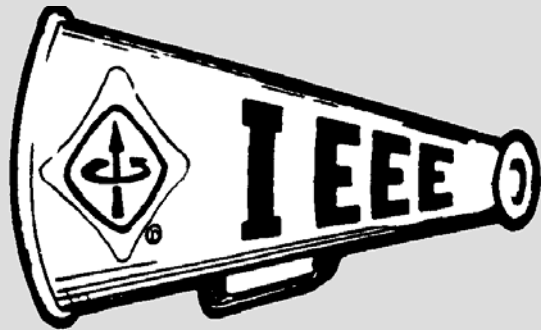


The Valley Megaphone



Newsletter of the

Institute of Electrical and
Electronics Engineers, Inc.
Phoenix Section

November 2008, Volume XXII, Number 11

Executive Committee

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Monica H. Braunisch
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This Issue of the Valley Megaphone features:

Contacts:

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- Chapters and Branches (page 1)
- Student Branches (page 2)

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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 Sam Karikalan at samk@broadcom.com

Chapters

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gang.qian@asu.edu

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Teacher-in-service

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ASU Main, Computer Society

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ASU Polytechnic

Chair: Justin Burrell
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Barbara.Rempel@asu.edu

DeVry, Phoenix

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DeVry, Computer Society

NAU, Engineering

Chair: Kenji R. Yamamoto
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Embry-Riddle, Prescott

Chair: Maria Nzmebi Ngomba
ngomb7db@erau.edu
Advisor: John E. Post
postj@erau.edu

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

November '08 Meeting:

No Meetings in July and August

Date: November 4, 2008, Tuesday

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 and turn right on 47th Place.

More Info:

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

Contact:

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

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 (<http://www.ieee.org/fellows>) 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.

IEEE – EDS Masters/Ph.D Student Fellowship

The IEEE Electron Devices Society has established the Masters and Ph.D. Student Fellowship Programs to promote, recognize, and support advanced degree study and research within the Electron Device Society's fields of interest. The application deadline is May 15, 2009. Please contact Chuck Weitzel, the Chair of the IEEE Phoenix – Waves Devices Chapter, at E-mail: Chuck.Weitzel@freescale.com or Tel. 480-413-5906, for more details.



IEEE EMC Society - Phoenix Chapter

November Meeting Announcement

The next meeting of the IEEE - Electromagnetic Compatibility (EMC) Society - Phoenix Chapter will be held, as follows:

Date: Monday, November 3, 2008

Place: Garcia's Mexican Restaurant at Embassy Suites Hotel

Address: 4400 South Rural Road, Tempe, Arizona

Address: Just South of U.S. 60 on West side of Rural Rd.

Time: 5:30PM Social, 6PM Dinner (order off the menu), 7PM Meeting

Title: EMC in Power Electronics

Speaker: Daryl Gerke of Kimmel Gerke Associates

Abstract: Come join us as Daryl Gerke of Kimmel Gerke Associates shares some insights on EMC in power electronics. You will hear some tips and techniques on transient protection, power filters, and RF hardening. He will also discuss some special problems, such as parasitic coupling and high frequency emissions in power supplies.

About the Speaker: Daryl Gerke, PE, is a partner with Kimmel Gerke Associates, Ltd., an engineering consulting and training firm that specializes in EMI/EMC issues. Daryl has a BSEE from the University of Nebraska. He is a Registered Professional Engineer (PE), a NARTE Certified EMC Engineer, and a Senior Member of the IEEE. Daryl has been professionally involved with EMC since 1970, and has been a full time EMC consulting engineer since 1987. He lives in Mesa, AZ.

Reservations: To help us get an accurate headcount, please send an email to Harry Gaul (harry.gaul@gdc4s.com). There is no charge for meetings, but you pay for your own meal and drinks. Since we order off the menu, we do not need an exact number, so 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.

Special Notice to IEEE Student Members: Present your IEEE Student Member card at the meeting and get your meal for **free** including drinks (except for alcohol beverages).

For more details, pls contact the EMC Society Chairperson, Harry Gaul at Harry.Gaul@gdc4s.com



Phoenix Chapter of the IEEE Computer Society

**Annual Elections will be held at the November 5, 2008 meeting!!
If you want to volunteer for one of the current officer positions, please
contact Cesar Vasquez-Carrera (see web site contacts page) by November
1 to get put on the ballot.**

November 5 meeting

Chris Colby from Dell on Advances in Virtualization

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

Upcoming Meetings

- November 5, 2008 - Virtualization, Chris Colby of Dell
- December 3, 2008 - Inference Engines for Consumer Electronics, Dr. Keshu Zhang, Motorola Applied Research & Technology Center
- January 14, 2009 - Software Quality Assurance, Bob Fowler and Oris Friesen **Note Alternate Date Due To Holiday**
- February 4, 2009 - Cognitive Ubiquitous Computing, Prof. Panchanathan of ASU, **Southeast Valley location TBA later**
- March 2009 - Annual Picnic, *Time and Date TBA*
- April 1, 2009 - Chat Localization: Developing Applications for 26 Different Languages, Highland Mary Mountain of Intel, **Southeast Valley location TBA later**
- May 4, 2009 - TBA

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.



Phoenix Chapter of the IEEE Computer Society

Website Improvements

We've added several new features to our website:

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

including information on the following topics such as:

- **Jobs** – New web page for positions available around the Phoenix area.
- **News** - lists other events around the Phoenix area
- **Contacts** – lists officers and other volunteers
- **Meetings** – descriptions of upcoming meeting and links to archives for previous meeting materials (in case you missed a meeting)

LinkedIn Update

LinkedIn has added a new discussion forum feature for groups as well as the following features for individual members:

Work collaboratively with your network.

- **Box on LinkedIn:** Share files and collaborate with your network.
- **Huddle on LinkedIn:** Private workspaces to collaborate with your network on projects.

Share information and keep up to date with your network.

- **Amazon on LinkedIn:** Discover what your network is reading.
- **Triplt on LinkedIn:** See where your network is traveling.
- **SixApart on LinkedIn:** Stay up to date with your network's latest blog posts.

Present yourself and your work in new ways.

- **Google Docs on LinkedIn:** Embed a presentation on your profile.
- **SlideShare on LinkedIn:** Share, view and comment on presentations from your network.
- **WordPress on LinkedIn:** Promote your blog and latest posts.

Gain key insights that will make you more effective.

- **Company Buzz by LinkedIn:** See what people are saying about your company.

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: <http://www.linkedin.com>.



Phoenix Section

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



Friday, November 14th, 2008
7:00 AM - 5:00 PM
ASU Memorial Union (Arizona Room)
Arizona State University, Tempe, Arizona 85287

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

present an all-day workshop on

EMERGING DEVICE AND PACKAGING TECHNOLOGIES

ABSTRACT

The continued scaling of microelectronics for mainstream applications, such as computing and communications, has been enabled by newly developed materials, tools, and techniques. This development of new capabilities has spawned 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 highly relevant areas.

We are excited to present keynote addresses for each of our three topical sessions. Jerry Hallmark, President of the U.S. Fuel Cell Council and Manager of Energy System Technologies at the Motorola Mobile Devices Technology Office, will open the energy session with the keynote "Emerging Energy Technologies for Mobile Devices." The bioelectronics session features an opening keynote by Dr. Samhita Dasgupta titled "The Impact of Micro and Nano Scale Devices in Chemical and Biological Applications." Dr. Dasgupta is a Device Engineering Manager at GE Global Research. Finally, the nanoelectronics session keynote will be delivered by Dr. Michael Roukes, Co-Director of the Kavli Nanoscience Institute (KNI) and Professor of Physics, Applied Physics, and Bioengineering at the California Institute of Technology. Dr. Roukes' presentation is titled "Nanosystems VLSI: Possibilities, Progress, and Projections."

In addition, this year we feature our first poster session on the broader Workshop topic of emerging device and packaging technologies. Poster presentations will cover a variety of topics from 80 GHz broadband beam-forming arrays and MEMS acoustic devices, to biosensing and biopatterning.

COMMITTEE MEMBERS

Workshop Chair
Dr. Vasudeva P. Atluri
(480) 554-0360
vpatluri@ieee.org

Technical Program Committee
Chair: Mel Miller
Co-chair: Debendra Mallik

Vendor Committee
Chair: Steve Rockwell
Co-chair: Dr. Rashaunda Henderson

Electronic Media Committee
Chair: Dr. Qing A. Zhou

Workshop Co-Chair
Dr. Charles E. Weitzel
(480) 413-5906
chuck.weitzel@freescall.com

Registration Committee
Chair: Dr. Sergio Pacheco
Co-chair: Surinder Tuli

Arrangements Committee
Chair: Dr. Samir Pandey
Co-chair: Dr. Hugh Barnaby

Publicity Committee
Chair: Dr. Ankur Agrawal

For additional information and vendor registration
www.ieee.org/phoenix

Online Registration
www.acteva.com/qa/ieeephxsecworkshop2008



AGENDA

- 7:00 AM Registration and Continental Breakfast**
- 8:00 AM Workshop Welcome**
Dr. Vasu Atluri, *Workshop Chairman; IEEE Senior Member; Program Manager, Intel Corporation*
- 8:15 AM Energy Session**
- 8:20 AM Keynote: Emerging Energy Technologies for Mobile Devices**
Jerry Hallmark, *President of the U.S. Fuel Cell Council; Manager, Energy System Technologies, Motorola - Mobile Devices Technology Office*
- 8:50 AM Photovoltaics Have Overrun the Silicon Industry**
Lane Garrett, *Founder and CEO, ETA Engineering*
- 9:20 AM Energy Harvesting for Microsystems**
Dr. Hanseup Kim, *Research Fellow, Dept. of Electrical Engineering, University of Michigan*
- 9:50 AM Break and Poster/Vendor Session**
- 10:20 AM Renewable Energies Landscape and Challenges**
Chico Hunter, *Senior Engineer, Sustainability Initiatives and Technologies, Salt River Project*
- 10:50 AM Bioelectronics Session**
- 10:55 AM Keynote: Impact of Micro and Nano Scale Devices in Chemical and Biological Applications**
Dr. Samhita Dasgupta, *Device Engineering Manager, GE Global Research*
- 11:25 AM A Probe-less Miniaturized Protein Sensor**
Dr. Junseok Chae, *Assistant Professor, Dept. of Electrical Engineering, ASU*
- 11:55 AM Lunch and Poster/Vendor Session**
- 1:25 PM Challenges in Bioelectronic Devices and Packaging**
Celeste Null, *Director of Biomedical Engineering, Digital Health Group, Intel Corporation*
- 1:55 PM Advances in Design, Processing and Packaging of Emerging Devices for Molecular Medicine**
Dr. Frederic Zenhausern, *Professor, School of Materials and Dept. of Electrical Engineering; Director, Center for Applied Nanobioscience, Biodesign Institute; Arizona State University*
- 2:25 PM Break and Poster/Vendor Session**
- 2:55 PM Nanotechnology Session**
- 3:00 PM Keynote: Nanosystems VLSI: Possibilities, Progress, and Projections**
Dr. Michael Roukes, *Co-Director, Kavli Nanoscience Institute (KNI), Professor of Physics, Applied Physics, and Bioengineering, California Institute of Technology*
- 3:30 PM Nanopackaging: Nanotechnologies and Electronic Packaging**
Dr. James Morns, *IEEE Fellow and Distinguished Lecturer; Professor, Dept. of Electrical and Computer Engineering, Portland State University*
- 4:00 PM Computational Challenges for Reliability Assessment of Next-Generation Micro and Nano Systems**
Dr. Abhijit Dasgupta, *Professor, Dept. of Mechanical Engineering, University of Maryland*
- 4:30 PM The Making of the GaAs MOSFET**
Dr. Matthias Passlack, *IEEE Senior Member; Visiting Scientist, UCSD*



INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

**WAVES AND DEVICES PHOENIX
CHAPTER**

Meeting Open to Non-IEEE Members
November 13th 2008 APS Meeting
Arizona State University



“SMART ANTENNA SYSTEMS”

An electromagnetics exact approach

Nicholas E. Buris

Motorola Inc., Schaumburg, Illinois

Abstract

The ultimate objective of this talk is to propose research and development activities toward the achievement of the more advanced electromagnetic design capabilities required to address future industrial and consumer electronics products, particularly wireless products.

An electromagnetics exact formulation from baseband-to-baseband of a Smart Antenna System is described. The formulation consists of full wave analyses of the antenna arrays involved on both sides of the link and a plane wave decomposition for the propagation environment. Calibration and Channel estimation algorithms are described for Time Division Duplex systems, such as WiMAX. The state of the art in designing antennas for terminals and for base stations is outlined. Some of the peculiarities of MIMO antenna performance are described, especially as they relate to the propagation environments that they operate in. Examples of actual product designs for WiMAX and IEEE 802.11n are given. In Smart Antenna systems, the multiple antennas are used to provide additional degrees of freedom and optimize advanced communications systems. MIMO systems require cross-layer design for global performance optimization. System performance metrics, such as capacity and throughput under adaptive modulation and coding schemes, are discussed as they are more relevant than traditional antenna metrics.

Finally, the talk ends with some recommendations on research topics to further the state of the art.

Biography

Nick Buris received the diploma of Electrical Engineering in 1982 from the National Technical University of Athens, Greece and the Ph.D. in EE from the North Carolina State University, in 1986. In 1986, he was a visiting professor at NCSU working on space reflector antennas for NASA. In 1987 he joined the faculty of the ECE dept. at U Mass, Amherst. His research work there focused on microwave magnetics, phased arrays printed on ferrite substrates and broadband antennas. In the summer of 1990 he was a faculty fellow at the NASA Langley Research Center working on calibration techniques for dielectric measurements and an ionization (plasma) sensor for an experimental reentry spacecraft. In 1992 he joined the Applied Technology organization of Motorola's Paging Product Group and in 1995 he moved to Corporate Research to start an advanced modeling effort. At Motorola he has worked on several projects from product design to measurement systems and the development of proprietary software tools for electromagnetic design. He currently manages the Microwave Technologies Research Lab within Motorola Labs in Schaumburg, IL. Recent activities of the group include 60GHz communications systems design, modeling and measurements of complex electromagnetic problems, RF Propagation, Smart Antennas/MIMO, RFID systems as well as TIA standards work on antennas and RF exposure.

Date: November 13, 2008

Location: Arizona State University, Goldwater Ctr (GWC), Rm 487.

Time: 4:30-5:30 PM *Presentation*

Pizza will be served following the Seminar

For more information, please call

Chuck Weitzel (Chapter Chair) at (480) 413-5906 chuck.weitzel@freescale.com

Steve Rockwell (Chapter Vice-Chair) at (480) 413-5235 s.rockwell@motorola.com



INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

WAVES AND DEVICES PHOENIX
CHAPTER

Meeting Open to Non-IEEE Members

November 25, 2008

Freescale Semiconductor, Tempe, AZ



Introduction to Large-Signal Modeling of Compound Semiconductor Transistors

Walter R. Curtice, Ph. D.

**W.R. Curtice Consulting
Washington Crossing, PA
walter@curtice.org**

Abstract

Very few installed models in circuit simulators have the capability to accurately model the characteristics of transistor power amplifiers for modern applications. This presentation will review the model types and describe some specific "compact models" in use today. We will discuss some important requirements of models and show the necessity of having specific features in the models for accurate simulation of HEMT and bipolar amplifiers. For example, both types of devices require accurate modeling of the effects of temperature, and HEMTs, in particular need good modeling of the effects of traps. Specific examples of the modeling of GaN HEMT and GaAs HBTs will be shown.

Biography

Walter R. Curtice received his BEE (with Distinction), MS, and Ph D degrees from Cornell University, Ithaca, New York. He joined the Raytheon Company for five years and then spent five years as an Associate Professor at the University of Michigan at Ann Arbor. Dr. Curtice then joined RCA Laboratories, Princeton, New Jersey, as a Member of the Technical Staff where he developed various models for GaAs field-effect transistors, including several circuit models that are widely used in SPICE and harmonic-balance simulators. Dr. Curtice joined Microwave Semiconductor Corporation, Somerset, New Jersey, as manager of Computer-Aided Design and Modeling for two years and then founded W. R. Curtice Consulting.

He has written over 90 technical papers, has 11 U.S. patents, and was made a Fellow of the IEEE in 1988. He was Distinguished Lecturer for the Microwave Theory and Techniques Society from 1990-1992 and visited approximately twenty chapters throughout the USA. In 2003, he received the Microwave Pioneer Award of the Microwave Theory and Techniques Society.

Date: November 25, 2008

Location: Freescale Semiconductor, 2100 E. Elliot Rd., Tempe, AZ Room TBA

Time: 4:00-5:00 PM *Presentation*

Pizza will be served after the Seminar

For more information, please call

Chuck Weitzel (Chapter Chair) at (480) 413-5906 chuck.weitzel@freescale.com

Steve Rockwell (Chapter Vice-Chair) at (480) 413-5235 s.rockwell@motorola.com

Power & Energy Society Announcements

November Technical Meeting

Date: Thursday, November 20, 2008

Speaker: Chris Anderson, Schweitzer Engineering Laboratories, Inc.

Topic: Synchophasors

Abstract: See PES website <http://ewh.ieee.org/soc/pes/phoenix/> for update.

Biography: Chris Anderson has an A.A.S. from ITT Technical Institute and is currently working on his B.S. in Electronics Engineering Technology through DeVry University.

Chris has been with Schweitzer Engineering Laboratories, Inc. (SEL) since July 1999. He spent his first three years at SEL working in product development for transmission protection products. For the next three years, Chris was an associate product engineer, supporting transmission protection in R&D. In August 2005, he became responsible for the development and support of SEL's synchrophasor measurement technology. In February 2008, Chris transferred to the field as an integration automation engineer for the Southeastern United States, and he currently makes his home in Dothan, Alabama.

Chris has been involved with the Eastern Interconnection Phasor Project (now the North American SynchroPhasor Initiative) since 2004 and has been involved with the introduction and implementation of synchrophasor technology at utilities spanning the United States and overseas.

December Technical Meeting

No meeting will be held due to the holidays.

January Technical Meeting

Chico Hunter from Salt River Project and Tony Tewelis from Arizona Public Service Company are scheduled to give a presentation on their company's **Renewable Energy Programs**. Further details will be available shortly on the PES website at <http://ewh.ieee.org/soc/pes/phoenix/>.

IEEE Life Members Affinity Group, Phoenix Section Meeting Notice

The next meeting of the Life Members Affinity Group of the IEEE Phoenix Section will be held on Thursday, December 11, 2008 at SRP's PERA Club (Big Horn Terrace Room), 1 East Continental Drive, Tempe, AZ. The new executive committee election will also be held at this meeting.

Topic: "What's in the IPCC report on Global Warming?"

Speaker: John S. Sadowsky, General Dynamics, Scottsdale

AGENDA:

- 11:00 AM - 11:30 Registration
- 11:30 - 11:45 Lunch
- 11:45 - 12:00 Executive Committee 2009 Election
- 12:00 - 1:00 PM Presentation
- 1:00 - 1:15 PM Question and Answer session
- 1:15 PM Adjourn

Cost: \$8.00 per person, includes lunch

Please RSVP, by Tuesday, December 2, to the Section Secretary, Michel Ebertin (michel@ebertin.net). Please try to attend, as the Chapter has to pay for lunch for the complete number reserved. Click on this link for directions to SRP PERA Club: [SRP PERA Club](#)

ABSTRACT

The presentation has 3 parts. The first part is an overview of the IPCC (Intergovernmental Panel on Climate Change) and its history. The second part is a summary of the content of the 2007 Assessment Report from Working Group 1, which deals with climate science and prediction of future climate. The third part will cover some of the critics of Global Warming.

About the speaker:

J. S. Sadowsky is a Member of the Technical Staff at General Dynamics in Scottsdale, AZ. He has been an IEEE member for 30 years. He has a Ph.D. in Electrical Engineering, M.S. in EE, M.A. in mathematics, and B.S. degrees in mathematics and EE. His professional career has been split between industry (14 years) and academia (15 years). He has published ~30 papers in IEEE Transactions and in various mathematics journals, and has over 60 conference papers and presentation. His academic research included applications of probability theory to modern digital communications. Today he is a leading physical layer architect for the MUOS project, which is a military satellite communications system.

2008 Chapter Executive Committee

Chair	Dr. Rao Thallam	(602) 236-8064
Vice Chair	Prof. George Karady	(480) 965-6569
Secretary	Michel Ebertin	(480) 991-2136
Treasurer	Leslie Daviet II	(602) 525-2377
Program Committee	Dr. C.B. Johnson	(480) 759-2826

Election of Executive Committee for 2009

Election of the Executive committee members will be held at the Dec 11 membership meeting. If you are interested in any of the positions: Chairman, Vice Chairman, Secretary, Treasurer or Program Committee Chairman, e-mail your name, phone number, contact address, and position interested to serve, by November 15, 2008 to Chapter Secretary, Michel Ebertin. (michel@ebertin.net) Phone: (480) 991-2136.



IEEE PHOENIX SECTION ANNUAL BANQUET



Saturday, February 7th, 2009

Hilton Phoenix Airport - Grand Ballroom, Phoenix, Arizona

AWARD NOMINATION INSTRUCTIONS

1. This Awards Guide lists the awards along with the selection criteria that will be implemented for selecting the award recipient.
2. Please read through this awards guide to help you in selecting the award category for nomination.
3. Complete the award nomination form given at the end of this document and submit ONLY as an email attachment to the IEEE Phoenix Section Annual Banquet Organizing Committee member responsible for the award category along with a copy to Dr. Vasu Atluri, Awards Committee Chair. Dr. Vasu Atluri's email address is vpatluri@ieee.org and telephone number is (480) 227-8411. The list of contacts is as follows:

For Member Category Nominations, please send the form along with supporting documents to Dr. Keith Holbert, Chair, at keith.holbert@asu.edu. He can be reached by telephone at (480) 965-8594.

For Chapter / Society Category Nominations, please send the form along with supporting documents to Mr. Debendra Mallik, Vice-Chair, at dmallik@ieee.org. He can be reached by telephone at (480) 413-5328.

For Non-Member Category Nominations, please send the form along with supporting documents to Dr. Henning Braunisch, Secretary, at braunisch@ieee.org. He can be reached by telephone at (480) 552-0844.

For Corporate Category Nominations, please send the form along with supporting documents to Dr. Vasu Atluri, Awards Committee Chair, at vpatluri@ieee.org. He can be reached by telephone at (480) 554-0360.

For Educational Category Nominations, please send the form along with supporting documents to Mr. Nick Leonardi, Student Activities Coordinator, at nleonardi@premiers2.com. He can be reached by telephone at (480) 720-1435.

4. Nominator can submit a form for self or for others. All sections of the form should be completely filled by typing in bold and capital letters. If needed, submit additional documents such as resume in support of the nomination.
5. Deadline for submission of the nomination form is Friday, December 5th, 2008. Awards Banquet Committee will review the forms and inform the selected candidates and nominators by Friday, December 19th, 2008.

If you have any additional questions, please contact Dr. Vasu Atluri, Awards Committee Chair, at (480) 227-8411 or by email at vpatluri@ieee.org.



IEEE PHOENIX SECTION ANNUAL BANQUET



Saturday, February 7th, 2009

Hilton Phoenix Airport - Grand Ballroom, Phoenix, Arizona

AWARDS GUIDE (UPDATED OCTOBER 2007)

The scope and purpose of the Section Awards program is to plan, promote and implement award and recognition programs that recognize outstanding performance in furthering the objectives and professional aims of the IEEE Phoenix Section, the IEEE and the IEEE-USA, and to stimulate others to pursue such achievements of excellence.

The Phoenix Section has established the following general award and recognition categories:

- Member
- Chapter/Society
- Non-member
- Corporate
- Educational
- Special Chair

AWARD AND RECOGNITION CATEGORIES

A. Member:

The Section recognizes individual members in two categories:

- Young Engineer of the Year
- Engineer of the Year

The **Young Engineer of the Year** award is offered to recognize an individual of Member Grade in the section with 10 years or less experience in the profession. Ten years include graduate degree study period. Nominations for this award may be offered by individuals, by a company or by a Society Chapter. Qualifications for the award must satisfy at least one of the following criteria:

- Be recognized by his/her employer for important contributions to a project /company mission
- Made important contributions to the Section/Chapter/Conference, profession or the community through leadership activities related to an event(s)
- Publish at least one refereed technical paper
- Hold at least one U.S. patent

The **Engineer of the Year** award is offered to recognize an individual of Member or Senior Member Grade in the section with over 10 years experience in the profession. Nominations for this award may be offered by individuals, by a company or by a Society Chapter. Qualifications for the award must satisfy at least one of the following criteria:

- Be recognized by his/her employer for important and significant contributions to the organization projects or towards the company mission
- Publish at least two refereed technical papers
- Hold at least two U.S. patents
- Made significant contributions to the community or profession

The Section also recognizes members who attain advanced member grade levels including Fellow and Senior Member. Criteria are established by the IEEE.

Fellow recognizes unusual distinction in the profession and is conferred only by invitation of the Board of Directors upon a person of outstanding qualifications and experience in IEEE designated fields. It is conferred to a person who has made important individual contributions to one or more of the IEEE designated fields. The Fellow Grade is the highest membership grade which can be achieved within IEEE. Total number selected in any one year does not exceed one-tenth percent of the total voting institute membership.

Senior Member Grade is the highest for which application may be made and requires experience reflecting professional maturity. Candidate should be an engineer, scientist, educator, technical executive, or originator in IEEE designated fields. Candidate should have shown significant practice for at least ten years and significant performance over a period of at least five of those years.

B. Chapter/Society:

The Chapter/Society may provide one award to recognize individual, team or organization using a variety of criteria including technical, professional, chapter / society contribution or other special category. Awards

should recognize specific contributions, achievements and efforts (individual or team) in the development and implementation of the criteria used for the award.

An "Outstanding Society Chapter Award" for the IEEE Phoenix Section may also be awarded each year. The Section shall solicit and qualify chapters for the Outstanding Society Chapter Award. Nominees are either provided by the Society Chapters or decided by awards committee. The Section may recognize a Society Chapter using a variety of criteria including technical, professional or other special category. Awards should recognize specific contributions, achievements, and efforts including the number of meetings, workshops, etc. consistent with membership size of the Society Chapter, in the development and implementation of the criteria used for this award. The Chapter/Society award nominations should be approved and submitted by the Chapter Chair or a Chapter Officer assigned by Chapter Chair. The assigned officer name should be informed by Chapter Chair by email in advance to both Dr. Rao Bonda, Annual Banquet Organizing Committee Member responsible for Chapter / Society Category Nominations, and to Dr. Vasu Atluri, Awards Committee Chair.

C. Non-Member:

The Section may recognize non-IEEE members for exemplary contributions (technical and/or professional) to the engineering profession through their efforts within their company, the community or for the Section.

D. Corporate:

The Section recognizes companies in two categories:

- Large Company of the Year
- Small Company of the Year

The companies are recognized for their outstanding technical and / or professional contributions in furthering the objectives and professional aims of the IEEE Phoenix Section, the IEEE, the IEEE-USA and the field of Electrical Engineering. The Technical Contributions should include significant contributions or advancements in technology or the application of technology in the electronics or electro-technology fields. The specific area of technology is not restricted and may include, but is not restricted to, design and manufacturing processes, new products or creative applications to existing technologies. The Professional Contributions include significant contributions made to further the professional goals and programs of IEEE. Companies may be recognized for specific contribution, achievements and efforts that promote the professionalism goals of the section and IEEE. Nominations may be for a variety of professionalism related areas including support of IEEE members, employee development and training initiatives, community involvement or other programs that improve the general image of the engineer or engineering profession. Companies with less than or equal to 500 employees are considered Small Companies and those with greater than 500 employees are considered Large Companies during the award selection.

E. Educational:

The Section recognizes educational institutions and educators in the following categories:

- Outstanding IEEE Student Branch
- Outstanding Pre-college Educator
- Outstanding Faculty

The Section shall solicit and qualify award candidates for the Student Branch award. Nominees are provided by the student branch, branch advisor, administrators or Society Chapters. The Section may recognize a Student Branch using a variety of criteria including technical, professional or other special category. Awards should recognize specific contributions, achievements and efforts (individual or team) in the development and implementation of the criteria used for this award.

Nominations for Outstanding Pre-college Educator and Outstanding Faculty may be submitted by any member of the Section. Awards should recognize specific contributions, achievements, programs and efforts completed by an individual who promotes technical literacy, or the technical or professional goals of the Section, the IEEE or the IEEE-USA.

The section also recognizes student scholarship winners selected during the year by a committee consisting of section officers. The criteria for selection are based on academic excellence, participation in IEEE activities, contributions to IEEE and financial need.

F. Special Chair:

The Section Chair may wish to provide up to three special awards to recognize individuals or organizations for activities that support the goals of the Section that are not specified within the above categories, such as public service. The Section Chair may solicit inputs and recommendations from the Awards Committee, Section Officers, and Members of the Section. The Section Chair may recognize IEEE or Non-IEEE members for contributions to IEEE, the engineering profession, and volunteer work. The section chair also recognizes current section officers for their contributions for advancement of the section.



IEEE PHOENIX SECTION



ANNUAL BANQUET

Saturday, February 7th, 2009

Hilton Phoenix Airport - Grand Ballroom, Phoenix, Arizona

Award Nomination Form

Completely filled form should be submitted as an email attachment ONLY to the appropriate award committee member Award committee chair should be copied on the email – Award committee contact list are listed on first page

Candidate's Name: <small>(including Dr., Mr. and Ms.)</small>	<input style="width: 100%;" type="text"/>		
Address:	<input style="width: 100%;" type="text"/>		
	<input style="width: 100%;" type="text"/>		
	<input style="width: 100%;" type="text"/>		
Telephone Number:	<input style="width: 25%;" type="text"/>	Fax Number:	<input style="width: 25%;" type="text"/>
Email:	<input style="width: 100%;" type="text"/>		
IEEE Member:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Student <input type="checkbox"/>
			Membership # <input style="width: 15%;" type="text"/>
Award Categories: (please select one)			
A. Member:	Engineer of the Year <input type="checkbox"/>	Young Engineer of the Year <input type="checkbox"/>	
B. Chapter / Society:	Technical <input type="checkbox"/>	Professional <input type="checkbox"/>	Special Category <input type="checkbox"/>
	Chapter / Society Contribution <input type="checkbox"/>		
	Outstanding Society Chapter <input type="checkbox"/>		
C. Non-Member:	Contributions to the IEEE / Engineering Profession <input type="checkbox"/>		
D. Corporate:	Large Company of the Year <input type="checkbox"/>		
	Small Company of the Year <input type="checkbox"/>		
E. Educational:	Outstanding Student Branch <input type="checkbox"/>	Outstanding Faculty <input type="checkbox"/>	
	Outstanding Pre-College Educator <input type="checkbox"/>		
F. Special Chair:	IEEE / Engineering Contributions <input type="checkbox"/>	Non-IEEE Contributions <input type="checkbox"/>	
Award Citation: <small>(Limit to Maximum Twenty Words)</small>	<input style="width: 100%;" type="text"/>		
	<input style="width: 100%;" type="text"/>		
	<input style="width: 100%;" type="text"/>		



IEEE PHOENIX SECTION ANNUAL BANQUET Saturday, February 9th, 2009



Award Nomination Form

Completely filled form should be submitted as an email attachment ONLY to the appropriate award committee member Award committee chair should be copied on the email – Award committee contact list are listed on first page

Please provide information in support of the nomination in the space provided below – if needed use additional sheets. Submit other documents such as resume in support of the nomination.

Nominator's Name:

IEEE Member: Yes No Student Member #

Affiliation: Section Chapter / Society Student Branch None

Affiliated Organization Name:

Telephone Number: Email:

 **IEEE** **IEEE Phoenix Section**  **IEEE**
Student Paper Contest 2009

The IEEE Student Prize Paper Contest offers the undergraduate IEEE Student member opportunities to exercise and improve both written and verbal communication skills. Throughout an engineer's career, (s)he will be constantly called upon to communicate ideas to others. Researching, writing, and presenting a paper provides a student with invaluable early experience in expressing ideas related to engineering. Since the paper contest primary function is to improve the engineering student's communicative skills, no student should be discouraged from entering the contest due to a false requirement of technical sophistication.

This undergraduate student paper contest consists of a written paper and an oral presentation. The written paper should be in the IEEE Region 6 standard, which is available at <http://www.ewh.ieee.org/reg/6/MemberStudentActivities/IEEERegionalStudentPaperContestGuidelines.doc> . Briefly, the type-written papers are 15 pages maximum, double-spaced with 12 pt font. The written paper, as either an MS Word or an Acrobat pdf file, should be emailed to nleonardi@ieee.org by 6 p.m. on **February 13, 2009**.

The oral presentations are 15 minutes plus a 5-minute question & answer period. The oral portion of the contest will be held the morning of Saturday, **February 28, 2009**. A computer with projector will be provided for the contestants to use, since PowerPoint slides are the recommended approach.

The local cash awards for the paper contest winners are (1) First Place – \$300, (2) Second Place – \$200, and (3) Third Place – \$100. The five judges are IEEE members from local industries.

The top entrant from each Local Student Branch (ASU Main, ASU Polytechnic, DeVry, Embry-Riddle, and NAU) is eligible to present their paper to the IEEE Region 6 Southwest Area contest to be held April 2009.

If you have any questions, please contact:

Mr. Nick Leonardi
IEEE Phoenix Section
Student Activities Chair
480-736-1970 x 23
nleonardi@ieee.org



IEEE PHOENIX SECTION SCHOLARSHIPS

Applications Due: December 22, 2008
Awardees Announced: January 2009

The Institute of Electrical & Electronics Engineers

IEEE Student Member Scholarships

- For full-time undergraduates who are members of IEEE: approved majors are Electrical Engineering, Computer Systems Engineering, Electrical Engineering Technology, Computer Engineering Technology, or Computer Science
- Must attend a university in the Phoenix Section during 2008-2009 (*i.e.*, ASU, ASU Polytechnique, DeVry, Embry-Riddle, or NAU)

Scholarship Application Requirement

- Application form (in the next three pages) with general information and qualifications including:
 - financial aid statement, and
 - one-page personal statement of attainments, interests and goals
- Official transcripts of all college work
- Recommendation letters (optional, but helpful to the selection committee)

For further information and to submit applications please contact:

Mr. Nick Leonardi
IEEE Phoenix Section
Student Activities Chair
480-736-1970 x 23
nleonardi@ieee.org



IEEE PHOENIX SECTION SCHOLARSHIP APPLICATION (Due: December 22, 2008)

Applicant IEEE Member No. _____

Name _____
Last/Family , First , Middle

Home Address _____
Number Street Apt
_____ City State Zip Code

Telephone No. (_____) E-mail _____

Social Security No. _____ Date of Birth _____
Month/Day/Year

Are you an Arizona resident? Yes No

Present School _____ GPA (and scale) _____

Class (Fr/So/Jr/Sr) _____ Academic Probation/Suspension Yes No

Name of Instructor familiar with your qualifications _____ Her/His Telephone _____

College Attending Next Year _____ Expected Graduation Date _____

College Major _____ Specialty within Major, if any _____

Please complete the next two pages also (Financial Aid Statement and Personal Statement) and Attach Official Transcripts from Present School/College.

IEEE PHOENIX SECTION SCHOLARSHIP FINANCIAL AID STATEMENT

Name _____

Marital Status: Married ____ Single ____

Can anyone claim you as a dependent? Yes ___ No ___

Number of dependents you are able to claim _____

Who sponsors your education? Yourself ____ Other ____ (please specify)

Projected College Costs and Financial Resources (for the 2008-09 School year)

Projected Expenses

Tuition and Fees:	\$ _____
Books and Supplies:	\$ _____
Transportation (Car/Bus/Insurance)	\$ _____
Room & Board (Dorm/Apt/Food/Utilities/Phone)	\$ _____
Personal (Clothes/Insurance/Recreation)	\$ _____
Total Expenses:	\$ _____

Projected Financial Resources

Education Loans	\$ _____
Government Grants	\$ _____
Federal Benefits (GI Bill/Social Security/etc)	\$ _____
Scholarships	\$ _____
Parent and/or Spouse Support	\$ _____
Employment (your job income)	\$ _____
Total Resources:	\$ _____

I certify that the information in this scholarship application is true to the best of my knowledge.

Signature

Date

IEEE PHOENIX SECTION SCHOLARSHIP PERSONAL STATEMENT

Name_____

Please provide a one-page statement summarizing your interests, academic accomplishments, school & athletic activities, community service, education and career goals, and employment history (position, company, dates).

Fundraiser for Phoenix Region Future City Competition

On Saturday, 17 January 2009, the Phoenix Region Future City Competition will kick off the year with its 8th Annual Golf Classic Tournament at the Whirlwind Golf Club. The Future City Group is composed of practicing engineers and architects involved in getting 7th and 8th grade kids interested in the future of engineering, science, and architecture. Our golf tournament is a major fundraiser for our yearly statewide competition held in Phoenix.

Last year over 130 players joined us at the Estrella Mountain Ranch Golf Club for a sold out day of golf and prizes in which over \$12,000 was raised. The success of our tournament is attributed to both the sponsorships we receive and the golfers who participate. Join us as we kick off the year, and test our New Years Resolutions, playing the Devil's Claw course at Whirlwind. Registration includes a gift, golf, lunch, beverages on the course, and the chance to win over \$10,000 worth of prizes.



8th Annual Design the Future Golf Classic *Benefiting the Phoenix Region Future City Competition*



TOURNAMENT HIGHLIGHTS:

**Saturday 17 January 2009
Devil's Claw @ Whirlwind Golf Club
5692 W. North Loop Rd, Chandler
Wild Horse Pass Blvd, West of I-10**

**7:00 AM
Registration**

**7:45 AM
Shotgun Start**

**Four-Person Teams
18-hole Modified Scramble**

**\$175 per player
(Includes cart, fees, lunch &
1 Mulligan per player)**

KICK OFF 2009!!!

**With the our version
Of the Vegas Hole**

PLUS:

Closest to Pins

Longest Putts

Longest Drives

Hole In One

Golf Poker



The Phoenix Region Future City Competition is open to 7th and 8th graders across the state. Additional information can be found at www.futurecity-phoenix.org. For further information on the golf tournament, contact Andrew Smigielski at SouthWest Traffic Engineering 602.266.7983 or smig@swte.us.

Design the Future Golf Tournament Entry Form

Name	Company	Phone/E-mail
1		
Address		
2		
Address		
3		
Address		
4		
Address		
<input type="checkbox"/> Please keep players 1-2-3-4 together <input type="checkbox"/> Please pair us with others <input type="checkbox"/> Sorry, I cannot attend, but please accept my contribution		_____ Players @ \$175 _____ Total
MAKE CHECKS PAYABLE TO: Future City Competition. Please complete and return this entry form by 8 January 2009 to: Andrew Smigielski, SouthWest Traffic Engineering, 3838 North Central Avenue, Suite 1810, Phoenix, AZ 85012 (phone-602.266.7983, fax -602.266.1115).		
Thank you for participating!		

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
Conferences 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.

IEEE Phoenix - Calendar of Events for November 2008:

IEEE Phoenix Section



Local activities in the Phoenix Section

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

November 2008



Choose Year:



Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3 EMC-Phoenix Chapter	4 6:00p-8:30p Phoenix Section Executive Board Meeting	5 7:00p Computer Society Chapter Meeting	6	7 IEEE's Teacher In-Service Program (TISP) Training Workshop!	8 IEEE's Teacher In-Service Program (TISP) Training Workshop!
9	10	11	12	13	14 7:00a-5:00p Emerging Device and Packaging Technologies	15
16	17	18	19	20 12:00p-1:30p PES Chapter meeting - Synchrophasors	21	22
23	24	25	26	27 Thanksgiving	28	29
30						
Sun	Mon	Tue	Wed	Thu	Fri	Sat