

## ***In the OPASsphere – December 8, 2008***

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***A service of the Oregon Pre-Engineering & Applied Sciences Initiative (OPAS) funded by ETIC***

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### ***Events – Announcements***

- **Linus Pauling Memorial Lectures** -- **\*\*The Perfect Stocking Stuffer\*\*** Three compelling evenings for the price of 2 -- \$64! -- **if purchased by Sunday December 14th** -- All events are at the Arlene Schnitzer Concert Hall 7:00 pm; tickets are for general admission seating -- <https://www.isepp2.org/BuyTickets/Purchase.aspx>
  - January 15, 2009 -- Holistic Design: A philosophical framework, Dr. Terence Love
  - February 12, 2009 -- Beyond The Science Wars, Dr. Susan Haack
  - April 23, 2009 -- Reinventing the Sacred: Science, Reason and Religion, Dr. Stuart Kauffman
  
- **HELD OVER through Sunday, December 14: R. Buckminster Fuller, The History and Mystery of the Universe**, a one-man show in Portland Center Stage's Ellen Bye studio at the Gerding Theater in the Armory. Bucky was about more than geodesic domes, and this would be a great introduction to **design and engineering as tools for saving the world**, thinking outside the box, and nerds as inspiration. Take some student you know! Don't forget to enjoy the architecture and design elements of the restored building itself.
  - A review: <http://www.portlandmercury.com/theater/buckys-big-ideas/Content?oid=924759>
  - Portland Center Stage Box office: 503.445.3700 or [www.pcs.org](http://www.pcs.org) (website frantically undergoing repair -- due up Monday afternoon, December 8)
  
- **National Engineers Month, February 2009** –
  - PSU's Maseeh College of Engineering and Computer Science's **Annual Design Competition on Friday, February 27, 2009**. These competitions provide opportunities for **middle and senior high school students** to engage in hands-on engineering projects while having fun. Competition rules, registration information, photo release form, and more -- <http://www.pdx.edu/cecs/outreach.html>
  - Educators, invite a guest engineer to your classroom -- check out Classroom Resources, below
  - If you know of additional events or resources to share here, please contact Jo!

### ***Weblinks***

- To sign up for **Portland State University's Maseeh College of Engineering and Computer Science (MCECS) special event and outreach mailing list**. please visit [https://mailhost.cecs.pdx.edu/mailman/listinfo/mcecs\\_outreach\\_events](https://mailhost.cecs.pdx.edu/mailman/listinfo/mcecs_outreach_events)

*The OPAS Vision is that all Oregonians have the opportunity to choose and successfully pursue engineering or applied science as their field of study and career, thereby helping Oregon's industries contribute to state economic needs, and innovate and prosper in the global economy.*

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### ***Equity***

- **The University as Mentor: Lessons Learned from UMBC Inclusiveness Initiatives**, Council of Graduate Schools, 2007 – 10 Lessons for retaining PhD candidates, especially in STEM disciplines, are summarized on page 8. While we in the OPASsphere do not usually focus on graduate studies, these best practices echo and build on what we see works for younger students and may offer insight and inspiration to educators and administrators -- [http://www.cgsnet.org/portals/0/pdf/Paper\\_Series\\_UMBC.pdf](http://www.cgsnet.org/portals/0/pdf/Paper_Series_UMBC.pdf)

### ***Articles***

- **Lessons Learned on the Couch**, by Bill Ferriter, Teacher Magazine, November 19, 2008  
[http://www.teachermagazine.org/tm/articles/2008/11/19/08tln\\_ferriter.h20.html?tmp=1494696259](http://www.teachermagazine.org/tm/articles/2008/11/19/08tln_ferriter.h20.html?tmp=1494696259) – a passionate content expert is not the same as a teacher.

### ***Research***

- **Growth vs. Fixed Mindset**: while this webpage (with references!) talks about girls in particular, I think this sheds light on the attitude of certain students used to academic success, regardless of gender, and why it is important to challenge students early and often --  
<http://www.laurelschool.org/about/CRGinMS.cfm>

### ***Field Reports***

- From **Dick Knight**, Dean at **PSU's Maseeh College of Engineering and Computer Science**:
  - **"What Would Galileo Do?"** -- PSU Professor Mark Weislogel uses water balloons in near-zero G to explain physics while having fun -- <http://www.pdx.edu/cecs>
  - By this time next year PSU hopes to have completed the **new drop tower** in the 6 story atrium of the Engineering Building, that will be useful for both research and as an outreach opportunity for K-12 students

### ***Classroom Resources***

- **Seeking Educators For NEM 2009!** Educators teaching grades 3-12 in Oregon and Southwest Washington are invited to sign up to request a Guest Engineer for NEM 2009! Managed by the Business Education Compact (BEC), NEM is an annual event that occurs each February as hundreds of K-12 classrooms are energized with engineer presenters. Funded by participating companies, the service is free for schools. Guest engineers provide a short presentation on the engineering field and engage students in a hands-on experiment, helping to spark their imagination and get excited about math and science in a new way. Educators simply register on the BEC website to sign up for NEM 2009! Educator Registration: [www.becpdx.org](http://www.becpdx.org) Questions: [NEMsupport@becpdx.org](mailto:NEMsupport@becpdx.org)
- **Engineers Make a Difference Poster Contest Winners** –this year, for the first time, the majority of entrants were high school students. Posters are available for purchase (scroll down a bit on this page) <http://www.engineeredu.com/contest.htm>

***Happy Holidays!***

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