



## Contents

- IEEE Oregon Section April Meetings
- Seminars and Courses
- IEEE Oregon Section Summer Picnic
- ASE Saturday Academy Needs Volunteers
- Advancing to IEEE Senior Member
- The New adidas-1 Self-adapting Running Shoe
- Volunteers Needed For "Healthy Aging" Research Study
- Angwin Scholarship Deadline May 1
- PSU Maseeh College Names Associate Dean
- IEEE-USA White Paper: Gigabit Networks
- IEEE Foundation Announces Awards Sponsors
- IEEE-USA 2005 Year-In-Review Webpage, 2004 Online Annual Report
- IEEE Xplore 2.0 Upgrade
- OGI Seminars

## IEEE Oregon Section April Meetings

For latest meetings list see <http://www.ieee-or.org/events/>

- **Power Engineering Society (PES)**  
Topic: Solar Technology  
Speaker: Geoff Crabtree, Shell Solar Industries LP.  
Date: Tuesday, April 19, 2005  
Time: 12:30 PM to 1:30 PM  
Location: Lloyd 700 Building - 700 NE Multnomah Blvd, Portland; Conference Room - Third fl
- **Industry Applications (IAS)**  
Topic: Energy From the Sea - A Wave Energy Research Update for OSU  
Speaker: Ken Rhinefrank, OSU  
Date: Wednesday, April 20, 2005  
Time: 6:00pm no-host refreshments, 6:30pm dinner  
Speaker presentation starts at 7:30pm  
Cost: \$20 for dinner, RSVP. No charge for talk  
Place: Red Lion Hotel Portland, Grand Ave.
- **Communications, Computer & Engineering Management Society Joint Meeting**  
Topic: The Pentium Chronicles: The People, Passion, and Politics behind Intel's Landmark Chips  
Speaker: Bob Colwell, consultant  
When: Thursday, April 21, 2005  
Time: 6:00 PM ~ 8:30 PM

Cost: Free, open to the public (registration required).

Register:

<http://cpd.ogi.edu/courseSpecific.asp?pam=1808>

Location: Oregon Graduate Institute of Science and Technology (OGI), Wilson Clark Center, 20000 NW Walker Rd, Beaverton, OR 97006

## SEMINARS and COURSES

- **Product Safety Engineering (PSE) & EMC**  
Topic: Product Compliance Colloquium  
Speakers: Industry Experts  
Date: Monday, April 25, 2005  
Time: 8:30AM – 5:30 PM  
Cost: \$175 members, \$200 non-members  
Registration: See [www.ieee-or.org/events](http://www.ieee-or.org/events)  
Location: Red Lion Hotel on the River – Jantzen Beach
- **Communications Society Chapter**  
Wireless LAN Security (4-day workshop)  
Date: May 10-13, 2005  
Venue: Kingstad Place for Meetings, Beaverton  
See <http://www.ieee-or.org/events/cwsp>  
  
Wireless LAN Analysis (4-day workshop)  
Date: Jun 14 - Jun 17  
Venue: Kingstad Place for Meetings, Beaverton  
See <http://www.ieee-or.org/events/cwap>
- **Other Courses of Interest**

## Auxilium Professional Development Workshops

Price for all 1-day workshops is \$425

**Discount for IEEE members \$350**

### April / May Courses

- *Effective Technical Presentations*
- *Essential Skills for Engineers and Technical Professionals*
- *Leadership Skills for Engineers*
- *Understanding and Improving Project Culture*
- *Management Practices that Work*

For schedule and full details, go to:

<http://www.auxpd.com/training.htm>

## **IEEE Oregon Section Summer Picnic**

IEEE Oregon Section members and their families are invited to the IEEE Summer Picnic which will be held at Antique Powerland, about 35 miles south of Portland and 13 miles north of Salem off I-5.

Antique Powerland is a family of museums which preserve and continue to use machines made in the last century. The museum's annual "Steam-Up" event will be held July 30-31 and Aug 6-7. For more information on the museum see <http://www.antiquepowerland.com/>

**Date:** Saturday July 16th, 2005

**Time:** 9:30 AM to 4:00PM

(Picnic at 11:30AM)

**Location:** ANTIQUE POWERLAND

3995 Brooklake Rd NE, Brooks Oregon

0.25 miles west of I-5 exit 263

**Cost:** FREE, reservations required

**Reservations:** Details will be emailed when available.

### **Details:**

Members may bring their own lunch, IEEE will provide cold beverages.

Several museum buildings and rides will be available:

- Museums: Trolley Museum, Large Engine Bldg., Truck Museum, Trolley Car Barn, 30's Texaco Station.
- Rides: Electric Trolley, Miniature Railway, People Mover

## **ASE Saturday Academy Needs Volunteers**

The Apprenticeships in Science and Engineering (ASE) Program places highly motivated, talented high school students with science and engineering professionals for eight week, full-time summer apprenticeships. In addition to coordinating apprenticeships, ASE organizes two summer conferences for the 140 student participants. The conference objective is to introduce students to science and engineering disciplines other than the ones they are working in for their eight week summer experience.

ASE needs scientists and engineers to give Interactive Workshops or Short Presentations to high school students at the 2005 ASE Midsummer Conference on one of the event days. For more information, check out <http://www.saturdayacademy.org/involved/volunteer/default.aspx>

## **Advancing to IEEE Senior Member**

**According to the IEEE, "Every member should hold the highest grade of membership for which they are qualified."**

The March issue of IEEE Institute carried an article, **Stepping Up to Senior Member**. It seems that a major deterrent to advancing to Senior Member is that the member does not know whom of his colleagues and associates are available to be a Senior Member reference. Maybe we have an answer.

IEEE Oregon Section is planning its annual Summer Picnic for Saturday July 16. We will have a "Senior Member Rodeo" at the picnic. Bring your resume. We will have nomination forms available. We will have Section Senior Members available that can be references for your nomination.

With a little investment in time, Oregon Section members can:

1. **Take** a Senior Member nomination form and complete it.
2. **Combine their** resume with the completed Nomination form.
3. **Meet** several volunteers that will be **their** Senior Member references.
4. **Interview** with those Senior Members so that they can complete their reference form.
5. **Turn In** to us the nomination form, the resume and **the** completed reference forms.

The Oregon Section then submits the nomination package to IEEE in New Jersey. Then we wait for the review by the IEEE Admissions & Advancements Committee. That committee will notify the successful candidate by letter and within a few weeks provide a very nice brass and wooden plaque.

Can you get a Nomination form in advance to have it completed when you get to the picnic? You sure can! Contact Jim Rooks, Oregon Section Membership Committee Chair, at [james.rooks@ieee.org](mailto:james.rooks@ieee.org) and he will send you a Nomination form. Can you complete part of the process before the picnic? Yes! Just contact Jim Rooks.

## ***The New adidas\_1 Self-adapting Running Shoe***

By Dave Varner, Roving Reporter, IEEE BEEEP

What do Running, Cable Tension, Microprocessing, and Internal Impact Sensing have in common? The new adidas\_1 self-adapting running shoe. A Popular Science "Best of What's New" Grand Award winner in the Recreation category.

Utilizing a 20-megahertz microprocessor inside each shoe, the adidas\_1 takes readings while you run, and continually adjusts itself to the terrain. It measures such things as the runner's size and weight, running pace, and can even determine your fatigue level. While you run, as you lift your foot and the shoe is in the air, it adjusts a motorized internal cable system to vary the amount of heel cushioning as well as your foot position. This allows it to maintain maximum comfort and efficiency. They also allow you to manually set the comfort levels with + and - buttons for a totally custom fit and feel.

The internal sensor under the heel of the shoe measures compression, deciding if your shoe is too soft or too firm. The entire mechanical marvel (electronics, cable system, and battery) add a mere 40 grams (less than some shoe laces), so they feel like the high end running shoes they are.

Using replaceable lithium batteries which are estimated to last for 100 hours of running, the shoe has a power smart feature which turns off the processor keeping the cushioning "static" after 10 minutes of walking. You can also turn the computer off and they are "regular" sneakers...as regular as a super cool looking pair of adidas\_1 CAN look that is. With bright LEDs and a flashy gold heel that appears more like the suspension system for a formula one race car, the coolness factor is very high...and the fact that they also perform makes these new shoes the ones to have.

Of course all this wouldn't be possible without the fantastic engineering that went into their design and development. Starting some 3 years ago, engineers right here in Portland OR, working in complete secrecy utilized some of the most high tech design and testing equipment available. Measuring the terrain and impact, then sending those measurements to the processor, then having precise instructions sent to control the motor, and adjust the tension of the cable system is a true balance of art, science, and magic. Having only a fraction of a second to make critical decisions, the adidas\_1 microprocessor sorts through the data and makes adjustments "on the fly".

The difference between the hard concrete of downtown sidewalks, and the grassy areas of water front park would normally make for a totally different running experience. Optimum comfort and fit would be impossible to maintain in a normal shoe. Through advanced engineering and the application of sophisticated computer intelligence, the adidas\_1 demonstrates that even the most un-assuming item, the shoe, can be transformed into an intelligent adaptable tool, a partner if you will.

Just as the first cell phone was seen as an interesting toy for the affluent and is now the fastest growing communications tool in the world, intelligent self adjusting foot wear may very well become the standard of the future...and the future is now. Check out the adidas web site. With an interactive multimedia informative experience that is almost as cool as the shoe itself, your sure to be running in computer controlled, self-adapting comfort in no time.

## ***Volunteers Needed For "Healthy Aging" Research Study***

The ORCATECH (The Oregon Roybal Center for Aging, Technology, Education and Community Health) center at Oregon Health and Science University (OHSU) is looking for retired people to participate in a research study on the use of technology to promote healthy aging.

ORCATECH is funded through NIH, its mandate is to create a so-called "living laboratory" for conducting community-based research in this area. They are specifically recruiting older, technically-savvy individuals who might be interested in participating in their research. See

<http://www.ohsu.edu/research/alzheimers/pdf/orcatech/orcatech.rfa.05.02.pdf>

If you are interested, contact Tamara Hayes, at [tamara.hayes@bme.ogi.edu](mailto:tamara.hayes@bme.ogi.edu)

## ***2005 IEEE Region 6 - Bruce Angwin Memorial Scholarship May 1 Deadline***

IEEE Region 6 is encouraging its members and non-members with junior-level high school students to take advantage of the Scholarship program. This program (formerly the IEEE WESCON Scholarship) provides the ability for students to realize substantial awards to offset ever-increasing college costs.

Applications are being accepted from current high-school juniors who reside within the 12-state area encompassed by IEEE Region 6 (Western USA) for the 2005 IEEE Region 6 - Bruce Angwin Memorial Scholarship. A first prize (\$5000) and a second prize (\$3000) scholarship will be awarded to eligible high-school juniors based on a 500-600 word essay and contingent upon the recipients' entering an appropriate degree program (e.g., electronics engineering, electrical engineering, computer science, bio-medical engineering, etc.) .

Financial need will not be a consideration in selecting the scholarship recipient. Applicants' parents need not be IEEE members. Winners will be recognized and will receive a plaque at the 2005 IEEE Region 6 Awards Banquet. Scholarship funding is distributed to the awardees upon enrollment in an appropriate ABET-accredited four-year college degree program. Application packages must be postmarked no later than **May 1, 2005**.

For more information about the application process and requirements, check the scholarship website at <http://coe.isu.edu/ieee/wescon>

### ***PSU Maseeh College Names Dan Hammerstrom Associate Dean for Research***

Dan Hammerstrom has been named associate dean for research in the Maseeh College of Engineering and Computer Science at Portland State University.

Hammerstrom is a professor in the Maseeh College's Department of Electrical and Computer Engineering, whose research interests include biologically inspired computer engineering, intelligent signal processing, and VLSI (Very Large Scale Integration) design. This winter he taught the "Advanced Computer Architecture" course in the Department of Electrical and Computer Engineering.

Hammerstrom, in addition to 10 computer science faculty members, moved from Oregon Health & Science University's OGI School of Science & Engineering to the Maseeh College in fall 2004. As associate dean of research, Hammerstrom is charged with increasing the level and sophistication of research activity at the Maseeh College, as well as tech transfer to industry in both licensing of technology and spinning off new companies. One important focus area is in increasing nanotechnology research at the Maseeh College; he is actively involved with the new Oregon Nanoscience and Microtechnologies Institute, ONAMI.

"Dr. Hammerstrom has the research and technology transfer to industry experience that will assist our faculty in moving their research capabilities and success to the next level," said Dean Robert D. Dryden. "This is another step toward advancing the mission of the Maseeh College to be both regionally relevant and nationally prominent in disciplines that are very important to the current and future success of the region."

For the full article, see

<http://www.pdx.edu/cecs/news/4955/>

### ***IEEE-USA White Paper: U.S. Prosperity at Risk; Gigabit Networks Should be National Priority***

WASHINGTON -- The United States should deploy widespread wired and wireless gigabit networks as a national priority, according to a white paper from the IEEE-USA Committee on Communications and Information Policy (CCIP). See [http://www.ieeeusa.org/communications/releases/2005/04\\_0805pr.asp](http://www.ieeeusa.org/communications/releases/2005/04_0805pr.asp)

"Providing Ubiquitous Gigabit Networks in the United States," issued 14 March, says that our nation must act promptly to ensure that a new generation of broadband networks - of gigabit per second speed - is ubiquitous and available to all. Failure to act will "relegate the U.S. telecommunications infrastructure to an inferior competitive position" and undermine the future of the U.S. economy.

"Priority deployment of gigabit networks is essential for the United States to maintain its world leadership in the knowledge economy," IEEE Life Fellow and IEEE-USA CCIP member Dr. John Richardson said. "Information drives our lives and our prosperity. The problem is that current networks aren't fast enough to distribute that information properly."

Omnipresent U.S. gigabit networks, readily achievable by deploying optical fiber and high-speed wireless, would carry numerous benefits. These include providing the U.S. economy with superior ability to compete globally; stimulating economic activity in digital home entertainment; enhancing online education and training; and facilitating health care remote diagnosis and consultation (telemedicine).

Congress, the Executive Branch and private-sector initiatives could secure these benefits for our nation's

global competitiveness and quality of life by adopting "principles leading to ubiquitous, symmetric gigabit availability as a national priority," according to the CCIP white paper

(<http://www.ieeeusa.org/volunteers/committees/ccip/docs/Gigabit-WP.pdf>).

Such principles include regulatory flexibility and encouragement of user-owned networks.

### **IEEE Foundation Announces Awards Sponsors**

- **Samsung to Sponsor IEEE Edison Medal**

The IEEE Foundation is excited to announce that Samsung Electronics Co., Ltd. is the latest addition to the ranks of the IEEE Awards sponsors. They join Qualcomm, Texas Instruments, Sony, IBM, Lucent Technologies, and many others in appreciating the need to recognize and reward excellence in engineering. Beginning in 2006 and continuing for ten years, Samsung will sponsor the prestigious IEEE Edison Medal. Created in 1904 by a group of Thomas Edison's friends and associates, this Medal may be presented to an individual for a career of meritorious achievement in electrical science, electrical engineering, or electrical arts. The prize items include a US\$10,000 honorarium, gold medal, gold pendant, and certificate.

- **Grainger Foundation Gift to Honor Outstanding Power Engineers**

The Grainger Foundation, known for its generous support of the field of power engineering, gave a US\$100,000 gift to the IEEE Foundation for the annual presentation of the IEEE Nikola Tesla Award. The Grainger Foundation's co-sponsorship of this important power engineering Award will bring new understanding and elevated importance to both the Award and its recipients.

Established in 1975 and named in honor of Nikola Tesla, this award may be presented annually to an individual or a team that have made outstanding contributions to the generation and utilization of electric power. The prize items include a plaque and honorarium. This gift is expected to support the cost of the annual honorarium through 2017.

To learn more about these and other IEEE Awards, go to <http://www.ieee.org/awards>.

### **IEEE-USA 2005 Year-In-Review Webpage, 2004 Online Annual Report**

WASHINGTON -- IEEE-USA, the IEEE organizational unit devoted to advancing the public good and promoting the careers and public-policy interests of U.S. IEEE members has unveiled two new online communications products: the 2005 year-in-review webpage; and the 2004 online annual report.

According to IEEE-USA Managing Director Chris J. Brantley, "The year-in-review webpage is designed to help IEEE-USA keep better track of our progress through the year, enhance communication with U.S. IEEE members, and provide volunteer members with a reference to help promote IEEE-USA." The page includes month-by-month highlights of IEEE-USA programs and activities such as important meetings, new product releases, policy advocacy efforts and outcomes, and other IEEE-USA milestones.

The year-in-review page is continuously revised, and can be seen at <http://www.ieeeusa.org/about/yearinreview.asp>.

Further, IEEE-USA has produced its first online annual report, which highlights the organization's efforts in 2004 when it was led by John W. Steadman, dean of the College of Engineering at the University of South Alabama in Mobile. Dr. Steadman ranked as his highest priority "communicating effectively with all U.S. IEEE members." He also cited "one of our continuing priorities...to combat unprecedented levels of unemployment among U.S. IEEE members."

To view the entire annual report, go to [http://www.ieeeusa.org/about/Annual\\_Report/2004.pdf](http://www.ieeeusa.org/about/Annual_Report/2004.pdf). (Please allow up to a minute to download on a fast connection.) A one-page summary of IEEE-USA's 2004 activities also appeared in the January 2005 IEEE SPECTRUM.

In addition, ongoing coverage of "IEEE-USA in the News" can be reviewed by yearly quarters from 2002-2005. Go to

<http://www.ieeeusa.org/communications/inthenews/default.asp>.

## IEEE Xplore 2.0 Upgrade

IEEE announces that IEEE Xplore Version 2.0 was successfully launched as scheduled. This release marks a milestone in the evolution of the IEEE's web delivery platform because it adds not only an updated graphic design, but also adds many new functions to improve the user's experience and facilitate web-first publishing.

IEEE Xplore is already widely used: during the first two months of this year the users retrieved 4.55 million documents a month -- an increase of 25% over the first two months of 2004. We expect these enhancements will help further increase the use of IEEE's superb technical information.

Key improvements in Xplore 2.0 include:

- A new home page that makes it easy to immediately access information
- Free Basic Search for guests (basic abstracts)
- Top 100 articles: most frequently downloaded articles in the past month
- Improved search
- Expanded journal and magazine "homepages" better identify each periodical and provide easy access to everything about it
- Easier navigation that in general means fewer clicks to get to requested information
- Improved abstracts records
- Consolidated title listings for many IEEE conferences, including conference nicknames
- Groups multiple years of a conference together -- try "Globecom", "ISSCC" or "IEDM" for examples
- An improved single-article purchase process
- Improved support

To try it use your personal IEEE member Web Account to get access tied to your personal membership.

### OGI SEMINARS

(free, in evening unless noted otherwise)

See <http://www.cpd.ogi.edu/> for details

Apr 19 (Tuesday)

[High Tech and Health Care: The Decade of Healthcare Information Technology](#)

Mark Leavett, MD, PhD, Medical Director at the Healthcare Information and Management Systems Society

Apr 21 (Thursday)

[HR & OD Forum: Rebalancing Total Compensation--A Look at Stock Options and Other Elements of Total](#)

### Rewards

Deborah Marsh, HR Director, TriQuint Semiconductor (\$15 includes seminar and lunch buffet)

Apr 19 (Tuesday Lunch)

[Identity & Interoperability--Issues in Regional Health Information Organization \(RHIO\) Formation](#)

Jody Pettit, MD, Mark Leavitt, MD, PhD, Charles Parisot, Lorraine Fernandes (\$25 includes lunch and break refreshments)

Apr 21 (Thursday)

[IEEE Seminar: The Pentium Chronicles-The People, Passion, and Politics behind Intel's Landmark Chips](#)

Bob Colwell, Intel

Apr 27 (Wednesday)

[SPIN Seminar: Domain-Driven Design - Tackling Complexity in the Heart of Software](#)

Eric Evans

May 5 (Thursday)

[Growing Your Business through Innovation in Services](#)

Jon Marshall, Innovatin Frameworks LLC

May 10 (Tuesday)

[High Tech and Health Care: Surgery of the Virtual Image](#)

John G. Hunter, MD FACS, OHSU

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