The Valley Megaphone

Newsletter of the Institute of Electrical and Electronics Engineers, Inc., Phoenix Section

August, 2016
Volume XXX, Number 8

Executive Committee 2016

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

Vice Chair
Surinder Tuli, 480-287-1437
Surinder.tuli@gmail.com

Secretary
Vivek Gupta, 480-734-0266
vmgupta@msn.com

Treasurer
Mahesh Shah, 480-544-9438
mkshah@ieee.org

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

Publicity
Wei Xu, 480-296-1116
Wei.Dr.Xu@ieee.org

PACE
TBD

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

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

Conferences
TBD

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

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

Webmaster
Gopi Krishna 480-552-2566
gckrishnan@gmail.com

In this Issue of the Valley Megaphone: Table of Contents

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

IEEE Phoenix Section on-line updates can be found at http://sites.ieee.org/phoenix/ and on LinkedIn at:http://www.linkedin.com/groups?gid=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

Signal Processing & Communications
Andreas Spanias
spanias@asu.edu

Computer Society
Jerry Crow
jerry.crow@computer.org

CPMT Society
Mahesh Shah
480-544-9438
mkshah@ieee.org

Education Chapter
Martin Reisslein, 480-965-8593
reisslein@asu.edu

EMBS Chapter
TBD

EMC Society
Brett Gassaway, 480-926-3100
brettg@compliancetesting.com

Power & Energy Society
Josh Gorman
josh@forman-co.com

Solid State Circuits
Mirembe Musisi-Nkambwe
Mirembe@ieee.org

Teacher-In-Service
Rickie Currens
Rickie.Currens@att.net

Waves & Devices Society
Steve Rockwell
steve.rockwell@ieee.org

Life Members
Les Daviet II
lesdavietii@cs.com

Women In Engineering
Phoebe Henson
480-888-6396
Phoebe.Henson.us@ieee.org

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

The Valley Megaphone is the newsletter of the Phoenix Section of the Institute of Electrical and Electronics Engineers. It is published monthly and reaches about 4000 members. Submit articles, advertisements, and announcements to Surinder Tuli at the above email address. Deadline for announcements and advertisements is the third Friday of the month prior to publication. Advertising Rates: Full page: $200, 3/4page: $125, ½ page: $75, 1/3 page: $50, 1/4 page: $25. Change of address/email? Call toll free 1-800-678-IEEE. Please allow 6-8 weeks. Section Web Page is http://sites.ieee.org/phoenix/

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
ealong2@asu.edu

Student Branches

ASU Main, Engineering
Chair: Ngoni Mugwisi
480-567-4299,
ieeeasuchair@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
jkcarrol@asu.edu
Elizabeth Long
Elizabeth.a.long@asu.edu
Advisor: : Dr. John M. Parsey, Jr.,
480-727-5279
John.Parsey@asu.edu

DeVry, Phoenix – Engineering
Chair: Diego Hernandez
602-749-4500
dhernan249@gmail.com
Advisor: Deanna Davis
602-749-4500
ddavis1@devry.edu
Advisor: Roger S. Gulledge
602-749-4586
rgulledge@devry.edu

DeVry, Phoenix – Computer Society
Chair: Alan Haley
602-749-4500
alanhaley17@gmail.com
Advisor: Thomas Stein II
602-749-7397
tsteinii@devry.edu
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

The DeVry University IEEE Student Branch has been doing some work behind the scenes since the ending of our successful SkillsUSA event earlier this year. At this event, we provided judges and competitions for both the Engineering Technology and Information Technology Services participants.

We are working on new ways to reach out to a larger variety of students with a wider diversity of studies. We are currently planning internal competition days where students will be able to compete in friendly challenges that test both teamwork and critical thinking skills. Moving forward, we are nearing the date for our new school year to begin and will be hosting our annual elections as our Chair, Diego Hernandez, and Vice Chair, Oscar Jaquez will be stepping down with their graduation. We have successfully filled the Chair position, Andrea Gonzalez, and Vice Chair, Nahtasha Gonzalez, and would like to welcome them to this wonderful organization.

Diego Hernandez
Chair, IEEE DeVry Student Branch
Dhernan249@gmail.com

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Upcoming Conferences in Region 6

Hello IEEE Student Members!

2016 IEEE International Conference on Image Processing (IEEE ICIP) will be held at the Phoenix Convention Center, Phoenix, AZ on September 25-28, 2016.

4th Annual IEEE Conference on Technologies For Sustainability, will be held in Phoenix, AZ between October 9th and 11th, 2016.

IEEE International Conference on Rebooting Computing (ICRC 2016), will be hosted at the Hilton San Diego/Del Mar, San Diego, CA on 17-19 October 2016.

IEEE Rising Stars Conference, will be held in Las Vegas, NV, Jan 2-4, 2017.

Making the Future

IEEE Region 6, the Santa Clara Valley Section and the Consultants Network of Silicon Valley (CNSV) are sponsoring a branded IEEE booth at the 2016 Maker Faire May 20-22, 2016 in the Make to Market Pavilion in San Mateo. There is a special 20% discount for IEEE members for one-day Maker Faire adult registration.

Maker Media is the organization that puts on Maker Faires all over the world (http://makerfaire.com). The company is an off-shoot of O'Reilly Media, the Sebastopol, CA publisher of mostly software programming books. Maker Media is based in San Francisco California. Maker Media and O'Reilly Publishing were recipients of 2015 Region 6 Directors awards.

According to the company web site the "Maker Faire is the Greatest Show (and Tell) on Earth—a family-friendly festival of invention, creativity and resourcefulness, and a celebration of the Maker movement. Part science fair, part county fair, and part something entirely new, Maker Faire is an all-ages gathering of tech enthusiasts, crafters, educators, tinkerers, hobbyists, engineers, science clubs, authors, artists, students, and commercial exhibitors. All of these "makers" come to Maker Faire to show what they have made and to share what they have learned."

The first Maker Faire was in May 2006 in San Mateo, CA. Since that initial event the Maker Faire movement has spread all over the world with full annual Maker Faires in over 14 cities such as Detroit, New York, Oslo, Rome, San Mateo, Salt Lake City, San Diego, Shenzhen (China), Taipei (Taiwan), Tokyo and over 119 independently produced Mini-Maker Faires in other cities (including Santa Cruz and Seattle in Region 6). In 2014 I was in Taiwan and stumbled upon a Maker Faire going on there.

The local Santa Clara Valley IEEE Section has participated in various ways in the San Mateo Maker Faires over the years with a booth in 2011 (manned by local volunteer and past section chair Lee Colby) and with a local group of technical organizations called the Silicon Valley Engineering Council (SVEC) in the years since then. IEEE volunteers have participated in various Maker Faire activities such as solder training stations. At the 2011 IEEE Sections Congress in San Francisco we had several folks associated with the Maker Faires do technical projects for the children of IEEE members that attended that event.

IEEE will have a branded IEEE booth at the 2016 San Mateo Maker Faire that will be manned by local volunteers including consultants and student members. Material and support for this booth are coming from various IEEE operating units coordinated by the MGA membership staff. One of the primary goals of the booth is to sign up new IEEE members and IEEE Collabratec participants. There will also be a video shoot of Maker Booths by the IEEE Public Visibility Committee during the Faire. IEEE members can get a 20% discount to register for a single day adult pass (this is the 5th choice down on the registration page) for the 2016 San Mateo Maker Faire using this link: https://www.eventbrite.com/e/maker-faire-bay-area-2016-tickets-20741987844?discount=IEEE20

Region 6 is looking into using this sponsorship as a path to additional future interactions with the Maker Media people that could include IEEE member participation in Maker Faires and mini-Maker Faires in the region, possible participation in maker camps and maker spaces. We see participation in Maker Faires, First Robotics, Future Cities and other STEM activities as an important part of our IEEE outreach and to help bring in and retain more members to the IEEE community. We hope that you can join us in this effort!

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

2016 IEEE International Conference on Image Processing (IEEE ICIP)

Phoenix Convention Center, Phoenix, AZ,
25-28 September 2016.
Website: 2016.ieeeicip.org

IEEE ICIP 2016 is the event for researchers, developers, product creators, educators and students who want to share, learn about, and advance the state-of-the-art in the areas of image/video processing, image/video communications, computer vision, computational imaging, and visual technologies based applications.

IEEE ICIP attendees include more than 1000 experienced researchers/developers including educators, engineers, computer scientists, and students, providing great networking and recruiting opportunities.

Important Dates:
Special Session and Tutorial Proposals: November 16, 2015
Paper Submissions: January 25, 2016
Visual Technology Innovation Award Nomination: March 31, 2016
Visual Technology Showcase Submission: May 15, 2016

IEEE ICIP 2016 highlights:

- nominate an individual or team for the Visual Innovation Award by 31 March 2016: This Award was created to recognize pioneers of transformative technologies and business models in areas within the technical scope of IEEE ICIP. The Award showcases innovations that have had great impact on human experiences with technology or are anticipated to do so in the near future. The Award Committee consists of well-known industry executives, visionary entrepreneurs, and scholars.

- maximize the visibility of your work via free open preview: Papers accepted to ICIP 2016 will (upon author approval) be available in their final accepted format on IEEE Xplore, freely accessible and downloadable by all in their final format from Aug 20,2016 through September 30, 2016.

- maximize your networking and career connections: attendees will be given the opportunity to upload their CVs to be shared among interested recruiters for full-time, part-time, and consulting job opportunities. These CVs will be made available through a password-protected searchable platform to ICIP 2016 supporters/recruiters.

- experience state-of-the-art visual technology products and prototypes at the ICIP'16 Visual Technology Showcase. IEEE ICIP 2016 will feature a Visual Technology Showcase where technology creators and developers can present live demos of recent visual technologies and prototypes. *Participants who are interested in demoing their technology should submit a description of the technology at the IEEE ICIP 2016 website by 15 May 2016.*

- attend presentations, tutorials, and training courses by experts in the areas of image/video processing, image/video compression, computer vision, computational imaging, biomedical imaging, and other topics within the scope of IEEE ICIP 2016.

IEEE International Conference on Image Processing

Phoenix Convention Center

September 25-28, 2016 • Phoenix, Arizona, USA

2016.ieeeicip.org

General Chair
Lina Karam
Arizona State University

Vice-General Chair
Aggelos Katsaggelos
Northwestern University

Technical Program Chairs
Fernando Pereira
Instituto Superior Técnico
Gaurav Sharma
University of Rochester

Innovation Program Chairs
Haohong Wang
TCL Research America
Jeff Bier
BDTI & Embedded Vision Alliance
Khaled El-Maleh
Qualcomm Technologies Inc.

Finance Chair
Sohail Dianat
Rochester Institute of Technology

Plenary Chairs
Michael Marcellin
University of Arizona
Sethuraman Panchanathan
Arizona State University

Special Sessions Chairs
Dinei Florencio
Microsoft Research
Chaker Larabi
Poitiers University
Zhou Wang
University of Waterloo

Challenge Sessions Chair
Dinei Florencio
Microsoft Research

Tutorials Chairs
Ghassan AlRegib
Georgia Tech
Rony Ferzli
Intel

Publicity Chair
Michel Sarkis
Qualcomm Technologies Inc.

Paper Awards Chairs
Vivek Goyal
Boston University
Ivana Tosic
Ricoh Innovations

Exhibits Chair
David Frakes
Arizona State University & Google

Publication Chairs
Patrick Le Callet
Nantes University
Baoxin Li
Arizona State University

Local Arrangement Chair
Pavan Turaga
Arizona State University

Registration Chair
Ricardo De Queiroz
Universidade de Brasilia

The 23rd IEEE International Conference on Image Processing (ICIP) will be held in the Phoenix Convention Centre, Phoenix, Arizona, USA, on September 25 - 28, 2016. ICIP is the world's largest and most comprehensive technical conference focused on image and video processing and computer vision. In addition to the Technical Program, ICIP 2016 will feature an Innovation Program focused on vision technologies and fostering innovation and networking. The conference will feature world-class speakers, tutorials, exhibits, and **a vision technology showcase**.

Topics in the ICIP 2016 Technical Program include but are not limited to:

Filtering, Transforms, Multi-Resolution Processing
Restoration, Enhancement, Super-Resolution
Computer Vision Algorithms and Technologies
Compression, Transmission, Storage, Retrieval
Computational Imaging
Color and Multispectral Processing
Multi-View and Stereoscopic Processing
Multi-Temporal and Spatio-Temporal Processing
Video Processing and Analytics
Authentication and Biometrics
Biological and Perceptual-based Processing
Visual Quality Assessment
Scanning, Display, and Printing
Document and Synthetic Visual Processing
Applications to various fields

New initiatives at ICIP 2016 include:

1) Open preview for accepted papers on IEEE Xplore; 2) Visual Innovation Award (individual or team nominations due by 31 March 2016 at conference website); 3) Support for reproducible research; 4) Support for CV uploads on the ICIP site for full-time, part-time, and consulting job opportunities; 5) Visual Technology Showcase (submission due by 15 May 2016). For more details on these and other new initiatives at ICIP 2016, visit 2016.ieeeicip.org and connect now on the ICIP 2016 social media to get automatic updates about the various deadlines, sessions and events.

Paper Submission:

Prospective authors are invited to submit full-length papers at the conference website, with up to four pages for technical content including figures and references, and with one additional optional 5th page for references only. Submission Instructions, templates for the required paper format, and information on "no show" policy are available at **2016.ieeeicip.org**.

Tutorials, Special Sessions, and Challenge Sessions Proposals:

Tutorials will be held on September 25, 2016. Tutorial proposals should be submitted at the conference website and must include title, outline, contact information, biography and selected publications for the presenter(s), and a description of the tutorial and material to be distributed to participants. For detailed submission guidelines, please refer to the tutorial proposals page. Special Sessions and Challenge Session Proposals should be submitted at conference website and must include a topical title, rationale, session outline, contact information, and a list of invited papers/participants. For detailed submission guidelines, please refer the ICIP 2016 website at **2016.ieeeicip.org**.

Important Deadlines:

Challenge Session Proposals: October 30, 2015

Special Session and Tutorial Proposals: November 16, 2015
Notification of Special Session and Tutorial Acceptance: December 18, 2015

Paper Submissions: January 25, 2016
Notification of Paper Acceptance: April 30, 2016

Visual Inovation Award Nomination: March 31, 2016

Visual Technology Showcase Submission: May 15, 2016
Notification of Visual Technology Showcase Acceptance: May 30, 2016

Revised Paper Upload Deadline: May 15, 2016
Authors' Registration Deadline: May 15, 2016

World's FIRST

Visual Innovation Award

Call for Nomination: The Award recognizes pioneers of transformative technologies and business models that have had great impact on human experiences or are anticipated to do so in the near future. The Award Committee consists of well-known industrial executives, visionary entrepreneurs, and scholars. Nominations are to be submitted online no later than 31 March 2016. The nominations will be forwarded to the Award Committee for selection of finalists who will be presented with their award at IEEE ICIP 2016. Please visit *2016.ieeeicip.org* for more information and for the online submission form.

Nominate your favorite visual innovation TODAY! Details can be found at *http://2016.ieeeicip.org/VisualInnovationAward.asp*

Important Dates:

31 March 2016: Deadline for nominations

15 June 2016: Finalists announced

Award Committee

Giles Baker
SVP
Dolby Labs

Nikhil Balram
CEO
Ricoh Innovations

Hanno Basse
CTO
20th Century Fox

Achin Bhowmik
VP
Intel

James Brailean
Managing Partner
Karmel Capital

Bill Dally
SVP
nVidia

Robert Gove
VP
Synaptics

Hsiao-Wuen Hon
Chairman of ARD
Microsoft

Kevin Jou
CTO
MediaTek

C C Lee
SVP
Sony

Matthew Mengerink
VP
Google

Anthony Park
VP
Netflix

Raj Talluri
SVP
Qualcomm

Martin Vetterli
President
Swiss NSF NRC

Susie Wee
CTO
Cisco

Lina Karam
Professor
Arizona State

Aggelos Katsaggelos
Professor
Northwestern

Haohong Wang
General Manager
TCL

Khaled El-Maleh
Sr. Director
Qualcomm

Jeff Bier
President, Embedded
Vision Alliance

IEEE

2016.ieeeicip.org

ICIP 2016 Sept 25-28 Phoenix

IEEE | SusTech 2016

4th Annual IEEE Conference

Conference on Technologies Driving Sustainability in Energy, Water, Waste, Electronics, Transportation, Internet of Things, Societal Implications, and more

October 9-11, 2016

Phoenix Airport Marriott
1101 North 44th Street
Phoenix, Arizona 85008, USA
Early Bird Registration till Sept 14th 2016

Phone: 1-602-273-7373

Hotel Toll-Free Reservation Center:
1-800-228-9290

For Conference Registration Click Here
http://sites.ieee.org/sustech/

Learn from industry experts how to take your sustainability to the next level!

The IEEE Conference on Technologies for Sustainability (**SusTech 2016**) aims to explore the development and application of science, engineering, and technology to promote sustainability.

Featured keynote speakers:

Mark Goldstein, President, International Research Center, GSV Sustainability Partners

Grady Gammage, Jr., Partner Gammage & Burnham, Morrison Institute for Public Policy

- Technical papers, posters and workshops.
- Energy, Water, Waste, Electronics, Transportation, Internet of Things, Societal Implications.
- Invited talks from experts in the field.
- Professional development courses → Cleantech Entrepreneurship; Makers and Sustainability.
- Opportunities to dialogue on environmental issues and collaborate on ideas to develop and utilize innovative tools and intelligent systems to address them.

IEEE SusTech 2016, brings together leaders in industry, academia, and government. Obtain tools, solutions and make connections to take your sustainability programs to the next level.
Questions?: Contact Vivek Gupta at vmgupta@msn.com; Ed Perkins at e.perkins@ieee.org

IEEE SusTech 2016

IEEE Conference on Technologies for Sustainability

Phoenix AZ, Oct 9-11, 2016

*Are you **passionate** about the environment and sustainability?*
*Are you developing **innovative** solutions to drive sustainable development?*
*Are you interested in **learning** from and **collaborating** with technology and community leaders?*

If so, **YOU MUST ATTEND SUSTECH 2016 !**

- The **2016 IEEE Technologies for Sustainability** (Sustech) conference will be held in **Phoenix, AZ** on **October 9-11, 2016** aims to explore the development and application of science, engineering, and technology to promote sustainability.
- The 2016 conference will bring together sustainability leaders in industry, academia, and government in a three day conference involving technical talks, poster sessions, professional development courses, and key notes.
- **Topics** include Energy, Water, Electronics, Transportation, Internet of Things, Societal Implications, and more, with **Professional Development Courses** on Cleantech Entrepreneurship, Makers and Sustainability and more.

Learn More: http://sites.ieee.org/sustech/
Questions: gopi.krishnan.2015@ieee.org

IEEE Components, Packaging and Manufacturing Technology Society Phoenix Chapter

2015 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
Website Co-Chair			

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**
Sep. 21, 2016	On-Chip Embedded Cooling of Power and Logic Components	Prof. Avram Bar-Cohen
Oct. 19, 2016	Heterogeneous Integration Technology Roadmap	Dr. William Chen
Nov. 7, 2016	3D Interconnects, Materials, Processes, Reliability, and Applications	Prof. Karlheinz Bock
Dec. 14, 2016	Current and Future of Microelectronic Packaging	Darvin Edwards

IEEE Components, Packaging and Manufacturing Technology Society Phoenix Chapter

Wednesday, August 17th, 2016 at 5:30 PM

Advanced Thermo-Compression Bonding Technologies for 3D IC Integration

Dr. Katsuyuki Sakuma
Research Staff Member
IBM T.J. Watson Research Center
1101 Kitchawan Road, Yorktown Heights, NY 10598, USA
Tel: 914-945-2080, Email: ksakuma@us.ibm.com

ABSTRACT

3D IC integration technology and large die packaging are essential ingredients for further performance enhancement of main frame and super-computer applications, but warpage of large and thin interposers is one of the biggest challenges in achieving large die 3D IC integration. In addition to that, a micro-bump pitch for 3D application is becoming smaller in order to achieve higher bandwidth I/Os, hence removal of flux residue becomes more difficult. To eliminate the use of flux and its associated cleaning process during flip chip bonding, a micro-scrub thermo-compression (TC) bonding process was evaluated as a potential bonding method. We also demonstrated a successful bonding process for large die 3D IC integration with 22 nm ULK CMOS technology by developing an enhanced TC bonding process that addresses problems caused by interposer and laminate warpage. Both TC bonding technologies will be discussed.

BIOGRAPHY

Dr. Sakuma is a Research Staff Member at the IBM T. J. Watson Research Center. His research interests include 3D integration technologies, bonding technologies, and advanced packaging. He has published more than 85 peer-reviewed journal papers and conference proceeding papers, including three book chapters. He has also been the lead author of work at *the Electronics Components and Technology Conference (ECTC)* (2007-2016). He also holds 18 issued or pending U.S. and international patents. He has been recognized with IBM Outstanding Technical Achievement Award (OTAA) in 2015. He received his B.S. and M.S. degrees from Tohoku University and Ph.D degree from Waseda University, Japan. He is a senior member of IEEE and a member of the Japan Society of Applied Physics (JSAP). He has served in the IEEE ECTC Interconnections sub-committee from 2012 and is current committee chair of the Interconnections sub-committee.

Date: Wednesday, August 17th, 2016

Location: Constellation Room, NXP Semiconductors, Discovery Business Center, 2108 E. Elliot Rd. Tempe, AZ.
Note New Address – Park on east side of campus – New main entrance on south side facing Elliot.
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.

For more information, please contact any of the following CPMT officers:

Vasu Atluri	(480) 227-8411	Rao Bonda	(480) 786-7749	David Dougherty	(480) 413-6923
Vivek Gupta	(480) 734-0266	Marc Licciardi	(650) 996-0478	Ravi Mahajan	(480) 554-3715
Bharat Penmecha	(480) 552-2511	Mahesh Shah	(480) 544-9438	Shawn Shi	(480) 929-5614

PLEASE NOTE THE CHANGE OF ENTRANCE (NEXT PAGE)

IEEE THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

CPMT IEEE COMPONENTS, PACKAGING AND MANUFACTURING TECHNOLOGY SOCIETY

IEEE Components, Packaging and Manufacturing Technology Society Phoenix Chapter

September 21st, 2016 at 5:30 PM

On-Chip Embedded Cooling of Power and Logic Components

Avram Bar-Cohen*, PhD
IEEE / CPMT Distinguished Lecturer
Principal Engineering Fellow, Raytheon Corporation – Space & Air Borne Systems
Rosslyn, Virginia, USA

ABSTRACT

Thermal packaging technology has been a key enabler in the development of today's microelectronic systems, including smart phones, tablet computers, back-room data-crunching supercomputers, and the navigation systems that have come to define our lives in the 21st Century. Much of the benefit that we derive from miniaturization, higher performance, lower cost and greater reliability of these quintessential 21st Century "widgets," can be traced to improvements in thermal technology, thermal modeling, and the integration of thermal management principles and techniques into electronic product development.

A review of thermal packaging over the first 70 years of the Information Age will reveal a relentless "inward migration" of cooling technology from room ventilation and air-conditioning, to cabinet cooling, to component cooling with heat sinks and cold plates, and to today's efforts to address on-chip hot spots and near-junction thermal transport. Attention will then be devoted to current thermal management requirements, driven by nano-electronics, which confront packaging engineers with the simultaneous "triple threat" of high-power, "hotspots," and 3D integration in applications as diverse as high performance computing, power electronics, and RF systems. The lecture will close with a review of 3rd-generation thermal management technologies relying on intra- and interchip microfluidic cooling, use of diamond substrates, and on-chip thermoelectric coolers to implement the emerging "embedded cooling" paradigm.

BIOGRAPHY

Dr. Avram Bar-Cohen is an internationally recognized leader in thermal science and technology, an honorary member of ASME, and Life Fellow of IEEE, currently serving as a Principal Engineering Fellow at Raytheon Corporation – Space and Airborne Systems. He is on-leave from his position as a Distinguished University Professor in the Department of Mechanical Engineering at the University of Maryland. His publications, lectures, short courses, and research, as well as his US government and professional service in ASME and IEEE, have helped to create the scientific foundation for the thermal management of electronic components and systems. His current research focuses on embedded cooling, including on-chip thermoelectric and two-phase microchannel coolers for high heat flux electronic components, thermal control of solid-state lighting and directed energy systems, and polymer- heat exchangers.

Bar-Cohen serves on the Board of Governors of the IEEE CPMT Society and has represented the Society as a Distinguished Lecturer for more than 15 years. From 2001 to 2010 he served as the Chair of Mechanical Engineering at Maryland. He recently completed his service as a Program Manager in the Microsystem Technology Office at the Defense Advanced Projects Agency in Virginia.

In 2014 Bar-Cohen was honored by the IEEE with the prestigious CPMT Field Award and had earlier been recognized with the CPMT Society's Outstanding Sustained Technical Contributions Award (2002). Among other awards, Bar-Cohen received the Luikov Medal from the International Center for Heat and Mass Transfer in Turkey (2008) and ASME's Heat Transfer Memorial Award (1999), Edwin F. Church Medal (1994), and Worcester Reed Warner Medal (1990).

In addition to serving as the Editor-in-Chief of WSPC's Encyclopedia of Thermal Packaging and the co-editor of the Advanced Integration and Packaging book series, Bar-Cohen has co-authored Dielectric Liquid Cooling of Immersed Components (WSPC, 2013), Design and Analysis of Heat Sinks (Wiley, 1995), and Thermal Analysis and Control of Electronic Equipment (McGraw-Hill, 1983), and has edited/co-edited 28 books in this field. He has authored/co-authored nearly 400 journal papers, refereed proceedings papers, and chapters in books and has delivered 95 keynote, plenary and invited lectures at major technical conferences and institutions.

Date: Wednesday, September 21st, 2016
Location: Constellation Room, NXP Semiconductors, Discovery Business Center, **2108 E. Elliot Road Tempe, AZ.**
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 (*Photo ID required*) **BEFORE 6:00 PM**. You will be escorted to the meeting room.
Please arrive at the entrance no later than 5:45 PM. The presentation promptly starts at **6:00 PM**.
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

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

August, 2016

Meetings

The dates for the remaining meetings in 2016 are shown below. All are second Wednesdays and all meetings begin at 6:00 pm and end at 9:00 pm.

August 10th	ITT Tech in Phoenix
October 12	ITT Tech in Tempe
December 14th	DeVry University, Phoenix

Our August meeting will feature Paul Schaaf, Special Agent, Phoenix FBI and Shelly Dunlap. They will be speaking on the general topic of Bitcoin. The meeting will be held at the Phoenix North Campus of ITT Technical Institute. The address of the venue is 10220 N. 25th Avenue, #100. Please note that this is the Phoenix location of ITT Technical Institute.

Presentation

Bitcoin Q & A

What is Bitcoin and is it legal? Why would someone want to use Bitcoin and how is it obtained and stored? These are just some of the questions that will be answered regarding Bitcoin and other electronic currencies on the Internet. This Bitcoin presentation will have the technical and scientific information as well as the Law Enforcement perspective of this electronic currency represented by FBI SA Paul M. Schaaf.

Presenters

Special Agent Paul M. Schaaf is a Cyber Agent assigned to the FBI Phoenix Division of the FBI. SA Schaaf has a Masters Degree in Computer Information Systems and Bachelors Degree in Finance. SA Schaaf worked in computer systems in the financial sector before joining the FBI in 2003. SA Schaaf has worked Cyber, Civil Rights, Fraud, Extortion, Intellectual Property and Innocent Images cases in his career. SA Schaaf has the unique distinction of having the first Spam Case go to trial which involved an international spam operation that operated out of 4 countries.

Shelley Dunlap is technology veteran performing as a professor, analyst, manager, and educatainer for over 23 years. Currently Ms Dunlap's talents are at work as a cyber-Lieutenant Uhura bridging the gaps between the technical haves and the technical have-nots. Ms Dunlap holds a Master's of Science in Information Technology, a Bachelor's Science in Technology, and is a graduate of the FBI Citizens Academy. Ms Dunlap's technical expertise and research have attracted the attention of various three letter agencies and law enforcement resulting in requests for industry input and cyber education. Ms Dunlap collects industry certifications and gives back to the cyber community by serving as an advisor and board member of industry organizations.

All meetings begin at 6:00 pm and end at 9:00 pm. The venue locations vary as we try to balance venues between the east side of the valley and the west side.

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

A PRACTITIONERS APPROACH TO EMC TESTING WITH REVERBERATION CHAMBERS

Date: **Thursday, August 25, 2016**

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

Speaker: **Dr. Vignesh Rajamani**
Senior Associate
Technology Development and Practice
Exponent, Inc.

Location: **Exponent, Inc.**
23445 North 19th Ave
Phoenix, Arizona 85027
www.exponent.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

Presentation: Practitioners Approach to EMC Testing with Reverberation Chambers **--** *By Dr. Vignesh Rajamani, Exponent, Inc.*

Abstract:

This talk discusses the efficiency of reverberation chambers to perform emissions and immunity tests. The statistically isotropic, randomly polarized, and uniform electromagnetic environment present inside a well stirred reverberation chamber enables a robust, all aspect angle test. The controllable uncertainty of a reverberation chamber test method provides the test engineer options to design a test depending on whether the test is a simple product qualification test or a mission critical system test.

SPEAKER BIOGRAPHY

Dr. Rajamani is an expert in the electromagnetic characterization and application of reverberation chambers and holds a position of Senior Associate at Exponent. A main thrust of his research and project experience in the area of reverberation chambers has been towards increasing test accuracy. His expertise includes statistical electromagnetics, validation and optimization techniques for computational electromagnetics, communication system test in complex multipath environments, EMI/C Issues with Unmanned Aerial Systems, antenna systems and radio frequency (RF) design, and estimation probability of failure of electronic systems due to electromagnetic interference and compatibility.

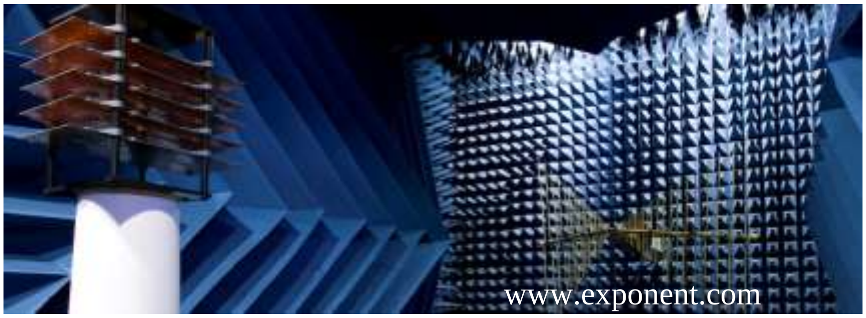
Dr. Rajamani is the Vice President of Member Services for the IEEE Electromagnetic Compatibility (EMC) Society and involved with several technical committees and educational activities through the EMC Society. He is a Senior Member of IEEE and served as a distinguished lecturer for the IEEE EMC Society for term 2013-2014. He has lectured around the world on reverberation chamber test methodologies and has taught design engineering seminars for faculty and students at many universities focusing on challenges in engineering education and prepare the faculty to handle them by spreading a significant number of Project Based Learning (PBL) classes across the curriculum. Prior to joining Exponent, Dr. Rajamani was with Oklahoma State University as a Visiting Assistant Professor where he taught courses in engineering design and performed research in probability of failure of electronic systems in harsh electromagnetic environments.

ABOUT EXPONENT

"Exponent is a multi-disciplinary engineering and scientific consulting firm that brings together more than 90 different disciplines to solve important engineering, science, regulatory, and business issues. For nearly 50 years [they] have provided engineering, scientific, environmental and health consulting services to corporations, insurance carriers, government agencies, law firms and individuals. Its Phoenix Test and Engineering Center is home to unique test and design analysis services from vehicle crash testing to development of ground penetrating radar systems and robots used in military applications."

Exponent can be thought of as the 'real' myth-busters! Exponent has been involved in the investigations of many well-known incidents including the Toyota sudden unintended acceleration, the September 11 attacks in New York, and the Deepwater Horizon investigation.

This is a rare opportunity for our chapter to visit this world-renowned facility! For more information, please see: http://www.exponent.com/.



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

59th ANNUAL IEEE-PES PHOENIX FUNDRAISING GOLF TOURNAMENT

October 8th 2016

Be sure to join us at the Legacy Golf Club, located at 6808 South 32nd Street, for a 1:15PM Shotgun Start. The course is located 10 Minutes south of Sky Harbor Airport.

This is the annual fundraiser for your IEEE-PES Chapter. The fee is $100 per player or $400 to sponsor a foursome. Be sure to come early and stay late as there will be free range balls beforehand and dinner afterwards. Cash prizes awarded for first place, second place, and third place teams. There will also be a Raffle, Skills Games, and Giveaways Galore.

Use this sheet to sign up either individually or for your team. You can either:

- **Print out and complete, then mail the form with your payment**
- **Return this form electronically (distribution@gorman-co.com) and then send your payment.**
- **Send payments to:**

IEEE-PES
c/o Gorman Company
4819 35th Street
Phoenix AZ 85040

You will be notified via email that your payment has been received and you are registered to participate. If you have any questions, please feel free to call us at (602) 470-0400.

Please provide all requested information, including email addresses for all team members.

TEAM/SPONSOR____

Player ____ **Dinner?**_____

Email ____

Player ____ **Dinner?**_____

Email ____

Player ____ **Dinner?**_____

Email ____

Player ____ **Dinner?**_____

Email ____

Additional Dinner Guests: ____

To minimize waste and extra costs, we would like your help getting an accurate dinner count.

Phoenix Section Life Member Affinity Group

Technical Presentation and Administrative Meeting

Meeting Tuesday October 18, 2016

Program Presentation: In development

NOTE MEETING STARTS AT 11 AM

Meeting Agenda:

11AM: Attendee introductions
11.05 Lunch
11:20 AM: Program Presentation
12:20 Discussion of LMAGs survey and possible tours.
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 October 18, 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 October 18, 2016
- Tuesday December 20,2016

The Officers are as indicated below.

Officers:

Chair	**Leslie Daviet II**	**lesdavietii@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 Spraque**	**r.spraque@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.

July and August 2016

Summer Break -Section

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 LinkdIn page by clicking in 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 your 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 Member's Benefits

IEEE Collabratec™

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 IEEE Collabratec

MOUSER ELECTRONICS

Member Discounts

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, well 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.

Lenovo

Work and life never stand still... neither should your PC! Now is the time to upgrade and save instantly up to 38% off select Lenovo PC desktops, laptops, tablets, and accessories that keep you in motion.

Shop now atwww.lenovo.com/ieee and save in the month of May!

- Up to 38% off Lenovo Tablets
- Up to 15% off ThinkPad Laptops

- Up to 15% off ThinkCentre Desktops
- Up to 13% off Lenovo Laptops

Innovation...never stand still.

A Message from Liberty Mutual Insurance

Auto & Home Insurance That Give You Peace of Mind

Liberty Mutual has partnered with IEEE to offer members exclusive savings on auto and home insurance.* Along with quality coverage, expert advice, and personalized service, you could also enjoy our valuable and unique benefits, such as Better Car Replacement, Accident Forgiveness, Home Protector Plus, and our Multi-Policy Discount. Helping people live safer, more secure lives for more than 100 years, Liberty Mutual is a company you can trust.

Call [1-800-531-4958]() or [visit Liberty Mutual]() to learn more or get a free quote.

* 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.

Save 35% on Books from Wiley-IEEE Press

IEEE members save 35% off all Wiley-IEEE Press and Wiley print books! Visitwww.wiley.com/ieee and enter promo code **18493** at checkout. Offer valid on print books only, and excludes major reference works, databases, journals, and digital books.

Teaching and Training for Global Engineering: Perspectives on Culture and Professional Communication Practices
Kirk St. Amant, Madelyn Flammia
ISBN: 978-1-118-32802-6, April 2016, Wiley-IEEE Press
List Price: ~~US$49.95,~~ **Member Price: US$32.47**

▸ Order now

FOLLOW Wiley-IEEE Press

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

Build an Effective Resume/CV to 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

IEEEs 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.