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**IEEE Oregon Section Meetings**

For latest Meetings List see <http://www.ieee-or.org/events/>

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**IEEE Oregon Section Summer Picnic**

Come and join in on the summer fun with your whole family. 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 picturesque theme park north of Salem at Brooks Oregon. There are about 30 acres of walking and picnic areas with museums for adults and rides for children. The rides include antique electric trolleys, a miniature railway and a hayride powered by steam tractors. The museums include large engine museum (a must), an antique truck museum, an electric trolley museum and a 30's Texaco station. There is a large picnic area to eat lunch and visit with other Section members.

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 near the saw mill)

**Location:** ANTIQUE POWERLAND  
3995 Brooklake Rd NE, Brooks Oregon  
0.25 miles west of I-5 exit 263

**Cost:** FREE, reservations and \$5 refundable deposit required (\$10 after July 1)

**Reservations:** See [www.ieee-or.org/events](http://www.ieee-or.org/events) .

**Details:**

Members may bring their own lunch, IEEE will provide cold beverages. (Fast food and restaurants nearby)

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

There will be a *Senior Member Roundup* held during that Picnic. Nomination forms will be available. Reference forms will be available. Identified Senior Member volunteers willing to serve as references will be available, and identified.

The plan is for the candidate to obtain a nomination form, complete the nomination form, obtain some reference forms, find a volunteer, interview with a volunteer, then deliver the completed nomination form, the reference forms and a resume to Jim Rooks. You can be prepared ahead of the Picnic by sending Jim Rooks [james.rooks@ieee.org](mailto:james.rooks@ieee.org), an email requesting the form and completing it before you come to the Picnic.

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**SEMINARS and COURSES**

- **Communications Society Chapter**  
*Wireless LAN Analysis (4-day workshop)*  
Date: Aug 29 - Sep 1, 2005  
Venue: Kingstad Place for Meetings, Beaverton  
See <http://www.ieee-or.org/events/cwap>
- **Wireless LAN Administratory (4-day workshop)**  
Date: Sep 13 - 16, 2005  
Venue: Kingstad Place for Meetings, Beaverton  
See <http://www.ieee-or.org/events/cwnp>

## **From the Editor's Desk**

by Allen G. Taylor

### **Recognizing Inventors**

June is a slow news month, but we do have a few things to report. Congratulations to IEEE-USA President Dr. Gerard A. Alphonse into the New Jersey Inventors Hall of Fame. Notice of this achievement caused me to wonder if there is an Oregon Inventors Hall of Fame. I was not able to find one, even though Oregon has been the home of many distinguished inventors. Among other contributions, Doug Englebart of Portland invented the computer mouse, which has revolutionized the way we interact with computers. Charles Ginsberg, who lived in Eugene, invented the video tape recorder. Doug Strain has been a pioneer in the practical use of lasers, as well as many other areas of technology. Clearly there have been many Oregonians worthy of recognition. It would be good to recognize these men and women for their achievements and their contributions to our welfare. Think about it. What would it take to start an Oregon Inventors Hall of Fame?

### **DARPA Switches Focus**

The funding shift chronicled in this issue at the Defense Advanced Research Projects Agency has drawn criticism from William A. Wulf, president of the National Academy of Engineering. He envisages a DARPA in decline. In response, DARPA director Tony Tether maintains that the massive shift from discipline-specific research to multidisciplinary work is aimed at solving national security problems, and reflects a recognition of a more pressing need. It seems that those academics who have traditionally depended on DARPA support must now be more nimble than ever, either moving into those areas that reflect the new emphasis, or seeking support elsewhere.

### **Summer Fun**

By all means, plan to attend the Oregon Section Summer Picnic on Saturday, July 16 at Antique Powerland in Brooks, Oregon. Register on the Web and then bring along the whole family for fun, food, and socializing with your fellow Section members.

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Editorial submissions are welcome and should be made by the 25<sup>th</sup> of the month preceding publication. Send all items to the Editor, Allen Taylor, email: [allen.taylor@ieee.org](mailto:allen.taylor@ieee.org)

### (ADVERTISEMENT)

ADJUNCT FACULTY POSITION - GEORGE FOX UNIVERSITY (Newberg, Oregon): Part-time instructors needed to teach electrical engineering courses for the 2005-2006 academic year. Candidates should hold an MS in Electrical Engineering or closely related field. Previous classroom teaching experience is desirable. Courses include: Circuit Analysis, Electronics II, Electrical Network Analysis, Signals and Electrical Systems, Control Systems and Communication Systems.

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## **New Senior Members**

Congratulations to our new Senior Members advanced at the May 14, 2005, IEEE A & A Committee meeting.

<b>Senior Member</b>	<b>Sponsoring Organization</b>
Victor M. Agostinelli Jr.	<i>Electron Devices Society</i>
Mohsen Alavi	<i>Electron Devices Society</i>
Donald E. Best	<i>Oregon Section</i>
Rosamaria Carbonell	<i>Oregon Section</i>
Kristine E. Matthews	
Richard A. Palmer	<i>Oregon Section</i>
Bernard Rate	<i>Oregon Section</i>
Fabio E. Rodriguez	<i>Oregon Section</i>
Zhongfeng Wang	<i>Circuits &amp; Systems Society</i>

## **PICMET '05 Conference**

[www.picmet.org](http://www.picmet.org)

"Technology Management: A Unifying Discipline for Melting the Boundaries"

July 31 - Aug. 4, 2005  
Portland Hilton & Executive Tower  
Portland, Oregon, USA

Discontinuous innovations and disruptive technologies are changing the world, and opening doors for exciting new opportunities. The potential of stem cell research to find cures for "non-curable" diseases, the promise of fuel cells to provide nearly unlimited energy, and the vision of a world with nano-level bio-mechanical devices collecting and disseminating information for continuous improvements in people's health are no longer science fiction. They are within reach.

Bringing these opportunities to reality is not possible within any single discipline. They require interactions among virtually all disciplines including science, engineering, finance, economy, psychology, sociology, ethics, law, theology, art, and many others. Parochial, discipline-oriented views will not be able to address the issues that have been brought to focus by the rise of technology to its current, prominent role in society. A unifying discipline must provide leadership and guidance in bringing the various disciplines together, and melting the boundaries among them, so we can harness the energy of technology and make it work for the betterment of humankind.

Technology Management is that unifying discipline. It is not an easy role, but a necessary responsibility for which the technology management community should accept the challenges. That is the only way to manage technology and not be managed by it. Recognizing this enormous challenge, PICMET '05 takes a bold step and examines the role of technology management in melting the boundaries among disciplines to guide technology toward the betterment of humanity.

The PICMET '05 program consists of (see <http://www.picmet.org/Conferences/2005/>)

- Doctoral Colloquium for Ph.D. students and recent graduates
- Five Workshops by experts on critical issues  
<http://www.picmet.org/conferences/2005/workshops.asp>
- Ten Plenary sessions by global leaders from industrial corporations, academic institutions and government agencies.  
<http://www.picmet.org/conferences/2005/plenaries.asp>

- Research papers by cutting-edge researchers
- Applications papers by researchers and practitioners working on industry applications
- Panel discussions with interactions between panelists and the audience
- 22 Tutorials on select topics by authorities in the field
- Over 350 papers to be presented

**Special incentive registration rate (use Special Registration Code: pic05-ieee)** for local IEEE Oregon members available on-line at:

<https://www.picmet.org/picmetinc-67/onlinereg/onlinereg.asp>

PICMET (Portland International Conference on Management of Engineering and Technology) was established in 1989 as a non-profit organization to disseminate information on technology management through an international conference. PICMET is a biennial conference held in Portland during the last week of July in odd-numbered years. IEEE Oregon and the IEEE Engineering Management Society are PICMET Cooperating Societies for 2005.

## **IEEE-USA President to be Inducted into New Jersey Inventors Hall of Fame**

IEEE-USA President Dr. Gerard A. Alphonse of Princeton, N.J., will be inducted into the New Jersey Inventors Hall of Fame on 23 June.

An IEEE Fellow who holds more than 50 U.S. patents, Alphonse is being honored for his "prolific work in diverse cutting-edge technologies, including superconductivity, acoustic emissions and electro-optics." Former inductees include Thomas Edison and Albert Einstein.

"I never dreamed of joining the ranks of such prestigious inductees," Alphonse said. "I feel both proud and humbled to receive such a great honor and mark of distinction, with my name joining those of famous inventors."

Alphonse invented and demonstrated the world's highest performance superluminescent diode in 1986. The device is a broadband semiconductor light source and key component of next-generation fiber optic gyroscopes, low coherence tomography for medical imaging, and external cavity tunable lasers with applications to fiber optic communications.

Alphonse is a founder and senior vice president of advanced technologies for Medekon Corp., an optical technology developer for medical diagnostics and therapy in Ewing, N.J. The company is currently developing a new product for the cardiac diagnostics industry to assist in the treatment of coronary artery disease.

Alphonse and three others were selected for the New Jersey Inventors Hall of Fame by the New Jersey Research and Development Council, a nonprofit association dedicated to creating a strong, healthy environment for the continued growth of R&D within the state. The council also recognizes inventors, innovators and graduate students.

The honorees will be recognized at a luncheon at the New Jersey Institute of Technology in Newark, N.J., on Thursday 23 June at noon. For information on past award winners, go to [www.njinvent.org](http://www.njinvent.org).

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### ***Five U.S. Technical Job Classifications Show Employment Drop, One Shows Steep Increase***

WASHINGTON (15 June 2005) -- Five major engineering and computer job classifications showed a drop in employment in the first quarter of 2005 vs. the 2004 average, while one showed a large increase, according to data compiled by the U.S. Department of Labor's Bureau of Labor Statistics (BLS).

The biggest drop was among computer hardware engineers (18,000), followed by computer software engineers (13,000), computer programmers (8,000), electrical and electronics engineers (8,000) and computer and information systems managers (5,000). Contrasted with this loss of 52,000 jobs, the BLS reported a gain of 54,000 jobs among computer scientists and systems analysts.

"While we are encouraged by the employment growth among computer scientists and systems analysts, the continuing shrinkage of other technical specialties signals that all is not well in electrotechnology professions," IEEE-USA President Gerard A. Alphonse said.

Percentage-wise, the computer hardware engineers workforce declined by 18.8 percent, while computer scientists and systems analysts experienced 7.7 percent growth. The other four job classifications fell modestly, and the overall increase in technical employment was less than one percent (0.1).

This table summarizes the BLS data:

<b>Job Classification</b>	<b>2004Avg</b>	<b>1Q2005</b>	<b>Change</b>	<b>Pct.</b>
Computer Hardware Engineers	96,000	78,000	-18,000	-18.8
Computer & Info. Systems Managers	337,000	332,000	-5,000	-1.5
Computer Programmers	564,000	556,000	-8,000	-1.4
Computer Scientists & Systems Analysts	700,000	754,000	+54,000	+7.7
Computer Software Engineers	813,000	800,000	-13,000	-1.6
Electrical & Electronics Engineers	343,000	335,000	-8,000	-2.3
<b>Total</b>	<b>2,853,000</b>	<b>2,855,000</b>	<b>+2,000</b>	<b>+0.1</b>

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### ***Pentagon Agency Cuts in Support For Basic Computing***

Since its inception in 1958, the Defense Advanced Research Projects Agency (DARPA) has earned a reputation for its lead role in cutting-edge, "blue-sky" research, particularly in computers and electronics. But now, as reported in the June 2005 issue of IEEE-USA TODAY'S ENGINEER Online, the Pentagon agency is cutting back on support for basic, open-ended computing research at U.S. universities.

According to House Science Committee testimony quoted in the TODAY'S ENGINEER article, Wm. A. Wulf, president of the National Academy of Engineering (NAE), contends that DARPA already has lost momentum as a one-time critical engine of American high-tech research and development. "There was only one old-style DARPA, and it is gone," said Wulf, adding: "At a time of growing global competition, DARPA's disinvestment in university-based, long-term research is, in my view, a risky game for the country." Wulf's remarks came in Science Committee testimony at a 12 May hearing.

According to data provided by the staff of the House Science Committee, the amount of DARPA computer

science funding awarded to universities dropped by 42.5 percent from \$214 million in Fiscal Year 2001 to \$123 million in Fiscal Year 2004. Over the same period, the National Science Foundation's burden of supporting research in this area increased substantially.

IEEE-USA Vice President for Technology Policy Russell Lefevre contends that the sharp drop-off in DARPA funding represents "a dramatic departure from the historic government support for basic research at U.S. universities and colleges, especially in information technology." IEEE-USA's Lefevre states that cybersecurity and high-performance computing "will suffer immensely without sustained federal investment."

DARPA Director Tony Tether sought to reassure the House panel that there has been no decision to divert resources. According to Tether, "DARPA's commitment to seek new ideas, to include ideas that support research by bringing together new communities of research scientists, is the same as it has been, dating back to the agency's inception in 1958." Tether added that DARPA is not moving away from long-range "blue-sky" research.

The DARPA director emphasized the need for funding more multidisciplinary research efforts, even though that could mean cutbacks in support for particular disciplines such as computer science: "Rigidly funding specific, established disciplines would severely limit the flexibility DARPA needs to be successful," Tether said. He concluded: "DARPA needs the ability to promote multidisciplinary work to solve important national security problems."

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### ***IEEE-USA Launches Compensation Portal for Employers of Technical Professionals***

The launching of the IEEE-USA Salary Service gives employers of technical professionals direct access to the database of the IEEE-USA Salary & Fringe Benefits Survey.

This service provides employers advanced online tools for accurately benchmarking technical professionals' compensation. It combines the power of relational databases and sophisticated regression modeling with salary survey data from nearly 15,000 U.S. IEEE members. This gives the salary service detailed information on every industry, line of business, job function, technical specialty and U.S. location in the technical workforce.

"Our salary service makes it easier for employers to determine with accuracy how to fairly compensate an employee in nearly every U.S. electrotechnology and information technology occupation," IEEE-USA President Gerry Alphonse said. "Compensation research in these fields can now reach an unprecedented level of depth and customization."

The salary service is available in a standard package for \$399 that includes "Published Reports" and "My Reports." The latter is the only tool that uses a simple query wizard to provide a nearly unlimited and customized array of options to cross tabulate and present data. The premium package, for \$100 more, also features access to three advanced analysis tools, including an individual compensation analyzer that factors in 12 significant variables to provide precise pay estimates for particular employees.

For more information and a demonstration of the IEEE-USA Salary Service, visit [http://salaryapp.ieeeusa.org/rt/salary\\_database/about/salaryservice](http://salaryapp.ieeeusa.org/rt/salary_database/about/salaryservice).

The site's homepage is at <http://salary.ieeeusa.org>.

The service also has a member version that is free to any U.S. IEEE member who completes the salary survey. This service enables individuals to benchmark their own compensation using a salary calculator powered by a regression model from the survey data. Members can record how their salaries track their career progress, how they measure up to their peers, and what effect possible job or career moves can have on their compensation. Go to <http://salaryapp.ieeeusa.org/salary> and click "IEEE Member Login" to gain access to the IEEE-USA Salary Service and Survey.

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