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UPCOMING EVENTS

OSCON Special Meeting Series (July 23-26)

IEEE
Oregon
Section
Computer
Society



Chapter has arranged with the Ubuntu Live and OSCON Conferences to invite several speakers to make local presentations July 23-36.

Monday July 23: “The 3-laws of IT; Explaining the present and dictating the future”, with Pauwl Lunow, Director, Qhuba

Tuesday, July 24: “High Performance Web Pages”, with Steve Souders, Chief Performance Yahoo!, Yahoo!

Tuesday, July 24: “Lawyers as Hackers; Hackers as Lawyers: Free Software Law and How We Do It”, with Eben Moglen, Director, Software Freedom Law Center

Wednesday July 25: “The Spring Java Framework”, with Rod Johnson, CEO, Interface21

Thursday July 26: “Open ID”, with David Recordon, Innovator, Verisign

Thursday July 26: “Technical Management of Software Development”, with Alex Martelli, Uber Technical Lead, Google, Inc.

Details about each presentation are found at www.ieee-or.org/events/cs_july/. All presentations are at Portland State University, either in the Engineering Building, 1930 SW Fourth Avenue or the Unitus Building, 2121 SW Fourth Avenue (Corner Lincoln and Fourth).

There will be a No Host dinner after the meeting with the speaker.

For further information or questions, contact John Prohodsky, john.prohodsky@ieee.org.

Directions:

To reach PSU Fourth Avenue, coming from the East or South take the 4th Avenue exit from I-405; coming from the North or West, take the 6th Avenue exit off I-405 and turn right onto Hall St. Paid parking is available under the Engineering Building (1930 SW 4th Ave) or in the surface lot at Hall and 4th. See www.pdx.edu/map.html for more details.

PICMET '07 Conference (Aug 5-9)

Special registration rate available to local IEEE members.

The PICMET '07 (Portland International Center for Management of Engineering and Technology) Conference will be held at the Hilton Portland and Executive Tower on August 5-9, 2007.

The theme of PICMET '07 is "Management of Converging Technologies". The strategic and operational issues of the convergence of new technologies to address challenges and opportunities in the world of the 21st century will be addressed in more than 350 presentations in plenary sessions, research sessions, applications sessions, panel discussions and tutorials selected from 650+ submissions.

There is an NSF-sponsored one-day symposium on "Technology Management in the Service Sector" on Sunday, August 5. Well known experts in the field will discuss critical issues and research directions of "Service Science, Engineering and Management". The attendees will participate in the development of a report on the recommended research agenda of this new field for NSF's use. The conference itself will start at 8:30 a.m. on Monday, August 6 and continue until Thursday evening, August 9.

In addition to the technical sessions, PICMET '07 has a rich social program including dinners on Monday, Tuesday and Wednesday evenings, and an optional dinner with a Native American show in the Native American Center on Portland State University campus on Wednesday.

IEEE Oregon members can register for the full PICMET '07 conference at a special discounted rate of \$450. This allows you to attend the entire conference, which includes light breakfast and coffee breaks Mon. - Thurs, three dinners, proceedings and all the regular sessions.

To register at the special IEEE Oregon Section member rate, visit www.picmet.org, click on "Registration fee (online registration)." The special rate will not be visible on the next page, which outlines the different registration categories and optional activities. Select "Click here to register on-line" and fill out the form. Select "Conference on Aug. 6-9, 2007," and at the bottom of that page "**Special Registration Code**" will appear. Type **2007-oregon**, click on "continue," and the next page will show you the \$450 rate and other optional activities. Continue filling out the rest of the form.

For more information, please write to info@picmet.org

7th Annual OctoberBest

Regional High-Tech Manufacturing Conference and Expo
Wednesday, September 12th PCC Rock Creek, Portland

The Electronics Manufacturing Association (EMA) and the Electronics Representatives Association (ERA) Pacific NW Chapter are presenting Oregon's only electronics and manufacturing conference and exposition, which will showcase local Northwest suppliers, services, and resources.



Register prior to September 1st, 2007, the Show is Free; after September 1st, 2007 \$10.00/person - Entrance Fee (Donated to Oregon Food Bank) OR Bring a Bag of non-perishable food.

Attendees are encouraged to bring non-perishable food items for the Oregon Food Bank collection barrels located at entrance for OctoberBest. In addition all attendee admission fees will benefit the Oregon Food Bank. Register online at www.OctoberBest.org

In addition to this being the best opportunity to see the latest products, services, and technologies, you can attend seminars on emerging trends from 8 am-5 pm. View the Program Schedule.

IEEE Oregon is holding two morning technical seminars starting at 8:30 am. Registration check-in begins 30 minutes prior to the seminar start. 0.2 or 0.3 CEUs (0.1 CEU = 1 PDH) will be awarded on completion.

- What Hardware Engineers Need to Know About Software and Vice Versa
 - Time: 8:30 AM – 11:50 AM (3 hours; 0.3 CEUs)
 - Speaker: John Blyler, PSU and Extension Media
 - Cost: IEEE/ASQ/EMA/ERA \$65, non-members \$80
- Signal Integrity Issues Affecting Flexible FR-4 Multi-Package Modules
 - Time: 8:30 AM – 10:50 AM (3 hours; 0.3 CEUs)
 - Speaker: Shawn Arnold, High Speed Solutions
 - Cost: IEEE/ASQ/EMA/ERA \$65, non-members \$80

SME Portland is holding a morning technical seminar from 8:00 am - Noon.

Registration check-in begins 30 minutes prior to the seminar start.

- Lessons in Being an Effective LEAN Leader
 - Time: 8:00 AM – 11:50 AM (4 hours)
 - Speakers: Greg Hutchins, QPE; Bruce MacKender, SME; Karl Schultz, Schultz Associates
 - Cost: IEEE/ASQ/EMA/ERA/SME \$80, non-members \$99

Note: Class size limited to 20.

OctoberBest afternoon seminars cover topics critical in today's manufacturing environment such as: overview of mechanical control systems, making money from your ideas, EPEAT, design for manufacturing, embedded software, and testing.

Opening Keynote (repeated at 2pm): "Innovation in Unmanned Aerial Vehicles - The INSITU Story"

The OctoberBest 2007 Expo will be held at PCC Rock Creek 17705 NW Springville Rd. Portland, OR 97229 on Wednesday, September 12th from Noon until 6:00pm for exhibits featuring technical and educational sessions from 8:00 AM until 5:45 PM

Space is limited - sign up early!

The OctoberBest 2007 Expo will be held at PCC Rock Creek 17705 NW Springville Rd. Portland, OR 97229 on Wednesday, September 12th from Noon until 6:00pm for exhibits

- Featuring technical and educational sessions from 8:00 AM until 5:45 PM
- Opening Keynote (repeated at 2pm)
- Free parking on site
- Featuring our GOLD Sponsor for 2007
 - **Prototron Circuits**
- Featuring our SILVER Web Sponsor for 2007
 - **Stilwell-Baker**

Note: if you or your company is interested in being an exhibitor, please review the Exhibits page at the following website: www.ema-oregon.org/OctBest7_exhibitor.php

October 2007 EMC Short Course

The Oregon & Southwest Washington IEEE EMC Chapter is sponsoring a special EMC educational and training event this fall.

The October 2007 IEEE EMC Short Course will be held Tuesday, October 9th, 2007.

This will be an informative and enjoyable all day EMC course taught by Bruce Archambeault, an IEEE EMC Society Distinguished Lecturer; well known and respected throughout the EMC Community. His lectures are justly-famous and well worth going considerably out of your way to attend. And we're bringing him all the way out here to Portland for a full day.

Lunch and CD copies of the presentation materials will be provided to all participants. For all who are unable to attend the IEEE International EMC Symposium in Hawaii in July this year, this may be your best opportunity for local, high-quality, low-cost continuing EMC education. Those of you fortunate enough to be able to attend the Symposium should consider this a bonus.

The costs for this course will be more than reasonable:

- Free to all IEEE EMC Society Members who register for the course.
- Free to all Student IEEE members who register for the course.
- Free IEEE and EMC Society membership for 1 year for the first 20 new Student members who register for the course.

Not presently a member of the IEEE or the EMC Society? No problem. We will be there to help you join, before or at the Short Course. And we will be set up to take cash, check, or major credit cards for your convenience. Please watch this space and check the BEEEP for further details as to course registration contacts, location, and specific costs for membership.

Futurecar Comes to Portland

What: High-tech Future Car Demonstration/Ride-along

When: Wednesday, July 18, 2007: 11:30 to 4:30 by invitation

Where: Portland Expo Center, Parking Lot LP1 (Adjacent to MAX station)

For more information, contact Jon Makler (maklerj@metro.dst.or.us, 503-797-1873)

Vehicle Infrastructure Integration (VII) is the next wave of advanced intelligent transportation systems (ITS) tech-

nology that has the ability to support improvements in the management and operations of our roadway system. VII is a movement toward equipping vehicles to communicate with each other and the roadway in real-time. To reduce traffic congestion, decrease emergency response time, decrease fuel consumption and increase roadway safety, VII supports interaction among traffic management, emergency response, traveler information and vehicle control systems.

On July 18th, the Intelligent Transportation Society of Oregon (ITS Oregon), is hosting a local demonstration of VII technology at the Portland Expo Center. The demonstration itself involves a regular car that will be outfitted with various technologies that communicate with the driver as well as an intersection that will be set up in the demonstration area. Participants will be able to ride in (and possibly drive) the demonstration vehicle on a closed course. The enclosed article relates one reporter's experience during the demonstration that was held recently in Detroit, Michigan.

New Senior Members

IEEE Oregon congratulates our newest Senior Members, elevated at the IEEE A&A Review Panel held 16 June in Philadelphia, Pennsylvania:

- Jose Maiz
- Vincenzo Ditommaso

IEEE NEWS

1. Getting to Know Apter, Ray, and Vig

With IEEE elections three months away, The Institute interviewed Marc Apter, Pedro Ray, and John Vig--the candidates on the ballot for 2008 President-Elect. To learn about them, visit

<http://bmsmail3.ieee.org:80/u/6528/05229885>

2. The IEEE Around the World

Read about the latest IEEE Foundation grants, newly formed IEEE sections, and Women in Engineering Affinity groups, as well as other news from the IEEE's 10 Regions at

<http://bmsmail3.ieee.org:80/u/6529/05229885>

3. Part-time Passions: a Speed Demon and a Teller of Tales IEEE members do more than just work all day. Many have intriguing passions, including driving race cars and writing adventure novels.

Read about these two people at
<http://bmsmail3.ieee.org:80/u/6530/05229885>

4. Calendar of Events

Summer is a slow time for IEEE meetings, but a few are being held in June, July, and August. Check out what's on tap at

<http://bmsmail3.ieee.org:80/u/6532/05229885>

5. Almost Here: Multiphysics Simulation Webinar

Sign up now for the 28 June Webinar: Multiphysics Simulation for Electrical Engineers, or you'll be too late. Learn about the issues of multiphysics simulation of devices--including MEMS, RF components, power electronics, semiconductors, and electromechanical systems, such as those behind the rovers that explored Mars. Register for this

IEEE Spectrum Tech Insiders Webinar at
<http://bmsmail3.ieee.org:80/u/6533/05229885>

6. A Quartet of Web Site Updates

The last few months have seen some useful enhancements added to IEEE Xplore, the IEEE Job Site, IEEE.tv, and myIEEE. For what's happened, visit
<http://bmsmail3.ieee.org:80/u/6534/05229885>

7. Seven Upcoming Conferences

Read about the highlights of seven IEEE conferences taking place from August to October. Topics include nanotechnology, broadcast technology, vehicular technology, and microwave theory. For more, go to
<http://bmsmail3.ieee.org:80/u/6536/05229885>

8. The IEEE Mentoring Connection: What's It About?

Some of the situations that mentors and their mentees deal with can be gleaned from the questions and answers from participants in the IEEE Mentoring Connection. The program connects young professionals and recent grads with IEEE members willing to guide them in their professional development. Read on at

<http://bmsmail3.ieee.org:80/u/6537/05229885>

9. Power Architecture Developer Conference

On 24 and 25 September, hundreds of design engineers and developers, along with leading companies in the power architecture field, will meet at the Power Architecture Developer Conference, in Austin, Texas. Power.org, a program of the IEEE Industry Standards and Technol-

ogy Organization, is hosting the first-time event. For more information, visit

<http://bmsmail3.ieee.org:80/u/6538/05229885>

10. "Design Squad" TV Show Seeks New Projects

Producers of the PBS TV series "Design Squad" are seeking ideas for engineering projects that would appeal to the show's audience of 9- to 12-year olds. The IEEE funds the series, in which two teams of high-school students mentored by engineers compete to design and build a functioning machine. Projects should be visually interesting and allow for a number of solutions.

E-mail your ideas to the show's executive producer, Marisa Wolsky, at mailto:marisa_wolsky@wgbh.org

11. Conference Focuses on History of Electric Power

Want to learn the role played by electric power in shaping the modern world? That will be examined at the 2007 IEEE Conference on the History of Electric Power. Sponsored by the IEEE History Committee and the IEEE History Center, it's to be held from 3 to 5 August at the New Jersey Institute of Technology, in Newark, and includes a visit to Thomas A. Edison's home in Glenmont, N.J. For more information and to register, visit

<http://bmsmail3.ieee.org:80/u/6539/05229885>

12. Nominations Sought for Technical Field Awards

Candidates are being sought for the 2009 Technical Field Awards.

Nominations for the 30 awards are due 31 January 2008. For more

information and a list of the awards, visit

<http://bmsmail3.ieee.org:80/u/6540/05229885>

CALL FOR PAPERS ISQED 2008

9th International Symposium & Exhibits on QUALITY ELECTRONIC DESIGN (ISQED08) www.isqed.org Leading Conference in Design for Quality & Manufacturability March 17-19, 2008 San Jose, CA, USA

<http://www.isqed.org>

Paper Submission Deadline: September 30, 2007 Acceptance Notifications: November 23, 2007 Final Camera-Ready paper: January 3, 2008

PAPERS ARE REQUESTED IN THE FOLLOWING AREAS: A pioneer and leading multidisciplinary conference, ISQED accepts and promotes papers related to Elec-

tronic Design, EDA, and Semiconductor Manufacturing. Authors are invited to submit papers in the various disciplines of high level design, circuit design, test & verification, design automation tools; processes; flows, device modeling, semiconductor technology, and advance packaging.

The details of various topics of paper submission and the procedure is explained in ISQED web site at

<http://www.isqed.org>

Capitol Hill Watch

Is Lack of STEM Education Contributing to Offshoring of Jobs?

After listening to a diverse panel of experts on economic globalization explain why American high tech jobs are being offshored to other countries, Committee on Science and Technology Ranking Member Ralph Hall (R-TX) noted, "Once upon a time it was thought that only low-skilled jobs were in danger of being offshored. However, it seems that highly educated people in good paying jobs are now just as threatened." Stressing the need for improved science, technology, engineering and mathematics (STEM) education Hall added, "In this global economy our children will be competing head to head with Chinese and Indian students, but they aren't taking the necessary classes or making their education work for them. When our children graduate from high school they have taken consistently fewer classes in math and science than their contemporaries across the globe."

YouTube: Not So Much Fun for Law Firm Advocating H-1Bs

A law firm found itself in the hot seat when a taping of a seminar they conducted for clients on hiring workers found its way onto the YouTube video-sharing site. Since the video appeared, Senator Chuck Grassley (R-IA.) and Congressman Lamar Smith (R-TX.) sent a letter to the law firm, expressing their concern over the huge loopholes revealed by the YouTube videos. They also sent a letter to Secretary of Labor Elaine Chao. They said the clip on YouTube is evidence of abuse in the program and they want answers from the law firm featured in the footage. They also want the Labor Department to probe "the law firm's unethical procedures and advice to clients."

Senate Passes Energy Legislation Sans Tax Incentives and a Renewable Electricity Mandate

After much debate during the last month, the Senate finally passed H.R. 6., the Clean Energy Act of 2007, by a large margin – 65-27. Feuding over a renewable electricity mandate and a \$32.1 billion tax package had threatened progress on the bill. And when a cloture motion failed – a procedural move that would have prevented

further debate on these items and forced a vote on the bill - Senate Majority Leader Harry Reid (D-Nev.) said H.R. 6 would move ahead without the tax provisions or the renewable mandate. Without cloture, it is unlikely the bill would have come up for a vote if these items remained in the bill. Reid chastised Republicans for helping the oil and gas industry, which would have borne much of the cost of the tax incentives intended to boost alternative energy sources.

On the Other Side, Smaller Energy Tax Incentives Bill Passes House Committee

While the Senate's version of energy tax incentives legislation was dying, the House Ways and Means Committee passed a smaller, \$16 billion package - H.R. 2776, the Renewable Energy and Energy Conservation Act of 2007. The House bill will come to the House floor after the July Fourth recess.

And Still Further Action on Energy Legislation: House Committee Passes Legislation to Promote a Responsible Balance in Energy Reform

By a slim margin, the House Natural Resources Committee passed legislation designed to balance the U.S.' ever-growing demand for energy and the need to tackle the harmful effects of climate change. H.R. 2337, the Energy Policy Reform and Revitalization Act of 2007, provides a framework to reinstate public accountability and integrity in the Interior Department's energy programs, advance alternative fuels and efficient energy strategies, promote carbon sequestration, and tackle the impacts of climate change on fish and wildlife resources.

Legislation to Promote Solar Energy Discussed in House

The House Science and Technology Subcommittee on Energy and Environment held a hearing on legislation promoting solar technologies. Witnesses representing the solar industry discussed H.R. 2774, the Solar Energy Research and Advancement Act of 2007 sponsored by Gabrielle Giffords (D-AZ). The bill has bipartisan support but some are concerned about pushing the legislation without first addressing unanswered questions.

White House & Executive Agency Watch

Net Neutrality Backers Challenged In FCC Filings - In newly released FCC comments on whether network neutrality regulation is warranted to prevent hi-speed Internet services from potentially acting as content gatekeepers, the agency accuses companies such as Google - which support a "neutral" Internet - of prioritizing Web traffic in ways similar to those they are seeking to block for telecommunications and cable providers.

Reports, Speeches & Documents of Note

BHEF Report Urges Stakeholders to Address STEM Teaching Shortage - A new report by The Business-Higher Education Forum (BHEF) says, with a projected national shortage of more than 280,000 math and science teachers by 2015, key stakeholders must begin initiating strategies to recruit, retain and renew the nation's teaching workforce.

Biomedical Engineers Use Electric Pulses to Destroy Cancer Cells

Newswise - A team of biomedical engineers at Virginia Tech and the University of California at Berkeley has developed a new minimally invasive method of treating cancer, and they anticipate clinical trials on individuals with prostate cancer will begin soon.

The process, called irreversible electroporation (IRE), was invented by two engineers, Rafael V. Davalos, a faculty member of the Virginia Tech-Wake Forest University School of Biomedical Engineering and Science (SBES), and Boris Rubinsky, a bioengineering professor at the University of California, Berkeley.

Electroporation is a phenomenon known for decades that increases the permeability of a cell from none to a reversible opening to an irreversible opening. With the latter, the cell will die. What Davalos and Rubinsky did was apply this irreversible concept to the targeting of cancer cells.

"IRE removes tumors by irreversibly opening tumor cells through a series of short intense electric pulses from small electrodes placed in or around the body," said Davalos, who is the 2006 recipient of the Hispanic Engineer National Achievement Award for Most Promising Engineer or Scientist. "This application creates permanent openings in the pores in the cells of the undesirable tissue. The openings eventually lead to the death of the cells without the use of potentially harmful chemotherapeutic drugs."

The researchers successfully ablated tissue using the IRE pulses in the livers of male Sprague-Dawley rats. "We did not use any drugs, the cells were destroyed, and the vessel architecture was preserved," Davalos said. This work was completed with three additional colleagues, Lluís Mir, director of the Laboratory of Vectorology and Gene Transfer Research of the Institut Gustave Roussy, the leading cancer research center in Europe, and of the Centre National de la Recherche Scientifique (CNRS); Liana Horowitz, a visiting scientist at UC-Berkeley; and Jon F. Edd, a doctoral candidate at UC-

Berkeley. They reported the in vivo experiments in the June 2006 IEEE Transactions on Biomedical Engineering.

Oncologists already use a variety of methods to destroy tumors using heat or freezing processes, but these current techniques can damage healthy tissue or leave malignant cells. The difference with IRE is Davalos and Rubinsky were able to adjust the electrical current and reliably kill the targeted cells. "The reliable killing of a targeted area with cellular scale resolution without affecting surrounding tissue or nearby blood vessels is key," Davalos said.

Now, an article by Davalos on IRE is being featured in a special issue of Technology in Cancer Research and Treatment (<http://www.tcrt.org>) dedicated to this new field. Rubinsky, who earned his Ph.D. from the Massachusetts Institute of Technology, is the guest editor for this special issue, to be published in August, 2007.

At Virginia Tech, Davalos directs the interdisciplinary Bioelectromechanical Systems Laboratory, part of the university's Institute for Critical Technology and Applied Science (ICTAS), of which SBES is a core member. In the Bioelectromechanical Systems Laboratory, other research projects associated with utilizing the physical and electrical characteristics of cells, such as engineering methods for microfluidic single cell analysis, selective cell concentration, and image-guided surgery, broaden the understanding and potential of the field of IRE.

"IRE shows remarkable promise as a "minimally invasive, inexpensive surgical technique to treat cancer. It has the advantages that it is easy to apply, is not affected by local blood flow, and can be monitored and controlled using electrical impedance tomography," Davalos said. He and other researchers will continue to advance this promising method to treat cancer.

New Discovery Channel Engineering-based TV Show Seeks Help

See below for more details and contact information if interested.

"We are a UK based documentary production company and are producing a 13 x 1hr shows for the Discovery Channel US, tentatively titled 'Crash Test Inventors'."

"The series is all about taking existing and new technologies and using them to engineer solutions to issues of safety in a variety of situations and events. During the show we will take a concept such as an airbag, investigate the possibilities, design a re-application for another use and perform a large scale test of the invention. This could involve attaching a large airbag to a helicopter to

keep it afloat in the event of a crash into water. The items will range right down to smaller scale tests such as far as how to make hard hats stronger using advanced materials and cover both man made and natural hazards."

"The idea is to demonstrate innovative solutions to dangers that pose a risk to people in their everyday lives. We won't be looking for a final polished product but to demonstrate the reapplication, engineering, construction of the invention and an interesting and visual way to test it. This could mean anything from dropping a helicopter into a canyon to smashing our hard hat with rocks."

"As these shows hinge upon clever engineering we are hoping that engineers and scientists might be willing to share their ideas and inspirations with us as potential story ideas. We are covering a huge spectrum within the remit so however big or small scale or 'out there' the ideas might seem, we would be hugely grateful for any submissions. The tests will be carried out at the series base wherever possible and expert test facilities across the States."

"We would ultimately be looking for a consultant to come on for each story to provide expertise in that particular field and assist our hosts with the construction and testing. This might therefore provide the opportunity for an engineer to join our team in building and testing the invention and offer expertise in their particular field."

"All responses can come to this email address, alternatively please feel free to contact me using the details below."

*Kind regards,
Jez Bradshaw*

jez.bradshaw@darlowsmithson.com

'Crash Test Inventors'

Darlow Smithson Productions

Highgate Studios

53-79 Highgate Road, London. NW5 1TL

Telephone: 020 7482 7027 Fax: 020 7482 7039

Corrections

In the May 2007 article on the Design Squad Portland Event. Ellen Robinson should have been listed as WGBH Outreach Coordinator not as series producer.

IEEE Oregon Section Contacts

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To contact us, see www.ieee-or.org/contact_us