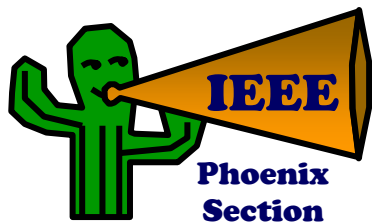


The Valley Megaphone

Newsletter of the
**Institute of Electrical and
Electronics Engineers, Inc.,
Phoenix Section**
November 2012,
Volume XXVI, Number 11



Executive Committee 2012

Chair

Ralph Hogan, 480-774-8227
rhogan@ieee.org

Vice Chair

Charles Weitzel, 480-292-0531
c.weitzel@ieee.org

Secretary

Barbara McMinn 602-371-6383
barbara.mcminn@aps.com

Treasurer

Bruce Ladewig, 480-620-9291
bruceladewig@ieee.org

Past Chair

Jim Hudson, 480-855-8987
jim.hudson@srpnet.com

Publicity

Surinder Tuli, 480-554-8275
Surinder.tuli@gmail.com

PACE

Mike Andrews, 602-682-5440
m.andrews@ieee.org

Membership

Vasudeva P. Atluri
480-227-8411
vpatluri@ieee.org

Student Activities

S.Diane Smith
602-749-4601
sdianesmith@computer.org

Conferences

Guoliang Xue
480-965-6218
xue@asu.edu

Awards

Vasudeva P. Atluri
480-227-8411
vpatluri@ieee.org

Inter-Society

Mike Andrews, 480-991-1619
m.andrews@ieee.org

Webmaster

Krishna Bharath 480-552-8913
kbharath@ieee.org

In this Issue of the Valley Megaphone: Table of Contents

(click on an item to go directly to it)

U – News	2
Student Branches	2
U – Newsbytes.....	2
IEEE Phoenix Scholarships.....	3
Signal Processing & Communications Society	5
CPMT Phoenix Chapter.....	7
Power & Energy Society.....	8
Solid State Circuits Society	10
IEEE EMC Society.....	11
Life Member Affinity Group.....	12
Women in Engineering Affinity Group.....	14
Computer Society	15
Wave and Devices.....	16
The Arizona Science Lab	17
2012 IEEE Phoenix Section Calendar	20
Phoenix Section Executive Committee Meeting.....	21
IEEE Membership Grade Advancement	24
Enhanced Senior Member Application Launched ...	24
IEEE USA E Book on Transition	24
IEEE-USA Government Fellowships:	25
IEEE Phoenix Section Annula Banquet.....	26
Phoenix Section LinkedIn Group.....	26

IEEE Phoenix Section on-line updates can be found at <http://ewh.ieee.org/r6/phoenix/> and on LinkedIn at:

<http://www.linkedin.com/groups?gid=2765918>

Please send announcements for the Valley Megaphone to Surinder Tuli at surinder.tuli@gmail.com and to Russ Kinner at r.kinner@ieee.org for inclusion in the Section Calendar.

The IEEE Banquet pictures are up, see <http://ewh.ieee.org/r6/phoenix/index.php>

All meetings announced in the Phoenix Section Megaphone or on the Phoenix Section Calendar are open to everyone (IEEE members and non-Members)

Chapters

Signal Processing & Communications

Pavan Turaga
TBD

pturaga@asu.edu

Computer Society

Jerry Crow

jerry.crow@computer.org

CPMT Society

Vasudeva P. Atluri
480-227-8411

vpatluri@ieee.org

Education Chapter

Martin Reisslein, 480-965-8593

reisslein@asu.edu

EMBS Chapter

TBD

EMC Society

Harry Gaul, 480-441-5321

harry.gaul@ieee.org

GOLD

Chaturvedi Gogineni
cogoginen@asu.edu

Power & Energy Society

Scott Freymuller 480-991-9191

scott@youngpower.com

Solid State Circuits

Mohamed Arafa

mohamed.arafa@ieee.org

Teacher-In-Service

Rickie Currens

Rickie.Currens@att.net

Waves & Devices Society

Steve Rockwell

steve.rockwell@ieee.org

Life Members

Barry Cummings

abarrycummings@gmail.com

Women In Engineering

Shamala Chickamenahalli

shamala.chickamenahalli@intel.com

U – News

(for Student Members)

Updates of Student Advisors and Committee Members

Each Student Branch noted on the right side of this page should review current information on Advisors and Student Committee Members and forward to my attention within this week, as we are reviewing contacts for reporting and activities including Student Monthly Meetings.

S. Diane Smith
602-749-4601
sdianesmith@computer.org
Student Activities Chair

Student Branches

ASU Main, Engineering
Chair: Ahmet Durgun,
480-371-7743, adurgun@asu.edu
Advisor: Cihan Tepedelenlioglu,
480-965-6623, cihan@asu.edu

ASU Main, Computer Society
Chair: TBD
Advisor: Guoliang Xue
480-965-6218, xue@asu.edu

ASU Polytechnic
Chair: TBD
Advisor: TBD

DeVry, Phoenix
Chair: Donovan Benedict
Don4ben5@gmail.com
Advisor: Diane Smith
dsmith2@devry.edu

DeVry, Computer Society
Chair: TBD
Advisor: Diane Smith
dsmith2@devry.edu

NAU, Engineering
Chair: TBD
Advisor: Niranjana Venkatraman
v.niranjana@ieee.org

Embry-Riddle, Prescott
Chair: Tim Lemm
timothy.lemm@erau.edu
Advisor: John E. Post
postj@erau.edu

U – Newsbytes

ASU Polytechnic is currently seeking Advisor for the Student Branch. Please email Diane (at email address above) with Recommendations.

Start your own MicroMouse and compete for cash prizes!

The Section has a full tournament sized MicroMouse maze. Funding for your project may be available. For details contact the Section Student Activities Chair, S. Diane Smith
sdianesmith@computer.org

- View pictures from the MicroMouse contest at the Southwest Area Spring 2010 meeting at <http://picasaweb.google.com/ieeegoldphx/2010IEEEESWASpringMeeting> (photography by David Huerta, GOLD Affinity Group Chair)

IEEE-PHOENIX Section Scholarships



IEEE

IEEE Phoenix Section Scholarships

- In 2013 the IEEE Phoenix Section will award \$1000 scholarships to three qualified applicants.
- Detailed information and the scholarship application form can be found at <http://ewh.ieee.org/r6/phoenix/Scholarships.htm>
- Application deadline is January 13, 2013

Dr S. Diane Smith
IEEE Phoenix Section
Student Activities Chair
sdianesmith@computer.org



IEEE

Phoenix Section Student Paper Contest

- Undergraduate students can win cash prizes and top entrants are eligible to present their paper at the IEEE Region 6 Southwest Area later in Spring 2013 .
- Detailed information can be found at <http://ewh.ieee.org/r6/phoenix/StudentPaper.htm>

**The submission deadline is
March 2, 2013**

**Dr S. Diane Smith
IEEE Phoenix Section
Student Activities Chair
sdianesmith@computer.org**

Signal Processing & Communications Society

Phoenix Chapter of IEEE Signal Processing Society and
Communications Society



Upcoming events

IEEE Distinguished Lecture

Machine-to-Machine: Vision, Technologies & Application to Smart Homes



Dr. Mischa Dohler

Centre Tecnologic de Telecomunicacions de Catalunya (CTTC), Barcelona, Spain.

Friday, Nov 16th 2012, 11:00am

ASU Campus, Usability Engineering Bldg., USE Room 104

Abstract:

The unprecedented communication paradigm of machine-to-machine (M2M), facilitating 24/7 ultra-reliable connectivity between a prior unseen number of automated devices, is currently gripping both industrial as well as academic communities. Whilst applications are diverse, the in-home market is of particular interest since undergoing a fundamental shift of machine-to-human communications towards fully automatized M2M. The aim of this keynote is thus to provide academic, technical and industrial insights into latest key aspects of wireless M2M networks, with particular application to the emerging smart home. Open technical challenges, along with the industry's vision on smart home developments, will be discussed during the talk.

Brief Biography: Mischa Dohler is now leading the Intelligent Energy [IQe] group at CTTC in Barcelona, with focus on Smart Grids and Green Radios. He is working on machine-to-machine, wireless sensor, femto, cooperative, cognitive and docitive networks. He also CTO of Worldsensing, an award-winning company with focus on Smart City solutions as well as wireless instrumentation solutions for construction, seismic acquisition, among others. In the framework of the Mobile VCE, he has pioneered research on distributed cooperative space-time encoded communication systems, dating back to December 1999. He has published more than 150 technical journal and conference papers at a citation h-index of 30 and citation g-index of 62, holds a dozen patents, authored, co-edited and contributed to 19 books, has given more than 30 international short-courses, and participated in ETSI, IETF and other standardisation activities. He has been TPC member and co-chair of various conferences, such as technical chair of IEEE PIMRC 2008 held in Cannes, France. He is Editor-in-Chief of ETT and is/has been holding various editorial positions for numerous IEEE and non-IEEE journals. He is Senior Member of the IEEE and Distinguished Lecturer of IEEE ComSoc. He had press coverage by BBC, Wall Street Journal, among others. He is fluent in 6 languages. From June 2005 to February 2008, he has been Senior Research Expert in the R&D division of France Telecom, France. From September 2003 to June 2005, he has been lecturer at King's College London, UK. At that time, he has also been London Technology Network Business Fellow receiving Anglo-Saxon business training, as well as Student Representative of the IEEE UKRI Section and

member of the Student Activity Committee of IEEE Region 8 (Europe, Africa, Middle-East and Russia). He obtained his PhD in Telecommunications from King's College London, UK, in 2003, his Diploma in Electrical Engineering from Dresden University of Technology, Germany, in 2000, and his MSc degree in Telecommunications from King's College London, UK, in 1999. Prior to Telecommunications, he studied Physics in Moscow. He has won various competitions in Mathematics and Physics, and participated in the 3rd round of the International Physics Olympics for Germany.

Modeling the Spontaneous Reaction of Mammalian Cells to External Stimuli



Prof. John Daigle
Director, Center For Wireless Communications
Electrical Engineering Department of Electrical Engineering
University of Mississippi

Tuesday, Nov. 13th 12:00 - 1:00pm
ASU Goldwater Center GWC 487

Abstract: Through analysis of experimental data, we demonstrate that cells communicate with their outside world in response to external stimuli and that this communication occurs in an orderly manner. We argue that the potential benefits of developing a high-fidelity model of the communication system has enormous potential in terms of enhancing the understanding of biological systems and that such understanding is a major step towards detection and treatment of disease. We discuss state-of-the-art mathematical and simulation models of the communication system. By focusing on analysis and the behavior of lysosomal enzymes within a cell in response to stimuli, we demonstrate that the understanding of the mechanisms and the protocols that govern this communication is far from complete. We discuss some major challenges and outline promising approaches to reaching the next level.

Brief Biography: Dr. John N. Daigle is Director of the Center for Wireless Communications and Professor of Electrical Engineering at the University of Mississippi, Oxford. He was formerly a Principal Engineer for the MITRE Washington Networking Technical Center. His experience in electrical communications dates back to 1970 and includes experience both in industry and academia. Prof. Daigle is a Fellow of the IEEE and has served as Editor-in-Chief of IEEE Network and IEEE Communications Surveys and Tutorials, and has served on the IEEE Communications Society's Board of Governors.

Please contact Chapter Chair Pavan Turaga (pturaga@asu.edu) to volunteer or propose a speaker for upcoming meetings.

CPMT Phoenix Chapter

CPMT- Packaging and Manufacturing Technology Society



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.



New Updates coming soon

IEEE CPMT Society Phoenix Chapter is seeking volunteers to serve as Chapter Officers for 2013.

IEEE CPMT Society Phoenix Chapter is seeking volunteers to serve as Chapter Officers for 2013. One has to be a member of IEEE CPMT Society to serve as the IEEE CPMT Society Phoenix Chapter Officer. If interested, please contact Dr. Vasudeva P. Atluri, Chair, IEEE CPMT Society Phoenix Chapter, by sending an email to vpatluri@ieee.org.

Power & Energy Society



IEEE Power and Energy Society
Phoenix Chapter

<http://ewh.ieee.org/soc/pes/phoenix/>



News and Announcements:

- **Check out the latest Plug-in Electric and Plug-in Hybrid Electric Vehicles at our luncheon on November 15th.** See flyer on next page for further details.
- At the IEEE Phoenix Section Annual Award Banquet, the Phoenix PES Chapter was named the Outstanding Chapter for 2011 (<http://ewh.ieee.org/soc/pes/phoenix/OutstandingChapterAward2011.JPG>). We would like to thank everyone who supports our Chapter by sponsoring and participating in our annual golf tournament and by attending our monthly luncheons.
- We are pleased to announce that our Chapter sponsored a \$1000 electrical engineering scholarship, which was awarded by the IEEE Phoenix Section in February. The deadline for the next round of scholarships is January 2013. For more details, visit <http://www.ewh.ieee.org/r6/phoenix/Scholarships.htm>.
- Want to know more about IEEE Power and Energy Society? Watch this video:
 - http://www.youtube.com/watch?v=BRKM4lpo_tk
 - More videos are available at: <http://ieee-pes.org/outreach/pes-informational-promotional-videos>
- Have you considered becoming a Senior Member of IEEE? It's not as difficult as you think. Basically, you need ten years of professional experience, and your bachelor's degree counts for three of those years. Find out more at: http://www.ieee.org/membership_services/membership/senior/index.html



IEEE Power and Energy Society
Phoenix Chapter
<http://ewh.ieee.org/soc/pes/phoenix/>



IEEE PES Phoenix Chapter: Plug-in Electric Vehicle / Plug-in Hybrid Electric Vehicle Showcase

Thursday, November 15th, 2012

- Time:** 11am: Registration
11:30am: Lunch
12pm: Technical Presentations
11am – 1:15pm: Cars available for show
- Location:** SRP PERA Club
1 E. Continental Dr.
Tempe, AZ
<http://ewh.ieee.org/soc/pes/phoenix/images/PERAMAP.pdf>
- Speakers:** Car manufacturer representatives will give a short technical discussion regarding their PEV/PHEV
- Topic:** Technical presentation on: charging capability, drivetrain, type of engine, charging system, maximum driving distance, future improvements
- Cost:** \$5 for attendees; \$FREE for students
- Reservations:** Register by emailing Nancy Hinkle (Nancy@youngpower.com) or Stacy Benetos (Stacy@youngpower.com) since the IEEE website is down due to the storm (<http://ewh.ieee.org/soc/pes/phoenix/lunch1204.php>).
- Please register by Monday, November 12th at 12 PM.

More information regarding the PES Phoenix Chapter can be found at:
<http://ewh.ieee.org/soc/pes/phoenix/>

Solid State Circuits Society



INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS



Solid State Circuits Society --Phoenix Chapter

Seminars are Free & Open to Non-IEEE Members

Silicon Nanopore Systems for Molecular Sensing

Dr. Michael Goryll – Arizona State University

November 7, 2012 12pm to 1 pm

ASU GWC 487

Modeling the Spontaneous Reaction of Mammalian Cells to External Stimuli

Dr. John N. Daigle - University of Mississippi

November 13, 2012 12pm to 1 pm

ASU GWC 487

Spur-Free Switching Power Converters for Analog and RF Loads

Dr. Ayman A. Fayed Iowa State University

November 30, 2012 12pm to 1 pm

ASU GWC 487

These talks are co-sponsored with ASU Connection One

SSCS-PHX Chapter Website: http://www.ieee.org/go/sscs_phx

Contact: Cyndi Recker (cyndi.recker@ieee.org), SSCS-PHX Chapter Chair

EMC Society

Technical Meeting



Announcement on Printed Circuit Board EMC Design Review

Date: Tuesday, November 13th, 2012

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 in Garcia's, 6PM Dinner in Garcia's, 7PM Meeting in Embassy Suites Junior Ballroom (upstairs)

Title: Printed Circuit Board EMC Design Review

Speaker: Daryl Gerke PE, Kimmel-Gerke Associates Ltd

Abstract: As EMC consulting engineers, we are often asked to conduct EMC design reviews. A key area of concern is the printed circuit board -- critical circuits, stackup, trace routing, I/O protection, and more. The goal is to catch problems early in the design stage, when it is inexpensive (or even free) to fix them. Knowing what to look for, you can do simple EMC design reviews yourself. You may not catch everything, but if you eliminate 90% of the problems, you are 10x (20 dB) better than before. This presentation will address twelve of those EMC design concerns.

Biography: Daryl Gerke, PE, is a partner with Kimmel Gerke Associates Ltd, an engineering consulting firm that specializes in EMI/EMC design issues. Daryl has been involved with EMC for over 40 years, and has been a full time consulting engineer for 25 years. Daryl has a BSEE from the University of Nebraska, and is a Registered Professional Engineer (PE) and a NARTE Certified EMC Engineer. He is the vice-chairman of the Phoenix EMC Society Chapter, and resides in Mesa, AZ.

Reservations: To help us get an accurate headcount, please send an RSVP email to Harry Gaul (harry.gaul@ieee.org). There is no charge for meetings, but you pay for your own meal and drinks. 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.

Life Member Affinity Group



Technical Meeting December 4, 2012

Topic:

"When it comes to Solar Modules, Bigger can be Better"

Presenter - Shields Thomas Fair

Presenter Bio: Applications and Design Engineer for Motorola Semiconductor Products in Phoenix AZ, 1963-1969. Manager, Dickson Electronics Maquiladora assembly facility, Agua Prieta, Sonora Mexico 1970 – 1972, 600 employees. Founder / President, Aztek Inc. maquiladora factory, Agua Prieta, Sonora Mexico, 1973-1986, 400+ employees, manufacturing and assembling electronic subassemblies for US and Canadian companies. 1980 – 1986, Founder / President, MEXSAT, sa de C.V., with offices in the major cities in Mexico. Had first license in Mexico to "design, manufacture, sell and install SATELLITE TELEVISION equipment in the country". 1986- 1994, Consultant to Fortune 500 companies: Motorola, Siemens, 3-M, Levolor, others, setting up manufacturing facilities for them "off shore". 1995 to date, manufacturing consultant, design engineering, entrepreneur.

When: Tuesday, December 4, 2012, 11:00am – 1:00pm, Registration fee is \$15.

AFFINITY GROUP MEETING

Election of Officers

Please provide a nomination for any office if you or your nominee is willing to serve.

Nominated Candidates at this time are:

Chair: No nominee at this time

Vice Chair: Michel Ebertin

Secretary: Tom Lundquist

Treasurer: Leslie Daviet II

Program Chair: Ronald L. Sprague, P.E.

Where: SRP's **PERA Club** Bighorn Room,
1 East Continental Drive, Tempe, AZ
West of 68th St., ½ mile south of McDowell Road

RSVP: Please respond to Program Chair, Ronald Sprague by email:
rsprague@q.com (Q.com) at least 5 days before the meeting.

The Program Chair is seeking suggestion from members for future technical presentations. Any ideas of interest are open for consideration. Please contact Ronald Sprague Program Chair at rsprague@q.com or any officer with ideas.

About IEEE Phoenix Section Life Member Affinity Group:

The IEEE Phoenix Section Life Member Affinity Group was organized to enable IEEE Life Members to retain active IEEE associations, contribute to the social good in their communities, advance IEEE's professional interests and enjoy each other's company.

An IEEE member automatically becomes an IEEE "Life Member" status when at least 65 years of age and the sum of your current age and years of membership is 100. For more details use the link

http://www.ieee.org/web/volunteers/mga/home/life_members_committee/index.html

Activities: Annual technical meetings scheduled in February, May, October, and December. Elections are held at the December meeting.

Technical meeting topics and suggested speakers are encouraged. Contact any Officer.

Future Technical Meetings:

- Tuesday, December 4, 2012 SRP PERA CLUB
- Tuesday, February 12, 2013 SRP PERA CLUB
- Tuesday, May 14, 2013 SRP PERA CLUB
- Tuesday, October 15, 2013 SRP PERA CLUB
- Tuesday, December 3, 2013 SRP PERA CLUB

Officers:

Chair	A. Barry Cummings	Barry.Cummings@srpnet.com
Vice Chair	Michel Ebertin	Michel@ebertin.net
Secretary	Tom Lundquist	Tom.Lundquist@ieee.org
Treasurer	Leslie Daviet II	lesdavietii@cs.com
Program Chair	Ronald L. Sprague, P.E.	rlsprague@q.com
Past Chair	C Bruce Johnson	cbjsg@q.com

Women in Engineering Affinity Group



IEEE Phoenix Section
Women in Engineering
Affinity Group



On October 18th the IEEE Phoenix Section **Women in Engineering (WIE) Affinity Group (AG)** met at Intel's facility in Chandler to listen to a panel of women discuss how to successfully transition from school to work. Four speakers shared their experiences and lessons learned throughout their careers. Fourteen women attended, including several engineering students. Thank you to all our excellent speakers for sharing their wisdom with us.



On November 16th, **WIE** will be supporting the Arizona Science Lab (ASL) by volunteering to help students in grades 4 through 9 learn about rockets. The ASL was founded in February 2009 as a non-profit volunteer group managed by the IEEE. More information about ASL can be found on their website at www.azsciencelab.org. This will be the second time this year Phoenix Section **WIE** members have participated as volunteers with ASL. If you are interested in future opportunities to help **WIE** inspire the next generation of engineers, please contact Shamala Chickamenahalli (email below).

WIE is also planning an event for Monday, December 3rd. LeeAnn Torkelson, Principle Engineer in the Transmission Analysis department at Salt River Project, will be speaking on the process for planning high-voltage electric transmission lines at a state, regional, and national level. The event is free, and all interested parties are welcome to attend. The event will be held at SRP's main building (1521 N. Project Drive, Tempe 85281) from 5:30 pm to 7:00 pm. Light refreshments will be provided. Further details, including a link to the registration site, will be sent to the **WIE** distribution list.

If you would like to be added to our distribution list for further information about this and future events, please contact Diane Watkins (diane.watkins@srpnet.com).

If you would be interested in helping to organize any of our activities or have suggestions for other activities or speakers for future events, please feel free to contact any of our Executive Committee members:

- Chair: Shamala Chickamenahalli (Shamala.Chickamenahalli@intel.com)
- Vice-Chair: Joy Harris (joyelle.j.harris@intel.com)
- Secretary / Publicity: Diane Watkins (diane.watkins@srpnet.com)
- Treasurer: Diane Smith (diane@web-oasis.com)
- Web Master: Audrey Skidmore (ASkidmore@azmag.gov)
- Membership: Lesley Polka (lesley.a.polka@intel.com)
- Region 6 Liaison: Barbara McMinn (barbara.mcminn@aps.com)

The IEEE WIE Affinity Group's mission is to inspire, engage, encourage and empower IEEE women worldwide with a vision of creating a community of IEEE women and men innovating the world of tomorrow. More information about IEEE WIE can be found at: http://www.ieee.org/membership_services/membership/women/women_about.html.

Computer Society



Phoenix Chapter of the IEEE Computer Society November, 2012

News

- We are planning a chapter picnic for November. The picnic will be at Desert Breeze Park in Chandler and will be held on Saturday, November 17th. See below for additional detail.
- Chapter elections for officer positions for 2013 will be held at the chapter meeting in November. If you are interested in an officer position in 2013 please contact one of the current officers.

Future Events

- November 14 – Chapter meeting, DeVry University, speaker Dr. Gil Speyer, PhD, graphical processing units and their applications, with focus on medical imaging.
- November 17 – Chapter Picnic, Desert Breeze Park, Chandler. There will be a nominal charge to cover the food and ramada rental. Tickets may be purchased in advance via PayPal or at the event (cash only). This is a family event; kids are welcome.
- January 9, 2013 – Chapter meeting, location TBD, speaker Michèle Stuart, PI, JAG Investigations, Internet Evidence searching.
- March 6, 2013 – Chapter meeting, location TBD, speaker, TBD.

Meetings start at 6:00 pm with networking and light refreshments followed by the presentation at 7:00 pm. DeVry University is located at 2149 W Dunlap Avenue, Phoenix.

Visit the CS Chapter website for the latest information: <http://ewh.ieee.org/r6/phoenix/compsociety/>.
For brief announcements regarding upcoming events we are also on Twitter: @IEEECS_PHX

If you would like to suggest a topic or speaker for any of our future meetings, please contact one of the chapter officers:

Jerry Crow (jerry.crow@computer.org)
Brad Morantz (bradscientist@ieee.org)
Audrey Skidmore (askidmore@computer.org)
Diane Smith (sdianesmith@computer.org)



Wave and Devices



INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
WAVES AND DEVICES - Phoenix Chapter

New Updates coming soon

The Arizona Science Lab



THE ARIZONA SCIENCE LAB®

The IEEE "Arizona Science Lab" (ASL) was launched in February 2009. It is a volunteer group operating under the management of the IEEE, a 501(c)(3) organization, that engages retired and employed engineers, scientists and teachers, university students and other professionals in enhancing the STEM learning of grade 4 thru' 9 students, stimulating their interest in STEM subjects, and inspiring them to pursue studies and future careers in STEM subjects.

- ASL workshops are provided free of charge to all public and charter schools in Maricopa County and especially to State Grade "C" and "D" and Federal "non-AYP" and "Title 1" schools. The ASL is supported by the IEEE, Nina Mason Pulliam Charitable Trust, APS, Verizon, and the Tempe Elementary School District No. 3.
- The permanent location of the Arizona Science Lab is in the Meyer School Facility in Tempe!
- The teachers bring their grade 4 to 9 science class (up to 60 students) to the Arizona Science Lab for a full day immersion in a Science Workshop.
- Each Science Workshop, in a lab setting, is supported by expert volunteers who conduct a project-based lesson plan, complete with demonstrations, lecture, experiments, and a construction project in a single 3 - 4 hour session.
- Each Workshop is conducted by a group of retired, employed and university student engineers who are highly qualified in math, physics, computers, electronics, power generation & distribution, structures, thermal, chemistry, materials science, and computer software. Our instructional staff has years of real world application experience in the sciences. They relate the theory being taught to everyday applications.
- The teachers choose a Workshop from a list of ready-to-run Workshops that support the Common Core and Arizona Science Education Content Standards.
- ASL's rigorous Metrics Program, that includes guidance and support from two
- shows a 4 to 13% improvement in student STEM knowledge, understanding and motivation after each workshop.

Each Workshop emphasizes the WOW factor of hands-on construction projects and experiments!!!

**Rickie Currens,
Executive Director- Arizona Science Lab**

THE ARIZONA SCIENCE LAB®

Meyer School Facility, 2615 South Dorsey Ln, Tempe, AZ 85282-2799

www.arizonasciencelab.org

IEEE ASL MEMBER POSITION DESCRIPTION

The primary objective of the IEEE “Arizona Science Lab” program is to encourage grade 4 - 9 students to become interested in science, technology, engineering and math (STEM) and to pursue studies and a career in STEM, and to reverse the widely acknowledged continuous downward trend of the number of students opting for studies and careers in STEM. The secondary objective is to encourage retired engineers and scientists, employed engineers and scientists, retired teachers, university engineering students, and anyone with an interest in science and a practical aptitude to become engaged with the students and share their knowledge, expertise and passion for engineering and science with them.

To accomplish these two objectives ASL uses teams of 6 – 8 volunteers to put on fully provisioned project-based science lesson plans for grade 4 – 9 schools throughout the Phoenix metro area, in our facility in Tempe, with all the volunteers, equipment and supplies being provided at no cost to the teacher or school or students.

See some short videos at this link: http://www.azsciencelab.org/Videos_Photos.php

Position Description:

IEEE ASL Members are volunteers who provide academic and career support to grade 4 thru’ 9 students during one day Workshops in the IEEE “Arizona Science Lab.” Members teach students science and help them perform experiments and construct projects that reinforce the science they have been taught. Members advise students on studies and careers in science and engineering.

In each workshop there are two different positions available:

- **Teacher:** responsible for giving the lectures and running the demonstrations
- **Supporter:** responsible for working with the students on experiments and the construction projects

Qualifications & Responsibilities:

- Retired or employed engineer or scientist or teacher, or university engineering or science student, or anyone with an interest in science and an aptitude for hands-on activities
- Enthusiasm for science, technology, engineering and math (STEM)
- Desire to share knowledge and experience with grade 4 thru’ 9 students
- Desire to help students learn and enjoy science
- 1 year overall commitment preferred
- Commit one day in a week at least twice a month as a Workshop Teacher or Project Supporter
- Actively participate in IEEE ASL Group meetings to review program status, discuss issues and ideas, review lesson plans, etc.
- Complete Arizona State required criminal background check and Independently Verified Fingerprint (IVP) clearance (processing fee will be paid by IEEE ASL)

TISP/ASL Provided Training and Orientation:

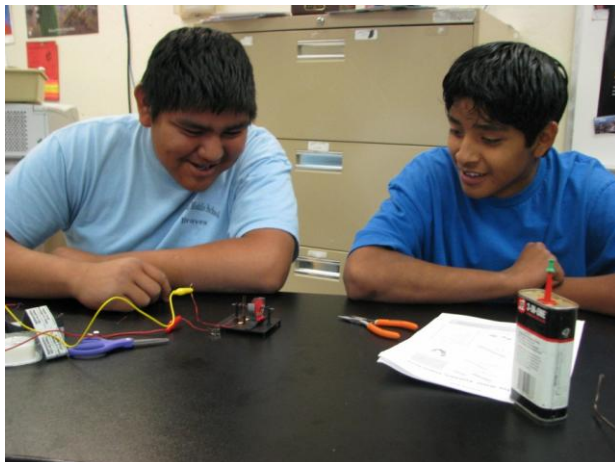
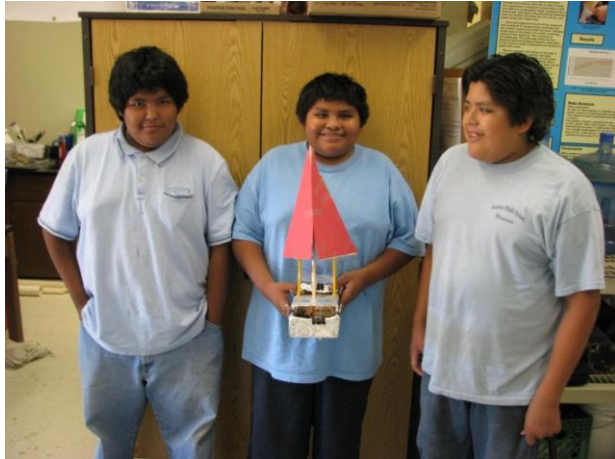
- Understand how IEEE ASL operates
- Deepen your teaching skills

- Expand your tutoring and support techniques
- Increase your sensitivity to different cultures and age groups

Benefits:

- Access to free trainings and workshops
- Opportunity to make a difference in a child's life and in your community
- Share the excitement and "Wow Factor" the students have when they complete and test their project
- Be a small part of helping create a better world for tomorrow — students will remember these workshops and your help and advice for a very long time!

The "Wow!" Factor In The IEEE ASL Lessons



**Michel Ebertin
Stuart Wecker**

**Contact Information:
ASL Director of Volunteer Recruitment
ASL Executive Director**

**mebertin@azsciencelab.org
swecker@azsciencelab.org**



**“Helping Students Transfer
What Is Learned In The
Classroom To The World Beyond”**

2012 IEEE Phoenix Section Calendar



The calendar is updated by the Vice Chair on a rolling basis.
TBD

You may access the IEEE Phoenix Section Calendar of Events at:

<http://ewh.ieee.org/r6/phoenix/Calendar.htm>

For inputs and updates to the Calendar, please contact the IEEE Phoenix Section
Charles Weitzel, 480-292-0531 c.weitzel@ieee.org

- November 2012
 - o Election of new officers
 - o 2013 budget proposal
 - o Start ad for Student Paper Contest and Scholarships
 - o Student Industry Mixer: TBD



Executive Committee Meeting Phoenix Section

Venue: Phoenix Airport Hilton 2435 S 47th St, Phoenix, AZ, 85034 ([map](#))
Tel.: 480-804-6017

More Info: Meetings are held on the first Tuesday of the month, 6–8 PM.

All interested IEEE members are welcome to attend.

Contact: Ralph Hogan, 480-774-8227
rhogan@ieee.org

Please note change in the Timing November Meeting Starts at 5:30PM

Agenda

- **Election of Section Officers**
- Section Officer Reports
 - Vice Chair – Chuck Weitzel: Calendar of Activities
 - Secretary – Barbara McMinn: Meeting Minutes
 - October Meeting Minutes
 - Treasurer – Bruce Ladewig : Monthly report
 - October Monthly Report
 - Proposed Section Budget for 2013
 - Past Chair – Jim Hudson
- Society Chapter and Affinity Group Reports
 - Components, Packaging and Manufacturing Technology (CPMT) – Vasu Atluri
 - Computer Society (CS) – Jerry Crow
 - Education Society (EdSoc) – Martin Reisslein
 - Electromagnetic Compatibility (EMC) – Harry Gaul
 - Engineering in Medicine and Biology Society (EMBS) – TBD
 - Graduates of the Last Decade (GOLD) – Chaturvedi Gogineni
 - Life Members Affinity Group (LMAG) – Barry Cummings
 - Power & Energy Society (PES) – Scott Freymuller
 - Signal Processing & Communications (SP/Com) – Pavan Turaga <pturaga@asu.edu>
 - Solid State Circuits Society (SSCS) – Cyndi Recker
 - Waves & Devices (WAD) – Steve Rockwell
 - Women in Engineering (WIE) - Shamala Chickamenahalli
- Student Branch Reports [Advisor]
 - Student Activities Chair – Diane Smith
 - ASU Main, Engineering – Ahmet Cemal Durgun
 - ASU Main, Computer Society – Nicholas Vaidyanathan [Guoliang Xue]
 - ASU Polytechnic – TBD [TBD]

- DeVry, Phoenix –Diane Smith
- DeVry, Computer Society – Lori Renaldi

- Embry Riddle – James Fernando [John E. Post]
- NAU, Engineering – Kenji R. Yamamoto [Niranjan Venkatraman]
- NAU, Computer Society – TBD [TBD]
- Standing Committee Reports
 - Awards – Vasu Atluri
 - Inter-Society – Mike Andrews
 - Professional Activities Committees for Engineers (PACE) – TBD
 - Membership – Vasu Atluri
 - Phoenix Conferences – Guoliang Xue
 - Publicity – Surinder Tuli
 - Teacher In-Service Program (ASL)– Rickie Currens
 - Web –Krishna Bharathkrishna
- New Business
- Adjourn

SMART Competition opens for high school students

News and Updates

October 19, 2012



Contact Michael Andrews
m.andrews@smartcompetition.org
(602) 682-5440

SMART Competition opens for high school students

The SMART Competition (www.smartcompetition.org) is a STEM and Career and Technology Education (CTE) education program that provides high school students with a practical real-world design challenge that addressed the smart grid, intelligent building design, energy efficiency, localized power generation and green buildings. The students create an innovative solution to a design problem faced by technical professionals everyday as they try to make schools function more efficiently.

According to Mark Schneider, Director of Bentley Systems and co-chair of the SMART design team, *"The competition is an ideal opportunity for students, either in the classroom or in informal learning environments to get hands-on practical experience in engineering design, building information modeling, energy analysis and intelligent design using software tools used by engineering professionals."*

The SMART Competition is a new high school STEM education program designed to challenge students to develop solutions to a real-world campus redesign project. The solution will include elements of localized power generation, the smart grid, power distribution and delivery, electric vehicles, architecture, the environment, community, livability and sustainable technology. The ultimate goal of the program is to create student interest in pursuing STEM related careers, higher education and university studies in a variety of technical disciplines.

As part of the competition, students use commercial software design tools and a global technical support infrastructure. The Competition, by promoting intellectual investigation, promotes academic achievement, career preparation, teamwork and other 21st century skills essential for in-demand occupations within high-growth industry sectors. The computer design and simulation skills give students with the capability to work for engineering and design firms while in school or immediately following graduation.

The competition is open to all high school students who attend public, private, parochial, charter and home-based schools or participate in informal education programs. The competition is designed to attract all students without regard or bias of gender, race, socio-economic or academic performance level.

For additional information, contact Mike Andrews, m.andrews@smartcompetition.org

IEEE Membership Grade Advancement

IEEE Phoenix Section Executive Committee encourages all to apply for advancement in membership grade to Senior Member and Fellow Grade. Please review the requirements at www.ieee.org. Please contact IEEE Phoenix Section Membership Development Chair, Dr. Vasudeva P. Atluri, at vpatluri@ieee.org for additional information.

Enhanced Senior Member Application Launched

Effective 29 July 2011, IEEE Admission and Advancement launched a [new Senior Member Application](#). The new application includes numerous enhancements, based on feedback from volunteers and members, including:

- New user friendly format / design
- Secure environment (need IEEE Web account)
- Ability to save application in “draft” form
- Ability to upload resume or Curriculum Vitae (up to 3 MB)
- Applicant can view application online
- Applicant can view status of requested reference forms
- References will be notified by email to provide applicant reference
- References will have the ability to view their completed reference form(s)
- Real time application status

The goal is to provide prospective Senior Members with an easy to use and intuitive interface, while streamlining internal operations at the same time. [View the new Senior Member application](#).

IEEE USA E Book on Transition

IEEE-USA E-Book E-Books to Members in September and October Feature Career Survival and Writing for Success:

IEEE-USA is offering two free e-books to IEEE members the next two months as a special benefit of IEEE membership. In September members can receive “The Best of IEEE-USA Today’s Engineer on Career Survival.” In October, the free featured publication will be “Writing for Success -- An Engineer’s Guide, Volume 1: Designing for Success.” “The Best of Today’s Engineer on Career Survival” is a compilation of career-focused articles from “IEEE-USA Today’s Engineer” that can help you find success in a challenging job market. We all need the ability to survive in a changing world, and engineers need a better awareness about the evolving business ecosystem and what those changes mean. The articles in this e-book will help to increase your situational awareness of the marketplace, which in turn, can help you with career planning and developing sustainable job skills. You’ll also learn how to assess the market and yourself, how to stay competitive, and what steps to take to thrive in the job market. “The Best of Today’s Engineer on Career Survival” can be downloaded at <http://www.ieeeusa.org/communications/ebooks/files/wisao2sf/Best-of-TE-On-Career-Survival-V1.pdf> for free to IEEE members. The nonmember price is \$5.99. The purpose of “Writing for Success -- An Engineer’s Guide, Volume 1: Designing for Success” is to inspire and help engineers to approach their writing tasks with the same confidence and skill they take to the technical problems that confront them -- so that emails, reports, test-plans, and other documents they write are as useful, successful and valued as their engineering efforts. “Writing for Success – An Engineer’s Guide, Volume 1: Designing for Success” will be available for members to download in October.

IEEE-USA Government Fellowships:

2013-2014 IEEE-USA Government Fellowships

Each year, IEEE-USA sponsors three qualified IEEE members to serve as government fellows: one Engineering & Diplomacy Fellow and two Congressional fellows. The fellows spend a year in Washington – from September to August each year – serving as advisers to the U.S. Congress or key U.S. Department of State decision-makers. IEEE-USA's Government Fellowships link engineers with government, providing a mechanism for IEEE-USA members to learn firsthand about the public policy process through personal involvement.

The congressional fellowship consists of an appointment to the personal staff of a U.S. Senator or Congressman, or to the professional staff of a Congressional Committee. For an application Kit for the 2013-2014 Congressional Fellowship Program, visit: <http://ieeeusa.org/policy/govfel/congfel.asp>

The State Department fellowship offers an opportunity for an engineer to provide technical expertise to the State Department, and help raise awareness of the value of engineering input while learning about and contributing to the foreign policy process. For an application Kit for the 2013-2014 Engineering & Diplomacy (State Department) Fellowship Program, visit:

<http://ieeeusa.org/policy/govfel/state.asp>

The postmark application deadline for 2013-2014 Fellowships is 8 February 2013. For more information, visit: <http://ieeeusa.org/policy/govfel/congfel.asp>

Phoenix Section Annual Banquet 2013

IEEE Phoenix Section Annual Banquet 2013 IEEE Phoenix Section is holding an Annual Banquet on Saturday, February 9th, 2013, from 6:00 PM to 10:00 PM at Hilton Phoenix Arizona Grand Ballroom located at 2435 S. 47th Street, Phoenix, Arizona – 85034 (Tel: 480-894-1600). The focus of annual banquet is to 1. Showcase IEEE and Phoenix Section Activities, 2. Provide a forum for member networking, 3. Recognize contributions of members, non-members, faculty, students, and corporations by presenting awards and 4. Acknowledge the work of section officers and volunteers.

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. All members are encouraged to block their calendars to attend the annual banquet to be held on Saturday, February 9th, 2013.

Guests and non-members are also encouraged to attend. Nominate peers and others for recognition at the annual banquet by accessing nomination forms and student scholarship applications at

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

. Access banquet registration forms at the website.

For additional questions and inquiries, contact Dr. Vasudeva P. Atluri, Annual Banquet 2013 Chair, at (480) 227-8411 (Cell) and by email at vpatluri@ieee.org

or Dr. Charles E. Weitzel, Annual Banquet 2013 Vice Chair, at (480) 292-0531 (Cell) and by email at c.weitzel@ieee.org

Phoenix Section LinkedIn Group

If you are interested in professional networking and shared Section related updates & discussions join the [IEEE Phoenix Section Group on LinkedIn](#). Signing up only takes minutes and is free. A job board is available as well.

Faculty opening at Embry-Riddle

Electrical Engineering faculty opening at Embry-Riddle, Prescott. For more information, search available positions at Prescott at www.erau.edu/jobs or contact Dr. Ed Post at postj@erau.edu.