

Hi everyone! I hope the summer is treating you well! I'm writing this email from Orlando, Florida, where I am attending a Technology Student Association (TSA) conference with a group of students. If any of you are involved in TSA (or at the conference?), I'd love to talk to you about it -- my school doesn't actually currently have a chapter, and we're weighing the merits. The weather here seems to be even warmer and wetter than what we left behind, although that's no real surprise.

This newsletter's offerings include job openings for an adjunct at University of the Sciences, and a full-time high school physics opening in West Chester. Here's the full list:

1. Opportunity to playtest Google Play for Education
2. NASA High School Exploration Design Challenge (registration deadline 3/14/14)
3. AAPT National Summer Meeting July 13-17 in Portland, OR (next deadline 6/12; dorm accommodations ARE available)
4. Opening for adjunct physics instructor at University of the Sciences (posted 6/19)
5. Opening for Physics Teacher in West Chester School District (posted 6/27)
6. Opening for Adjunct Faculty at Thomas Jefferson University (posted 6/10)
7. Full-time opening for Senior Lecturer at Penn State Harrisburg (posted 5/21)
8. Physics job opening for adjunct at Chestnut Hill College (posted 5/20)
9. Job opening for Physics teacher at Delaware County Christian School (posted 5/10)
10. Job opening for Physics teacher at Jack M Barrack Hebrew Academy (posted 5/13)
11. National Aerospace Training and Resource Center: Free Summer 2013 Teacher Programs (July 2013)
12. Materials Science Workshops for Teachers at Penn LRSM (August 2013)
13. 2013 Lunar workshops for Educators in Greenbelt, MD (6/24-28, 7/8-12)
14. Astrobiology for Educators at Penn State Abington (deadline 7/8, runs 7/22-26)
15. Online Interactive Multivariable Calculus Course (Fall 2013)
16. Online Resources about the International Space Station
17. Aerospace Education Services Project offers free Webinars (June-August)
18. NASA's Launch Systems Challenge 2013 (early bird 6/15, final deadline 7/15)
19. Student Spaceflight Experiments Program (deadline 6/30)
20. NASA/LEGO Design & Build Competition (deadline 7/31)
21. Save the date for CSAAPT's Fall 2013 Meeting (11/8-9)
22. Cool physics links: Star Size Comparison HD, APS Physics InSight slideshow of physics careers, Rock Around the World, Daniel Russell's vibration simulations
23. 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. 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/>

2. 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@nianet.org).

3. **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 -at- pdx.edu](mailto: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/>

4. **OPENING FOR ADJUNCT PHYSICS INSTRUCTOR AT UNIVERSITY OF THE SCIENCES**

The Department of Mathematics, Physics and Statistics at University of the Sciences in Philadelphia (USciences) is seeking to hire an individual for a part-time, one semester (renewable) Adjunct Instructor position beginning in Aug 2013.

Classes to teach: Introductory Physics Lab(s)

Degree Required: MA or MS required; PhD preferred

Applicant Qualifications: Minimum requirement is 18 graduate hours in Physics.

Job Summary: Teach assigned sections and curriculum as scheduled. Provide each student with a clearly written syllabus. Maintain class rolls. Provide reasonable on-campus access to students outside of class. Submit grades on schedule.

How to apply: Submit a letter of application, resume, official transcripts, and the names and phone numbers of at least three professional references to: Dr. Elia Eschenazi, Chair of the Department of Mathematics, Physics and Statistics. Email applications may be submitted to physics@uscience.edu.

5. **OPENING FOR PHYSICS TEACHER IN WEST CHESTER SCHOOL DISTRICT**

West Chester ASD will be hiring at least one Physics teacher for this coming school year.

Interested candidates can [apply here](#):

http://home.wcasd.net/pages/West_Chester_Area_SD/5994015546809392962/5994015711098229810/5994015548322402898/5994015722325333362

6. **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.

7. 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.

8. 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)

9. 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).

10. 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)

11. 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 gkennedy@nastarcenter.com. A registration packet may also be downloaded from the NASTAR Center website, www.nastarcenter.com.

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

12. 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@lrsm.upenn.edu

13. 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 -at- nasa.gov](mailto:Katie.K.Hessen-at-nasa.gov)

14. 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 -at- psu.edu](mailto:evaklein-at-psu.edu)

15. 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/>

16. 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)

17. AEROSPACE EDUCATION SERVICES PROJECT OFFERS FREE WEBINARS

The Aerospace Education Services Project is presenting a series of free webinars throughout Summer 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. 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](mailto:gamrat-at-psu.edu).

18. 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>.

19. 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 .

20. 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> .

21. 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.

22. COOL LINKS

Nicely rendered video comparing the sizes of objects -- planets, stars, etc -- in our universe:

https://www.youtube.com/embed/XE0aAZE0kp4?feature=player_embedded

From APS, here's the June 2013 Physics InSight slideshow of careers in physics:

<http://www.aps.org/careers/insight/download.cfm>

As in previous editions, the June 2013 slideshow includes lots of colorful slides on diverse physics careers and topics. New material in this month's edition includes:

- Profile of Aaron Weiss, a physics Bachelor and prototype engineer at Sparkfun, Inc., a company that builds components for use in electronic products.
- New data on skills used physics PhDs in industry, and starting salaries for physics Bachelors by sector.
- Information on the Higgs Boson, asteroids and other "near earth objects", the Earth's magnetic field, and more!

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

Daniel Russell at PSU has a nice set of simulations about modes of vibrations and related concepts here:

www.acs.psu.edu/drussell/Demos/string/fixed.html

23. 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>