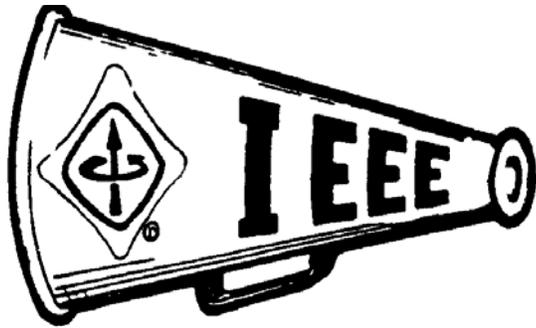


The Valley Megaphone



Newsletter of the
**Institute of Electrical and
Electronics Engineers, Inc.**
Phoenix Section
July 2008, Volume XXII, Number 7

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This Issue of The Valley Megaphone Features:

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

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The Valley Megaphone is the newsletter of the Phoenix Section of the Institute of Electrical and Electronics Engineers. It is published monthly and reaches about 4000 members. Submit articles, advertisements, and announcements to Eric Palmer at the above email address. Deadline for announcements and advertisements is the third Friday of the month prior to publication. Advertising Rates: Full page: \$200, 3/4page: \$125, 1/2 page: \$75, 1/3 page: \$50, 1/4 page: \$25. Change of address/email? Call toll free 1-800-678-IEEE. Please allow 6-8 weeks. Section Web Page is: <http://www.ieee.org/phoenix>

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Embry-Riddle, Prescott

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Phoenix Section Executive Committee Meeting – First Tuesday of the month.

Time: 6:00 pm to 8:00 pm

Place: Phoenix Airport Hilton, 2435 South 47th Street
Phoenix, AZ, 85034 Tel.: 480-804-6017

Directions: From the Hohokam Expressway (AZ 143), exit University Ave, go West, turn right on 47th Place.

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

Contact: Keith Holbert, Phoenix Section Chairman, holbert@asu.edu

No meetings in July and August.

Life Members Chapter in Phoenix Section

A petition to form Life Members Chapter in Phoenix section has been submitted and approved by the Section executive Committee and Region 6 Director Loretta Arellano. As of last month there are 435 Life Members in IEEE Phoenix Section. Life Members have long IEEE experience and can contribute significantly to the Section. Life Members Chapter like GOLD Members Chapter, and Consultants Network is an affinity group recognized and supported by the IEEE. If any Life Member is interested in becoming Chapter Executive Committee Chair, Vice Chair, Secretary, Treasurer or Program Committee Chair, please contact Rao Thallam: Phone (602) 236-8064, Cell: (602) 818-0549, e-mail: thallam@ieee.org

Call for IEEE Fellow Nominations

Nominations are being accepted for the IEEE Fellows class of 2010. The rank of IEEE Fellow is the institute's highest member grade, bestowed on an IEEE Senior Member who has had an extraordinary record of accomplishments in any of the IEEE fields of interest. The deadline for nominations is 1 March 2009. Senior Members can be nominated in one of four categories: application engineer/practitioner, research engineer/scientist, educator, or technical leader.

The Fellows Web pages contain information regarding the history of the IEEE Fellows program, the nomination process, access to the Fellows Nomination Kit, lists of Fellows who are eligible to be references and more about the Fellow program. Please visit the Fellows website at <http://www.ieee.org/fellows>.

Power Engineering Society Announcements

May's technical presentation was on *Transformer Dissolved Gas Analysis and Transformer Oil Analysis and Notification (TOAN)* by Don Lamontagne, T&D Reliability Analysis and Management Section Leader from Arizona Public Service (APS). TOAN allows APS to automatically monitor transformer oil data, receive notification of abnormalities nearly in real time and take necessary preventive actions. The net result is that catastrophic transformer fires may one day be a thing of the past — not only for APS, but for the entire electric industry. APS has filed two patents and received inquiries from other electric utilities about TOAN.

On Monday, June 16 it was announced the TOAN project had been awarded the Edison Electric Institute's (EEI) 2008 Edison Award. The Edison Award honors U.S. and international electric companies for outstanding contributions to the advancement of the power industry. The announcement was made at the EEI's annual conference in Toronto. The Edison Award, in its 81st year, usually acknowledges one U.S. and one international electric utility. This award was the subject of an article in The Arizona Republic: <http://www.azcentral.com/arizonarepublic/business/articles/0615biz-apsaward0616.html>.

Through TOAN, APS monitors transformer oil samples — which indicate the health of a transformer — every four hours. Through the use of artificial intelligence, TOAN is able to notify maintenance personnel of transformer problems by recognizing patterns of dissolved gases in the transformer's insulating oil, similar to a doctor recognizing patterns in a human's blood test.

In the past, APS — and other electric utilities — would have to travel to the locations of transformers to retrieve oil samples, then wait several days for the results before recognizing a problem may exist. Now, the monitoring is performed remotely, saving precious time and the costs associated with employee trips to substation locations, many in remote areas of the state.



Pictured, Don Lamontagne (left), TOAN project leader, and Section Leader, Transmission and Distribution (T&D) Reliability Analysis and Management, and Don Brandt (right), PNW President/COO and APS President/CEO with the 2008 Edison Award

Power Engineering Society Announcements

The PES Phoenix Chapter is currently on its summer hiatus for technical meetings. The next scheduled meeting is September 18 at APS's Deer Valley Facility located at 21st Avenue and Cheryl Drive. Please visit the Chapter's web site at <http://ewh.ieee.org/soc/pes/phoenix/> for additional information.

Date: **Thursday, September 18, 2008**

Speaker: **Bob Smith,**
T&D Maintenance Director, Arizona Public Service Company

Topic: TransWest Express Project

Abstract: In October of 2005, APS announced that it was undertaking a feasibility analysis for a new transmission project from Wyoming to the Desert Southwest, the TransWest Express Project, which would allow APS and other utilities in the Desert Southwest and Southern California to access coal, wind and other resources in Wyoming.

APS conducted the feasibility analysis in an open stakeholder process during 2006. The analysis showed that a bi-pole 500kV DC transmission system capable of 3000MW was the most economic and technically feasible option. The analysis also showed that there were a number of viable routing alternatives from a permitting standpoint. Because APS was only looking at the potential of 1000MW to 1500MW of resources from Wyoming, an effort was also undertaken to sign up partners including a project manager. Interest in the project was expressed by SRP, TEP, SCE, National Grid, as well as several independent entities interested in managing the project.

In early 2007 PacifiCorp announced plans for an AC transmission system from Wyoming to Southern Nevada, the Gateway South Project. In August 2007, APS, PacifiCorp, National Grid, and the Wyoming Infrastructure executed a Co-development Agreement to allow co-development of the two projects. Significant progress has been made in the areas of permitting and WECC Regional Planning and Rating Process.

Biography: Bob Smith is presently the Director of the Transmission and Distribution Maintenance Department at Arizona Public Service Co. in Phoenix. Bob has a Master's degree in Electrical Engineering from New Mexico State University and is a registered professional engineer in the State of Arizona. Bob has worked in the electric industry and for APS for 22 years in the areas of Transmission Planning, Construction and Maintenance, and Transmission and Control Area Operations. Bob has represented APS in several regional planning forums and has been extensively involved in WECC activities including two years chairing the WECC Compliance Monitoring and Operating Practices Subcommittee. In October of 2005 Bob was designated Project Manager of APS' TransWest Express Project.

51st Annual IEEE PES Golf Outing

The date of the PES's annual golf outing - September 27 - is rapidly approaching. Make your reservations soon using the form on the next page. Everyone is welcome to participate - regardless of skill level or whether an IEEE member. Come join us for an enjoyable day in the coolness of Prescott, AZ.

51st Annual IEEE-PES Golf Outing

- Date:** September 27, 2008
- Time:** 1:00 pm
- Place:** Antelope Hills Golf Course
One Perkins Drive
Prescott, AZ 86301
- Fee per Player:** \$85.00 - Includes Greens Fees,
Golf, Range Balls and Dinner
- Prizes:** Prizes for top three teams plus
individual skills will be awarded.
A raffle will be held.
- Prizes:** Will be held at the course at 7:00 pm
and is included in the fee. To bring a
guest for dinner, add \$25.00.
No host bar opens at 6:00 pm.
- Reservations:** Mail form with check payable to:
IEEE-PES
c/o Arizona Sun Sales
120 N. 44th St. #420
Phoenix, AZ, 85034

51st Annual IEEE-PES Golf Outing
Reservation Form

Please include all requested information. Also, include email addresses for team members not in our original mailing.

TEAM (please print)

Player _____ Hdcp or Avg Score _____

Email _____

Player _____ Hdcp or Avg Score _____

Email _____

Player _____ Hdcp or Avg Score _____

Email _____

Player _____ Hdcp or Avg Score _____

Email _____

Additional Dinner Guest: _____



Phoenix Chapter of the IEEE Computer Society

For the latest news, please visit our web site:
<http://www.ewh.ieee.org/r6/phoenix/compsociety>

We are on our summer "hiatus"! No meetings until October.

Upcoming Meetings

June to September – Summer Hiatus, No Meetings

Wednesday, October 1, 2008

"I-19 Wireless Corridor Project," by Galen Updike, Arizona Broadband Telecommunications

Wednesday, November 5, 2008

TBD

Wednesday, December 3, 2008

TBD

Would you like to be a speaker at a future meeting? We are always looking for interesting speakers to cover computer related topics. Contact C.Vasquez-Carrera@computer.org for more information on becoming a speaker today.

For more information about Past Meetings, see
<http://www.ewh.ieee.org/r6/phoenix/compsociety>

LinkedIn Update

The Phoenix Chapter of the Computer Society has formed a group on LinkedIn. If you are interested in joining the group, please send an email to Louis Rayes or Joy Shetler (email addresses are listed on the Computer Society website). For more information about LinkedIn, please check out the description on Wikipedia:

<http://en.wikipedia.org/wiki/LinkedIn> or the LinkedIn Website.

IEEE Mentoring Connection

IEEE is offering its members the opportunity to participate in an online program which will facilitate the matching of IEEE members for the purpose of establishing a mentoring partnership. By volunteering as a mentor, individuals use their career and life experiences to help other IEEE members in their professional development. I believe this program can be a great tool to provide our newest members of our profession guidance in their careers and provide experienced members a chance to hear first hand from the newly graduated about the latest training the next generation is receiving. This is a program for higher level members and is provided to help ease the transition out of school and into a career.

As a mentee, you lead your partnership by selecting your mentoring partner from among those who have volunteered to serve in this capacity. I ask that you review the time and effort commitment to the program to ensure a successful mentoring partnership. Participation in the program is voluntary and open to all IEEE members above the grade of Student Member.

If you are interested, please go to <http://www.ieee.org/mentoring> for information on the roles and responsibilities of each mentoring partner. I encourage you to take advantage of the IEEE network of technical professionals or offer your expertise and sign up for the online mentoring program today.

Who can be an IEEE Mentor?

IEEE higher-grade members (above Student Member grade) who are, but not limited to:

- Willing to give time and effort to the mentoring partnership (we suggest minimum of two hours per month)
- Able to communicate effectively with others
- Willing to share some career successes and failures
- Individuals who may be or have been executives, consultants, or in middle or upper management, or in research
- Individuals who may be or have been educators, entrepreneurs, or self-employed
- Individuals who may be or have been proven leaders offering inspiration and insight
- Individuals who may be or have been IEEE officers or volunteers
- Willing to review an orientation session to learn guidelines, tools of program and the mentee and mentor's role and responsibilities

Who can be an IEEE Mentee?

IEEE higher-grade members (above Student Member grade) who are, but not limited to:

- New professionals in their first or second job, or considering entering graduate programs
- Recent graduates entering the professional workforce for the first time
- Professional making a career move or career change
- Passionate for learning
- Willing to give time and effort to the mentoring partnership (we suggest minimum of two hours per month)
- Willing to identify and clarify their developmental goals
- Interested in learning from another professional "who has been there"
- Willing to participate in mentee orientation session to learn guidelines, and tools of program and their role and responsibilities as a mentee

This program deserves your consideration and doesn't require a large amount of time on your part. It can provide of great assistance to the next generation of engineers.

Russ Kinner
Membership Chair, Phoenix Section

RE-SEED

Retirees Enhancing Science Education through Experiments & Demonstrations

Overview

RE-SEED (Retirees Enhancing Science Education through Experiments and Demonstrations) is a Northeastern University program that prepares engineers, scientists, and other individuals with science backgrounds to work as volunteers, providing in-classroom support to upper elementary and middle school science teachers with teaching the physical sciences.

After completing a comprehensive free training program, participants volunteer in middle school classrooms on the average once a week for at least one year. RE-SEED began in 1991 with six volunteers. To date close to 500 RE-SEED volunteers have worked in schools in about 100 communities throughout the country offering about 500,000 hours of their time.

Nationally, 75 percent of 7th and 8th grade students are taught physical science by teachers who do not have a major or a minor in the subject (The National Science Board, Science and Engineering Indicators 2000). RE-SEED volunteers possess talent and expertise that complement those of science teachers. They bring with them a wealth of knowledge and experience that allows them to make science interesting and relevant to everyday situations.

RE-SEED volunteers work closely with the host science teachers to help them enrich and implement their school curriculum. Overall the volunteers become involved members of their schools' and even their districts' teaching team, sometimes taking part in curriculum adoption decisions.

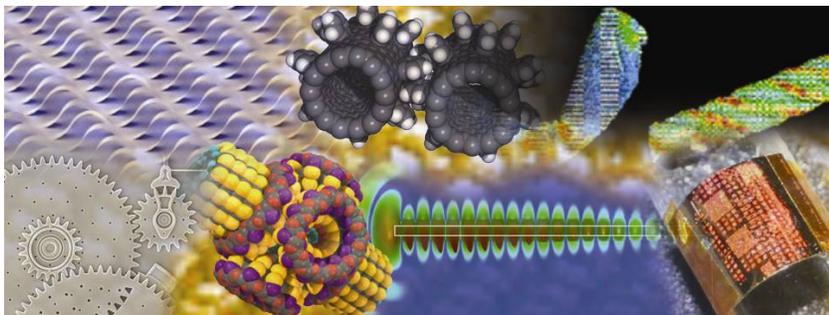
Please contact us by email at reseed@neu.edu or phone 888-742-2424; Shelia Kirsch at Sheila.Kirsch@asu.edu and / or Deirdre Weedon, d.weedon@neu.edu. if you are interested in learning more about these training programs.



Institute of Electrical and Electronics Engineers, Inc.

Phoenix Section
Components, Packaging and
Manufacturing Technology
Society Chapter
&
Waves and Devices Chapter

PRESENT AN ALL-DAY
WORKSHOP ON



Images courtesy of Argonne National Laboratory, NASA Ames Center for Nanotechnology, Stanford University, Sandia National Laboratories (SUMMIT™ Technologies) and Nanorex, Inc.

Emerging Device and Packaging Technologies

Friday, November 14th, 2008 7:00 A.M. – 5:00 P.M.

Arizona State University, Tempe, Arizona – ASU Memorial Union (Arizona Room)

EXECUTIVE COMMITTEE

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 Kalluri Sarma, Honeywell
 Sudhama Shastri, CMD
 Sandeep Tonapi, Anveshak

Call for Papers

The continued scaling of microelectronics for mainstream applications such as computing and communications on one hand has been enabled by newly developed materials, tools, and techniques; on the other hand the associated capabilities are spawning novel applications and market opportunities. This year's one-day workshop focuses on the topics of nanotechnology, bioelectronics, and energy. Invited experts from industry, academia, research labs, and consortia will share their vision of technical challenges and opportunities in these areas. Current and emerging device, interconnect, and packaging technologies will be discussed in depth. A poster session on the broader workshop topic of emerging device and packaging technologies has been added this year to provide additional presentation and discussion opportunities. Select vendors will exhibit products and services related to all aspects of the supply chain for microelectronics design and manufacturing.

Invited Speaker Topics

Nanotechnology

- Nanofabrication
- Nanoelectromechanical Systems
- Nanofluidic Devices

Bioelectronics

- Biochips
- Biosensing
- Biosecurity

Energy

- Solar Cells
- Energy Harvesting
- Micro Power Generators

Poster Session

Abstracts are invited for consideration to the poster session in emerging device and packaging technologies (not limited to nanotechnology, bioelectronics, or energy).

Poster Abstract Submissions: Two pages (topic, summary of significant results and conclusions – WORD or PDF files only). Abstract must include author names, affiliations, addresses, and e-mail address of lead author.

Submission Deadline: August 29, 2008
 Submitting Address: melmiller@ieee.org
 Acceptance Notification: September 19, 2008
 Final Presentation Due: November 5, 2008

Sponsorships and Vendor Displays: This is a great opportunity to promote your company or product. For more information, contact Vasu Atluri vpatluri@ieee.org or Chuck Weitzel c.weitzel@ieee.org (sponsors) and Steve Rockwell steve.rockwell@ieee.org (vendors).

Workshop Registration: On-line registration will open in August at www.acteva.com/go/ieeephxsecworkshop2008

IEEE ANNOUNCEMENTS

Upcoming IEEE Conferences in Arizona:

Conference:	2008 IEEE Nuclear & Space Radiation Effects Conference (NSREC 2008)
Conference Dates:	14 Jul - 18 Jul 2008
Location:	JW Marriott Starr Pass Resort & Spa, Tucson, AZ, USA
Conference Web Site:	http://www.nsrec.com

Conference:	2008 IEEE Radiation Effects Data Workshop (in conjunction with NSREC 2008)
Conference Dates:	14 Jul - 18 Jul 2008
Location:	JW Marriott Starr Pass Resort & Spa, Tucson, AZ, USA
Conference Web Site:	http://www.nsrec.com/call.htm
Conference Scope:	The Radiation Effects Data Workshop is a forum for papers on radiation effects data on electronic devices and systems. Workshop papers are intended to provide radiation response data to scientists and engineers who use electronic devices in a radiation environment, and for designers of radiation-hardened systems.

Conference:	2008 30th Electrical Overstress/ Electrostatic Discharge Symposium (EOS/ESD)
Conference Dates:	07 Sep - 11 Sep 2008
Location:	Westin La Paloma, Tucson, AZ, USA
Conference Web Site:	http://www.esda.org
Conference Scope:	The Symposium is devoted to the understanding of issues related to electrical transients and electrical overstress, and the application of this knowledge to the solution of problems in consumer, industrial and military applications, including componets and manufacturing.

Conference:	2008 2nd IEEE RAS & EMBS International Conference on Biomedical Robotics and Biomechatronics (BioRob 2008)
Conference Dates:	19 Oct - 22 Oct 2008
Location:	FireSky Resort, Scottsdale, AZ, USA
Conference Web Site:	http://www.ieee-biorob.org/
Conference Scope:	The main focus of Biorobotics is to analyze biological systems from a "biomechatronic" point of view, trying to understand the scientific and engineering principles underlying their extraordinary performance. This profound understanding of how biological systems work, behave and interact can be used for two main objectives: to guide the design and fabrication of novel, high performance bio-inspired machines and systems, for many different potential applications.