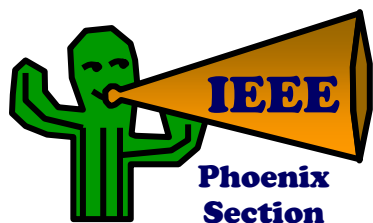


The Valley Megaphone



Newsletter of the Institute of Electrical and Electronics Engineers, Inc., Phoenix Section November, 2016 Volume XXX, Number 11

Executive Committee 2016

Chair

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Vice Chair

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Secretary

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Treasurer

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Past Chair

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Publicity

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PACE

TBD

Membership

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Student Activities

S.Diane Smith, 602-749-4601
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Conferences

TBD

Awards

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In this Issue of the Valley Megaphone: Table of Contents

(Please Click on the heading below to go directly to
that page)

U – News	2
Student Branches	3
Special Event.....	4
Upcoming Conferences.....	7
CPMT Phoenix Chapter	8
Communication Society.....	12
Computer Society.....	13
EMC Society.....	15
Power & Energy Society.....	17
Waves & Devices.....	18
Life Member Affinity Group.....	20
IEEE Phoenix Section News	22
Phoenix Section Executive Committee Meeting.....	23
Phoenix Section LinkedIn Group.....	24
Phoenix Section on Social Media.....	24
IEEE Membership Grade Advancement	25
IEEE Member's Benefit.....	27

IEEE Phoenix Section on-line updates can be found at
<http://sites.ieee.org/phoenix/> and on LinkedIn
at: <http://www.linkedin.com/groups?qid=2765918>
and on Facebook at:
<https://www.facebook.com/IEEEPhoenixSection>

Please send announcements for the *Valley
Megaphone* to Wei Xu at Wei.Dr.Xu@ieee.org for
inclusion in the Section Calendar.

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

Chapters

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Computer Society

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CPMT Society

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EMBS Chapter

TBD

EMC Society

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Power & Energy Society

Josh Gorman
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Solid State Circuits

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Teacher-In-Service

Rickie Currans
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Waves & Devices Society

Steve Rockwell
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Life Members

Les Daviet II
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Women In Engineering

Phoebe Henson
480-888-6396
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Young Professionals

Jennifer Taggart, 928-581-5198
jennifer.taggart@asu.edu

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

Update from ASU Polytechnic Student Branch

The club is going through a transition process at the moment. With several of the officers graduating, myself included, Josh Carroll and I are working to fill the seats. He will update you with the names of the new board members. Due to time constraints the club was unable to begin any of the projects that they wanted to create. The coming fall semester will have some changes to allow the members more freedom in exploring their interests. We also plan on collaborating with the robotics club to work on some troubleshooting as well as projects both clubs are interested in. With the help of Dr. Parsey the club plans to have a much more productive fall semester.

Elizabeth Long
IEEE ASU Poly Chapter - Vice President
Ira A. Fulton School of Engineering
Arizona State – Polytechnic
elalong2@asu.edu

Student Branches

ASU Main, Engineering

Chair: Ngoni Mugwisi
480-567-4299,
ieeasuchair@gmail.com
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 Main, Power and Energy Society

Chair: Nikita Singhal
nsinghal@asu.edu
Co-Chair: Deepak Ramasubramanian
dramasu1@asu.edu
Advisor: Kory Hedman
kory.hedman@asu.edu

ASU Polytechnic

Chair: Josh Carroll
jkarroll@asu.edu
Elizabeth Long
Elizabeth.a.long@asu.edu
Advisor: : Dr. John M. Parsey, Jr.,
480-727-5279
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DeVry, Phoenix – Engineering

Chair: Jacob Dietz
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Vice Chair: Desiree Nielsen
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Advisor: Roger S. Gulledge
602-749-4586
rgulledge@devry.edu

DeVry, Phoenix – Computer Society

Chair: Lisa Rodi
lisamarierodi@gmail.com
Vice Chair: Thomas Varland
T.varland2@gmail.com
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602-749-7397
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Advisor: Roger S. Gulledge
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rgulledge@devry.edu

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Chair – Andrea Gonzalez
andrea0611.ag@gmail.com
Vice Chair – Nahtasha Conzalez
nmgonzalez3397@gmail.com
Advisor – Roger S. Gulledge
602-749-4586
rgulledge@devry.edu

NAU, Engineering

Chair: Taylor Bruce
tab383@nau.edu
Advisor: Julie Heynssens
Julie.Heynssens@nau.edu

Embry-Riddle, Prescott

Chair: Lisa M. Ferguson
FERGUSL2@my.erau.edu
Advisor: John E. Post
postj@erau.edu

Update from DeVry University IEEE Student Branch

On behalf of the Engineering, Computer Society, and the WIE Chapters of DeVry University we thank the Outgoing student leaders who have done so much to further the good name and reputations of the IEEE and DeVry University. These folks have performed an outstanding service to the community through their dedication to outreach events such as the 2015 Arizona State Fair STEM Exhibit and the 2016 SkillsUSA Arizona State Championships. Thank you Diego, Oscar, Alan, and Jason.

We welcome the new leadership team as listed elsewhere in this newsletter. Please reach out to these outstanding men and women to create great synergies our independent organizations can achieve through collaboration in the IEEE Phoenix Section.

The Arizona State Fair is rapidly approaching (October 7 – 30, 2016) so all efforts are being directed to creating the static displays and the workshops that are its hallmark. All student branches and the all IEEE members are encouraged to not only attend the Fair and stop by the STEM Exhibit but to contribute projects for display at the Exhibit. As in years gone by, we gratefully acknowledge the great support of the Phoenix Section and its Executive Committee. We look forward to a great school year!

For the IEEE Student Branch, Computer Society Chapter, Women in Engineering Affinity Group
Roger S. Gullledge
Professor, College of Engineering and Information Sciences
Councilor, IEEE Student Branch
DeVry University, Phoenix Arizona
rgullledge@devry.edu

A Generous Challenge in Support of Arizona Science Lab

The Arizona Science Lab (ASL), an IEEE Phoenix Section Program, is one of the most impactful programs with which our Section has been involved. Recently, it caught the attention of Mr. Gary Tooker, Former Chairman and CEO of Motorola, Inc. and an IEEE Life Member, who has offered to match up to **\$50,000** in a dollar-to-dollar challenge of all donation raised from IEEE Phoenix Section Members **between now and December 31st, 2016**. In order to take full advantage of Mr. Tooker's generosity, the Phoenix Section Executive Committee is working with the IEEE Foundation to raise funds in support of ASL. Mr. Tooker said "We encourage all our IEEE Phoenix Section Members to join Diane and me in supporting the great work of ASL in exciting more young people to pursue STEM courses and careers".



Arizona students' rank 35th in the nation according to standardized testing in science and math. This unique program offers hands-on, project-based science workshops for more than 2,000 students in grades 4-8 each year. The workshops are taught by expert, credentialed engineers and scientists that include IEEE members and others.

Launched in February 2009, ASL is a volunteer group operating under the management of the IEEE, a 501(c)(3) organization. ASL volunteers, including retired and employed engineers, scientists and teachers, university students and other professionals create exciting Science, Technology, Engineering, and Mathematics (STEM) based workshops for the students and deliver them from the Evans Learning Center facility located in Tempe, Arizona. These workshops stimulate the student's interest in STEM subjects, and inspire them to pursue studies and future careers in STEM related fields.

This experimental based learning offers the students a window into the world of science, technology, engineering and mathematics (STEM) through a unified lesson including scientific principles, social relevance, experimental demonstrations, and hands-on engineering project construction activities. This program, offered **free of charge** to all grade 4-8 student classes in the **greater Phoenix area**, responds to the growing concern that not enough students are adequately prepared to enter into the fields of science, technology, engineering and/or mathematics (STEM). A key focus of ASL is serving the needs of underserved students in low performing schools with a State Grade of "C" and "D" and Federal "non-AYP" and "Title 1" schools.



ASL is supported by our sponsor organization, community partners, and IEEE members like you. Learn more about ASL at www.azsciencelab.org.

IEEE Phoenix Section Executive Committee requests all members to help us reach our challenge match by making a generous donation to this worthwhile cause. Donations can be made online to the IEEE Foundation [https://ieeefoundation.org/support_azsciencelab] or mailed to IEEE Foundation, 445 Hoes Lane, Piscataway, New Jersey 08854, USA. Consider the range of gifts necessary to meet the challenge and **let us know where you fit in!**

1 gift of \$10,000 = \$10,000,	3 gifts of \$5,000 = \$15,000,	5 gifts of \$1,000 = \$5,000
10 gifts of \$500 = \$5,000,	20 gifts of \$250 = \$5,000,	100 gifts of \$100 = \$10,000

If circumstances don't allow you to make a gift at one of the above levels, we would be happy to accept a donation of any amount.

Contact Mr. Rickie Currens at rickie.currens@att.net and Dr. Vasudeva Prasad Atluri at vpatluri@ieee.org for additional information and clarifications.

Thank you for helping us help the youth of the greater Phoenix Area embrace the wonders of STEM!



THE ARIZONA SCIENCE LAB

Evans Learning Center, 4525 S. College Ave, Tempe, AZ

www.azsciencelab.org

ASL VOLUNTEER POSITION DESCRIPTION

The primary objective of the IEEE “Arizona Science Lab” program is to encourage students in grades 4 - 8 to become interested in science, technology, engineering and/or math (STEM) so they might pursue studies and a career in one of these fields. Through interactive workshops the ASL program is trying to reverse the widely acknowledged continuous downward trend in the number of students opting for studies and careers in STEM. The secondary objective of the ASL 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 both of these objectives, ASL offers science workshops, executed by a team of teachers and 5-7 volunteers, to student classes in grades 4-8 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/workshop-videos.html>

Position Description:

IEEE ASL Volunteers provide the academic and career support to grade 4 - 8 students during these 4 hour one day workshops in the IEEE Arizona Science Lab. Volunteers teach students science and help them perform experiments and construction projects that reinforce the science they have been taught. Volunteers also advise students on studies and careers in science and engineering.

In each workshop there are two different positions:

- **Teacher:** responsible for giving the lectures and managing the demonstrations.
- **Supporters:** 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 - 8 students
- Desire to help students learn and enjoy science
- 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.

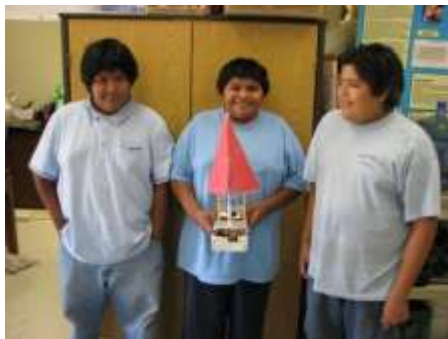
TISP/ASL Provided Training and Orientation:

- 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 Lesson Workshops



For more information: visit our website: www.azsciencelab.org OR contact:

Richard Hrusovsky ASL Director of Volunteer Recruitment
Stuart Wecker ASL Executive Director

rhrusovsky@azsciencelab.org
swecker@azsciencelab.org





Upcoming Conferences in Region 6

Hello IEEE Student Members!

[IEEE Green Energy and Systems Conference \(IGESC 2016\)](#) will be held at Pyramid, CSULB, Long Beach, CA 90840, USA, November 7, 2016.

[IEEE 3rd World Forum on Internet of Things \(WF-IoT\)](#) will be held in Reston VA USA, 12-14 December 2016.

[International Conference on Consumer Electronics \(ICCE\)](#) will be hosted Las Vegas NV, in Region 6, for the 35th year, on Jan 8-11, 2017.

[IEEE Rising Stars Conference](#), will be held in Las Vegas, NV, Jan 2-4, 2017.

Making the Future

Like many engineers I was inspired to get into technology partly due to the Science Fiction books I read when I was young. I try to keep up with the genre now, but it is difficult to find the time to read all of the great new SF stories as well as watch all the new movies and TV shows. These stories inspired me to think what life would be like with new technology and to want to have a hand in creating the technology that would enable the future. I was not alone. I am sure that many of my readers were also inspired (and frightened) by the worlds of tomorrow...

Today the tools available to us exceed greatly those of the past in terms of their precision and scale. As a consequence, we have detected gravity waves with transcontinental measuring devices and may soon have gravity wave observatories that, combined with electromagnetic and other observational devices (including satellites), can probe the deepest secrets of space.

For designers of electrical devices, we have development kits that span the needs of hobbyists to professional system designers. This has spawned a whole generation of makers and hackers who don't consider that they own a device unless they know what makes it work and can program and fix it themselves. While most users of modern consumer products don't have such interests there is a growing group that do. These are a new breed of inventors and engineers. The ultimate goal for many of these creators is to program devices and perhaps ultimately matter itself.

Technology and its applications create wealth and this wealth in the hands of curious and ambitious people can lead to bold and innovative approaches. These include the creation of many ways to provide universal Internet access using satellites, balloons and drones promoted by companies such as Google and Facebook. This also drives the creation of driver assistance technology and ultimately cars that drive themselves.

SpaceX, Blue Origin and Virgin Galactic along with many other companies are working to create a commercial space industry with goals of inexpensive satellite launches, space tourism and ultimately the mining of extraterrestrial resources and mankind's move to new worlds. Ultimately these efforts will move mankind towards a full Type 2 civilization where we control the resources of our solar system and generate new levels of wealth and opportunity.

The future is enabled and shaped by engineers. It is our responsibility to create tomorrow's technology, but also to clarify the ethics of how technology should be used. IEEE is working on shaping the future as well as developing public policies to make these technologies serve the needs of humanity. However, IEEE is not some abstract entity, it is an organization of individual people. We need your help and imagination in the IEEE to create this future and a better life for future generations.

Tom Coughlin
Director, IEEE Region 6
tom@tomcoughlin.com



IEEE Components, Packaging and Manufacturing Technology Society Phoenix Chapter

2016 Executive Committee for CPMT Chapter for IEEE-Phoenix Section

Position	Name	Phone Contact	Email Contact
Chair	Dr. Mahesh K. Shah	(480) 544-9438	mkshah@ieee.org
Asst. Chair	Mr. Vivek Gupta	(480) 734-2366	vmgupta@msn.com
Secretary	Dr. Rao Bonda	(480) 786-7749	r.bonda@ieee.org
Treasurer	Mr. David Dougherty	(480) 245-8099	david.dougherty@nxp.com
Program Chair	Dr. Vasudeva P. Atluri	(480) 227-8411	vpatluri@ieee.org
Asst. Program Chair	Bharat Penmecha	(480) 552 2511	bharat.penmecha@ieee.org
Tutorial & Workshop Chair	Dr. Vasudeva P. Atluri	(480) 227-8411	vpatluri@ieee.org
Website Co-Chair	Marc Liciardi		marc@dfxengineering.com

If anyone is interested to serve the Phoenix Chapter in any capacity, please send contact Chapter Chair (mkshah@ieee.org) or any other committee members listed above.

Tentative Schedule for Monthly Seminars

Date	Topic	Speaker
Jan. 20, 2016	Understanding and Managing the Key Cost Drivers in PCB Design to Optimize Performance and Cost	Marc Licciardi
Feb. 17, 2016	Roadmaps As We Approach The End of Moore's Law Scaling	Dr. Bill Bottoms
Mar. 23, 2016	System Level IC Packaging - An Overview of the Technology	Mike Kelly
Apr. 27, 2016	Design for Signal Integrity in a "Material" World	Chudy Roosevelt Nwachukwu, Intel Corp.
May. 11, 2016	Analyses of Oxide Ferroelectrics on GaN by Sol-Gel and MOCVD	Prof. Sandwip K. Dey, ASU
Jun. 6, 2016	Understanding the Optical, Thermal, and Electrical Performances of LED and their Relationship to Efficiency of Solid-State Lighting	Prof. Shi-Wei Ricky Lee, HKUST
Jul. 13, 2016	Recent Advances and New Trends in Semiconductor Packaging	Dr. John H. Lau
Aug. 17, 2016	Fluxless Thermo-Compression Bonding Process for 3-D Interconnect	Dr. Katsuyuki Sakuma
Tuesday, Sep. 20, 2016	On-Chip Embedded Cooling of Power and Logic Components	Prof. Avram Bar-Cohen
Oct. 12, 2016	Current and Future of Microelectronic Packaging	Darvin Edwards
Nov. 16, 2016	2.5D and 3D IC Technology for Electronic Microsystems: Design Considerations and Experimental Demonstrations	Prof. Muhannad S. Bakir
December	No meeting Planned	



The IEEE Phoenix Section, CPMT Society Chapter is seeking nominations for the following elected Section officer positions for the 2016 term:

- Chair
- Asst. Chair
- Secretary
- Treasurer

Additionally, the Nominating Committee is seeking candidates for some of the following non-elected appointed standing committee Chair positions for the 2016 term:

- Program Chair
- Tutorial Chair
- Workshop Chair
- Publicity
- Web Master

Society officers must be IEEE and CPMT members. Self-nominations are acceptable.

Please send nominations or any questions to any member of the Nomination Committee via an email.

Dr. Mahesh Shah (Current Chair): mkshah@ieee.org
Dr. Vasudeva Atluri (Past Chair): vpatluri@ieee.org

Deadline for Nominations is midnight, Sunday, December 4, 2016.



IEEE Components, Packaging and Manufacturing Technology Society Phoenix Chapter

Wednesday, November 16th, 2016 at 5:30 PM

2.5D and 3D IC Technology for Electronic Microsystems: Design Considerations and Experimental Demonstrations

Dr. Muhannad S. Bakir

Professor

School of Electrical and Computer Engineering

Georgia Institute of Technology

Atlanta, Georgia, USA

+1-404-385-6276, muhannad.bakir@mirc.gatech.edu

ABSTRACT

This presentation will address innovative interconnection and integration technologies for electronic microsystems. First, we discuss a highly scaled through-silicon via (TSV) technology for fine-grain heterogeneous electronic integration; we demonstrate TSVs with diameter of less than 1-micron for a wide range of applications. Next, we present innovative thermal solutions for 2.5D and 3D integration platforms using microfluidic cooling; the performance of a 28 nm CMOS FPGA with monolithic microfluidic cooling is demonstrated. Moreover, we analyze the thermal implication of silicon bridge technology in 2.5D systems. We also describe innovative 'thermal isolation' technologies in which thermal coupling between 3D IC stacks is minimized using an air-gap isolation and mechanically flexible interconnects. Lastly, an innovative sacrificial micro-fabricated self-alignment technology is also discussed as part of this application (sub-1 micron alignment accuracy is demonstrated without the use of a flip-chip bonder).

BIOGRAPHY



Dr. Muhannad Bakir is a Professor in the School of Electrical and Computer Engineering at Georgia Tech. His areas of interest include three-dimensional (3D) electronic system integration, advanced cooling and power delivery for 3D systems, biosensors and their integration with CMOS circuitry, and nanofabrication technology. Dr. Bakir is the recipient of the 2013 Intel Early Career Faculty Honor Award, 2012 DARPA Young Faculty Award, and 2011 IEEE CPMT Society Outstanding Young Engineer Award. In 2015, Dr. Bakir was elected by the IEEE CPMT Society to serve as a Distinguished Lecturer for a four-year term. Dr. Bakir and his research group have received more than twenty conference and student paper awards including five from the IEEE Electronic Components and Technology Conference (ECTC), four from the IEEE International Interconnect Technology Conference (IITC), and one from the IEEE Custom Integrated Circuits Conference (CICC). Dr. Bakir's group was awarded the 2014 Best Paper of the IEEE Transactions on Components Packaging and Manufacturing Technology in the area of advanced packaging. Dr. Bakir is an Editor of *IEEE Transactions on Electron Devices* and an Associate Editor of *IEEE Transactions on Components, Packaging and Manufacturing Technology*.

Date: Wednesday, November 16th, 2016

Location: Constellation Room, NXP Semiconductors, Discovery Business Center, 2108 E. Elliot Road, Tempe, Arizona.

Note New Address – Park on east side of campus – New main entrance on south side facing Elliot Road
Sign in at the security station to obtain visitor pass BEFORE 5:45 PM - Present Valid Photo ID.

You will be escorted to the meeting room. Within the building you should always be escorted.

Agenda: 5:30–6:00 PM: Social/Refreshments, 6:00–7:00 PM: Presentation, 7:00 PM: Dinner
(Pizza and Soda will be provided by the IEEE Phoenix Section CPMT Society Chapter)

IEEE members and non-members are all welcome to attend. The presentation promptly starts at 6:00 PM.

PLEASE NOTE THE CHANGE OF ENTRANCE (NEXT PAGE)



IEEE

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.



IEEE COMPONENTS, PACKAGING AND
MANUFACTURING TECHNOLOGY SOCIETY



Entrance from
Elliot Road



SP-COM Phoenix Chapter

Please join our Google Group!

Please join our increasingly popular Google group to get the most up-to-date information about the society's activities. We have now over 50 members who are availing of this facility. Email traffic is thin, and used only to send meeting notices. No spam !

<https://groups.google.com/d/forum/ieee-sp-com-phoenix-chapter>

In addition, we continue to post meeting notices on IEEE vtools at (<https://meetings.vtools.ieee.org/main>)



Phoenix Chapter of the IEEE Computer Society

November, 2016

Meetings

The dates for our upcoming meetings in 2016 & 2017 are shown below. All are second Wednesdays and all meetings begin at 6:00 pm and end at 9:00 pm.

- December 14th DeVry University, Phoenix
- April 12th DeVry University, Phoenix

Speakers are confirmed for both of these meetings. Note that we normally meet in February, but next year we intend to cancel the February meeting in lieu of the IEEE Awards Banquet which will be held the weekend following our normal meeting date. If this decision changes, we will notify you.

Our presenter on December 14th will be Mark Goldstein of International Research Center. Mark is a well known speaker in Phoenix and has presented to the computer society on multiple occasions in the past. Mark will provide us with an update on the Internet of Things.

Presentation

The IEEE Computer Society Phoenix Chapter Presents:
Internet of Things Innovations & Megatrends Update
With Mark Goldstein, President, International Research Center
Wednesday, December 14, 2016 from 6:00-9:00 PM

Presentation: Mark Goldstein, President of International Research Center will explore the next Internet wave, the Internet of Things (IoT), expected to connect tens of billions of new sensors and devices in the coming years. Waves of change will roll through home, business, government, industrial, medical, transportation, and other complex ecosystems. Join us as we examine how IoT will be implemented and monetized creating new business models from pervasive sensor deployments and data gathering, accompanied by new privacy and security risks. Come and explore IoT's roadblocks and operational challenges, emerging standards and protocols, gateway and wireless integration, and big data strategies and opportunities.

Speaker: Mark Goldstein is President of International Research Center (<http://www.researchedge.com/>), providing consulting, custom research, and strategic support for business, legal and public policy clients across a variety of disciplines and arenas since 1992. IRC concentrates on clients' needs in the complex worlds of telecommunications, information technology, eCommerce, eContent, eLearning, the Internet, biotechnology and other domains by harnessing global information resources for informed decision making. He also represents Sustainability Partners (<http://www.gsvsp.com/>), a transformative finance company that provides full funding for sustainable energy and conservation projects under a shared savings model.

Mark is a technophile and technology visionary, activist, advisor, and entrepreneur with extensive experience and connections throughout myriad technology sectors. He is involved with a number of policy, economic development, professional, and trade groups, and a frequent speaker and trainer. Mark previously worked for 18 years in electronic and computer engineering including 12 years managing engineering teams and projects for Medtronic, a Fortune 500 biomedical device manufacturer. He worked in the mid-seventies for MicroAge in R&D at the beginning of the personal computer revolution.

Logistics: The next chapter meeting will be held on Wednesday, December 14th, at DeVry University, Phoenix Campus, at 2149 W. Dunlap Ave., Phoenix, AZ 85021 (about 1 mile east of I-17 on Dunlap Ave.). There is no charge to attend. The meeting will begin at 6:00 PM with light refreshments and networking followed by the presentation and Q&A from 7:00-9:00 PM.

We are seeking volunteers for assistance in the operation of the chapter, from program acquisition to meeting preparation to the officer positions. If you are interested in volunteering or would like to suggest a topic or speaker for a future meeting, please let one of the officers noted below know via email.

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

Chair	Jerry Crow	jerry.crow@computer.org
Vice-chair	Dr. Brad Morantz	bradscientist@ieee.org
Secretary	Audrey Skidmore	askidmore@computer.org
Treasurer	Diane Smith	sdianesmith@computer.org
Webmaster	Audrey Skidmore	askidmore@computer.org



IEEE Phoenix EMC Chapter Meeting Announcement

Facts about Decoupling Capacitors and PCBs!

Date: Thursday, November 10, 2016

Time: 5:30 PM: Networking, Dinner and Drinks (food and beverages provided, donations encouraged), 7:00 PM: Presentation

Speaker: Bruce Archambeault, PhD
www.brucearch.com

Location: Compliance Testing, LLC
1724 S. Nevada Way, Mesa, AZ 85204
Phone 480.926.1775
www.compliancetesting.com

RSVP: Please respond to glen@southwestemi.com so we have an approximate head count. Everyone is welcome to attend – you do not need to be an IEEE member – just interested in EMI/EMC.

TECHNICAL PROGRAM

Facts about Decoupling Capacitors and PCBs!

The number and location of decoupling capacitors on PCBs is a hotly debated topic. Some engineers claim the capacitance values should cover a wide range of values, while others claim a single value is best. Some claim the capacitors should be close to the IC, and others want to distribute them across the PCB. This talk will examine the various conflicting recommendations myths about decoupling and help understand the true role of decoupling capacitors and how to optimize the design while maintaining low power noise.

SPEAKER BIOGRAPHY



Dr. Bruce Archambeault is a IBM Distinguished Engineer (emeritus) at IBM in Research Triangle Park, NC.

He received his B.S.E.E degree from the University of New Hampshire in 1977 and his M.S.E.E degree from Northeastern University in 1981.

He received his Ph. D. from the University of New Hampshire in 1997. His doctoral research was in the area of computational electromagnetics applied to real-world EMC problems.

In 1981 he joined Digital Equipment Corporation and through 1994 he had assignments ranging from EMC/TEMPEST product design and testing to developing computational electromagnetic EMC-related software tools.

In 1994 he joined SETH Corporation where he continued to develop computational electromagnetic EMC-related software tools and used them as a consulting engineer in a variety of different industries.

In 1997 he joined IBM in Raleigh, N.C. where he is the lead EMC engineer, responsible for EMC tool development and use on a variety of products. During his career in the U.S. Air Force he was responsible for in-house communications security and TEMPEST/EMC related research and development projects.

Dr. Archambeault has authored or co-authored a number of papers in computational electromagnetics, mostly applied to real-world EMC applications.

He is currently a member of the Board of Directors for the IEEE EMC Society and a past Board of Directors member for the Applied Computational Electromagnetics Society (ACES).

He has served as a past IEEE/EMCS Distinguished Lecturer and Associate Editor for the IEEE Transactions on Electromagnetic Compatibility.

He is the author of the book "PCB Design for Real-World EMI Control" and the lead author of the book titled "EMI/EMC Computational Modeling Handbook"



IEEE Power and Energy Society Phoenix Chapter

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



IEEE PES Phoenix October 2016 Luncheon Meeting

Date: Friday, November 18th, 2016

Time: 11:30 - 11:45 am: Registration
11:45 am: Lunch
12:00 pm: Program

Location: SRP's PERA Club
1 E Continental Dr,
Tempe, AZ 8528

Speakers: Kip Pollay - Dykman

Topic: Dare to Compare Motor Presentation

Cost: \$8.00 (No cost if you are a college student)

Reservations: Contact Monica at (602) 470-0400 or email distribution@gorman-co.com.
Reservations deadline is NOON on Wednesday October 19th, 2016.

Presentation Outline:

Dykman will bring some of the leading motor manufacturers IEEE841 spec product and tear down for viewing from the inside out. The manufacturers included in the presentation will be from GE, Toshiba, TECO Westinghouse, Siemens, Baldor, US Motors, WEG, and Marathon. The reason we choose the 841 spec is simply because it is the tightest motor spec available and is known as each manufactures top offering. With a tight spec, they should be close to the same. But the presentation will show that all motors are not built the same. We will discuss the components of the electric motors starting with the hardware, end bells, rabbit foot connections, nameplates, j-boxes, ground lugs, safety hooks and more. These materials do not necessarily make the motor run better but gives insight to if manufactures product is being built by cutting corners, going the extra mile, or somewhere in between. We then direct our attention to the meat and potatoes of these offerings starting with the fans, bearing systems, rotor and stator, core plate material, insulation values, thermal margin, balancing procedures, tropicalization coating, and windings. We encourage questions and participants to be hands on.

Biography:

Kip Pollay joined team Dykman in September of 2014. Most of his adult working life was spent as an electrical contractor in a third generation family owned business which was sold in 2006. He was then employed by City Electric Supply as a branch manager and worked with them until accepting an offer from Dykman in 2014. Kip handles numerous accounts for Dykman Phoenix in power generation, municipal, agriculture, and more. Outside of the office Kip is a dedicated husband to Becky, and a father of four boys. He is an avid outdoorsman and has been a high school football coach for over 20 years. In what little time is left, he enjoys spending time in his music studio.

IEEE Phoenix Valley Megaphone November, 2016
INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
WAVES AND DEVICES - Phoenix Chapter



Meeting Free & Open to Non-IEEE Members
6:00 to 7:30PM, Thursday, September 15, 2016
Arizona State University
Goldwater Center, GWC487
650 E. Tyler Mall, Tempe, AZ



METROPOLIS

The Waves and Devices chapter will host a viewing of the landmark science fiction film “Metropolis”.
A planning meeting will be held just prior to the showing. All are welcome to attend the planning meeting.



Abstract: This influential German science-fiction film presents a highly stylized futuristic city where a beautiful and cultured utopia exists above a bleak underworld populated by mistreated workers. When the privileged youth Freder (Gustav Fröhlich) discovers the grim scene under the city, he becomes intent on helping the workers. He befriends the rebellious teacher Maria (Brigitte Helm), but this puts him at odds with his authoritative father, leading to greater conflict.

Biography: "Fritz" Lang (December 5, 1890 – August 2, 1976) Austrian-German filmmaker, screenwriter, and occasional film producer and actor. One of the best-known émigrés from Germany's school of Expressionism, he was dubbed the "Master of Darkness" by the British Film Institute.

Refreshments: An assortment of appetizers, entrees, desserts, and drinks (non-alcoholic) will be available.

For more information <https://meetings.vtools.ieee.org/m/41734>, or contact:

Steve Rockwell, WAD Chapter Chair (480) 241-9891 steve.rockwell@ieee.org
Curtis Scott, WAD Chapter Vice-Chair (623) 703-9177 curtis.scott.us@ieee.org
Trevor Thornton, WAD Chapter Secretary (480) 965-3808 t.thornton@asu.edu

Agenda:

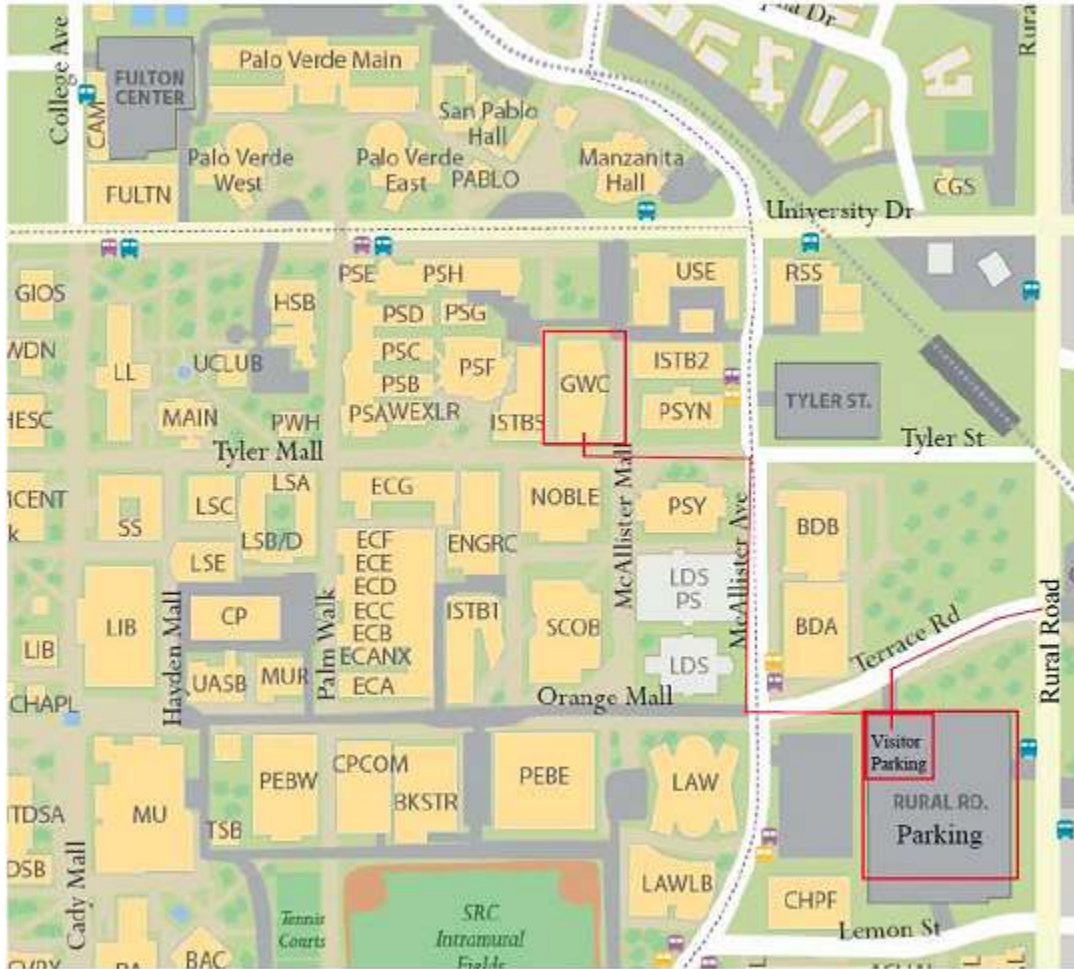
6:00 pm	Executive Committee planning meeting
6:30 pm	Film showing, food service, and social time

Date: Wednesday, November, 16, 2016

Time: 6:00-8:30 PM Presentations (Food and drink provided)

Location: Goldwater Center, GWC487, Arizona State University, [650 E. Tyler Mall, Tempe, AZ](#)

Goldwater Center – GWC – Room 487
Building is across from Noble Science Library





Technical Presentation and Administrative Meeting

Meeting Tuesday December 20, 2016

Program Presentation: "Research Outside the Confines of Traditional R&D"

by

Dr. William Chappell, Director, DARPA Microsystems Technology Office

Abstract: The U.S. Defense Advanced Research Projects Agency (DARPA) has had a long history in foreshadowing large scale shifts in technology. Programs currently within the Microsystems Technology Office (MTO) are on the cusp of changing several technological landscapes in the MEMS, Photonics, Processing, SiGe, and GaN communities. This talk will cover these specific technologies in detail, while attempting to predict the impact of these technologies for future National Security issues.

Bio: Dr. Chappell received his Bachelor of Science (summa cum laude), Master of Science, and Doctorate of Philosophy degrees in Electrical Engineering, all from the University of Michigan.

Currently Dr. Chappell serves as director of the Microsystems Technology Office (MTO) where he focuses the office on three key thrusts important to national security including ensuring unfettered use of the electromagnetic spectrum, building an alternative business model for acquiring advanced DoD electronics that feature built-in trust, and developing circuit architectures for next-generation machine learning.

Prior to his role as MTO director, Dr. Chappell managed DARPA programs on adaptable radio frequency (RF) systems and low-cost antenna array technologies. If these programs become fully successful, they will result in the deployment of RF components that provide the DoD with unperturbed access to the electromagnetic (EM) spectrum while enhancing society's ability to connect by way of the same EM resource.

NOTE MEETING STARTS AT 11 AM

Meeting Agenda:

11AM: Attendee introductions

11.05AM Lunch

11:20AM Program Presentation

12:30PM Nominations from the floor for Officers positions

If you are a member you know are willing to accept an officers position you may nominate by responding back to tom.lundquist@ieee.org or at the December 20th meeting. We particularly are in need for a PROGRAM Chair nominee as Barry Perlman is unable to continue.

12:35PM Vote for Officer Nominees

12:45 Admin. Meeting / Officers

Where: SRP's **PERA Club Bighorn Room**,

1 East Continental Drive, Tempe, AZ

Continental is West of 68th St., ½ mile south of McDowell Road

Enter the Private PERA Club and follow drive to large parking lot. Big Horn is small building at South East corner of lot.

When: Tuesday December 20, 2016 - **11:00am – 1:00pm**, Registration fee is \$15. This fee will include lunch provided by the PERA Club. Students attending will not pay the fee.

Lunch: TBD

RSVP: Please advise Ronald Sprague r.sprague@ieee.org if you plan to attend so accounting for lunch is possible.

Technical Presentations: The Program Chair is seeking suggestion from members for future presentations and/or tours of local facilities of interest. Please contact Barry Perlman Program Chair at barry.perlman@gmail.com.

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.

Future Technical Meetings: All meeting are scheduled at the SRP PERA CLUB. It is suggested you put these dates on your calendar to attend the meetings.

- Tuesday December 20,2016

The Officers are as indicated below.

Officers:

Chair	Leslie Daviet II	lesdaviatii@gmail.com
Vice Chair	Jim Tang	JFTANG@cox.net
Secretary	Tom Lundquist	tom.lundquist@ieee.org
Treasurer	Gary Frere	gary.frere@gmail.com
Membership	Rao Thallam	Rao.Thallam@gmail.com
Facilities	Ron Sprague	r.sprague@ieee.org
Program	Barry Perlman	barry.perlman@gmail.com
Past Chair	Barry Cummings	abarrycummings@gmail.com



IEEE Phoenix Section News

IEEE Phoenix Section Officer Terms

At the November 3, 2015 Executive Committee (ExCom) meeting of the IEEE Phoenix Section officers and representatives of the affiliated Chapters and Affinity Groups, a decision was made to change the term of IEEE Phoenix Section Officers from one year to two years in accordance with the bylaws the Phoenix Section operates under. The rationale of this decision included operational efficiency and effectiveness of individuals being in a position for two years and thus more able to implement improvements; program continuity and planning; and improved section operations.

Per the Phoenix Section website (<http://sites.ieee.org/phoenix/about/section-bylaws/>), the Phoenix Section is “required to operate in accordance with IEEE Constitution, Bylaws, Policies, and the MGA Operations Manual.” Per Section 9.4.F.7.b. of the MGA Operations Manual:

- “The term of office for all officers shall be one or two years. A Section must define the officer term as one or two years and record it in its local operating procedures document; if the officer term is not recorded in the local operating procedures document, it shall be two years. An individual may continue in the position until a successor has been duly elected and takes office.”

There may be times when an individual is unable to serve for two years in a position so annually the Nominating Committee will confirm with each officer their willingness and ability to serve in the specific position for the second year of their term. If someone needs to drop out after their first year or be replaced, the Nominating Committee will identify replacements and place them on the ballot for election. Typically, the officer succession plan is to request individuals serving as officers to progress through the various positions but this is not a requirement.

The purpose of this notice is to record the decision reached regarding Phoenix Section Officers serving two year terms. Please contact any of the Phoenix Section Officers if you have questions or input. Thank you.

Executive Committee Meeting

No meeting of Executive Committee in July & August

Normal meetings are on first Tuesday of the month from 6:00 PM to 8:00 PM

The Airport Hilton Phoenix,
2435 S 47th St. Phoenix, AZ 85034, (480) 894-1600.

2016 Executive Committee

Chair:	Bruce Ladewig
Vice Chair:	Surinder Tuli
Secretary:	Vivek Gupta
Treasurer:	Mahesh Shah
Past Chair:	Barbara McMinn

Executive Committee Meetings

Date:	First Tuesday of every month, except July and August
Time:	6:00 – 8:00 p.m.
Location:	Hilton Phoenix Airport, 2435 South 47th Street, Phoenix, AZ 85034

IEEE Phoenix Section: Calendar of Activities

For any questions and inputs regarding the calendar of activities, please contact Dr. Surinder Tuli, Vice Section Chair, at Surinder.tuli@gmail.com.

November 2016

Election of 2017 Officers
2017 budget development
Start advertising for Student Scholarships, Nominations due January
Start advertising for Phoenix Section Awards
Nominations due November
Need to determine how much money needs to be transferred from the Investment Account

December 2016

Declare Election of 2017 Officers
2017 Budget Development
Report of Section activities for the year
Appoint chairs of Section committees
Annual Banquet:

- Finalize speaker
- Email program
- Section Award Nominations Due; Student Scholarship applications due January


IEEE Senior Member and Fellow Grade

IEEE Phoenix Section Membership Development would like to nominate eligible IEEE Members from the Section to Senior Member and Fellow Grades. Please review the requirements at www.ieee.org for eligibility.

Eligible candidates are requested to send in their resumes to Dr. Vasudeva P. Atluri, Membership Development Coordinator, at vpatluri@ieee.org and Dr. Bruce Ladewig, Section Chair, at bruceladewig@ieee.org for consideration.

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.

You can also go to IEEE Phoenix Section LinkedIn page by clicking  button on the [IEEE Phoenix Section home page](#)

IEEE Phoenix Section Ventures into Social Media

You can access the web page three ways:

Use the URL: <https://www.facebook.com/IEEEPhoenixSection>

Click on the Facebook logo  link from [IEEE Phoenix section home page](#).

Search for IEEE Phoenix Section from your Facebook page.

We need following help.

1. Each of you access the IEEE Phoenix Section Web page and click on "Like" hyperlink.
2. Go on the Friends section of the page and "Invite Your Friends." Once you click on Invite button, it will get your email contact list. Your facebook contact list will already be populated with your Facebook friends and you can simply click the Invite button next to their name. Please invite as many friends as you can.
3. Provide me the contents for posting on a regular basis - meeting/ event announcements, Event pictures, Videos.
4. Start some discussion topics under - Status section.

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 Senior Member Nomination Drive

IEEE Phoenix Section Executive Committee started a Senior Member Nomination Drive on July 18th, 2016. The Executive Committee encourages eligible members from the Section to upgrade their membership to Senior Member grade. IEEE Phoenix Section will assist by nominating eligible candidates. Each nomination has to be endorsed by at least two IEEE Senior Members or Fellows who submit online references. Two additional eligible members may also submit online references. Additional information about Senior Member grade can be obtained by accessing https://www.ieee.org/membership_services/membership/senior/index.html.

To get the nomination process started send your updated detailed resume which should include the following information to the Section Membership Development Chair and Co-Chair whose contact information is shown below:

1. IEEE Member #, business address, personal and business telephone #s, as well as personal and business email addresses. These should be mentioned on first page preferably under the name.
2. Start and end dates for all the educational degrees pursued in mm/dd/yyyy format. The nomination cannot be completed without this information.
3. Start and end dates for all professional experiences preferable in mm/dd/yyyy or mm/yyyy format.
4. Key summary of professional accomplishments.
5. Awards and honors received.
6. Patents, Publications, and Presentations in the technical literature format.
7. Professional Affiliations.
8. Any Other Significant Achievements.

Full names, member numbers, and email addresses of at least two and up to four active IEEE Senior Members and Fellows who can provide a reference in support of your nomination should be provided. IEEE Phoenix

Section Executive Committee may be able to help you find qualified members from IEEE Phoenix Section who can provide references to support your IEEE Senior Member nomination based on your resume and brief discussion with you.

The Phoenix Section Senior Membership Drive has been very successful in submitting 56 Senior Membership nominations as of August 19, 2016. This would not have been possible without the generous support of the following IEEE Senior Members and Fellows who have provided references in support of these nominations:

Dr. Peter Aaen	Dr. Jiangqi He	Prof. Antonia Papandreou-Suppappola
Mr. David F. Abdo	Prof. Kory W. Hedman	Prof. John Parsey
Prof. Ali Abedi	Prof. Gerald T. Heydt	Dr. Suraj Patil
Dr. Ankur Agrawal	Prof. Walter G. Hopkins	Dr. Lesley A. Polka
Dr. Kemal Aygun	Prof. Shane R. Johnson	Prof. John Edward Post
Dr. N. Rao Bonda	Prof. George Karady	Mr. Steve K. Rockwell
Dr. Henning Braunisch	Prof. Mohsen Kavehrad	Dr. John Sadowsky
Dr. Ronald O. Brown	Prof. Jonathan Kimball	Dr. Mahesh K. Shah
Prof. Chaitali Chakrabarti	Mr. Russell H. Kinner	Dr. James C. Smith
Prof. Lawrence Clark	Mr. Mark W. Kroll	Prof. S. Diane Smith
Prof. Alina Deutsch	Dr. Khosrow Lashkari	Prof. Andreas S. Spanias
Prof. Deepakraj M. Divan	Dr. Ning-Cheng Lee	Dr. Joe Staudinger
Prof. Babak Fahimi	Dr. Ravi V. Mahajan	Prof. David Thiel
Dr. Stephen Fitzhugh	Dr. L. M. Mahalingam	Mr. Surinder K. Tuli
Prof. Paul G. Flikkema	Mr. Debendra Mallik	Prof. Pavan Turaga
Dr. Sankaranarayanan Ganesan	Prof. Margaret R. Martonosi	Dr. Phani Charana Vallabhajosyula
Dr. Douglas A. Garrity	Mr. William Maxwell	Prof. Dragica Z. Vasileska
Mr. Glen Gassaway	Ms. Barbara J. McMinn	Prof. Vijay Vittal
Prof. Stephen M. Goodnick	Prof. Darryl Morrell	Prof. Sarma Vrudhula
Dr. Deepak Goyal	Mr. Chuck Mullett	Dr. Charles E. Weitzel
Mr. Vivek Gupta	Dr. Mirembe Musisi-Nkambwe	Dr. Xiaoning Ye
Ms. Barbara Blake Haney	Mr. Dorin Panescu	Mr. Brian Zahnstecher
Dr. Kenneth A. Hansen	Prof. Guang-Wen (George) Pan	

IEEE Phoenix Section Executive Committee extends sincere thanks to the above listed Senior Members and Fellows for their support with the Senior Member Drive and look forward to their continuing support.

IEEE Phoenix Section Executive Committee plans to submit additional Senior Membership nominations during 2016 for review at the last 2016 IEEE Admission & Advancement meeting scheduled for Saturday, November 19, 2016, in New Brunswick, New Jersey, USA. The online nomination and references must be submitted by Sunday, November 6th, 2016.

If interested in helping with IEEE Senior Membership Nomination Drive in the future, send us an email.

Vasudeva Prasad Atluri, PhD
Chair – Membership Development
IEEE Phoenix Section
Email: vpatluri@ieee.org

Charles E. Weitzel, PhD
Co-Chair – Membership Development
IEEE Phoenix Section
Email: c.weitzel@ieee.org

IEEE Member's Benefits



Job Seekers

Look for job postings and other career opportunities in IEEE Collabratec. Visit the Opportunities section to:

- Search job listings and filter by location, interest, and posting date.
- Manage your saved job listings for quick reference and review.

There are over 2,100 job posted in IEEE Collabratec in technical areas such as:

- Communications (signal processing), *over 1,000 jobs posted*
- Energy, *over 600 jobs posted*
- Information Technology, *over 600 jobs posted*
- Nuclear and Plasma Sciences, *over 300 jobs posted*
- Biomedical Engineering, *over 300 jobs posted*
- Cybersecurity, *over 100 jobs posted*

Have Recruiters Find You

Make yourself visible to recruiters who represent the top technology firms in their respective industries. Get started by enabling your Employment Preferences under the Settings tab in Opportunities. Identify your desired interest in areas such as:

- Job type (Full-time, Part-time, Temporary, Internship)
- Preferred amount of business travel
- Willingness to relocate
- Employer location (Country, State, City)
- Annual salary

Upload your CV/Resume to further enhance your visibility to recruiters. Recruiters will be searching for potential candidates by using search tools that scan your CV/Resume for key word matches.

**Thank you to the Charter Sponsors of
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IEEE members can access more savings in more places for home and office including group discounts on insurance, travel, home/office and technology needs. While you focus on your

career, we'll take care of saving you money. See vendor details for terms, conditions and availability.

Visit the Member Discounts page at www.ieee.org/discounts to discover this added perk of IEEE Membership.

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Innovation...never stand still.

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* Discounts and savings are available where state laws and regulations allow, and may vary by state. To the extent permitted by law, applicants are individually underwritten; not all applicants may qualify.

Be Prepared: May is Disability Insurance Awareness Month

*Brought to you by the IEEE
Member Group Insurance
Program*

What if you become disabled and you were not able to work? How would you continue to pay your bills and take care of your family?

Now is a good time to ask yourself these questions and evaluate your financial protection. Disability insurance helps provide valuable income protection and peace of mind, but many people underestimate their risk or need for it. [Here are some common myths and facts about disabilities to help make sure you're aware AND prepared.](#)



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Culture and Professional
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Kirk St. Amant, Madelyn Flammia

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Free IEEE-USA eBook Offered as Special Benefit to

IEEE Members

As a special benefit of IEEE Membership through 15 June, IEEE-USA is offering a free eBook, ***Starting Your Start-Up Book 5: The Launch***, by author Tanya Candia.

The Launch presents a detailed roadmap to successfully launching a company and product, from setting realistic goals for the launch, determining the key messages, and preparing the sales team--to briefing the press and analysts, finding the right venue, and enlisting the help of early customers. This book takes you through all the necessary steps to a successful launch.

Candia writes that a company or product launch should achieve some well-defined goals. But she reveals many entrepreneurs don't comprehend the launch purpose, and most technologists don't understand when or how to launch a company or product. Further, Candia says if there is no clear understanding about the need for a launch, it will be difficult to set realistic goals.



The launch, Candia shares, should build brand awareness, smooth the process for sales efforts, build buzz around the company or product, and result in benefits that last far beyond the launch. And she presents the information in an easy way for the busy entrepreneurs to act upon and internalize it.

Some of the topics in *The Launch* are: The Definition of a Launch; The Intent and Expected Outcome; Timing; How to Develop a Launch Plan; How to Manage the Message; Implementing the Launch Plan; and Post-Launch: Where Do We Go from Here?

The last eBook in the *Starting Your Start-Up* series, *The Launch* is filled with exercises that will assist you in planning and executing a successful launch. Other titles in the Starting Your Start-Up series include:

- Book 1: Starting Your Start-Up
- Book 2: Market Size and Strategy
- Book 3: Competitive Analysis
- Book 4: Pricing Strategies



Members can download *Starting Your Start-Up Book 5: The Launch* for free through 15 June 2016. Sign in with your IEEE Account, add the book to your Cart, and enter the promo code **MAYFREE16** at checkout.

In June, IEEE-USA eBooks will offer *Shaping an Engineering Career Book 2: Dual Career Ladders*, by Raymond E. Floyd and Richard H. Spencer.

In *Dual Career Ladders*, Floyd and Spencer give a brief summary of their backgrounds; write about their experiences in a dual ladder career; what they learned along the way; and they offer insight to readers who may be considering a dual ladder" career path.

IEEE-USA Webinars

Workplace Civility & Employee Engagement: Two Hot Workplace Topics

Many employees today are faced with certain types of incivility in the workplace. From rudeness to belittling another employee's efforts, to outright bullying. Our presenter Nathalie Thompson of 5 Fold Consulting has heard and seen all these things take place in many workplaces. Nathalie has extensive experience in conflict resolution and mediation and is often brought in by companies to address these workplace problems.

IEEE-USA is sponsoring [a webinar on Thursday, 16 June at 2:00](#)

[pm EDT](#) so Nathalie can provide solutions to any IEEE member that might be facing these

issues or managers tasked with solving these complicated workplace issues. The webinar [Civility in the Workplace](#) is designed to prepare all members to deal with this growing concern.



Employee Engagement

Elizabeth Lions has again graciously volunteered her time to speak with IEEE members about *Employment Engagement*. An "engaged employee" is one who is fully absorbed by and enthusiastic about their work and so takes positive action to further the organization's reputation and interests. According to Gallup, only 30 percent of workers are engaged at work, which results in over US\$550 billion lost in productivity. Please join us on Friday, 24 June at 1:00 pm EDT for [Employee Engagement: How to Take the Reins and Get Involved](#) and let Elizabeth walk us through what is employee engagement and why is it important.

Refer a Colleague, Get Great Merchandise!

In conjunction with IEEE-USA, IEEE is excited to continue this special offer for U.S. members refer a colleague to IEEE. If they join before the end of the membership year, they'll get a 25% discount off their first year membership, and you'll get a gift. IEEE-USA gift items you can choose from include:

Cooler backpack	Computer backpack
Portable solar battery charger	Tablet case
Portable speaker	Parker pen and mechanical pencil set
Parker ballpoint pen	Travel coffee mug and tumbler set
Golf balls	Baseball hat
Golf umbrella	Travel umbrella

Members remain eligible to receive incentives through the existing IEEE Member-Get-a-Member (MGM) program. How it works:

- Refer your colleague via the [online form](#).
- Your referral will receive an email inviting them to join at a 25% discount off first-year membership dues, and will receive benefits through 31 December 2017.

- Your referral will provide your IEEE member number when he or she joins.
- Within 1-2 weeks after your referral joins, you will receive an email confirming your recruiting success, including a link which allows you to select your IEEE-USA merchandise item.
- You will receive a separate email for each new member you recruit.

Please help spread the word and share your IEEE experience - no one knows how beneficial IEEE Membership is to technical and career development better than you, the member. [Refer your friends and colleagues today!](#)

IEEE in 2030 Challenge Seeks the "Next Big Idea"

For the second year, IEEE is holding the IEEE in 2030 Challenge, designed to discover innovative, creative, and potentially disruptive approaches to new products and services targeted to technology professionals in industry. The IEEE New Initiatives Committee is currently accepting proposals for short-term (completed in 12 months or fewer) projects. **Submissions for the IEEE in 2030 Challenge are due by 1 July 2016.**



Applications may be submitted by one or more IEEE members or organizational units, individually or in cooperation with an IEEE staff group. The proposals will be evaluated on their potential to lead to new IEEE products, services and communities delivering value to engineers and technology professionals working in industry.

For more information, and to submit a proposal, [visit the 2030 Challenge page](#).

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Land the Perfect Job

Utilize the resume and CV building tools in IEEE ResumeLab. Available to IEEE members at no additional cost, this is an effective way to build your resume or CV. Select from a wide array of templates

geared toward specific industries, sectors and work experience stages. The step-by-step process is intuitive and simple to use so you can create the type of resume employers are expecting to see. Build your resume or CV today.



[Access IEEE ResumeLab](#)

Generating Media Coverage for IEEE Members

IEEE's Public Visibility Initiative continues its efforts to increase worldwide recognition of the IEEE brand and its members. This initiative is intended to foster awareness of members ongoing contributions to society for the benefit of humanity, and to elevate these IEEE members to their peers and the general public. To view additional member media coverage

visit [IEEE in the News.](#)