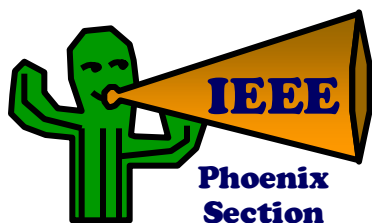


The Valley Megaphone

Newsletter of the
**Institute of Electrical and
Electronics Engineers, Inc.,
Phoenix Section**
April 2014,
Volume XXVIII, Number 4



Executive Committee 2014

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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>

Please send announcements for the *Valley Megaphone* to Mahesh Shah at mkshah@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)

IEEE Phoenix Section 2014 Annual Banquet pictures are available to view and download at

<http://sites.ieee.org/phoenix/2014/03/03/pictures-from-the-2014-annual-banquet/>

Chapters

Signal Processing & Communications

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pturaga@asu.edu

Computer Society

Jerry Crow
jerry.crow@computer.org

CPMT Society

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TBD

EMC Society

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GOLD

Shafiul "Jacky" Islam 520-245-9010
shafiul.islam@intel.com

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Teacher-In-Service

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Waves & Devices Society

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Life Members

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lesdavietii@cs.com

Women In Engineering

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shamala.chickamenahalli@intel.com

U – News (for Student Members)

Updates of Student Advisors and Committee Members

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

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

Start your own MicroMouse and compete for cash prizes!

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

Student Branches

ASU Main, Engineering

Chair: Jennifer Taggart
928-581-5198,
jennifer.taggart@asu.edu
Advisor: Cihan Tepedelenlioglu,
480-965-6623, cihan@asu.edu

ASU Main, Computer Society

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

ASU Polytechnic

Chair: TBD
Advisor: TBD

DeVry, Phoenix

Chair: Lori Renaldi
lorirenaldi@computer.org
Advisor: Diane Smith
dsmith2@devry.edu

DeVry, Computer Society

Chair: TBD
Advisor: Diane Smith
dsmith2@devry.edu

NAU, Engineering

Chair: TBD
Advisor: Niranjan Venkatraman
v.niranjan@ieee.org

Embry-Riddle, Prescott

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

U – Newsbytes

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

This month we had a meeting and a presentation about the High altitude balloon experiments done by ASU and ERAU was shown at the monthly meeting. DR Cone and ten other persons attended the banquet in Phoenix. There was a lunch and learn held at the Hazy library (ERAU campus library) about the type of articles and media available for research from the IEEE in our library and how to access it. The group also sponsored a representative from labview to come and demonstrate their product for a large group of people.

Our group did sponsor an "egg drop" contest for campus engineering week. The Idea was to get students involved to design a device in which an egg can survive a drop from a 3 story building. The criteria for the contest was based on the weight, number of pieces of the device, and if the device hit the target. I do have pictures from the event if you would like to see them.

Thank you
Brenda Moerchen
Secretary, ERAU Chapter, Prescott



Spring Lecture Series

Starting Friday March 21st, the ASU Student Branch will begin its Spring lecture series. Lectures are every Friday at 5 pm in GWC 487. Pizza and drinks will be served!

Schedule:

March 21st – Dr. Lawrence Clark “*Mitigating VLSI variability with transistor architecture and circuit approaches*“

March 28th – Dr. Dragica Vasileska “*Self-heating effects in nanoscale devices*“

April 4th – Dr. Zachary Holman “*Amorphous silicon/crystalline silicon heterojunctions: The future of high-efficiency silicon solar cells*“

April 11th - Dr. Hugh Barnaby (topic – TBD)

April 18th – Dr. Jennifer Blain Christen (topic – bioelectronics)

Location:

GWC 487

5 p.m. – 6:30 p.m.

RSVP at link below:



<http://goo.gl/7IXsWH>



IEEE Fort Huachuca Section

Is Hosting a Joint Social and Networking event for the IEEE Sections
in Arizona and New Mexico:

Phoenix, Tucson, Ft. Huachuca, Albuquerque, Los Alamos, Alamogordo-Holloman

10:00 A.M. - 4:00 P.M. Saturday, June 7, 2014

LOCATION – Kartchner Caverns, Rte. Az-90, south of Benson

(Map: <https://www.google.com/maps/place/Kartchner+Caverns/>)

Admission: The event is free. Lunch is provided to attendees and guests, courtesy of the Ft. Huachuca Section.

Participants are encouraged to schedule cave tours on their own.
The first 25cave tours scheduled will be reimbursed by the Ft. Huachuca Section

Complete details and registration link on vtools at:

https://meetings.vtools.ieee.org/meeting_view/list_meeting/23867



From Star Wars to the Phoenix Symphony π STEM to STEAM ♪

“There is certainly no question that STEM education and STEM skills are a vital part of this country’s edge, but many educators would argue that STEM is missing a key set of creativity-related components that are critical to fostering a competitive and innovative workforce, and those skills are summarized under the letter “A” for Arts” - John Tarnoff, www.steam-notstem.com

Join the Phoenix Section of the Society of Women Engineers for an engaging presentation by Jim Ward on his intriguing career with film director George Lucas, advertising for Apple and Microsoft and how he integrated these into his current position as President and CEO of The Phoenix Symphony

*When: Tuesday
April 29th, 6:00–8:00 pm*

*Where: Ray and Joan Kroc
Community Center
1375 E. Broadway Rd
Phoenix, AZ 85040*


Cost: \$10.00

*RSVP and Pay: Noon Apr. 14th
Paypal, credit or debit card*

[Click here to RSVP & Pay](#)

*Networking: 6–6:45 pm
Speaker: 6:45–7:30 pm
Q&A: 7:30 –7:45 pm
Hors d'oeuvres served*

Questions: countsv@gmail.com


Jim Ward

- Pres./CEO PHX Symphony
- Advertising executive
- Venture capitalist
- President of LucasArts
- Vice Pres. of LucasFilm
- AZ Congressional candidate

Jim Ward has an impressive resume. As an advertising executive, he was involved with product introductions including Apple’s Powerbook, Microsoft’s Windows 95 with the Rolling Stones and Tiger Woods with Nike. With LucasArts and LucasFilms, he oversaw marketing and distribution for their theatrical properties including Star Wars and Indiana Jones. As an executive producer of a prime time non-fiction special he was nominated for an Emmy in 2007. Mr. Ward is a graduate of the Thunderbird School of International Management and a 2010 Arizona Congressional candidate.

The Phoenix Symphony is now proud to have Jim Ward as their President and CEO. Since 2011, with a new vision, mission and values, Mr. Ward has restructured the symphony and reduced operating costs by, \$1.5 million.

Jim Ward is also passionate about STEM education in technology and the arts, changing STEM to STEAM





Upcoming Conferences in April in Region 6

There is a grand total of 8 conferences in Region 6 during the month of April. Five are in California and one each in Nevada, Hawaii, and Idaho.

Please mark your calendars for May 19 to 23 as the IEEE International Parallel and Distributed Processing Symposium (IPDPS) is going to be held at the Arizona Grand Resort which is across the street from the Fry's Electronics on Baseline.

If any group is looking to have a conference, please contact our new direct email Phoenix.Conferences@ieee.org



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.



IEEE COMPONENTS, PACKAGING AND MANUFACTURING TECHNOLOGY SOCIETY

IEEE Components, Packaging and Manufacturing Technology Society Phoenix Chapter

2014 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. Devarajan Balaraman	(480) 619-0944	iangoinbiking@gmail.com
Treasurer	Mr. Surinder L. Tuli	(480) 287-1437	surinder.tuli@gmail.com
Program Chair	Mr. David Dougherty	(480) 245-8099	david.dougherty@freescale.com
Asst. Program Chair	Dr. Nageswara R. Janapala	(650) 213-6733	nageswara.r.janapala@intel.com
Tutorial Chair	Dr. Ashish Gupta	(480) 554-2409	ashish.x.gupta@intel.com
Asst. Tutorial Chair	Adel Elsherbini	(734) 686-2278	a.elsherbini@gmail.com
Workshop Chair & Publicity	Dr. Vasudeva P. Atluri	(480) 227-8411	vpatluri@ieee.org
Website Co-Chair	Huiyang Fei		Huiyang.H.Fei@ieee.org
Website Co-Chair	Bharat Penmecha	(480) 552 2511	bharat.penmecha@ieee.org

Tentative Schedule for Monthly Seminars

We are planning to arrange monthly Seminars on topics of interest on following days. If you have suggestion for topics and/or speakers please contact any of the executive committee members listed above.

Wednesday, March 12 – We were lucky to have another great lecture by Prof. Rao Tummala, Director of National Science Foundation Packaging Research Center at Georgia Tech on New Frontier in Electronics: System Scaling for Smart Mobile Systems by Glass Packaging. The lecture was attended by over 50 people.

Future Lectures are being planned for 3rd Wednesday of each month. Tentative dates are: **April 30th, May 8th, May 21st**, June 18th, July 23rd, August 20th, September 17th, October 22nd, November 19th and December 17th. If you are interested or if you know some one who can provide a seminar on interesting topics related to Electronics Packaging please contact David Dougherty or Dr. Nageswara Janapala from our Program committee.

Additional Activities – Save the Date - Tutorial and Workshop

Phoenix section is planning to hold a Half Day tutorial on the topic of reliability in early Fall. In addition we are working with other Society Chapters to hold a workshop on **Emerging Device and Packaging Technology** in mid-November.



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.



IEEE COMPONENTS, PACKAGING AND MANUFACTURING TECHNOLOGY SOCIETY

IEEE Components, Packaging and Manufacturing Technology Society Phoenix Chapter

Wednesday, April 30th, 2014 at 5:30 PM

Improved PoP Package w/o TSVs can compete with 2.5/3D Packages using TSVs

Dr. Dev Gupta

Chief Technical Officer

APSTL (Advanced Packaging & Systems Technology Laboratories) LLC

Scottsdale, AZ 85262 USA

ABSTRACT

The industry has been awaiting maturation of 3D packaging technologies as a low-cost alternative to further integration on a single die. So far die stacking & interconnecting with Through Silicon Vias (TSVs) have received most attention. The commercial adoption of 3D TSVs has been limited to cases where its use has resulted in performance benefits and reduced costs, example such as BSI modules used in some Smart Phones. Cost reduction (by reduced yield losses) has been a key factor in the adoption of 2.5D for small-scale production of high-end FPGAs built as a multi-chip module rather than a single large chip. Such cost reduction has not yet been possible for CPU-Memory combinations in 3D stacks. This is not simply because of the high initial cost or supply-chain issues typical of new technologies, but also due to unresolved issues related to choice of material and process flow for 3D TSVs. These concerns, along with stress and thermal issues that affect device performance in 3D stacks, will be discussed. Lower-risk alternatives that can be implemented even in consumer systems e.g. Smart Phones are evaluated. To identify "low hanging fruits", analyses was carried out to simulate bandwidth and power needed to transfer data in 3D stacks and 2.5D modules using TSVs as well as several packages that do not use TSVs for application to Smart Phones. PoP (Package-on-Package), the poor man's 3D is ubiquitous in Smart Phones. This talk will describe efforts underway at APSTL to improve PoP package electrical performance e.g. power efficiency (battery life) and bandwidth (video rate) to approach that of 3-d stacking with TSVs but without using any TSVs on the active dies. Improved performance of the resulting "Super PoP" will be discussed and contrasted with other industry efforts to improve the PoP package.

BIOGRAPHY

Dr. Dev Gupta has been pioneering and innovating various types of Advanced Packaging technologies e.g. Flip Chip (electroplated solder bump, bonding robots, pillar and micro - pillar bumps, organic substrates) at Motorola and Intel that have now become industry standards. At Intel, Dr. Gupta's Team succeeded in dramatically improving the yield & reliability of Organic Substrates, thus enabling the widespread adoption of flip chip technology. At APSTL he is responsible for the development and licensing of new Advanced Packaging technologies e.g. various types of bumping & substrate, their assembly (as well as turnkey engineering of fabs for them), and now the "Super PoP" technology that he will discuss in his talk.

Date: Wednesday, April 30th, 2014

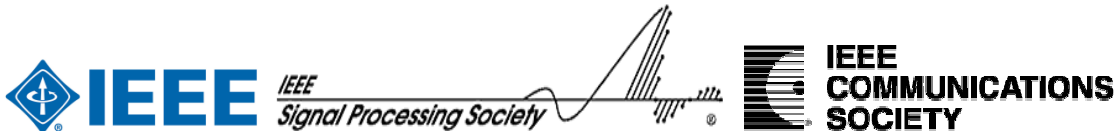
Location: Group Conference Room, Freescale Semiconductor, Inc., 2100 E. Elliot Rd. Tempe, AZ. There are new signs on the property (Discovery Business Center). Enter the facility through the Main (South) Lobby in building 94 and sign in with Security (*Photo ID required*). You will be escorted to the meeting room.

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. Those who plan to attend should be at the facility entrance no later than 5:45 PM, as there will be no escorts available after that.

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

Vasu Atluri	(480) 227-8411	Devrajan Balaraman	(480) 619-0944	David Dougherty	(480) 413-6923
Adel Elsherbini	(734) 686-2278	Ashish Gupta	(480) 554-2409	Vivek Gupta	(480) 734-0266
Nageswara Rao J.	(650) 213-6733	Mahesh Shah	(480) 544-9438	Surinder Tuli	(480) 287-1437



SP-COM Phoenix Chapter

Please join our Google Group!

We have recently started a google group to be able to send you more timely announcements via email for upcoming events and talks. Please sign up for timely email announcements at the below link

<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>)

Upcoming Talks

A Convex Approach for Learning Near-Isometric Linear Embeddings Aswin Sankaranarayanan, Asst. Professor, Carnegie Mellon University April 9, 2014, 1:45pm
Room: GWC 487

Abstract

The last decade has seen numerous applications of randomized dimensionality reduction techniques. A key property of such techniques is that of near-isometry – or the approximate preservation of pairwise distances between data points. These techniques are largely inspired by the seminal Johnson Lindenstrauss lemma which suggests that near-isometric embeddings can be realized in a dimension that is merely logarithmic in the number of data points. However, in spite of their simplicity, randomized embeddings do not leverage additional structures often present in datasets. In this talk, I will describe a novel framework for the deterministic, data-dependent approach to near-isometric linear dimensionality reduction. Our framework is guaranteed to preserving all pairwise distances between input data points, while reducing their dimensionality as much as possible. At the heart of our formulation is a rank-minimization problem that we relax into a semi-definite program (SDP). Further, we leverage tools from optimization that can solve this SDP very efficiently thereby allowing us to handle hundreds of thousands of high-dimensional data points. We showcase the performance of our technique on a wide range of applications in machine learning, sensing, and pattern classification where we achieve significant improvements over classical dimensionality reduction techniques.

Bio: Aswin Sankaranarayanan is an Assistant Professor in the ECE Department at Carnegie Mellon University, Pittsburgh, PA. His research interests lie in the areas of computer vision, signal processing, and image and video acquisition. Prof. Sankaranarayanan received his B.Tech in Electrical Engineering from the Indian Institute of Technology, Madras in 2003 and MSc and PhD degrees from the Department of Electrical and Computer Engineering at the University of Maryland, College Park in 2007 and 2009, respectively. He was awarded the Distinguished Dissertation Fellowship by the Dept. of Electrical and

Computer Engineering at the University of Maryland in 2009. He was a post-doctoral researcher at Rice University from October 2009 to December 2012.

Upcoming Student Seminars:

4/4 – Rushil Anirudh: Test driving object detectors and classifiers: Estimating performance on unlabeled data

5/2 – Revak Tyagi: Performance Models for LTE-Advanced Random Access

Sponsored by the SenSIP Center and NSF I/UCRC

Technical Co-Sponsorship by the IEEE Signal Processing and Communications Chapter, Phoenix Section

Google Group!

Please sign up for timely email announcements at our google group link:

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



Phoenix Chapter of the IEEE Computer Society

April, 2014

News

- We continue to assemble our programs for 2014. Chapter meeting dates for the remainder of 2014 are listed below. Mark your calendars to save the dates:
 - May 7th at DeVry University (see below)
 - July 2nd at DeVry University
 - Sep 3rd at DeVry University
 - Nov 5th at DeVry University

Details of the program for these chapter meetings will be published as the speakers are confirmed.

- On March 5th an IEEE Distinguished Visitor, Dr. Hal Berghel from the University of Nevada, Las Vegas, presented "**The Digital Assault on Privacy**" at the chapter meeting at DeVry University. The presentation was extremely interesting and contemporary. Feedback has been positive.

Future Events

- May 7th – Chapter meeting, DeVry University, presentation on solid state disk drives by representatives from Intel Corporation.

Meetings start at 6:00 pm with networking and light refreshments followed by the presentation at 7:00 pm. DeVry University is located at 2149 W Dunlap Avenue, Phoenix, (a mile east of I-17 on Dunlap).

Visit the CS Chapter website for the latest information: <http://ewh.ieee.org/r6/phoenix/compsociety/>.

For brief announcements regarding upcoming events we are also on Twitter: @IEEECS_PHX

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

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

EMC Society Technical Meeting Announcement on High Speed I/O Design For EMC & Signal Integrity



Date: Tuesday, April 29, 2014

Place: Compliance Testing LLC

Address: 1724 South Nevada Way, Mesa AZ 85204

Time: Pizza/drinks at 6 PM, Presentation at 7 PM

Title: High Speed I/O Design for EMC & Signal Integrity

Speaker: Dr. Xiaoning Ye, Principal Engineer, Intel Corporation
Distinguished Lecturer of the IEEE EMC Society

Abstract: High speed links are running at microwave frequencies and high quality models are essential to the IO design. In this presentation, the author will discuss modeling challenges and provide simulation guidelines in building accurate electrical models of link components such as PCB, package, connector, etc. In-depth analysis of the PCB technology will be provided to reveal why traditional PCB modeling methodology is running out of steam at multi-GHz frequencies. The presentation will also address another critical aspect of high speed interconnect design: the simulation and measurement correlation. Practical examples using TDR/VNA to perform simulation/measurement correlation will be given in the presentation.

Biography: Dr. Xiaoning Ye received the Bachelor's and Master's degrees from Tsinghua University, Beijing, China, in 1995 and 1997, respectively, and the Ph.D. degree from the University of Missouri-Rolla (currently Missouri University of Science and Technology) in 2000. Dr. Ye is currently a principal engineer in Datacenter Group of Intel Corporation, where his role includes ensuring signal integrity of high-speed signaling in server platforms, providing platform design guidelines, and research and development of next generation multi-Gb/s bus interfaces. He was also engaged in research and development of electromagnetic compatibility solutions for enterprise platforms. Dr. Ye has published over 50 IEEE journal and conference papers, holds five patents and five patent applications in the areas of high-speed signaling. He is currently an IEEE senior member, and serves as Chair of TC-10 (Signal Integrity Technical Committee) of the IEEE EMC Society. He is also the technical program committee co-chair of 2014 IEEE International conference on Signal and Power Integrity.

Who Should Attend: Anyone interested in high speed digital design issues - not just EMC/Signal Integrity engineers. All are welcome -- you do NOT need to be an IEEE member to attend. Free pizza and drinks will be provided by the EMC Society Chapter.

RSVP: To help us get an accurate headcount for ordering the pizza, please send an RSVP email to Harry Gaul (harry.gaul@ieee.org). There is no charge for meeting. If you decide at the last minute, please come anyway.



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



News and Announcements:

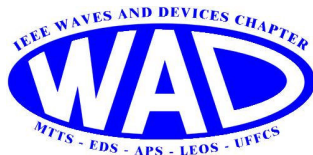
- Want to know more about IEEE Power and Energy Society? Watch this video:
 - http://www.youtube.com/watch?v=BRKM4lpo_tk
 - More videos are available at:
<http://ieee-pes.org/outreach/pes-informational-promotional-videos>
- Have you considered becoming a Senior Member of IEEE? It's not as difficult as you think. Basically, you need ten years of professional experience, and your bachelor's degree counts for three of those years. Find out more at:
http://www.ieee.org/membership_services/membership/senior/index.html

April Luncheon Meeting

Date: Thursday April 17th, 2014
Time: 11:30 am: Registration
11:45: Lunch
12am – 1pm: Program
Location: PERA Club
1 E. Continental Drive, Tempe, AZ 85281
Speaker: Brad Albert
Topic: Solana Solar Generating Station
Cost: \$5
Reservations: Contact Nicole at (602) 470-0400 or submit your name here:
<http://ewh.ieee.org/soc/pes/phoenix/lunch.php>



IEEE



CMOS Sensors and Circuits for Biomolecular and Cell Culture Systems

Jennifer Blain Christen

School of Electrical, Computer and Energy Engineering, Arizona State University

Abstract

Prof. Blain Christen will present complete systems integration for CMOS-based systems for in vitro and ex vitro biological assays. She will examine CMOS-based sensors as well as techniques to improve their performance taking advantage of CMOS-based fabrication. She will then describe some of the systems designed by her group including both the sensors and readout circuits. These chips are embedded in microfluidics, and a new technique for packaging is presented. Finally she will discuss the concept of multi-modal feedback (these are multi-physics systems so the implementation of feedback necessitates sensing and actuating using different physics). The complete system enables a new class of assays resulting from application of engineering principles to biological research.

Biography



Jennifer Blain Christen received a B.S. (1999), M.S. (2001) and Ph.D. (2006) in electrical and computer engineering from Johns Hopkins University. Her dissertation focused on hybrid systems for life science applications exemplified through the development of a micro-incubator for cell culture. Blain Christen held a Graduate Research Fellowship and a G K-12 fellowship both from the National Science Foundation. In her post-doctoral work at the Johns Hopkins School of Medicine in the Immunogenetics Department, she developed a microfluidic platform for homogeneous HLA (human leukocyte antigen) allele detection. Her research interests involve design of analog and mixed-mode integrated electronics for direct interface via innovative fabrication techniques to aqueous environments with special emphasis on biological materials.

Date: Thursday, April 24, 2014

Time: 5:00-6:00 PM Presentations (Pizza will be served following the Seminar)

**Location: Group Conference Rm, Bldg 94, Freescal Semiconductor, 2100 E. Elliot Rd, Tempe, AZ
Use Freescal Main Entrance (South) facing Elliot Road**

For more information, contact:

Steve Rockwell (WAD Chapter Chair) (480) 241-9891 steve.rockwell@ieee.org
Vishwanath Natarajan (Chapter Publicity) (404) 428-0514 vishwanath.natarajan@ieee.org

WAD Website: <http://ewh.ieee.org/r6/phoenix/wad/>



Technical & Administrative

Meeting May 13, 2014

Program Presentation: "IEEE LIFE MEMBER TOUR EXPERIENCES"

Discussion of how the tours work and experiences during the past 4 years of tours to England & Scotland, Japan, Eastern Canada, and Panama.

Presenter: David Onstad

David worked in electric power for 30 years with the US Bureau of Reclamation, the Western Area Power Administration and the Arizona Power Authority. He has volunteered for about 20 design teams during the past 15 years performing designs for missionaries in other countries who need to have schools, hospitals, children's homes and churches built to further their programs. He is a member of the Phoenix LMAG.

Meeting Agenda:

1. **Introductions of attendees**
2. **Old Business**
 - a. **TOPICS FOR TECHNICAL PRESENTATIONS FOR 2014 TECHNICAL MEETINGS**
 - b. **ARIZONA SCIENCE LAB MANPOWER SUPPORT report Barry Cummings**
 - c. **Proposed ANNUAL SCHOLARSHIP PROGRAM report Les Daviet**
3. **New Business**
 - a. **Discussion for suggestions on the Program presentations.**
 - b. **Discussions of future LMAG activities**

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 Room is the most South east building off parking.

When: Tuesday, May 13, 2014, 11:00am – 1:00pm, Registration fee is \$15. This fee will include lunch provided by the PERA Club. Lunch will be: to be voted on

RSVP: Please respond to the Program Chair, Ronald Sprague by email: r.sprague@ieee.org at least 5 days before the meeting. The RSVP is needed to determine the number of meals to be provided by PERA.

The Program Chair is seeking suggestion from members for future presentations. Any ideas of interest to LM are open for consideration. Please contact Ronald Sprague Program Chair at r.sprague@ieee.org or any officer with ideas.

About IEEE Phoenix Section Life Member Affinity Group:

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

more details use the link

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

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

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

- Tuesday, May 13, 2014
- Tuesday, October 14, 2013
- Tuesday, December 9, 2014

Officers:

Chair	Leslie Daviet II	lesdavietii@cs.com
Vice Chair	Position is Vacant	
Secretary	Tom Lundquist	Tom.Lundquist@ieee.org
Treasurer	Leslie Daviet II	lesdavietii@cs.com
Program	Ronald L. Sprague,	r.sprague@ieee.org
Past Chair	A. Barry Cummings	abarrycummings@gmail.com



IEEE

youngprofessionals

IEEE Young Professionals (formerly GOLD) Phoenix Section Officers

- Chairman: Shafiul “Jacky” Islam (shafiul.islam@intel.com)
- Vice Chairman: Jennifer Taggart (jennifer.taggart@asu.edu)
- Treasurer: Ashley Meredith (ashley.meredith@aps.com)
- Secretary/Webmaster: Joseph Caglio (joseph.m.caglio@intel.com)

February 22, 2014, Engineers Day at the Arizona Science Center

IEEE Young Professionals (formerly GOLD) Phoenix Section, took the lead to represent IEEE Phoenix Section on Engineers Day, February 22, at the Arizona Science Center from 10:00 am to 3:00pm. For this event, IEEE Young Professionals, Phoenix Section has collaborated with Arizona Science Lab, IEEE Women in Engineering, Phoenix Section, and IEEE Life Members, Phoenix Section. IEEE Young Professionals, Phoenix Section highly appreciate the help of those who were able to volunteer and thank their valuable contributions on Engineers Day. The list of volunteers are provided below:

- Shafiul “Jacky” Islam, Chair, IEEE Young Professionals Phoenix Section (from Intel Corporation)
- Ashley Meredith, Treasurer, IEEE Young Professionals Phoenix Section (from APS)
- Chuck Weitzel, Past Chair, IEEE Phoenix Section (IEEE Fellow)
- Shamala Chickamenahalli, Chair, IEEE Women in Engineering (from Intel Corporation)
- Ahmet Durgun, Past Chair, IEEE Arizona State University Student Branch (from Intel Corporation)
- Zhen Zhou (from Intel Corporation)



March 29, 2014, Region 6 Southwest Area Meeting and Officers Meeting

Shafiul “Jacky” Islam did a presentation to provide an overview of:

- Major of changes over transition from IEEE GOLD to IEEE Young Professionals;
- IEEE Young Professionals Phoenix Section Officers;
 - Succession Plan effective 2015: Jennifer is going to be Jacky’s successor;
- IEEE Young Professionals Phoenix Section key events in 2013;
- Jacky’s perspectives/idea on:
 - Challenges in IEEE engagement right out of school;
 - Why to be part of IEEE: Networking, Empowerment, and Professional Development opportunities;
 - Applying IEEE leadership experiences towards MBA / Executive MBA (in future).
- Ashley’s idea on paper clip helicopters, which was super hit with kids on Engineer’s Day when we represented Phoenix Section.
- Tentative Event Plans for 2014;

During breaks and commute, we also held officer’s meeting to discuss succession plan effective 2015 and event plans for Fall 2014.



IEEE Phoenix Section
Women in Engineering
Affinity Group



Representatives of the IEEE Phoenix Section **Women in Engineering (WIE) Affinity Group (AG)** role modeled Engineering Values by various activities during the National Engineering week. WIE engineers visited the St. John Bosco Catholic School, Awahatukee and gave a talk about careers in engineering to 8th grade science class students.



WIE representatives anchored to arrange a speaker session for the month of April, Dr. Celeste Fralick, senior technologist and Principal engineer from Intel Corporation is giving a talk on 'Intelligent Analytics' on the 29th of April. Harvard Business Review stated that being a Data Scientist is the Dream job of the 21st century. In this talk, Dr. Fralick will discuss why the Internet of Things has heated up the need to be more analytic savvy, and the secrets of a Data Scientist. What does "analytics" mean? What's "Big Data"? Why should you care? What do you need to know to survive without turning into a Data Scientist? Join Dr. Fralick from the Internet of Things Solutions Group as she provides the answers to these questions as well as a primer for Analytics 101.

Link to the talk session and registration can be found here at https://meetings.vtools.ieee.org/meeting_view/list_meeting/25361

Date: 29-April-2014

Time: 05:30PM to 07:00PM (1.50 hours) **All times are:** US/Arizona

Location: Goldwater Center for Science & Engineering,

Chair: Shamala Chickamenahalli (Shamala.Chickamenahalli@intel.com)

Vice-Chair: Lesley Polka (lesley.a.polka@intel.com)

Secretary / Publicity: Divya Kalimuthu (divya.kalimuthu@intel.com)

Treasurer: Diane Smith (diane@web-oasis.com)

Web Master: Audrey Skidmore (ASkidmore@azmag.gov)

Membership: Lesley Polka (lesley.a.polka@intel.com)

Region 6 Liaison: Barbara McMinn (barbara.mcminn@aps.com)

If you would like to be added to our distribution list for further information about this and future events, please contact Divya Kalimuthu (divya.kalimuthu@intel.com).

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

http://www.ieee.org/membership_services/membership/women/women_about.html.

Celeste Fralick is a senior technologist and Principal Engineer at Intel Corporation. She is currently focused in strategic data analytics and its architecture in the embedded, "Internet of Things" markets, and has been a technical leader in Intel's biotech strategies, product qualification, and life cycle programs. Active in various industry boards, journal editorial staffs, and consortiums, her 34 year experience spans semiconductor process and product development, regulatory, medical device, analytics, and quality /reliability technology. Celeste holds a Ph.D. in Biomedical Engineering from Arizona State University, with a concentration in predictive analytics and neuroscience

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



 **2014 IEEE Phoenix Section News**

View or down load the pictures from IEEE Phoenix Section Annual Banquet 2013 at: <http://sites.ieee.org/phoenix/category/annual-banquet/>

Executive Committee Meeting

Upcoming Meeting Tuesday, May 3rd, 2014
The Airport Hilton Phoenix,
2435 S 47th St. Phoenix, AZ 85034, (480) 894-1600.

2014 Executive Committee

Chair: Barbara McMinn
Vice Chair: Bruce Ladewig
Secretary: Surinder Tuli
Treasurer: Vivek Gupta
Past Chair: Charles Weitzel

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 Annual Banquet 2014 Photos are Posted at:

<http://sites.ieee.org/phoenix/2014/03/03/pictures-from-the-2014-annual-banquet/>

IEEE Phoenix Section – Forming Reliability Chapter **Reliability Chapter Forming**

The IEEE Reliability Society (IEEE RS) plans to collaborate with the IEEE Phoenix Section, as well as, the IEEE Sections in Tucson and Sierra Vista/Ft Huachuca in forming this new state-wide IEEE Reliability Chapter. The Reliability Chapter will focus on 3 meetings in the first 6 months after being created. The topics that may be discussed will include new IEEE Reliability Standards (e.g., IEEE 1633), new software reliability techniques and reliability growth techniques. The IEEE RS plans to rotate Chapter meetings between the 3 state locations. If you are a member of the IEEE, but not an IEEE-RS member, you could join the society for \$35 and be a charter member to help in the formation of this new Chapter. If you are an IEEE RS member or interested in Reliability Society, please contact Lou Gullo at Louis.Gullo@ieee.org.

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. Charles E. Weitzel, Section Chair, at c.weitzel@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.

IEEE Phoenix Section Ventures into Social Media

We have made good progress in our Facebook page so far.

We have 43 people who Like this page (subscribers). Our first goal is to reach 500 likes by end of this year.

The activity chart shows that between 100 to 160 people are accessing this page every week.

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. <http://sites.ieee.org/phoenix/>

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.

If you have any questions, please call me.

Thanks for you help in advance.

I will send out regular reminders as well to make sufficient progress.

Vivek Gupta
Pace Chair
IEEE Phoenix Section

480-734-0266

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-USA's Free E-Books to Members

IEEE-USA's Free E-Books to Members Promote Fostering an Innovation Culture & Building a Relationship with Your Elected Officials

April Free E-Book

WASHINGTON (31 March 2014) -- IEEE-USA E-Books is offering “Communicating with Congress -- How to Build a Relationship with Your Elected Officials” free to IEEE members in April.

Author Russell Harrison offers insight into effective communication techniques to use when meeting with members of Congress. The IEEE-USA senior legislative representative encourages readers to be activists, and provides guidance on writing letters to Congress and having a successful congressional visit.

The ability to communicate well with your congressional representatives plays a key role in helping to ensure a strong science and engineering workforce, as well as sufficient funding for research and development.

“Engineers must become as adept in dealing with societal and political forces as they are with gravitational and electromagnetic forces,” retired Lockheed Martin CEO Norm Augustine said. “We must equip engineers of the future to present their cases in almost every forum imaginable -- from town meeting to state legislature, from “The New York Times” to “60 Minutes,” from Congress to the Oval Office.”

“Communicating with Congress: How to Build a Relationship with your Elected Officials” can be downloaded at <http://www.ieeeusa.org/communications/ebooks/files/april14/29-0fnv/Communicating-with-Congress-2010-Update.pdf> for free to IEEE members. The non-member price is \$7.99. To purchase IEEE members-only products, and to receive the member discount on eligible products, members must log in with their IEEE Web account.

May Free E-Book

In May, IEEE-USA E-Books will offer “Educating 21st Century Engineers” free to members.

IEEE Fellow Dr. James Gover and Dr. Paul Huray wrote this e-book to raise awareness of the declining interest many U.S. students have in a career in engineering. The authors advocate for the federal government to declare engineering a public good, and for corporations to fill a major role in engineering education -- as engineers invent, improve, design and manage the production of technology that drives much of our economy.

Call for Authors

IEEE-USA E-books seek authors to write an e-book, or an e-book series, on career guidance and development topics. If you have an e-book idea that will benefit members on a particular topic of expertise, email your proposal to IEEE-USA Publishing Manager Georgia C. Stelluto at g.stelluto@ieee.org, and IEEE-USA E-Book Chair Gus Gaynor at g.gaynor@ieee.org.

App-E-Feat Mobile App Development Contest to Benefit Humanity

WASHINGTON (28 March 2014) -- Are you interested in using technology for the betterment of humanity and winning some cool prizes? If so, App-E-Feat is just for you.

App-E-Feat (<http://www.appfeat.org/>) is a mobile app development initiative featuring a two-category contest to help solve a local or global problem and have a positive impact on people’s lives. Contestants 13- to 17-years-old are asked to draw or describe an app online. Those 18 and older have to submit the actual app code. A panel of judges will choose the winning entries.

Prizes include an iPad Air tablet computer for first-place finishers in each of the two categories. Second-place finishers will receive a \$250 Amazon gift card; those placing third will receive a \$150 Amazon gift card. Each of the top contestants will have the opportunity to work with an IEEE mentor to enhance their technology-development skills and interest.

Examples of problems an App-E-Feat entrant could help solve include, among others, apps that provide location information for immunization clinics, educational resources and places to find safe drinking water.

“IEEE-USA launched the App-E-Feat contest to inspire both engineers and the next generation of technology professionals to find ways to leverage their expertise to benefit humanity,” said Dr. Karen Panetta, IEEE-USA vice president for communications & public awareness.

The contest is open through 19 May, and winners will be announced 20 June. For more information and official rules, see <http://www.appefeat.org/contest>.

Panetta, an IEEE fellow and professor of electrical and computer engineering at Tufts University, conceived App-E-Feat while listening to former President Bill Clinton describe how valuable mobile apps were to rescuers following the 2010 earthquake in Haiti. She later added the contest idea.

“App-E-Feat is more than a year in the making and was inspired by President Clinton’s 2013 comments discussing the impact and potential of mobile apps for causes around the world,” Panetta said.

App-E-Feat is IEEE’s contribution to the Clinton Global Initiative, which “convenes global leaders to create and implement innovative solutions to the world’s most pressing challenges.”

App-E-Feat has been well-received in the media, including:

* FOX 5 TV

(<http://www.myfoxdc.com/video?autoStart=true&topVideoCatNo=default&clipId=9862310#.UwZ9wtSt5Io.gmail>)

* Mashable (<http://mashable.com/2014/02/20/app-e-feat/>)

* The Boston Globe (<https://www.bostonglobe.com/business/2014/03/08/tufts-prof-professor-sparks-app-contest-for-teens/jzLi6y1yxylMi7UR4aCBeM/story.html>)

IEEE-USA Releases First in a Series of E-books on Women in Engineering

WASHINGTON (26 March 2014) -- Although women make up about half of the world’s population, they are woefully under-represented in STEM (Science, Technology, Engineering and Mathematics) occupations.

This and other issues will be covered in a new e-book from IEEE-USA. “Women in Engineering -- Book 1 (Volume 1): Inspire and Close the Gender Gap” is the first in a series of e-books on women engineers.

The reasons why more young girls are not pursuing STEM careers continues to be complex, varied and best appreciated when studied from multiple vantage points. Nita Patel, the book’s author and IEEE Women in Engineering International chair, says “a few key themes -- public stereotypes, inherent biases and lack of role models -- emerge.”

Women’s participation in the workforce has increased significantly over the past few decades, and they now earn more college degrees than men. And while the demand for STEM-educated professionals has grown more than four times the rate of the U.S. labor force as a whole, women, for example, make up only about 11 percent of the world’s electrical engineers and 18 percent of computer scientists.

Moreover, less than 24 percent of senior managers globally are female, a figure that is even less in technology companies. The Wall Street Journal recently reported that only 3 percent of all firms going public in the past year had women CEOs.

“Although there are no magic elixirs, developing one-on-one mentoring relationships, providing female role models, and increasing the awareness of inaccurate biases and stereotypes can make a difference,” Patel says. “We need more women in leadership roles.”

IEEE Women in Engineering is taking several steps to inspire young girls to pursue STEM careers and to engage women graduating with STEM degrees.

The IEEE Women in Engineering International Leadership Conference (www.ieee-wie-ilc.org), in San Francisco on 2-3 May, is, according to Patel, “one way to provide inspirational role models and develop leaders who can truly change the world through their leadership.”

“Women in Engineering -- Book 1 (Volume 1): Inspire and Close the Gender Gap” is \$7.99 for IEEE members and \$9.99 for nonmembers. See <http://bit.ly/NPEJ9K>.

IEEE-USA serves the public good and promotes the careers and public policy interests of more than 205,000 engineering, computing and technology professionals who are U.S. members of IEEE.

Web: www.ieeeusa.org

Facebook: www.facebook.com/ieeeusa

Twitter: www.twitter.com/ieeeusa

Join IEEE: www.ieee.org/join

Contact: Sharon C. Richardson, Coordinator

IEEE-USA Communications & Publishing

Phone: 1 202 530 8363

E-mail: s.richardson@ieee.org

Or

Chris McManes

IEEE-USA Public Relations Manager

202-530-8356

c.mcmanes@ieee.org

GoogleApps@IEEE Now Available to IEEE Members

GoogleApps@IEEE is a suite of products offered to IEEE members to enhance peer-to-peer communications and collaboration. The suite of applications includes e-mail, calendaring, contacts, and document sharing along with other collaborative tools. 30G of available cloud storage memory is available for these applications. Learn more about <http://www.ieee.org/googleapps>

GoogleApps@IEEE is available to members at no additional cost, bringing access to:

- A unique IEEE e-mail address (e.g., John.A.Doe@ieee.org);
- Mail forwarding or e-mail inbox (Gmail);
- 30-gigabytes of shared storage (Gmail and Google Drive);
- 99.9 percent up time guaranteed by Google;
- Advertisement-free Gmail;
- Files stored in the cloud for easy sharing and access from anywhere via Google Drive.