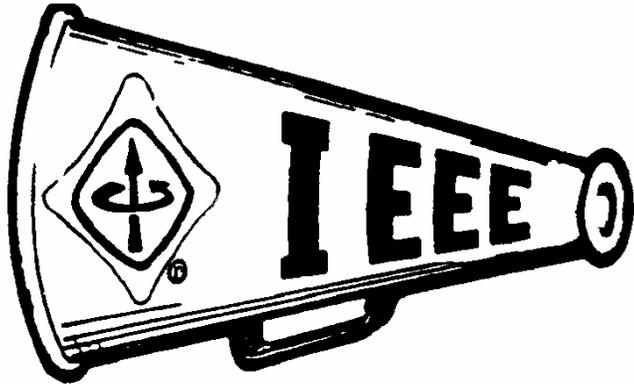


# The Valley Megaphone



Newsletter of the  
**Institute of Electrical and  
Electronics Engineers, Inc.**  
**Phoenix Section**  
May 2008, Volume XXII, Number 5

## Executive Committee

### Past Chair

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### Conferences

Russ Kinner, 602-997-2353  
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### Awards

Vasudeva P. Atluri, 480-554-0360  
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### Inter-Society

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### Web Master

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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>

Please send announcements for Valley Megaphone to Eric Palmer: [ecpalmer@ieee.org](mailto:ecpalmer@ieee.org).

## Chapters

### Communication & Signal Processing

Gang Qian  
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### Computer Society

Joy Shetler  
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### Consultants Network (PACN)

Vaughn L. Treude, 602-750-3662  
[vaughn@nakota-software.com](mailto:vaughn@nakota-software.com)

### CPMT Society

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### Education Chapter

Martin Reisslein, 480-965-8593  
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### EMBS Chapter

Ahmed Abdelkhalik  
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### EMC Society

Harry Gaul, 480-441-5321  
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### GOLD

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### Power Engineering Society

Barbara McMinn  
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### Solid State Circuits

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### Teacher-in-service

Mike Poggie  
[Mike.Poggie@ieee.org](mailto:Mike.Poggie@ieee.org)

### Waves & Devices Society

Chuck Weitzel, 480-413-5906  
[Chuck.weitzel@freescale.com](mailto:Chuck.weitzel@freescale.com)

### Life Members

Rao Thallam  
[thallam@ieee.org](mailto:thallam@ieee.org)

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>

## IEEE ANNOUNCEMENTS

<p><b>Student Branches</b></p> <p><b>ASU Main, Engineering</b> Chair: James Stape <a href="mailto:ieeasuchair@gmail.com">ieeasuchair@gmail.com</a> Advisor: Cihan Tepedelenlioglu, (480) 965-6623, <a href="mailto:Cihan@asu.edu">Cihan@asu.edu</a></p> <p><b>ASU Main, Computer Society</b> Chair: Luis Tari <a href="mailto:luis.tari@asu.edu">luis.tari@asu.edu</a> Advisor: Joseph Urban, 480-965-3374, <a href="mailto:joseph.urban@asu.edu">joseph.urban@asu.edu</a></p> <p><b>ASU Polytechnic</b> Chair: James (Bon) Brannan <a href="mailto:jbrannan@asu.edu">jbrannan@asu.edu</a> Advisor: Barbara Rempel <a href="mailto:Barbara.Rempel@asu.edu">Barbara.Rempel@asu.edu</a></p> <p><b>DeVry, Phoenix</b> Chair: Mason Surerus <a href="mailto:MSurerus@ieee.org">MSurerus@ieee.org</a></p> <p><b>DeVry, Computer Society</b></p> <p><b>NAU, Engineering</b> Chair: Kenji R. Yamamoto <a href="mailto:Kry3@nau.edu">Kry3@nau.edu</a> Advisor: Niranjana Venkatraman <a href="mailto:v.niranjana@ieee.org">v.niranjana@ieee.org</a></p> <p><b>Embry-Riddle, Prescott</b> Chair: Maria Nzmebi Ngomba <a href="mailto:ngomb7db@erau.edu">ngomb7db@erau.edu</a> Advisor: John E. Post <a href="mailto:postj@erau.edu">postj@erau.edu</a></p>	<p><b>Phoenix Section Executive Committee Meeting – First Tuesday of the month.</b></p> <p><b>Time:</b> 6:00 pm to 8:00 pm</p> <p><b>Place:</b> Phoenix Airport Hilton, 2435 South 47th Street Phoenix, AZ, 85034 Phone: 480-804-6017</p> <p><b>Directions:</b> From 143, exit University Ave, go west, turn right on 47<sup>th</sup> street.</p> <p><b>More Info:</b> Meetings held first Tuesday of month. No meetings in July and August. All interested IEEE members are welcome to attend.</p> <p><b>Contact:</b> Keith Holbert, Phoenix Section Chairman, <a href="mailto:holbert@asu.edu">holbert@asu.edu</a></p>
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### 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](mailto:thallam@ieee.org)

### NSF Scholarships in Electrical & Computer Engineering at Embry-Riddle Aeronautical Univ., Prescott, AZ

Embry-Riddle Aeronautical University is offering individual student scholarships funded through a grant provided by the National Science Foundation of up to \$10,000 per academic year (up to four years with qualifying criteria) to academically talented and financially challenged students accepted into either the Electrical Engineering or Computer Engineering degree programs offered at the Prescott, Arizona Campus. These scholarships are provided to assist students in paying Embry-Riddle costs of attendance. Scholarship recipients also receive a minimum assurance of \$5,000 per year in other scholarships and grants funded by Embry-Riddle. These scholarship amounts are in addition to assistance for which the student qualifies from other federal and state programs. For complete information visit <http://www.erau.edu/pr/news/1007nsf.html> or contact Ed Post at [john.post@erau.edu](mailto:john.post@erau.edu).

For more information visit <http://www.erau.edu/pr/news/1007nsf.html> or email [john.post@erau.edu](mailto:john.post@erau.edu)

## **Marty Halperin** **Senior Professor**



### *In Memoriam*

Marty was a long time IEEE Phoenix Section volunteer.

From Jim Dugan, DeVry University:

"We have lost another of our former great faculty members from our electronics program, Senior Professor Marty Halperin. Marty succumbed at the age of 65 on Friday, April 18 after a valiant battle with cancer.

Marty served DeVry/Phoenix and its students for 25 years, beginning in 1970 and departing in the summer of 2005 under an early separation program. He had an engaging style that so many thousands of students appreciated and benefited from over the years. Marty was truly devoted to doing a great job in the classroom, always willing to go the extra mile in preparing his lab and lecture material. In all of Marty's time at DeVry I cannot remember a single student who ever came to my office and complained of Marty's teaching, but I certainly remember the many times students offered their complimentary remarks.

We will miss him, and offer our thoughts and prayers for his wife Diana and two children Tiffany and Carl. In lieu of flowers the family requests contributions in Marty's name be made to City of Hope, 7900 E. Greenway Road, Suite 207, Scottsdale, Arizona, 85260."

Graveside services were held on Tuesday, April 22 at Beth El Cemetery, 2300 W. Van Buren Street, Phoenix, Arizona.

## Publicity Chair Needed

The IEEE Phoenix Section needs a member to fill the critical position of Publicity Chair. This person is a voting member of the Executive Committee. The duties of the Publicity Chair include the following:

- Publishing The Valley Megaphone, a monthly newsletter
- Relaying information on conferences, technical meetings, and other events that are of interest to all or part of the IEEE Phoenix Section members
- Working with the Web Master to provide content for the Phoenix Section Webpage

If you are interested in this position, then please contact Keith Holbert, Chair, IEEE Phoenix Section, (480) 965-8594, [holbert@asu.edu](mailto:holbert@asu.edu) .

## IEEE ANNOUNCEMENTS



### Phoenix Chapter of the IEEE Computer Society

For the latest news, please visit our web site:

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

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### May meeting

**Presentation: Intel Mobile Platform Hospital IT Enabling Research**  
**Speaker: Highland Mary Mountain, Intel Corp.**

**Date: 6:00 P.M., Wednesday, May 7, 2008**

**Location: DeVry University,**

**2149 West Dunlap Ave, Phoenix, AZ 85021 (1 mile east of I-17 on Dunlap, SE corner of 22<sup>nd</sup> Ave and Dunlap). Networking will be in the Courtyard (6-7PM with light meal), presentation at 7PM.**

**Free, everyone is welcome. Please tell others about this meeting.**

**For more information about this meeting, contact [joy.shetler@computer.org](mailto:joy.shetler@computer.org)**

#### **Description:**

This presentation focuses on a platform developed by Intel to aid hospitals and specifically the mechanism developed for the patient identification process (for purposes such as medication administration, blood administration, sample identification, treatment, meal service and patient billing). Background information on the challenges faced in the hospital environment will be described. The novel aspects of the Intel platform as well as the software developed to overcome these challenges will be discussed.

#### **Speaker Biography:**

Highland is the Digital Health Enabling (DHe)'s Software Engineering Research Lead. Her work has focused on RFID reader API development, mobile platforms and Real Time Location Systems (RTLS) for Mobile Point of Care usage models. She proposed a "Reader" class hierarchy encompassing the higher level notion of reader (including Barcode reader and RFID reader) along with lower level RFID tag protocol classes, including an ISO 18000-6C RFID Reader Class API (C1G2) definition. The RFID Reader API which resulted from this was released in 2007 via Intel's Open Source Mobile Platform SDK 1.2 release. The development platform was MS Windows XP, VS2003, VS2005, C# and C++ using SkyeTek HF RFID Reader development modules. She also led a cross organizational team (including SSG application enabling, Digital Health marketing/strategic planning and product engineering) to create the Mobile Clinicians Assistant (MCA) next generation software roadmap. She has patent applications pending for her work.

Early in her career at Intel, she was the Senior Software Engineering lead for the device management architecture within NBI's RFID Operations. She enjoyed leading the device management feature set development, integrating various software modules into a comprehensive architecture, presenting her work to external customers and implementing customer product suggestions.

Prior to joining Intel, Highland also worked at Xerox Corporation's Office Products Division. This organization designed and implemented Network Controller components embedded in Multifunction Printing Devices. Her responsibilities included the design and specification of new device features utilizing network protocols such as TCP/IP, SNMP, HTTP and SMTP. Interfaces to the network, management software, printer engine, user interface and scanner were defined for each feature component.

## IEEE ANNOUNCEMENTS

Programming tasks were in a Solaris/Unix environment. Her work resulted in 2 US Patents for device management via distributed systems.

Highland obtained her MS in Computer Science from Rochester Institute of Technology and her BA in Mathematics with a Computer Science Minor from the SUNY College at Geneseo, graduating Summa Cum Laude.

Additional professional background information may be found at: [www.linkedin.com/in/highlandmary](http://www.linkedin.com/in/highlandmary)

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### 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](mailto: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>

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#### 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 ANNOUNCEMENTS

### **PES Announcements**

#### **May Technical Meeting**

*Date:* Thursday, May 15, 2008

*Time:* 11:30am – 12:00noon: Registration  
12:00noon: Lunch served  
12:30pm: Program begins

*Location:* APS Deer Valley Building N-1, Conference Room E  
<http://ewh.ieee.org/soc/pes/phoenix/images/APS-DV-map.pdf>  
2124 W. Cheryl Drive; Phoenix, AZ  
(report to Security at the northwest corner of 21<sup>st</sup> Avenue and Cheryl Drive)

*Speakers:* Donald Lamontagne, T&D Reliability Section Leader, Arizona Public Service Company

*Topic:* Transformer Dissolved Gas Analysis and Transformer Oil Analysis and Notification

*Cost:* Lunch \$5.00 (Students Free)  
Program only Free

*Reservations:* Contact Michelle at 602-437-0469 or submit your reservation on the Chapter website at <http://ewh.ieee.org/soc/pes/phoenix/>. **Reservation deadline is Monday, May 12, 2008.**

If you are not currently receiving email notices of PES Phoenix meetings, please email a request to [Michelle@arizonasunsales.com](mailto:Michelle@arizonasunsales.com) to have your email address added to the distribution list.

*Abstract:* Not yet available. Check out website <http://ewh.ieee.org/soc/pes/phoenix/lunch0805.php> for updates.

*Biography:* Not yet available. Check out website <http://ewh.ieee.org/soc/pes/phoenix/lunch0805.php> for updates.

#### **September Golf Tournament**

The PES Phoenix Chapter's 51<sup>st</sup> annual golf tournament is scheduled for Saturday, September 27 at the Antelope Hills Golf Club (<http://www.cityofprescott.net/services/golf/>) in Prescott, AZ. Further details will be available soon but reserve the date now!

## IEEE ANNOUNCEMENTS

### *The Challenge of Choice – IEEE S-PAC Polytechnic Campus*

The IEEE Student Chapter on the ASU Polytechnic Campus held a Student Professional Awareness Conference (S-PAC) on April 18 entitled “The Challenge of Choice”, on the topics of Technology Policy and Ethics. There were about 25 student attendees as well as representatives from: IEEE Gold, IEEE PES/APS, Microchip, International Rectifier, Newtec, and ASU Engineering.

Five teams competed in an Ethics Competition in the morning of the event, wherein the students examined the ethical implications of an accident in the handling and moving of a missile by military personnel. Students had two and a half hours to read and interpret the case study, frame the ethical questions surrounding the incident, and give their analysis with a Power Point presentation. The five judges indicated that the results of the five teams were close. They all did a great job. The students remarked that it was a great experience and that they were happy to have participated.

The featured speakers were: Joseph Herkert, ASU Lincoln Professor of Ethics, Deborah Rudolph, Technology Policy Manager for IEEE National, and Lewis Alton and Pamela Kacir, of AZure Sky, a non-profit organization that promotes alternative energy efforts in the state of Arizona. The students really enjoyed the speakers’ insights and it certainly raised their awareness about local and national level opportunities for involvement within the area of Technology Policy. Dr. James Subach, Dr. Slobodan Petrovic and Dr. Narciso Macia also gave very short talks describing various Electronic Systems Department projects and initiatives, primarily for the corporate participants.

Sponsors of this event were: ASASUP, IEEE Phoenix Section, Microchip, AMKOR, International Rectifier, and IEEE National. Thanks to the many sponsors and participants who helped to make our event a success!

Barbara Rempel

## Phoenix Area Consultants Network Annual Picnic

In May, the PACN will hold its annual picnic in lieu of our usual Thursday-night meeting. This is a social get-together and non-members are welcome to come for fun and informal networking.

**Date:** Saturday, May 10, 2008

**Time:** Picnic starts around 2 PM  
Food served around 4 PM

**Place:** Lane Garret residence  
8502 E Cactus Wren Rd  
Scottsdale, Arizona 85250

**Food:** We will provide burgers and hot dogs, sodas, plates, utensils, etc. Please bring one pot-luck dish such as a casserole, salad, or dessert.

Please RSVP to [vaughn@nakota-software.com](mailto:vaughn@nakota-software.com)

**Directions:** From east loop 101, take the Indian Bend Road exit and head west. Turn left (south) at 86th street, then right (west) on Cactus Wren Road. Lane's home is on the NE corner of 85th and Cactus Wren.

From Scottsdale Road, turn East on Indian Bend Rd. Cross over Hayden Rd., continue east on Indian Bend Rd. and turn south on 84th St. which dead-ends into Cactus Wren. Go left on Cactus Wren one block.

**May Meeting  
Announcement for the  
Phoenix Chapter of the  
IEEE EMC Society**



**Date:** Wednesday, May 21st, 2008

**Place:** NTS Tempe

**Address:** 1155 West 23rd St. Suite 11-A, Tempe, Arizona

**Time:** 5:30PM Social, 6PM Buffet Dinner, 7PM Presentation and Tour

**Title:** An Update on MIL-STD-461F and Tour of NTS EMC/Environmental Lab

**Speaker:** James Press, EMC National Director, NTS

**Abstract:** The presentation will provide an overview of MIL-STD-461E/F and the major difference of the two standards. All tests methods will be discussed and the audience will be able to ask questions which may focus the talk on what is of interest to the group. A tour of the NTS EMC and environmental test facility will be arranged and demonstrations will be set up based on time available.

**About the Speaker:** Mr. Press has been working in the EMC field for over 22 years. In his present position as Director of National EMC Operations for National Technical Systems, he is involved in commercial, military, nuclear and telecommunications EMC design and test. National Technical Systems consist of environmental laboratories worldwide with 7 containing EMC capabilities. Mr. Press is responsible for all EMC technical issues and development nationwide. Mr. Press has been on the MIL-STD-461D/E, TR-102323, SAE AE-2, DO0160F/G, Defense Industry Steering Committee (DIESC) and AREMA EMC Committees. Mr. Press holds a BA from Temple University and a MS from Iowa State University, both in Physics. He has published over 20 articles and a handbook on EMC test and design. Mr. Press is NARTE certified EMC Engineer.

**RESERVATIONS:** To help us get an accurate headcount, please send an email to Harry Gaul ([harry.gaul@ieee.com](mailto:harry.gaul@ieee.com)). There is no charge for meetings and if you decide at the last minute, please come anyway. You don't need to be an IEEE or EMC Society member to attend -- all are welcome.



**GENSIPS'2008**



**IEEE International Workshop on Genomic Signal Processing and Statistics**

Phoenix, Arizona

**June 8–10, 2008**

<http://gsplab.tamu.edu/gensips2008>

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Recent advances in genomic studies have stimulated synergistic research in many cross-disciplinary areas. Genomic data, especially the recent large-scale microarray gene expression data, present enormous challenges for signal processing and statistics, which has led to the development of the new field of Genomic Signal Processing (GSP). This workshop is the sixth in a series of international scientific meetings devoted to the area of GSP and its applications in biology and medicine. The workshop addresses the emerging need for demonstrating to the signal processing community the potential for using signal-processing and statistical tools to uncover complex biological phenomena. The scientific program will include invited talks, tutorials, contributed papers and poster presentations. Participants will have the opportunity to be exposed to the most recent developments in the field and meet colleagues from all around the world.

**AREAS OF INTEREST**

Topics of interest to the conference include, but are not limited to:

- Signal processing and statistical approaches for functional genomics problems
- Statistical inference of biological networks from experimental data
- Pattern recognition methods for functional genomics
- Control theory and systems theory techniques for systems biology
- Models for cellular metabolism and intercellular signaling
- Modeling and simulation of biological regulatory networks
- Novel architectures and implementation methods for large-scale functional genomics
- High-throughput hardware and software approaches to genome-scale network modeling
- Integration of heterogeneous data
- Microarray image and data analysis
- Signal processing methods in sequence analysis
- Computational methods for modeling and simulation of biological regulatory networks

**VENUE**

GENSIPS'2008 will be held at the Embassy Suites Biltmore, in Phoenix, Arizona, which is located in the Biltmore area of Phoenix, home of fine dining, shopping, and other attractions, all within walking distance of the hotel.

## IEEE ANNOUNCEMENTS

### ORGANIZING COMMITTEE

General Chair: **Aniruddha Datta**, Texas A&M University, College Station  
Technical Program Chairs: **Paola Sebastiani**, Boston University  
**Gustavo Stolovitzky**, IBM T.J. Watson Center  
**Ciprian Doru Giurcaneanu**, Tampere University of Technology  
Tutorial Chair: **Ilya Shmulevich**, Institute of Systems Biology  
Plenary Speaker Chair: **Ioan Tabus**, Tampere University of Technology  
Special Session Chair: **Tewfik Ahmed**, University of Minnesota  
Finance Chair: **Ranadip Pal**, Texas Tech University  
Publication Chair: **Yufei Huang**, University of Texas at San Antonio  
Local Arrangement and Registration: **Jianping Hua**, Translational Genomics Research Institute  
Publicity Chairs: **Ulisses Braga-Neto**, Texas A&M University  
**Seungchan Kim**, Translational Genomics Research Institute and Arizona State University

### PROGRAM COMMITTEE

**Tatsuya Akutsu**, Kyoto University  
**Gil Alterovitz**, Massachusetts Institute of Technology  
**Junior Barrera**, University of São Paulo  
**Michael Bittner**, Translational Genomics Research Institute  
**Xiaodong Cai**, University of Miami  
**Yidong Chen**, National Cancer Institute, NCI/NIH  
**Paul Dan Cristea**, University of Bucharest, Romania  
**Nevenka Dimitrova**, Philips Research  
**Simon Godsill**, University of Cambridge, UK  
**John Goutsias**, The Johns Hopkins University  
**Arjang Hassibi**, University of Texas at Austin  
**Robert S. H. Istepanian**, Kingston University, UK  
**Ivan Ivanov**, Texas A&M University  
**Stephen Marshall**, University of Strathclyde, UK  
**Lijun Qian**, Prairie View A&M University  
**Gail Rosen**, Drexel University  
**Dan Schonfeld**, University of Chicago  
**Chao Sima**, Translational Genomics Research Institute  
**Anne Stomp**, North Carolina State University  
**Qi Tian**, University of Texas at San Antonio  
**Xiadong Wang**, Columbia University  
**Z. Jane Wang**, University of British Columbia  
**Stephen Wong**, The Methodist Hospital Research Institute  
**Rui Yamaguchi**, University of Tokyo  
**Byung-Jun Yoon**, Texas A&M University  
**Xiaobo Zhou**, Harvard Medical School

## Engineering and the Environment Conference and Exhibition

For additional information, contact Michael Andrews, [m.andrews@ieee.org](mailto:m.andrews@ieee.org), (602) 368-6013

Volunteers are needed to serve on the Organizing and Technical Committees for the first Engineering and the Environment Conference and Exhibition planned for March 2009.

The **ENGINEERING AND THE ENVIRONMENT CONFERENCE AND EXHIBITION** offers engineers and technical professionals the opportunity to:

- Share experience, concepts, innovations and technologies that address various environmental issues
- Demonstrate constructive concern from a global technical community
- Promote public awareness of engineering solutions to environmental issues
- Involve and inspire students, both university level and K-12, by including them in discussions, demonstrations and exposure to emerging technologies
- Provide a public event that will enhance the public image of the engineer and technical professional
- The event that is politically supportive/neutral and represents an untapped, unbiased knowledge base

The **ENGINEERING AND THE ENVIRONMENT CONFERENCE AND EXHIBITION** is designed to provide an opportunity for the engineering and technical community to address environmental issues of concern by the engineering community and design considerations that address sustainability. The Exhibition will provide an opportunity for organizations to spotlight emerging technologies and create innovative solutions for a number of environmental concerns.

Presentations can be a combination of technical track presentations, forums and tutorials. The **technical program** would be organized and managed similarly to other IEEE technical conferences with Track/Program Chairs, formal call for papers and refereed papers. The **forum** will be hosted by the conference with speakers invited based on a specific area of expertise or field of interest. **Tutorials** would be classroom-based presentations that provide conference attendees and the general public with implementable solutions to specific problems.

### Technical Tracks

- **Energy**
  - Energy conservation, building materials, lighting systems and controls, low voltage, starters, thin film, etc.
  - Renewable power generation, biomass, building materials, fuel cells, geothermal, hydrogen, nanomaterials and nanocells, nuclear, solar, wind, etc.
- **Green Materials**
  - Standards
  - Consumer and Industrial Electronics
  - Building and construction materials
  - Integrated elements
  - Infrastructure elements

## IEEE ANNOUNCEMENTS

- **Impact of Emerging Nations**
  - Use of natural resources
  - Design of new manufacturing and distribution facilities
  - Pollution control systems
  - Regulations and self-regulated development
- **Nanotechnology**
  - Nanotoxicology
  - Nanopollution
  - Nanosensors and control systems
- **Manufacturing**
  - Consumer electronics
  - Emerging economies
  - New manufacturing and distribution facilities, processes and systems
- **Sustainability**
  - Green engineering (process, building and infrastructure improvements)
  - Industrial Ecology (improved operating efficiency and waste reduction)
  - Ecological Engineering (systematic resource restoration)
  - Earth Systems Engineering (mitigation systems)
  - Energy systems
  - Water use, reclamation and reuse
  - Buildings
  - Transportation systems

### **Forum:**

In addition to the technical tracks identified, the conference could host a forum(s) that specifically address:

- A specific environmental issue
- National initiatives
- Funded research initiatives
- Transferable or repeatable approaches in manufacturing that positively impact the environment
- Award winning systems

## IEEE ANNOUNCEMENTS

### 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.

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