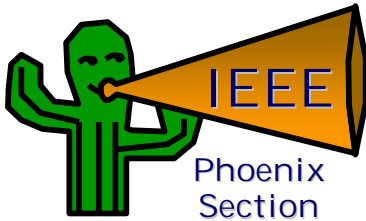


The Valley Megaphone

Newsletter of the

Institute of Electrical and
Electronics Engineers, Inc.
Phoenix Section

September 2009,
Volume XXIII, Number 9



Executive Committee

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This Issue of the Valley Megaphone features:

Contacts:

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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.

Chapters

Communication & Signal Processing
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Waves & Devices Society
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U – News

(for Student Members)

Welcome to all Returning and Newly Enrolled Students!
(and IEEE Phoenix Section Executive Committee / Meeting Sept 1st)

My immediate focus will be on direct communication with Student Officers and Advisors (as I will get phone #'s if not already available) and on Student Branches Standardized Monthly Report, a project that I chose to initiate going into the new semester with all current Officers. (Student Branch Monthly Reports to be sent to Email Address below)

Over the past weeks, I have had the opportunity to attend two Events:

- o ASU Main Chapter Monthly Meeting to review the planned activities
- o ASU Main Campus 2009 Passport Event for "Freshman Recruiting" into Organizations, with IEEE ASU Main Chapter Tabletop Exhibit!

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.

Wishing all Students success in their 2009 - 2010 Academic Year!

Regards,

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

Student Branches

ASU Main, Engineering
Chair: Harshini Yerra
[ieeeeasuchair@gmail.com]
Advisor: Cihan Tepedelenioglu,
(480) 965-6623, cihan@asu.edu

ASU Main, Computer Society
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nvaidyan@asu.edu
Advisor: Guoliang Xue
(480) 965-6218 xue@asu.edu

ASU Polytechnic
Chair: Justin Burrell
justin.burrell@asu.edu
Advisor: TBD

DeVry, Phoenix
Chair: Mason Surerus
msurerus@ieee.org
Advisor: Dion Benes
dion.benes@phx.devry.edu

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

NAU, Engineering
Chair: Kenji R. Yamamoto
kry3@nau.edu
Advisor: Niranjan Venkatraman
y.niranian@ieee.org

Embry-Riddle, Prescott
Chair: Caleb Young,
young27f@erau.edu
Advisor: John E. Post
postj@erau.edu

U-Newsbytes

- ✚ The next Executive Committee Meeting is set for September 1, so the next round of student reports were due on August 28th. If you have anything to report get the documents to me as soon as you can.
- ✚ Student Chapter Officers are in the process of filling officer positions being vacated by graduating students. Student Chapter activity will resume for 2009 - 2010 school year and newly elected officers (and returning officers) are to be listed in monthly reports.
- ✚ ASU IEEE Computer Society collaborates with Sun Microsystem's Open Source University Meetup (OSUM) Program. Sign-up Today! (Page 11).



Call for IEEE Phoenix Section Officer Nominations

The IEEE Phoenix Section is seeking nominations for the following Section Officer positions for the 2010 term:

- ❖ Chair,
- ❖ Vice-Chair,
- ❖ Secretary and
- ❖ Treasurer

Please send your nominations or questions to any of the following Nomination Committee members:

Keith Holbert (email: holbert@asu.edu),
Bob Paris (email: bob@arizonasunsales.com), or
Vasu Atluri (email: vpatluri@ieee.org)

Section Officers may be of Member, Senior Member, or Fellow grade, and must reside within the boundaries of the Phoenix Section. Self-nominations are perfectly acceptable. Deadline for nominations is Wednesday, September 30, 2009.

Note from the Publicity Chair

Dear Fellow IEEE Phoenix members,

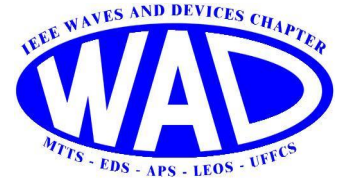
Thank you for your support of the activities of the IEEE Phoenix Section, especially during the transition of Publicity Chairs to myself from Sam. We will miss Sam's input and through treatment of each issue of the *Megaphone*. Our loss is California's gain.

Please send me any news of the Section for publication at r.kinner@ieee.org. I will attempt to continue the excellent service to our local Section as the past members who have served in this role. As I am also continuing to update the Section calendar (with some changes you will notice) that function will continue unabated.

Sincerely,
Russ Kinner



INSTITUTE OF ELECTRICAL AND
ELECTRONIC ENGINEERS



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
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



INSTITUTE OF ELECTRICAL AND ELECTRONIC
ENGINEERS



WAVES AND DEVICES – PHOENIX CHAPTER
<http://ewh.ieee.org/r6/phoenix/wad/>

APS Meeting

Meeting Free & Open to Non-IEEE Members

4PM, September 18, 2009

*Memorial Union, Room 228 Cochise Room
Arizona State University, Tempe, AZ*

ELECTRONICALLY-STEERABLE ANTENNAS FOR MILLIMETER-WAVE FREQUENCY RANGE

Dr. Abbas Abbaspour-Tamijani

Assistant Professor of Electrical Engineering, Arizona State University

Abstract

Recent years have witnessed a steady progress towards commercialization of millimeter-wave radio systems for applications ranging from automotive radar to ultra-high-speed internet and short range data communication. Much of this excitement is owed to the advances in millimeter-wave IC technology that enable cost-effective production of highly integrated RF front ends. Besides abundant bandwidth, an attraction of millimeter-waves is that they allow for smaller and more directive antennas. At these frequencies, the antenna gain in fact becomes an important term in the link budget calculations, as it has to compensate for the low output RF power and poor noise performance of the electronics and the high atmospheric absorption. Thus, almost all of the envisaged millimeter-wave systems with a range of more than a few meters rely on some type of beam-steering for achieving directivity and wide-angle coverage. There are significant research and development efforts in both academia and industry to address this requirement by developing low-cost phased array technologies based on IC phase shifters. However, the high noise figure of IC phase shifters can offset the directive gain in smaller arrays. Alternatively, passive quasi-optical beam-forming concepts offer high performance and more efficient beam-steering solutions. In this talk we review passive electronically-steered antenna designs for millimeter-wave band and present our recent work on lens-arrays, integrated lens beam-formers, and frequency scanned leaky-wave antennas. For high end defense and satellite communication applications, we will also present a class of reconfigurable lens-arrays and reflectarrays based on monolithically-integrated MEMS switch technology.

Biography

Dr. Abbaspour-Tamijani received his B.S. and M.S. degrees from The University of Tehran, Tehran, Iran, in 1994 and 1997, respectively, and his Ph.D. degree from The University of Michigan at Ann Arbor, in 2003, all in electrical engineering. From 1996 to 1999, he worked in industry as an Antenna and RF Engineer. In 2004, he was a Research Fellow with the Radiation Laboratory, The University of Michigan at Ann Arbor. He is currently an Assistant Professor of electrical engineering with the School of Electrical, Computer and Energy Engineering, Arizona State University, Tempe. His research focuses on novel device concepts for reconfigurable radio systems including beam-steerable and reconfigurable antennas, ultrawideband tunable filters based on vibrating and non-vibrating RF MEMS technologies, multi-functional millimeter-wave modules, and applications of microwaves in bio-telemetry and neural interfacing. His research is funded by NSF, NIH, DARPA, NASA, and industry.

Date: September 18th, 2009

Location: Memorial Union, Room 246 Coconino Room, Arizona State University, Tempe
Closest visitor parking is the Apache Blvd. parking structure (\$2 per hour)

Time: 4:00-5:00 PM *Presentation*; Pizza will be served following the Seminar

For more information, please call:

Steve Rockwell (Chapter Chair) at (480) 241-9891

Chuck Weitzel (Chapter Publicity) at (480) 292-0531

steve.rockwell@ieee.org

c.weitzel@ieee.org



Power & Energy Society Announcements

September 2009 Technical Meeting

Date: Thursday, September 17, 2009

Location: SPR PERA Club. Map -
<http://ewh.ieee.org/soc/pes/phoenix/images/PERAMAP.pdf>

Speaker: Clark Jones

Topic: Residential Solar Generation from one customer's perspective. See PES website for more information as it becomes available
<http://ewh.ieee.org/soc/pes/phoenix/>

September 2009 52nd Annual IEEE PES Phoenix Chapter Golf Tournament

Date: Saturday, September 26th, 2009

Location: Antelope Hills Golf Club, Prescott

Come join over a hundred other golfers for a great day out on the greens, followed by a banquet dinner with cash and prize giveaways.

For more information, please contact the PES Vice-chair Bruce Ladewig at Ladewig@wapa.gov.

Palo Verde Nuclear Generating Station Tour – Jan. 21, 2010

IEEE PES has tentatively scheduled January 21, 2010 for the Palo Verde Nuclear Generating Station tour. PV tour personnel are able to support a group of 20 due to security and escort limitations. A waiting list of those interested will be started to ensure we take advantage of this opportunity.

Tentative Schedule for Thursday, January 21, 2010:

- 0730 Depart to Palo Verde from Phoenix ~ 60 mile trip
- 0900 Arrive at Palo Verde / Proceed to Energy Information Center (EIC)
- 0915-1015 Presentation and Exhibits (EIC)
- 1015-1030 Security Badging (Badging Facility)
- 1030-1145 Protected Area Tour (Unit 2)
- 1145-1230 Lunch in EIC Conference Room
- 1230-1315 Control Room Simulator (if available)
- 1315-1330 Final Q&A (EIC)
- 1330 Group departs for Phoenix

Visitor Rules for the proposed tour are available for those interested. Please note information is required at least 48 hours before the tour for each person, including APS employees. Without all of the required information, individuals will not be allowed in the Protected Area.

For questions and additional information contact: Rafael Rios, APS, Transmission and Distribution & Engineering Standards at (602) 809-0349 or email Rafael.Rios@aps.com

Be one of the first 20 to respond to ensure a spot on this glowing opportunity.

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](#)".



Computer Society Technical Meetings

October 7, 2009 Advances in Digital Image Processing, Jorge Caviedes, Intel Corp, 6:00-8:30 P.M.

Location: TBA (at Intel)

November 4, 2009 – Computer Animation: Where it's come from, where it headed, and how to do it today , Ryan Anderson, Rainbow Studios (Phoenix, AZ) and Chapter Elections

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 (6-7PM with light meal), presentation at 7PM.

December 2, 2009 – Biological Neural Processing as a Paradigm for Visual Pattern Recognition Dr. Brad Morantz

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 (6-7PM with light meal), presentation at 7PM.

Would you like to be a speaker at a future meeting? We are always looking for interesting speakers to cover computer related topics.

Contact joy.shetler@computer.org OR Jon.Candelaria@motorola.com for more information on becoming a speaker today.

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

Call for Presentations has gone out, <http://ableconf.com/2009/Phoenix/Presentations>

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

List of Events

Moshe Apelas m2a@iname.com, Announcement Coordinator, compiles a list of events of general interest around the Phoenix Metro Area.

Please e-mail him if you have any events that should be included.

Webpage: <http://www.ewh.ieee.org/r6/phoenix/compsociety/news/news.htm>

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/>

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. More details and the award nomination forms coming next month.



Our next meeting will be September 10, 2009, and it will be held at Joe's Crab Shack, 1604 E Southern Ave, Tempe AZ 85282-5633, starting with the Board meeting at 5:30 PM, a networking session at 6:30, and the meal at 7:00, and the program at 8:00. Wives are welcome. The speaker will be Lane Garrett, P.E. The subject will be Renewable Energy.

The May meeting of the IEEE Phoenix Area Consultant's Network has been held at the offices of ETA Engineering, Inc., 4040 E Presidio Drive. Mesa Arizona, on May 14, 2009. The program topic was "Professional Liability (Errors and Omissions) Insurance for Consultants", and was presented by Jeff Gerrick, of Professional Underwriters, Inc. Mr. Gerrick gave a very informative presentation that was much appreciated by the 20 attendees.

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
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Program Chairman	Robert Petro	Robert.petro@systemdatasolutions.com
Member at Large	Lane Garrett, P.E.	lanegarret@aol.com
Member at Large	Ed Bawolek	bawolek@ieee.org
Website		www.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. The remaining meetings and topics for the calendar year are listed below.

September 10	"Renewable Energy"	Lane Garrett, P.E.
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 has been looking for other locations for meeting places. Joe's Crab Shack is one of his first suggestions.

Harvey Alstadter made an excellent suggestion in light of the current recession, (AKA depression). He suggested the PACN check with IEEE USA to see if there is an Employment Assistance Program that has been or can be established for the Phoenix area similar to one that had been formed in the Long Island Section some

10+ years ago after the aerospace bust. This suggestion was forwarded to the Phoenix Section, and was implemented in August with a job hunting workshop for out of work members. Thank you, Harvey.

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 E-mail Alias

with Virus Scanning and UCE Filtering (from the IEEE Benefits Bulletin)

Your_Name@ieee.org

IEEE offers a personal e-mail alias service through which IEEE members can register or instantly update a personal alias of their choice. Messages addressed to the alias@ieee.org will automatically be forwarded to the members real Internet e-mail address at their ISP.

An IEEE Personal E-mail Alias also offers an optional anti-spam feature – the Unsolicited Commercial E-mail (UCE) filter. Choose your own level of filtering sensitivity to have UCE tagged for your review or completely blocked from delivery.

Advantages of a Personal IEEE E-Mail Alias

- If you change your internet service provider and hence your e-mail address, you only have to send one update to IEEE.
- If you change your employer or your location within the company which results in a different e-mail address, you only have to send one update - to IEEE.
- An e-mail address which is independent of your service provider or employer.
- Only one place to make changes to your e-mail address.
- IEEE aliases are usually easier to remember and simpler to use than the real address.
- An e-mail address which associates you with IEEE.

IEEE E-mail Alias is easy to sign up for and easy to update. Register today for your IEEE e-mail alias.

Ed. Note: You have probably noticed many of our members use the IEEE Alias for e-mails concerning IEEE activities. I took advantage of the ease of redirecting my e-mails when between jobs. Changing the referenced address took less than 5 minutes and no notifications to my contacts were necessary.



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

Arizona Region Competition

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: 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 engineer supports the students, but 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.

Approximate commitment: 35 – 45 hours, August-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.

For additional information

Michael Andrews, Coordinator

m.andrews@ieee.org

Darcy McCulloch, Co-Coordinator

fcdarcy1@cox.net

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
Freescale Semiconductor Inc.
c.a.gaw@ieee.org

Amit P. Agrawal,
Chair - ECTC Electronic Components & RF TC
Cisco Systems, Inc.
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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 Executive Committee Meeting

– First Tuesday of the month.

Back to normal monthly meeting schedule

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 September 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