The Valley Megaphone

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In this Issue of the Valley Megaphone features:

IEEE Phoenix Section Executive Committee meeting minutes can be found at:
http://www.ieee.org/phoenix

Please send announcements for Valley Megaphone to Russ Kinner at r.kinner@ieee.org.

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Waves & Devices Society
Steve Rockwell,
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Life Members
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U – News
(for Student Members)

STUDENT BRANCHES CONTINUE TO EXPAND ACTIVITY SCOPE!

There have been additional changes within Student Branch Officers, as several students have been recruited for employment and internships. More details on these students in the future, as the energy and positive support within their Branches, translated to positive professional results.

Following is a brief listing of the recent events and events in planning:

* ASU Main Branch held Workshop on Job Search Strategy and a lecture on: Role of Electrical Engineers in Industrial Construction

* ASU Computer Society Students held two lectures with topics Software Licensing and Taking Research in the Private Sphere.

* Embry-Riddle Students will be touring some major companies, such as Boeing in the Phoenix area, in the upcoming months,

Please forward all Student Events to include on Phoenix Section Calendar and all Branches are preparing Summary for Regional Review Meeting.

This U-News Page, initiated last year, will continue to serve as the focal point for communications related to Student Branch Activity. The Section Committee is always looking for student recommendations for various improvements and support in expanding student memberships.

Nick Leonardi
480-720-1435 - Cell
nleonardi@ieee.org
Student Activities Chair

Student Branches

ASU Main, Engineering
Chair: Harshini Yerra
ieeeasuchair@gmail.com
Advisor: Cihan Tepedelenlioglu,
(480) 965-6623, cihan@asu.edu

ASU Main, Computer Society
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Advisor: TBD

DeVry, Phoenix
Chair: TBD
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dsmith2@devry.edu

DeVry, Computer Society
Chair: TBD
Advisor: Diane Smith
dsmith2@devry.edu

NAU, Engineering
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kry3@nau.edu
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Embry-Riddle, Prescott
Chair: Caleb Young,
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Advisor: John E. Post
postj@erau.edu

U-Newsbytes

* The next Executive Committee Meeting is set for October 6, so the next round of student reports were due on Monday the 5th.   If you have anything to report get the documents to me as soon as you can.

* ASU IEEE Computer Society collaborates with Sun Microsystem's Open Source University Meetup (OSUM) Program. Sign-up Today! (Page 11).

* Register for the IEEEXtreme Programming Competition
Think you can write code? Prove it on 24 October by participating in the IEEEXtreme programming competition. This global 24-hour online contest has IEEE student branch teams solve a challenging set of programming problems. The winning team will receive a variety of prizes. Registration ends 17 October. For more information and to register your team, visit: http://www.ieee.org/web/membership/students/xtreme/index.html

WAVES AND DEVICES
PHOENIX CHAPTER
http://ewh.ieee.org/r6/phoenix/wad/
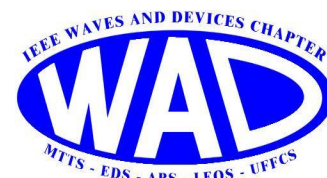
2009 Waves & Devices Technical Meetings

Date	Speaker	Society	Location	Time	Topic / Title
2-Feb	Dr. Mike Golio (Consultant)	MTT	Freescale	4:00 PM	Engineering your retirement
16-Apr	Mr. Bruce Bosco (Consultant)	MTT	Freescale	4:00 PM	Emerging Wireless Standards for Gigabit Applications
23-Apr	Dr. Michael Goryll (ASU)	EDS	ASU	4:00 PM	Ion Channel Biosensors on Silicon
18-May	Dr. Fadhel Ghannouchi (DL) (Univ. of Calgary)	MTT	Freescale	2:00 PM	SDR Based Power amplifiers /Transmitters for Advanced Wireless and Satellite Communications
28-May	Dr. Shahin Farahani (Freescale)	MTT	Freescale	4:00 PM	Short-Range Wireless Networking Standards
25-Aug	Dr. Peter De Maagt (DL) (ESA)	APS	ASU - MU246 (Coconino)	4:00 PM	Terahertz Technology for Space and Earth Applications
18-Sep	Dr. Abbas Abbaspour-Tamijani (ASU)	APS/MTT	ASU - MU228 (Cochise)	4:00 PM	Electronically-steerable Antennas for Millimeter-wave Frequency Range
14-Oct	**Dr. Shane Johnson (ASU)**	**LEOS**	**Agilent**	**6:00 PM**	**Device physics related to the efficiency of LEDs for lighting and optical refrigeration applications**
16-Oct	**Dr. Bruce Towe**	**UFFCS**	**ASU**	**4:00 PM**	**Microelectronic Implants and Bio-telemetry**
6-Nov	**Dr. Tahir Ghani (Intel)**	**EDS**	**Agilent**	**2:00 PM**	**Device Scaling in the Nanoscale Era**
18-Nov	**Dr. Sergio Pacheco**	**MTT**	**Agilent**	**6:00 PM**	**Automotive Radar Technology & Markets**

WAVES AND DEVICES - PHOENIX CHAPTER
http://ewh.ieee.org/r6/phoenix/wad/

Photonics Society Meeting
Meeting Free & Open to Non-IEEE Members
6 PM, October 14, 2009
Agilent Sales Office, Chandler, AZ

What Factors Limit the Wall-Plug Efficiency of Light Emitting Diodes?

Dr. Shane Johnson
Fulton School of Engineering, Arizona State University, Tempe, Arizona

Abstract

Semiconductor based light emitters are very attractive for lighting applications because they have the potential to achieve very large wall-plug efficiencies. However, efficient light emitters require active materials with near unity quantum efficiency and device designs that efficiently extract luminescence. Several approaches have been used to improve light extraction, including surface roughness, antireflection coatings, lenses, and reflectors; however, challenging designs are required to prevail over the fundamental limits that thermodynamics places on the extraction of light from semiconductors. Moreover there is an optimal injection level where the wall-plug efficiency of a light emitting diode (LED) peaks. In addition to a general discussion about LEDs for lighting applications, the ultimate wall-plug efficiency of LEDs is examined in terms of internal quantum efficiency, carrier injection efficiency, and light extraction efficiency.

Biography

Shane Johnson earned his PhD in Physics from the University of British Columbia, Canada, in 1996, is currently a tenured Research Scientist at Arizona State University, has 18 years research experience in the area of compound semiconductor devices, has published over 70 journal articles, has contributed to over 160 conference papers, abstracts, and invited presentations, has 4 issued US patents, was awarded the Natural Science and Engineering Research Council of Canada Postdoctoral Fellowship (1997-1998), is a member of the International Society for Optical Engineering and the American Physical Society, and is a senior member of the Institute of Electrical and Electronics Engineers.

Date: Wednesday, October 14th, 2009
Location: Agilent Sales Office, Suite 367, 4330 West Chandler Blvd., Chandler AZ 85226
(In office park on North side of Chandler Blvd west of McClintock Rd. Agilent sign is not visible from the street)

Time: 6:00-7:00 PM *Presentation*, Pizza will be served following the Seminar
For more information, please call:
Steve Rockwell (Chapter Chair) at (480) 241-9891 steve.rockwell@ieee.org
Chuck Weitzel (Chapter Publicity) at (480) 292-0531 c.weitzel@ieee.org

Power & Energy Society Announcements

October 2009 Luncheon Meeting

Date:	Thursday, October 15, 2009
Time:	11:30 am - 12:00 noon: Registration
	12:00 noon: Lunch
	12:30 pm: Program
Location:	APS Deer Valley Building N-1, Conference Room E _map - *http://ewh.ieee.org/soc/pes/phoenix/images/APS-DV-map.pdf*
	2124 W. Cheryl Dr.
	Phoenix, AZ
Speaker:	Clark Jones
Topic:	Residential Solar Generation from one customer's perspective
Cost:	$5.00 (No cost if you are a college student)
Reservations:	Contact Michelle at (602) 437-0469 or submit your name at *http://ewh.ieee.org/soc/pes/phoenix/lunch.php*
	Reservations deadline is Noon Monday, October 12th, 2009.
	If you have already registered for this luncheon but need to cancel, click http://ewh.ieee.org/soc/pes/phoenix/lunchcancel.php

Abstract:

In 2006, Clark Jones installed a utility intertie solar power system at his home in Gilbert, AZ. This talk is from a homeowner's perspective. Included is a brief overview of residential solar power systems, how the rate structures affect the homeowner, and a report on the results from operating his system for the past 3 years. Also, a few other related topics will be touched upon.

Biography:

Clark Jones grew up during the Space Race, and first got interested in electronics, solar energy, and computers in the 1960s. He earned a B.S. in Computing and Information Sciences (what today would be called Software Engineering) from the University of New Mexico in 1980, after taking a year off from college to do a stint as a factory electronics technician. He also worked part time for a while as a Broadcast Engineer at KGGM-TV while attending UNM. He then worked for Mostek for two years, prior to moving to the computer chip tester subsidiary of Schlumberger, Ltd., for 21 years, where he worked on both the software and hardware designs. He has served a two-year term on the board of directors for American Mensa. Clark has also been involved in Amateur Radio since 1991, and has served

several terms on the board of directors for the Arizona Repeater Association. He is currently writing a book on solar energy entitled "One Man's Quest for Power".

IEEE Life Members Affinity Group, Phoenix Section Announcements

October Technical Meeting

Date: Tuesday, October 20, 2009, 11:00 AM registration, 11:30 lunch

Location: *SRP's PERA Club (Big Horn Terrace Room),*

                 1 East Continental Drive, Tempe.

                 Click on this link for map to: SRP PERA Club

Speaker: Jeff Younger, Smart Grid Project Manager, SRP

Topic: Smart Grid - Empowering energy efficiency, distributed generation, and reliable service

RSVP: Required by Wednesday, October 9, to the Section Secretary, Michel Ebertin by email michel@ebertin.net .

Computer Society
Technical Meetings

Phoenix Chapter Website

www.ewh.ieee.org/r6/phoenix/compsociety

Monthly Meeting

Speaker: Jorge Caviedes, Intel Corporation

Date: Wednesday, October 7, 2009, 6:00 P.M. - 8:30 P.M.

Topic: Technology and Methods for High Quality Digital Video Processing

Location: Intel Corp., 5000 W. Chandler Blvd., Chandler, AZ 85226

Directions:
            http://www.ewh.ieee.org/r6/phoenix/compsociety/meetings/2009/IntelLocation.htm

Meet at Building C4 Lobby

Attendees need to be escorted. Show up in Lobby Area by no later than 6:45 P.M.

Networking will be in the C4 Patio 6:00 -7:00 P.M. with light meal. Conference Room location will be announced during the light meal. Presentation starts at 7:00 P.M. Free, everyone is welcome.

Monthly Meeting & Chapter Elections

Speaker: Ryan Anderson, Rainbow Studios, Phoenix, AZ

Date: Wednesday, November 4, 2009, 6:00 P.M. - 8:30 P.M.

Topic: Computer Animation: Where it's come from, where it's headed, and how to do it today

Location: DeVry University, 2149 West Dunlap Ave, Phoenix, AZ 85021

            (1 mile east of I-17 on Dunlap, SE corner of 22nd Ave and Dunlap)

Networking will be in the Courtyard 6:00 -7:00 P.M. with light meal. Meeting Room location will be announced during the light meal. Chapter Elections will be from 7:00 – 7:15 P.M. Presentation starts at 7:15 P.M. Free, everyone is welcome.

Monthly Meeting

Speaker: Dr. Brad Morantz

Date: Wednesday, December 2, 2009, 6:00 P.M. - 8:30 P.M.

Topic: Biological Neural Processing as a Paradigm for Visual Pattern Recognition

Location: DeVry University, 2149 West Dunlap Ave, Phoenix, AZ 85021

(1 mile east of I-17 on Dunlap, SE corner of 22nd Ave and Dunlap)

Networking will be in the Courtyard 6:00 -7:00 P.M. with light meal. Meeting Room location will be announced during the light meal. Presentation starts at 7:00 P.M. Free, everyone is welcome.

For more information about these meetings, contact Jon Candelaria, Program Coordinator, at jon.candelaria@motorola.com.

Conference

Ableconf 2009 Phoenix - Free Software for Free Enterprise

Date: Saturday October 24, 2009, 10 A.M. - 4:00 P.M.

Location: University for Advancing Technology, Tempe, AZ

Website: http://ableconf.com

For more information about this conference, go to http://ableconf.com/press_releases

Ableconf is currently looking for sponsorships, http://ableconf.com/sponsorships

Symposium

Project Management Institute Phoenix Chapter

$275 fee ($250 for IEEE members)

Date: November 6, 2009, 8 A.M. - 5:00 P.M.

Location: Sheraton Phoenix Downtown Hotel, Phoenix, AZ

Website: http://www.phx-pmi.org

LinkedIn Group

Louis Rayes louis.rayes@computer.org, LinkedIn Coordinator, manages the Computer Society Phoenix Chapter Group.

Join LinkedIn for free, the most widely used social network for technical professionals. Try it!

Website: www.linkedin.com

For more information about these announcements or to be added or removed from the Computer Society Phoenix Chapter e-mail list, contact: joy.shetler@computer.org or c.vasquez-carrera@computer.org

Chapter Website: http://www.ewh.ieee.org/r6/phoenix/compsociety/

The October meeting of the IEEE Phoenix Area Consultant's Network will be held at the offices of ETA Engineering, Inc., 4049 E Presidio Drive, Mesa Arizona, on October 8, 2009. Our speaker will be Ron Sprague based on a presentation from Bruce Johnson, and he will provide a briefing on the IEEE National Consultant's Network Programs that are available to the membership.

Our September meeting was held at Joe's Crab Shack, at Southern and McClintock, and out speaker was Lane Garrett. He spoke on Renewable Energy, and presented an interesting presentation showing the EROI, (energy return on the construction energy investment), of the conventional generation and the renewable energy generation methods. The results were truly an eye opener.

We made some interim selections for Webmaster and Advisor editor, and initiated steps to list our PACN web site on the IEEE Consultant's Network page, so other members can find us. Our officers are:

President	Ronald L. Sprague, P.E.	r.sprague@ieee.org
Vice President	C. Bruce Johnson	cbj@johnsonscientific.com
Treasurer	Bill Morgan	bill.morgan@cox.net
Secretary	Ed Mischen	ed.mischen@cox.net
Webmaster	Mike Pyska	m.pyska@ieee.org
Advisor editor	Ronald Sprague	r.sprague@ieee.org
Program Chairman	Robert Petro	Robert.petro@systemdatasolutions.com
Member at Large	Land Garrett, P.E.	lanegarret@aol.com
Member at Large	Ed Bawolek	bawolek@ieee.org
Website		ieeepacn.com

We have established a tentative schedule of programs for the next year, so we can all plan for future attendance. Our meetings are held on the second Thursday of the month, unless otherwise indicated.

October 8   "IEEE National Consultant's Network Programs"   C Bruce Johnson
November 12   "How to Conduct an Assignment"   Jim Soudriette, and Tom Funk
December 10   Annual business meeting and election of Officers

Mike Pyska will be looking for other locations for meeting places. We invite any of the IEEE Phoenix Section members and student members to attend our meetings, and we would like some inputs on program topics. Some of the topics we are considering for future meetings are:
- SCORE assistance for Small Business Startups
- The State of Arizona Mechanic's Lien Laws and their application to consultants
- Engineering Registration requirements for offering Professional Engineering services

We will be happy to add any new topics, if they are of interest to the Phoenix Section Membership.

IEEE Documentary Specials

KJZZ-FM (91.5 MHz) will be broadcasting 2 Specials, both co-productions of IEEE Spectrum magazine and the Directorate for Engineering of the National Science Foundation.

The first is to air on Sunday, November 15 at 3 PM with the topic "Engineers of the New Millennium – Dream Jobs" and the 2nd airs the following Sunday the 22nd also at 3 PM with the topic "Engineers of the New Millennium: The Global Water Challenge".

Upcoming IEEE Conferences in Phoenix

The *IEEE Industrial Electronics Society (IES)* of the IEEE is holding IECON 2010 - 36th Annual Conference of IEEE Industrial Electronics 7-10 November 2010 in Glendale, AZ. For more information:

http://iecon2010.njit.edu/

The *IEEE Microwave Theory and Techniques Society* will sponsor the conference entitled 2011 IEEE Radio and Wireless Symposium (RWS). This conference will be held in Glendale, AZ on January 16-20, 2011.

For further information, please contact,

George E. Ponchak
NASA Glenn Research Center
21000 Brookpark Rd., MS 54/5
Cleveland, OH 44135
+1 216 433 3504
george.ponchak@ieee.org

Both of the above Conferences are being held at the Renaissance Glendale Hotel, Glendale, AZ. The hotel is adjacent to the Univ. of Phoenix Stadium and Jobing.com Arena at Westgate.

Section Banquet

The Phoenix Section Annual Awards Banquet is set for February 13, 2010. Reserve that date for a great evening with many of your Section colleagues. It will be again held at the Phoenix Airport Hilton, 2435 S 47th St, Phoenix, AZ.

FUTURE CITY COMPETITION
ARIZONA REGION

www.futurecity-arizona.org

The Future City Competition is a national educational program sponsored by the engineering community to promote technological literacy and engineering to middle school students. The program fosters an interest in science, technology, engineering and math (STEM) through hands-on, real world applications. The competition is open to all public, private and parochial schools. The national finals of the Future City Competition are a featured event during Engineers Week, with students from across the country competing in Washington, D.C.

Goals

The Future City Competition offers students a fun way to learn about engineering and cities of the future. Through the program, students will:

- ➢ Work as a team under the guidance of a teacher and a practicing engineer.
- ➢ Apply their knowledge to real world situations.
- ➢ See firsthand how engineers turn ideas into reality.
- ➢ Use the award-winning computer game, *SimCity 4 Deluxe* to design their future city.
- ➢ Build a scale model of a section of their city.
- ➢ Utilize their communication skills by preparing an essay in response to a special problem and a verbal presentation relating their experience in the design of their city and some specific engineering features.

The Competition brings together Teachers, Students and Engineers. Each team consists of three students, a teacher-sponsor and an engineer-mentor. All members of the team have a role that is necessary for the successful completion of the project.

TEACHERS

The Future City Competition is an excellent educational program designed to support your classroom science, technology, engineering and math initiatives. Under your leadership, by integrating the competition deliverables into classroom activities, students will develop:

- Problem solving skills
- Teamwork
- The application of math and science to practical problems
- Research and presentation skills
- Computer skills
- An increased awareness of community related issues

<u>Arizona Region Competition</u>

The team registration period is from August until late October. A school may enter multiple teams. Students may participate on one team only.

There are 5 student deliverables:

➤ Logical Model: A computer model of their city using SimCity 4 Deluxe.
➤ Research Essay: 500-700 word report explaining how a design challenge was completed
➤ City Narrative: A "Chamber of Commerce" explanation of key features of the city
➤ City Scale Model: A scale model of a section of their city of the future, using recycled parts
➤ Team presentation: Student teams will present a verbal summary of their designs and concepts

Regional Competition: Regional Competition is held in January.

The National Finals of the Future City Competition will be held in February in Washington, D.C. as a highlighted event of National Engineers Week.

VOLUNTEERS NEEDED:

There are many opportunities to become involved with the student teams and the competition. Volunteers can be:

ENGINEER-MENTORS: Future City Competition – Arizona Region. The engineer is involved in all phases of the competition as an advisor and provides input and technical assistance, integrating real life engineering experiences as the students work on the competition. The students must do all of the actual work, such as the computer design of the city, building the tabletop model, writing the essay and presenting the project during the competition with support from the engineer.

   Approximate commitment: 35-45 hours from now until the regional finals in January.

JUDGES: Judging teams evaluate all of the student submissions (logical model, essay, abstract, scale model and verbal presentation).

   Approximate commitment: 30 – 35 hours, November-January

DAY-OF-THE-EVENT SUPPORT: The competition will involve students statewide. Volunteers will assist in all aspects of the competition including team check-in, awards and recognition, gift distribution and other logistical requirements of the event.

   Approximate commitment: 10 – 15 hours, Region Finals

COMMITTEES: There are volunteer opportunities that support the competition success including: Industry Relations, Professional Society contact, School contact, Administration and Finance, Communications, Competition, Data Management, Judges, Awards and Logistics. All individuals, both technical and non-technical, can participate on a committee.

<div align="center">For additional information</div>

Michael Andrews, Coordinator   Darcy McCulloch, Co-Coordinator

m.andrews@ieee.org   fcdarcy1@cox.net

IEEE President's Change the World Competition

http://www.ieee125.org/change-the-world/

For additional details, contact Mike Andrews, m.andrews@ieee.org

HTC STUDENT DESIGN PROJECT

The IEEE Presidents' Change the World Competition recognizes students who took on the challenge of developing unique solutions to real-world problems using engineering, science, computing and leadership skills to benefit their community and/or humanity.

The IEEE Humanitarian Technology Challenge (http://www.ieeehtc.org) is a partnership between the IEEE, UN Foundation and the Vodafone Foundation targeted at developing technological solutions to some of the greatest challenges facing humanitarian health and disaster workers today. The goal is to bring together humanitarian service providers, IEEE members and other technologists around the world to collaborate for the benefit of humanity.

The top three challenges have been identified as:

1. Reliable Electricity
Increase the availability of electric power in resource-constrained environments. Inexpensive, reliable electricity generation on a small scale (home or village) can provide lighting at night, charging of cell phones, refrigeration, and other communications, education, and economic development functions.

Specific design considerations for Reliable Energy projects included:
- Low power stationary facilities
- Rugged, mobile power supplies for emergency settings
- Mechanical transducers
- Passive generation devices (e.g., charge as you walk)
- Renewable energy hubs

2. Data Connectivity of Rural District Health Offices
Sharing information and exchanging data among remote health clinics and providers with central health facilities, hospitals and ministries is a significant challenge to tracking outbreaks of disease and ensuring the appropriate treatments and medicines get to those who need it most. Improving communication between these entities can improve access to treatment protocols, monitor health trends, and share results of treatments.

Specific design considerations for Data Connectivity projects included:
- Two way transmission – upload, download
- Data could be batched for daily transfer
- Also useful for emergency/outbreak alerts
- Less expensive service and higher bandwidth needed
- Create maps of existing connectivity
- Use intermediate field offices as data relay points

3.   Individual ID and tied to Health Record Tracking

Keeping health records in the developing world is sporadic at best and tying them to treatment regimens and tracking the impact of them is sorely lacking. When individuals are displaced by natural, man-caused disasters or diaspora, it is vital for NGO's and Governments to understand the healthcare needs of refugees and be able to deliver the appropriate treatment – especially for those with chronic diseases.

Specific design considerations for Individual ID and Health Record Tracking projects included:
•   Secure, confidential ID for patients
•   Emergency Response and Chronic Care Applications
•   Useful for routine care for migrant populations

IEEE-HTC STUDENT DESIGN PROJECT OBJECTIVE

The objective of the IEEE-HTC Student Design Project is to provide a working prototype, scale model or detailed engineering design specifications for a project that satisfies one of the three HTC Challenges.

University students participating in the IEEE-HTC Design Project are required to specify the following:
•   The scope of the project
•   The location where the project is/will be installed or tested
•   Project results (impact, value, cost, anticipated changes, maintenance, manufacture & production)
•   Implementation plan

Career Webinars from IEEE-USA and IEEE Job Site

The IEEE Job Site, IEEE Spectrum and IEEE-USA are hosting four career webinars this fall to help IEEE members build their careers:

Why Aren't I Hired Yet?
When: Thu., 22 October 2009 - 11:00 a.m. MST
This webinar will examine current employment market data and the latest hiring trends during this challenging economy. [Register](#)

How to Obtain and Maintain Security Clearance
When: Wed., 28 October 2009 – 8:00 a.m. MST
This webinar will address the benefits of acquiring security clearance, the process necessary to obtain security clearance, and who determines the need to hire candidates with security clearance. [Register](#)

What are HR professionals looking for in a Résumé?
When: Thu., 29 October 2009 - 11:00 a.m. MST
This webinar will cover what HR professionals are looking for in an applicant's résumé.
 [Register](#)

INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS

COMPONENTS, PACKAGING AND MANUFACTURING TECHNOLOGY SOCIETY

ECTC Electronic Components & RF Program Committee
CPMT RF & Wireless Technical Committee

60th Electronic Components and Technology Conference (ECTC)
June 1 – June 4, 2010
Paris Las Vegas Hotel, Las Vegas, Nevada USA

Call for Papers

The ECTC Electronic Components & RF Program Committee and the CPMT RF & Wireless Technical Committee encourage you to submit an abstract to ECTC 2010 in the areas of passive components & networks, RF & Microwave components & modules, and subsystems. ECTC is the premier Electronic Components and Packaging conference held annually and attended by about 1000 delegates with equal participation from companies and academia. As in the past, Electronic Components, RF & Microwave, and MEMS related papers are solicited for focus sessions during this prestigious conference.

Discrete Passive Components

Design, materials, processes, and manufacturing considerations for discrete passive components: resistors, capacitors, inductors, and passive networks.

Integrated & Embedded Components

Design, materials, processing, modeling, manufacture, and characterization of integrated & embedded passive & active components on silicon, organic, ceramic, ultra-thin, and glass type substrates for digital, mixed signal, and RF applications; metamaterials, component integration for power converter modules.

RF & Microwave Components

Integrated antennas, filters, baluns, RFID/sensors, RF MEMS, MEMS, MEMS packaging, tunable devices and switches, high power and high efficiency RF/Microwave power amplifiers – design, technology and high frequency characterization

RF & Microwave Modules

Module Integration technologies in semiconductor, organic, and glass substrates – System in Package, System on Chip, Package on Package, and 3D integration; shielding and isolation

Materials, Processing, Reliability, & Manufacture of Electronic Components

Design, High permeability and high permittivity materials at high frequencies and their processing, yield and reliability aspects of electronic components, through silicon vias, wafer level RDL, and nanostructured materials and processes,

SUBMISSIONS:

Please submit abstracts using the ECTC web site: www.ectc.net by October 15, 2009. Abstracts must comply with the guidelines outlined at the website. To have your paper considered for inclusion in the "Electronic Components & RF" focused sessions

YOU MUST SELECT

"Electronic Components & RF" committee as your PRIMARY subcommittee preference when you submit your abstract at the ECTC web site. Again, to have your paper considered for the electronic components & RF/microwave sessions, please do the following:

STEP #1:   Submit abstract through the ECTC web site (www.ectc.net) and
            select "Electronic Components & RF" as PRIMARY subcommittee preference

STEP #2:   Email abstract copy and author's email & contact information to:
            Craig Gaw at c.a.gaw@ieee.org & Amit Agrawal at amiagra2@cisco.com

Craig Gaw,
Chair - CPMT RF & Wireless TC
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IEEE Strategies to Help School Science Teachers

The national office of the IEEE has had an active program for a couple of years now to train science teachers in improved ways to teach science and engineering to school children. Called TISP – Teacher In-Service Program – the program is a response by the institute to the widely acknowledged appallingly low quality of science and mathematics knowledge among graduating school children, and the rapidly decreasing number of students who opt for a degree and a career in engineering rather than in business management, finance or law. The institute recognizes that a large part of the problem is the lack of knowledge and experience of engineering matters among the science teachers, this leading to a lack of exposure of children at a young age to real science or the encouragement of any child that might have an interest. In fact, studies show if children have not been exposed to science before high school it is really too late for them to get into it. Along with that, by 5th grade students need to know that going to college is a possibility for them.

Hence, a major part of the national IEEE program is the creation of a growing set of teaching modules / lessons plans, each module being structured around a particular engineering problem such as electric motors, structure loads, etc. Each module emphasizes the teaching of the relevant engineering, science and mathematics principles through a practical project performed by the students. These modules are freely available to any teacher on the institute website: www.tryengineering.org/lesson.php.

The TISP program is an effort sponsored and promoted by the national office but run at the local chapter level. The Phoenix Section lead on TISP is Mike Poggie. To further help the process, the national office has been running a series of workshops to train IEEE member volunteers in achieving two goals: to train teachers in better ways to teach engineering and science principles, and to provide in classroom assistance to the science and mathematics teachers. A small group from the Phoenix Section participated in the last session in November held in San Francisco; it was a lot of fun and very inspiring! But it is clear that to manage and implement TISP over the whole Phoenix Section, we have to divide up the tasks into manageable subsets, each subset under a different lead and all the subsets coordinated by Mike Poggie. A subset could be a distinct grouping such as retirees, or a town remote from Phoenix like Flagstaff, or even quite possibly a particular school.

As a first subset we are seeking to enlist the help of the talented retirees in the IEEE. Retirees represent a tremendous pool of engineering talent and knowledge associated with its application in the real world of industry, academia, government, etc. They are very capable of being able to show school children in science classes how what they are being taught relates to the real world and how science and math studies can lead to a fruitful and enjoyable career in engineering. Plus they have more time they can devote to this cause than do our colleagues in full-time employment and with young families. This subset is being organized by John Purchase. So any retiree interested in joining this effort should please email John Purchase at: jpurchase@cox.net.

Plus any non-retiree interested in helping the Chapter's TISP effort should get in touch with Mike Poggie at: Mike.Poggie@ieee.org. And the national office continues to run regular TISP workshops (and all travel expenses are reimbursed!); they are well worth attending for anyone interested in working with school children and teachers.

Please read the June 2009 edition of the Valley Megaphone at http://ewh.ieee.org/r6/phoenix/vm/2009/June09vm.pdf, for a glimpse of the contributions by the IEEE Phoenix TISP volunteers.

IEEE Computer Society at ASU

Open Source University Meetup

IEEE Computer Society at Arizona State University has a history of dedication to collaboration and innovation, and is a firm believer in the power of open source software. We are also passionate about helping our students network and succeed. In this spirit, we are proud to announce collaboration with Sun Microsystems and their Open Source University Meetup (OSUM) program!

Sun Microsystems has rapidly emerged as a leader in the open source community, making a large variety of their platforms open including OpenOffice, OpenSolaris, OpenJDK, and even OpenSPARC. You know a company is serious about open source when it makes its hardware open! In their passion for open source, they have created a community called the Open Source University Meetup which exists as a social networking tool for developers to meet others who are passionate about open source and learn more about Sun technologies. Members of the OSUM community include students from all around the world, Sun staff, and any developer who has a passion for expanding his or her own knowledgebase.

Beyond the obvious networking opportunities, members of OSUM also get free, well-written and authoritative training on Sun technologies through the Sun Academic Initiative, and *extremely* reduced-cost sun certification exams! This is an amazing deal for those seeking to enhance their skill-set or prove that they have mastered a particular tool, and the best part is it's free and easy!

So what are you waiting for, an invitation? Well, here it is: go to http://osum.sun.com to sign up. Need more information? Please contact Nicholas Vaidyanathan at Nicholas.Vaidyanathan@asu.edu.

Phoenix Section Annual Election

The Nominating Committee has put forth the following slate of candidates for the Phoenix Section Executive Committee the 2010 calendar year:

> Treasurer: Charles Weitzel
>
> Secretary: Ralph Hogan
>
> Vice Chair: James Hudson
>
> Chair: Henning Braunisch

As no more than one candidate is nominated for each position, the election will be held by the Executive Committee at its meeting scheduled for November 3, 2009.

Phoenix Section Executive Committee Endorses SI chart for AZ Schools

The executive committee passed a resolution at the November 6th meeting avocating "… that the SI Diagram (International System of Units) from the NIST (National Institute of Standards and Technology) be posted in each AZ Science classroom for students in grades 7-12."

There are 3 different versions of this chart that the NIST has published on their website. You can review the versions at:

http://www.physics.nist.gov/cuu/Units/SIdiagram2.html

Phoenix Section Executive Committee Meeting

– First Tuesday of the month.

Venue: Phoenix Airport Hilton, 2435 S 47th St, Phoenix, AZ, 85034
            Tel.: 480-804-6017

More Info: Meetings are held on the first Tuesday of the month. All interested IEEE
            members are welcome to attend.

Contact: Debendra Mallik, Phoenix Section Chairman, dmallik@ieee.org

IEEE Phoenix - Calendar of Events for October 2009:

You may access the IEEE Phoenix Section Calendar of Events at:

    http://ewh.ieee.org/r6/phoenix/Calendar.htm

For inputs and updates to the Calendar, please contact the IEEE Phoenix Section Conferences Chair, Russ Kinner at 602-997-2353 or e-mail: r.kinner@ieee.org