestnut Hill College, 9601 Germantown Avenue, Philadelphia, PA 19118
215-248-7197, [kduffy -at- chc.edu](mailto:kduffy-at-chc.edu)

20. JOB OPENING FOR PHYSICS TEACHER AT DELAWARE COUNTY CHRISTIAN SCHOOL (posted 5/10)

<http://www.dccs.org/page.cfm?p=303>

DC is in need of a full-time High School Science teacher with a strong Physics background for the 2013-14 school year. A Bachelor's Degree in Science is required for this position. Previous teaching experience, ACSI educator certification, PA state teacher certification, and the ability to coach athletic teams or lead co-curricular activities are desired. DC seeks to educate students who will serve God and impact the world through biblical thought and

action. Please check the school's website (www.dccs.org) regarding personal faith alignment and send a resume to Janet Grant at [jgrant -at- dccs.org](mailto:jgrant-at-dccs.org).

21. JOB OPENING FOR PHYSICS TEACHER AT JACK M. BARRACK HEBREW ACADEMY (posted 5/13)

The Jack M. Barrack Hebrew Academy located in Bryn Mawr, PA, has a full time opening for a science teacher starting September 2013. The teaching load will include 3 Middle School Science classes and one High School Chemistry class. Experience is preferred. Based upon the applicants, the position may be split into two part time teaching positions. Send a cover letter and resume to [raugust -at- jbha.org](mailto:raugust-at-jbha.org)

22. FRIENDS SELECT SEEKS UPPER SCHOOL CHEMISTRY TEACHER

Friends Select School seeks a maternity leave Chemistry teacher for the start of the 2013-14 school year. Successful candidates should have the requisite experience to teach the curriculum left by the teacher. Interested applicants should send all information (resume, cover letter, and list of references) to Science department chair Natalie Mayer Nataliem -at- friends-select.org

<http://www.friendscouncil.org/Library/Jobs/JobZoom.asp?FolderID=742&SessionID={43D4407A-D254-481B-9A62-7962486F2D0E}&JobID=3311>

23. WESTTOWN SCHOOL SEEKS SUMMER SCIENCE INSTITUTE DIRECTOR

<http://www.friendscouncil.org/Library/Jobs/JobZoom.asp?FolderID=742&SessionID={ECCC A550-813C-4264-B1EC-FE2E0E828185}&JobID=3277>

Westtown School, founded in 1799, is a Quaker, co-educational school for grades PreK - 12. The school is located on a 600 acre campus in Westtown, Chester County, a suburb of Philadelphia. Westtown has approximately 780 students and over 200 employees.

<http://www.westtown.edu>

Position Available: Westtown Summer Science Institute Director

Job Description: Part Time, Administration 6th, 7th, 8th, 9th, 10th, 11th, 12th

Applications must be received by: June 30, 2013

Job posting expiration date: 7/1/2013

Applicants should supply the following materials: Cover Letter, resume, and references

Westtown Summer Science Institute Director: Westtown School has an immediate opening for a part-time (50%) Westtown Summer Science Institute Director. With a newly renovated and expanded Science Center opening January of 2014, Westtown will launch a research intensive summer institute for middle and high school students in June of 2014. The founding Director will oversee all aspects of the creation and running of the program.

Responsibilities include envisioning and developing the program, finances, marketing, recruitment of students, hiring faculty, creating partnerships with local industry and universities, fundraising for scholarships, and managing the residential and day program.

The position is intended to expand, creating additional science programming for adults and youth throughout the year. Send cover letter and resume to L. Jay Farrow, Assistant Head of School at [employment -at- westtown.edu](mailto:employment-at-westtown.edu)

24. RESOURCES AND WORKSHOPS AT NASA TEACHER CENTER IN NJ

You may have seen the beautiful glossy photos and other resources from the NASA

Educator Resource Center that Anne Tabor-Morris brought to our spring meeting. More resources are available at the center's monthly open house:

New Jersey's only NASA Educator Resource Center OPEN HOUSE

Located at Georgian Court University, 900 Lakewood Avenue, Lakewood, NJ

3rd Sat of the month in the Library 10:30 am-12noon during the school year (May 18, 2013 and June 15, 2013 for the rest of this school year)

Free posters, lithographs, calendars, ideas for teachers (only).

Get on our email list: Email [nasa -at- georgian.edu](mailto:nasa-at-georgian.edu)

We are also happy to serve Eastern Pennsylvania as the NASA ERC of PA is located in Pittsburg.

Teacher Professional Development Workshop

Lunar Rock and Meteorite Workshop (6 hours)

NASA Teacher training PLUS get certified to bring the NASA Lunar Rocks (yes from the moon) and Meteorites into YOUR classroom.

FREE but reservations required. Limited seats available (waiting list will be kept).

Get 6 hours of Professional Development (certified under State of New Jersey)

Run by a Goddard Space Flight Center NASA Specialist Rich Varner

<http://education.gsfc.nasa.gov/pages/listserv.html>

At McCauley Heritage Center, Georgian Court University, Lakewood, NJ 08701

Thursday June 27, 2013, 9 am to 3 pm (bring your own brown bag lunch)

Email: [nasa -at- georgian.edu](mailto:nasa-at-georgian.edu) to register, seats are limited to 34.

If you are looking up directions to Georgian Court University using GPS, MapQuest, Google Maps, or similar, the best address to use is 517 Ninth Street, Lakewood, NJ 08701.

Teaching Astronomy or Geology? Rock Around the World: <http://ratw.asu.edu/>

25. FREE TEACHER PROFESSIONAL DEVELOPMENT WORKSHOPS AT NASA ERC

Two free teacher professional development workshops will take place at the NASA ERC at Georgian Court University in NJ.

Free Teacher Professional Development Workshops (Can sign up for one or both)

- **For Elementary (and Middle School Teachers)** NASA's SOLAR SYSTEM – for elementary and middle school teachers Run by a Goddard Space Flight Center NASA Specialist Rich Varner <http://education.gsfc.nasa.gov/pages/listserv.html> Get 6 hours of Professional Development (certified under State of New Jersey) Located at McCauley Heritage Center, Georgian Court University, Lakewood, NJ 08701 **Wednesday June 26, 2013, 9 am to 3 pm** (bring your own brown bag lunch)
- **For Middle & High school Teachers, & interested elementary school teachers** Lunar Rock and Meteorite Workshop (6 hours) NASA Teacher training PLUS get certified to bring the NASA Lunar Rocks (yes from the moon) and Meteorites into YOUR classroom. Get 6 hours of Professional Development (certified under State of New Jersey) Run by a Goddard Space Flight Center NASA Specialist Rich Varner <http://education.gsfc.nasa.gov/pages/listserv.html> Ocean First Lecture Hall Room 165 New Science Wing, Georgian Court University, Lakewood, NJ 08701 **Thursday June 27, 2013, 9 am to 3 pm** (bring your own brown bag lunch)

FREE but reservations required. Limited seats available (waiting list will be kept).

Email directly to: tabormorris@georgian.edu Reservations are REQUIRED. Limited seats!

<http://www.georgian.edu/nasa/erc.htm>

26. 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."

There is one teachers lecture remaining in this year's series:

June 13 -- Mojca Cepic, Physics, University of Ljubljana

"Liquid Crystals"

LRSM, 3231 Walnut Street, Philadelphia

The lecture will present a fascinating and peculiar world of liquid crystals and other anisotropic materials we meet every day. The audience will have an opportunity to perform several simple hands-on experiments, which illustrate the phenomena found in these systems. More precisely, we will find answers to the following questions:

- What are liquid crystals?
- Why are they anything special?
- What is anisotropy?
- How do we recognize anisotropic properties using visible light?
- How are these properties used in LC screens?
- ... and many other questions of your choice.

You can also see our new scientific art exhibit that illustrates many properties of melt crystallization and has just been permanently installed in the lobby of LRSM.

For those who can't make our teachers lecture on Thursday, June 13, consider this alternative:

June 12, 5:30 PM -- Mojca Cepic, Jerneja Pavlin, Maja Pecar

"Liquid Crystals"

LRSM Science Cafe at World Cafe Live Upstairs, 3025 Walnut St

Description: Several of the materials we use every day have very interesting properties. Some of them are transparent but can become colored by simple tricks, and some of them allow us to see what we type into our computers. We will show and the audience will perform several interesting hands-on experiments, which will introduce them to the unusual properties of various materials like plastics, but with emphasis on liquid crystals. We will also show how these interesting properties are applied in the LC screens of our computers.

On-street Pay and Display parking is available on Walnut St. We hope you can join

us to hear our Slovenian visitors, who are on an American tour, give simple explanations and demos of liquid crystals. Come early for dinner and a good seat.

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- lrsn.upenn.edu.

<http://www.lrsn.upenn.edu/outreach/teachers.htm>

27. SUMMER 2013 TEACHER PROGRAMS AT THE NASTAR CENTER

<http://www.nastarcenter.com/education/teachers/>

NASTAR Center Teacher Professional Development Programming for 2013

Since 2010, more than 150 teachers have attended professional development programs at the National AeroSpace Training And Research (NASTAR) Center in Southampton, PA. The emphasis for teacher programming is on fun, experience-based learning that provides teachers with practical tools and activities that they can apply in a classroom environment. Teachers can experience a 3-G suborbital spaceflight simulation in the NASTAR Center centrifuge, ascend to 8,000 feet in the altitude chamber, or learn how airplanes are controlled while piloting the GAT II simulator.

For 2013, the NASTAR Center is adding two brand new teacher professional development programs: "The Atmosphere and Weather," and "Exploring the Solar System."

The NASTAR Center is an approved provider of Act 48 continuing education hours by the Pennsylvania Department of Education. Each program is worth 8 hours of continuing education.

The schedule for 2013 is as follows:

July 8, 2013, Monday	Flight Physiology
July 9, 2013, Tuesday	500 Years of Flight
July 10, 2013, Wednesday	The Magic of Flight
July 11, 2013, Thursday	Rocket Science
July 12, 2013,	Acceleration
July 15, 2013, Monday	The Atmosphere and Weather
July 16, 2013, Tuesday	Exploring the Solar System
July 17, 2013, Wednesday	500 Years of Flight
July 18, 2013, Thursday	Rocket Science
July 19, 2013,	Acceleration
July 22, 2013, Monday	The Atmosphere and Weather
July 23, 2013, Tuesday	Exploring the Solar System
July 24, 2013, Wednesday	The Magic of Flight
July 25, 2013, Thursday	Rocket Science
July 26, 2013, Friday	Acceleration

The non-profit NASTAR Foundation is sponsoring these programs so they are being offered AT NO COST TO TEACHERS. If you are coming from out of town, we have arranged a meal/room package at a special rate in an area hotel. For enrollment information, contact Greg Kennedy at (215) 355-9100, X 1512, or via email at gkenedy -

at- nastarcenter.com. A registration packet may also be downloaded from the NASTAR Center website, www.nastarcenter.com.

Gregory P. Kennedy
Director of Educational Programs
PHONE +1.215.355.9100 x 1512
FAX +1.267.989.1251

THE NASTAR CENTER
125 James Way | Southampton, PA 18966 USA
www.NastarCenter.com

28. ONLINE INTERACTIVE MULTIVARIABLE CALCULUS COURSE

David Abineri, an AP Physics teacher, is offering an online Multivariable Calculus course next fall:

Students and Faculty, a **Multivariable Calculus** class is being offered again next year from September 2013 to May 2014. Ideal for students completing AP Calculus before the senior year and for faculty who might want to brush up on the subject.

This will be an online, totally interactive classroom **NOT just 'watch and work'**. There will be real discussions on all the major topics in such a way as to end up with a deep understanding of the subject.

Please pass on to friends, students and colleagues.

Class size will be limited, first come first served, all details

at: <http://calculusnow.blogspot.com/>

29. ONLINE INTERACTIVE DIGITAL ELECTRONICS COURSE

David Abineri (see above) is also offering a Digital Electronics Course, which will cover how logic chips can be connected to solve useful problems, the beginnings of how a computer works and, time permitting, work with a microprocessor.

This course, offered by an experienced Mathematics and Physics Teacher, will be a lab based class investigating digital electronics from simple logic gates to an introduction to microprocessors. Students will build and test their own circuits using computer chips in a safe 5 volt environment and may work with microprocessors if time permits. The class will be very interactive and the size will be limited, NOT just watch and work! There are no prerequisites: physics and electronics topics will be covered as they are needed. Math through Algebra II is helpful, but student interest is the most important thing. Tuition will be \$100, and equipment to build and construct circuits will cost about \$75.

Class size will be limited, first come first served, all details at: <http://summer-electronics.blogspot.com/>

30. COOL LINKS

At our Spring Meeting, Dave Goldberg of Drexel University talked about his io9 blog, "Ask a Physicist". Here's a link to that blog, if you want to check it out: <http://io9.com/tag/ask-a-physicist> (also on twitter here: <https://twitter.com/askaphysicist>)

ISS Commander Chris Hadfield's Youtube Channel, including several cool observations of the physics of zero gravity, and a cover of David Bowie's Space Oddity:
<http://www.youtube.com/channel/UCtGG8ucQgEJPeUPhJZ4M4jA>

And here's a short Youtube video from Eugenia Etkina on misconceptions:
<http://www.youtube.com/watch?v=jyFRJht94Ug&feature=youtu.be>

31. 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>