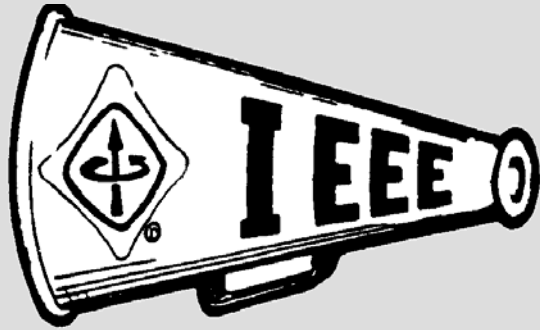# The Valley Megaphone

Newsletter of the

Institute of Electrical and Electronics Engineers, Inc.
Phoenix Section

October 2008, Volume XXII, Number 10

Executive Committee

Past Chair
Rao Bonda, 480-413-6121
r.bonda@ieee.org

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holbert@asu.edu

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dmallik@ieee.org

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Membership
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Inter-Society
Mike Andrews, 480-991-1619
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Webmaster
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This Issue of the Valley Megaphone features:

Contacts:

Contents:

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

Computer Society
Joy Shetler
jsshetler@juno.com

Consultants Network (PACN)
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CPMT Society
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qing.a.zhou@intel.com

Education Chapter
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EMBS Chapter
Ahmed Abdelkhalek
ahmed_a@acm.org

EMC Society
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harry.gaul@ieee.org

GOLD
Matt Mets
Matt.Mets@freescale.com

Power & Energy Society
Barbara McMinn
barbara.mcminn@aps.com

Solid State Circuits
Bahar Jalali-Farahani
Bahar.Jalali@asu.edu

Teacher-in-service
Mike Poggie
Mike.Poggie@ieee.org

Waves & Devices Society
Chuck Weitzel, 480-413-5906
c.weitzel@ieee.org

Life Members
Rao Thallam
thallam@ieee.org

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

October '08 Meeting:

No Meetings in July and August

Date: October 7, 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.

2009 IEEE Phoenix Section Officers Election

Nominations of officers for the 2009 IEEE Phoenix Section Executive Committee are open until November 1st, 2008. Nominations will be recommended by the current Executive and Standing Committees. Additional nominations from the general membership of the Section will be accepted via written petition signed by at least 10 members. The petitions must be received by the Section Secretary (Henning Braunisch) not later than November 1st, 2008. The written petition must provide a statement signed by the petition candidate stating his/her willingness to serve if elected. E-mailed scanned petition copies will be accepted. Please send nominations by email or US mail to:

Henning Braunisch
2303 E. Winged Foot Dr.
Chandler, AZ 85249-4964
Phone: 480-552-0844
Email: braunisch@ieee.org

2009 IEEE Phoenix Section – Chapter Officers Election

The following Chapters of the IEEE Phoenix Section are seeking nominations for officers to serve during 2009. Please contact the Chapter Chairs of the respective Chapters listed below for additional information. The nominations must be received by the Chapter Chairs by November 1st, 2008. Please send an email with the subject "IEEE Phoenix Section – Chapter Officers Nominations for 2009".

Communications and & Signal Processing
Gang Qian
gang.qian@asu.edu

EMC Society
Harry Gaul
harry.gaul@ieee.org

Computer Society
Joy Shetler
jsshetler@juno.com

GOLD
Mat Mets
matt.mets@freescale.com

Consultants Network (PACN)
Vaughn L. Treude
vaughn@nakota-software.com

Power and Energy Society
Barbara McMinn
barbara.mcminn@aps.com

CPMT Society
Qing Zhou
qing.a.zhou@intel.com

Solid-State Circuits
Hugh Barnaby
hbarnaby@asu.edu

Education Chapter
Martin Reisslein
reisslein@asu.edu

Waves and Devices
Chuck Weitzel
chuck.weitzel@freescale.com

EMBS Chapter
Ahmed Abdelkhalek
ahmed_a@acmn.org

◈ IEEE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

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 60 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

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

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

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

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

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

Electronic Media Committee
Chair: Dr. Qing A. Zhou

Publicity Committee
Chair: Dr. Ankur Agrawal

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

Online Registration
www.acteva.com/go/ieeephxsecworkshop2008

AGENDA

Time	Session
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 Morris, *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 ELECTRONIC ENGINEERS
WAVES AND DEVICES
PHOENIX CHAPTER

LEOS Seminar
October 23rd, 2008

Multijunction Solar Cells Using Lattice-Matched II-VI and III-V Semiconductors

Ding Ding

Center for Nanophotonics & Department of Electrical Engineering
Arizona State University
ding.ding@adu.edu

Abstract

High-efficiency solar cells are highly desirable for both space and terrestrial applications. In this talk, recent progress towards the realization of novel multijunction solar cells using II-VI (MgZnCd)(SeTe) and III-V (AlGaIn)(AsSb) direct bandgap semiconductors grown on GaSb or InAs substrates will be presented. The detailed balance limits of solar cells will be reviewed and extended to include nonradiative recombination and other extrinsic losses to provide a deep understanding of the working principles of multijunction solar cells. Device design and simulation using commercial Silvaco software package will be discussed. Preliminary studies of the growth and structural and optical characterization of (ZnCd)(SeTe) on GaSb and InAs substrates will also be reported.

Biography

Dr. Ding Ding received his Ph.D. in Material Science and Engineering from Arizona State University (ASU) in 2007. He is currently working as a Postdoctoral Research Associate in the ASU MBE Optoelectronics Group, Center for Nanophotonics & Department of Electrical Engineering in the area of optoelectronics, including high-efficiency multijunction solar cells, electroluminescence refrigeration, and superluminescent light emitting diodes.

Date: October 23rd, 2008

Location: Arizona State University, Main Campus, Gold Water Center (GWC) Room 487
Enter the facility through the main (south) lobby and take the elevator to the fourth floor. Go north down the west hallway, the conference room is on the right. See http://www.asu.edu/map/ for map.

Time: 4:20 PM *Refreshments Served*
4:30-5:30 PM *Presentation*
5:30 PM *Discussion with Pizza Severed*

Power & Energy Society Announcements

October Technical Meeting

Date: Thursday, October 16, 2008

Speaker: **Chris Hanks**, Engineering Supervisor,
Electronic Systems - Control Division, Salt River Project

Topic: Implementing IntelliGrid Platform at SRP: Browning Integration Project

Abstract: As pressure upon utilities increases for improved effectiveness, efficiency and customer service there has been a significant increase in the demand for power system information from utility substations. At SRP, this demand has come from operational groups throughout the company to support the operational needs for fault analysis, system planning, power quality, engineering, maintenance, metering, asset management and other data.

To address this demand in the past, SRP had implemented various independent stand-alone systems. Each system essentially consisted of many independent Intelligent Electronic Devices (IEDs), each communicating over its own serial line to its own master station computer.

This presentation details a ground-breaking SRP project to evolve this stand-alone design to a more integrated networked architecture by applying the basic design philosophies and principles developed by the EPRI/IntelliGrid Consortium. The integrated networked architecture would include LAN-connected IEDs capable of performing multiple functions and feeding a common corporate database.

This SRP project, completed in 2006, saw the design, procurement and installation of this integrated network architecture at a major SRP 500kV substation that included two 500kV power transformers and three 500kV circuit breakers. This integrated system now provides near real-time information for improved decision-making to various users corporate-wide about these important substation assets - improving maintenance planning, asset utilization and response time to outages. As a result of the success of the Browning Integration Project, SRP has continued to expand this concept at more 500kV stations.

Biography: Chris F. Hanks is an Engineering Supervisor in the Control Division of Electronic Systems at Salt River Project. Chris earned a BSEE from the University of Idaho in 1985 and has been with the Control Division at SRP since 1987. Chris has been involved with SCADA as well as Substation Integration and Automation during his career, most recently focusing on integration and acquisition of non-operational asset maintenance data. Chris is a member of the IEEE and DNP User Group.

November Technical Meeting
Chris Anderson from SEL is scheduled to give a presentation on **Syncho-Phasor**. Further details will be available shortly on the PES website at
http://ewh.ieee.org/soc/pes/phoenix/.

<u>51st Annual IEEE PES Golf Outing</u>

PES would like to thank all the sponsors, participants and organizers of our golf tournament. We had 95 golfers who enjoyed a wonderful (albeit a little windy and damp) afternoon of golf and an enjoyable dinner. Everyone's involvement and attendance helped make this a very fun and successful event.

The winning foursome was: Troy Orr, Bob Kostyk, Phil Miller and Skip Peeples

Other winners include:
- Closest to the pin: Rich Gonzales and John Demcko
- Longest Putt: Steve Rosenfield
- Longest Drive: Chris Clark.

A car was almost awarded on the hole-in-one hole – the ball missed the hole by only one foot! Better luck next year to all the golfers.

Next year's tournament is scheduled for Saturday, September 26, 2009 again at the Antelope Hills Golf Club in Prescott, Arizona. We'll also have a dinner at 7pm that evening. Mark your calendars now so you'll be free to join us.

IEEE Phoenix Area Consultants Network

October Meeting: **Energy Challenges**

Date: **Thursday, October 9th, 2008**

Time: Feel free to come around 5:30 and socialize.
We take d**inner orders around 6:30 PM**
Meeting begins around 7:30 PM

Place: Denny's Restaurant
3315 N. Scottsdale Rd. (at Osborn)
Scottsdale, Arizona 85251

Abstract:

Without sufficient energy, the global economy will collapse. In fact, the world generally requires more energy every year. Where will this energy come from? How much will it cost? What are the expected impacts of energy sources and uses on the environment? Dr. Johnson will present brief answers to these questions, and make the case for more renewable energy research and development.

About the Speaker:

Dr. C. Bruce Johnson, president of Johnson Scientific Group, Inc., is a senior scientist with a distinguished list of publications and inventions to his credit. He is experienced in the area of night vision and low level light imaging technology and manufacturing. He has received numerous awards from NASA and other government agencies and major corporations, and is a Life Fellow of the IEEE.

For more information, contact Vaughn Treude, vaughn@nakota-software.com, or see the IEEE PACN website, ieeepacn.com.

Calling all Engineers in Region 6!!!

Are you interested in working with your local schools, school districts and teachers?
Do you want to help impact the level of technical literacy of teachers and their students in your local community?
Did you know that there are materials and tools that you can use to help?

Then you should attend

IEEE's Teacher In-Service Program (TISP) Training Workshop!
November 7-8, 2008

Started in 2001, TISP features IEEE volunteers developing and presenting technologically oriented subject matter to educators in a professional development or "in-service" setting. In the last several years, IEEE volunteers have made more than 76 presentations to over 1800 pre-university educators within the United States, Asia and Africa. These educators reach over 185,000 students! There are a number of pre-planned classroom activities that you could use in a classroom setting. Visit us at:
http://www.ieee.org/web/education/preuniversity/tispt/index.html

Now you can be a TISP Champion! The IEEE Educational Activities Department, Region 6 and the local Sections are hosting a TISP Training Workshop: **November 7-8, 2008, at the San Francisco Marriott Downtown Hotel.**

The workshop will cover how to organize volunteers for TISP and how to bring the program to teachers in your local schools and school districts. Thanks to the support of IEEE USA and the IEEE Educational Activities Board the event is free for all IEEE members and invited educators! **(IEEE will reimburse for travel-related expenses for this workshop.)**

The event will begin on Friday, 7 November at 4:30 pm with a 2 hour presentation followed by a dinner at 7:30 pm.

On Saturday, 8 November, the event will run from 9:00 am to approximately 4:00 pm. It will include hands-on presentations, a question and answer period as well as discussion on numerous topics such as: program background and scope, getting started, potential costs to sections and educators, suggestions on making contact with your local pre-university community, and the alignment of an activity with educational standards. Breakfast and lunch will be provided.

The goal of the training session is to impact at least 1,000 pre-university educators in Region 6 and to help IEEE volunteers implement TISP in their local pre-university education communities.

During an actual TISP presentation, IEEE volunteers provide teachers with all needed materials and help them work their way through the lesson. Working together helps the teachers to feel more comfortable teaching the activity. The goal is for the teachers to bring the strategy back to their classrooms and use the lesson to excite their students. Please visit www.tryengineering.org to see the lessons you can use to foster technical literacy.

For more information on this upcoming TISP training session or TISP participation, please contact:
Yvonne Pelham, Manager of Educational Outreach, +1 732.562.5321, y.pelham@ieee.org   (or) Doug Gorham, Managing Director of Educational Activities,   +1 732.562.5483, d.g.gorham@ieee.org.

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

IEEE PHOENIX SECTION
ANNUAL BANQUET
Saturday, February 7th, 2009
Hilton Phoenix Airport - Grand Ballroom, Phoenix, Arizona

◆IEEE

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:
(including Dr., Mr. and Ms.)

Address:

Telephone Number: **Fax Number:**

Email:

IEEE Member: Yes ☐   No ☐   Student ☐   Membership # ☐

Award Categories: (please select one)

A. Member: Engineer of the Year ☐   Young Engineer of the Year ☐

B. Chapter / Society: Technical ☐   Professional ☐   Special Category ☐

Chapter / Society Contribution ☐

Outstanding Society Chapter ☐

C. Non-Member: Contributions to the IEEE / Engineering Profession ☐

D. Corporate: Large Company of the Year ☐

Small Company of the Year ☐

E. Educational: Outstanding Student Branch ☐   Outstanding Faculty ☐

Outstanding Pre-College Educator ☐

F. Special Chair: IEEE / Engineering Contributions ☐   Non-IEEE Contributions ☐

Award Citation:
(Limit to Maximum Twenty Words)

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 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 October 2008:

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 Computer Society Chapter Meeting	2	3	4
5	6	7 6:00p-8:30p Phoenix Section Executive Board Meeting	8 5:30p IEEE CPMT Society Phoenix Chapter	9	10	11
12	13	14	15	16 12:00p PES Phoenix Chapter meeting	17	18
19 2008 2nd IEEE RAS & EMBS International Conference on Biomedical Robotics and Biomechatronics (BioRob 2008)	20 2008 2nd IEEE RAS & EMBS International Conference on Biomedical Robotics and Biomechatronics (BioRob 2008)	21 2008 2nd IEEE RAS & EMBS International Conference on Biomedical Robotics and Biomechatronics (BioRob 2008)	22 2008 2nd IEEE RAS & EMBS International Conference on Biomedical Robotics and Biomechatronics (BioRob 2008)	23	24	25
26	27	28	29	30	31	
Sun	Mon	Tue	Wed	Thu	Fri	Sat