

In the OPASsphere – February 20, 2009

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

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Events – Announcements

- International Technical Education Association (ITEA) is having their **national conference** in Louisville Kentucky, March 26-28 -- <http://www.iteaconnect.org/Conference/conferenceguide.htm>
- **Richard Tapia Celebration of Diversity in Computing Conference**, April 1-4, Portland, Oregon -- <http://tapiaconference.org/2009/index.html>

Events – Wrap-Up

- Community College and University Engineering Faculty recently met to discuss First Year and Transfer Issues at the periodic **Engineered Communities** Meeting. Bruce Schafer handed out the ETIC Student Marketing Committee's "getreal" brochure to drive student traffic to the enhanced <http://getreal.ous.edu> website which has information on engineering and CS programs of study at OUS institutions and careers.

Volunteers Needed

- The MESA 2nd Bi- Annual Engineering Your Future Family Conference is looking for workshop presenters – share your enthusiasm about engineering with middle and high-school students from around the Portland area www.mesa.pdx.edu -- think about what you can do with a group of kids to excite their interest in engineering and computer science, download the form and fill it out – the event is April 11, 2009 on the PSU campus.

Contests

- **National Institute of Engineering Sponsors EngineerGirl! Contest** -- Cash prizes – deadline March 1 -- <http://www.engineergirl.org/?id=10104> –Both boys and girls eligible to enter three divisions by age -- In an effort to encourage the enthusiasm and innovation of tomorrow's engineers, the National Academy of Engineering is sponsoring an essay entitled, "EngineerGirl!-Imagine That! Engineering Innovation." Prospective contestants are asked to examine carefully one of three images and then to answer some provocative questions. What is it? What might it be used for? What are the most important features of the design? What was the engineer's role in making this product, and what engineering principles were used? Contestants must write an essay dealing with these questions. All entries must be posted to the EngineerGirl! Website by March 1, 2009. **All winning entries will be published, and first-place winners will receive \$500. Second-place winners will receive \$250 while third-place winners will be awarded \$100.**

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- **Real World Design Governor's Challenge** -- is being piloted in 10 states, including Washington, but not Oregon by the Department of Energy. An annual team-based, open-ended problem-solving challenge – 2009 addresses fuel efficiency in aviation -- <http://www.scied.science.doe.gov/RWDC/index.html>.

Weblinks

- **National Engineers Week Foundation** -- <http://www.eweek.org/EngineersWeek/EngineersWeek.aspx>
- **Techstart Education Foundation** has updated their website – check it out at <http://www.techstart.org/>
- UC Berkeley College of Engineering Dean Sastry on CNBC a few months ago -- <http://www.cnbc.com/id/15840232?video=758682516&play=1> -- The segment is titled “America’s Engineering Crisis” and cites stats that show China produces 600,000 engineers and India 350,000 compared to 70,000 in the U.S. (Note: A Duke University study subsequently debunked these numbers finding that they could not be verified and that they included non-accredited training programs in engineering, computer science and information technology.) Per the Dean, U.S. engineering training is fundamentally different from what is offered in China and India. The Dean states that the type of engineering education in the U.S. prepares graduates who are technology leaders and who are able to withstand several career changes that result from technology advances. Thanks to Susan Wheeler.
- **White House Agenda on Technology** -- <http://www.whitehouse.gov/agenda/technology/>
- **Minnesota** has launched a **STEM website aimed at students** – I am torn, if one believes the subliminals from the logo, it’s STeM -- <http://www.mn-stem.com/>

Articles

- **Purdue Study: Hands-on Learning better** (20 points better!) Journal & Courier Online -- <http://jconline.com/article/20090202/NEWS0501/902020322> -- Thanks to Brad Naas
- **This Car Runs on Code**, IEEE Spectrum -- <http://www.spectrum.ieee.org/feb09/7649> -- Thanks to Dan Hammerstrom and Dick Knight.
- **Cascade District Robotics Teams Build for Fun and Competition**, Salem Statesman-Journal, February 4, 2009 -- <http://www.statesmanjournal.com/apps/pbcs.dll/article?AID=2009902040348>
- **Local Kids Score in Robot Tourney**, Corvallis Gazette Times, January 28, 2009 -- http://www.gazettetimes.com/articles/2009/01/29/news/community/4loc02_legocomp.txt
- **Engineering Like a Girl: How do you build a science and technology program that appeals to girls? Ask these four schools**, Scholastic.com, January 2009 -- Thanks to PLTW & Judy D’Amico -- <http://www2.scholastic.com/browse/article.jsp?id=3751064&FullBreadCrumb=%3Ca+href%3D%22http%3A%2F%2Fwww2.scholastic.com%2Fbrowse%2Fsearch%2F%3FNtt%3Dgirls%2Bengineering%26query%3Dgirls%2Bengineering%26Ntk%3D%26Ntx%3Dmode%2Bmatchallpartial%26N%3D0%25>
- **Want to Engineer Real Change? Don’t ask a Scientist**, Henry Petroski, Washington Post, January 25 – a very cogent differentiation between engineering and science -- <http://www.washingtonpost.com/wp-dyn/content/article/2009/01/23/AR2009012302351.html?referrer=emailarticle>

Reports

- Achieve, Inc. on **Closing the Expectations Gap** – aligning and assessing the high school diploma with college and career readiness -- <http://www.achieve.org/closingtheexpectationsgap2009> – promising signs include more states with P-20 longitudinal data tracking systems and greater prevalence of assessments measuring college and career readiness.

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- The National Governor's Association has issued a report on the same topic – **Accelerating the Agenda, Actions to Improve America's High Schools** -- <http://www.nga.org/Files/pdf/0901IMPROVEHIGHSCHOOLS.PDF>.

Who's Who

- **TechAmerica** – Where the Future Begins. The Association of Companies Driving Innovation Worldwide -- <http://www.aeanet.org/> -- announced on February 10: the **merger of industry associations AeA** (American Electronics Association), **ITAA** (Information Technology Association of America), **GEIA** (Government Electronics and Information Association), **CSIA** (Cyber Security Industry Alliance) to form TechAmerica. Jennifer Bosze, Executive Director of the Oregon Council of the entity formerly known as AeA Oregon said to let everyone know: same people, same place, new name -- and the prospect of more and better services and a larger voice.

Field Reports

- ODE has released information on **Oregon's Advanced Placement (AP) scores and progress** (press release -- <http://www.ode.state.or.us/news/releases/default.aspx?yr=0000&kw=&rid=676#top>) and I am thrilled to see the increases in participation we have had over the past several years. In fact, Oregon was ranked 5th in the nation for increasing access to AP courses and student performance over the last five years. More of our students are taking AP courses than ever before and more of them are scoring a 3 or better on their exams, making them eligible for college credit. For more information on AP Potential please visit <https://appotential.collegeboard.com/loginGetAction.do> or contact Andrea Morgan at ODE.

Data

- The **Commission on Professionals in Science and Technology (CPST)** specializes in the collection, analysis and publication of reliable information about the human resources of the U.S. in the fields of science, engineering and technology -- <http://www.cpst.org/>. *Thanks to Susan Wheeler.*

PLTW

- **Engineering Like a Girl** -- http://www2.scholastic.com/browse/article.jsp?id=3751064&FullBreadCrumb=%3Ca+href%3D%22http%3A%2F%2Fwww2.scholastic.com%2Fbrowse%2Fsearch%2F%3FNtt%3Dgirls%2Bengineering%26query%3Dgirls%2Bengineering%26Ntk%3DSCHL30_SI%26Ntx%3Dmode%2Bmatchallpartial%26N%3D0%25

Classroom Resources

- **Oregon Science Teacher Update** from ODE -- <http://www.ode.state.or.us/search/page/?id=1843> *Thanks to Cheryl Kleckner.*
- **Are your Students High-Maintenance?** Tracy McCalla, Teacher Magazine, February 4, 2009 -- http://www.teachermagazine.org/tm/articles/2009/02/04/firstperson_mccalla.html?tmp=265207407

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