The Valley Megaphone

Newsletter of the
Institute of Electrical and Electronics Engineers, Inc.,
Phoenix Section
September 2014,
Volume XXVIII, Number 9

Executive Committee 2014

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

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

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

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

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

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

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

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

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

Conferences
Brad Morantz, 480-348-5945
Phx.Conf@yahoo.com

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

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

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

In this Issue of the Valley Megaphone: Table of Contents

(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 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
Pavan Turaga
pturaga@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
Craig Smith
craig.smith@aps.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
Shamala Chickamenahalli
shamala.chickamenahalli@intel.com

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

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

Student Branches

ASU Main, Engineering
Chair: Nick Spirakus
480-789-9867,
nmspirak@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
postj@erau.edu

U – Newsbytes

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

Message from the Chair

After a lot of thought and struggle, I resigned as the 2014 Chair for the IEEE Phoenix Section due to a personal situation. As the Phoenix Section has a well-defined succession plan, Bruce Ladewig has assumed the Chair responsibilities and will also continue his current Vice Chair responsibilities. . Elections will be held in November so this situation will only exist for a few months.

I am assisting Bruce with the transition and am available for consultations. I will also remain involved with IEEE to the extent my situation allows.

It is with great reluctance that I made this decision but feel it is the best for me and the Section at this time as I do not believe I can devote the necessary time to my Chair responsibilities and deal with my personal situation also. I thank everyone for their support during my time on the Phoenix Section Executive Committee and hope to be in a position to take on IEEE responsibilities in the future.

Sincerely,

Barbara McMinn, P.E.

Upcoming Conferences in August in Region 6

2014 39th International Conference on Infrared, Millimeter, and Terahertz waves (IRMMW-THz) Will be Sept 14 to 19 In Tucson

2014 36th Electrical Overstress/Electrostatic Discharge Symposium (EOS/ESD) Will be Sept 7 to 12 in Tucson

There will also be 3 conferences in California, one in Washington, and one in Nevada Coming up in Phoenix are Five (5) conferences

2015 IEEE/MTT-S International Microwave Symposium - MTT 2015 Will be held May 16 to 22 2015

2015 International Conference on Microelectronic Test Structures (ICMTS) will be held March 23 to 26 2015

2015 85th ARFTG Microwave Measurement Conference (ARFTG) will be held on May 22, 2015

2015 IEEE International Conference on Cloud Engineering (IC2E) will be held March 9 to 13

2015 IEEE Workshop on Automatic Speech Recognition and Understanding (ASRU) will be held Dec 13 to 16, 2015

Metro Area Workshop

We are trying to plan an all day workshop here in Phoenix for the spring of 2015. It will be for learning and networking and will be kept affordable so that everyone who wants to attend can. We are planning on having a keynote speaker and then break into a number of classes all day, with breaks for snacks, lunch, and networking.

Anyone who would like to volunteer to help or is able to teach a class, please contact me at Phoenix.conferences@ieee.org or bradscientist@ieee.org

We are also planning on having exhibits for the attendees to learn about new companies, products, and to meet other people. The booths will be reasonably priced, and if anyone is interested, please contact me at the email listed in the lines above.

Call for Papers
28th International Conference on Microelectronic Test Structures
March 23-26, 2015, Phoenix, Arizona USA

General Chair:
Larg Weiland
PDF Solutions
larg.weiland@pdf.com

Technical Chair:
Colin McAndrew
Freescale Semiconductor, Inc.
Colin.McAndrew@freescale.com

Tutorial Chair:
Brad Smith
Freescale Semiconductor, Inc.
Brad.Smith@Freescale.com

Local Arrangements:
Colin McAndrew
Freescale Semiconductor, Inc
Colin.McAndrew@freescale.com

Equipment Exhibition:
Bill Verzi
Agilent/Keysight Technologies
bill_verzi@agilent.com

Asian Representative:
Kunihiro Asada
VLSI Design and Education Center
University of Tokyo
asada@silicon.u-tokyo.ac.jp

European Representative:
Anthony Walton
Scottish Microelectronic Centre
University of Edinburgh
Anthony.Walton@ee.ed.ac.uk

USA Representative:
Loren Linholm
linhlw@comcast.net

Conference Manager:
Wendy Walker
Widerkehr and Associates
wwalker@widerkehr.com

The 28th International Conference on Microelectronic Test Structures (ICMTS) will be held in Phoenix, Arizona, USA, bringing together designers and users of test structures to discuss recent developments and future directions. The conference will be held March 24-26, 2015, preceded by a one-day Tutorial Short Course on Microelectronic Test Structures on March 23. There will be an equipment exhibition relating to test structures and measurements. Original papers are solicited presenting new developments in test structures, as well as their implementation, measurement, and application, related to semiconductors, nanotechnology, and MEMS. A Best Paper award will be presented by the Technical Program Committee. The conference is sponsored by the IEEE Electron Devices Society and all published papers will be posted to IEEE Xplore®.

Topics of relevance to ICMTS include, but are not limited to:

Material and Process Characterization: Wafer material evaluation for SiGe, strained Si, Si-on-insulator, Ge, GaAs, GaN and other compounds. Resistivity, mobility, stress, contact resistance, dielectric, and interconnect measurements. Test structures and methods to evaluate new materials and devices, e.g. graphene and CNTs.
Test structure design methods: Flows for automated test structure design, generation, and verification; design-for-analysis, parameterized design, layout issues (grid, hierarchy, misalignment), switched arrays.
Replicated Feature Metrology: Level-to-level registration, overlay, CD uniformity and control, non-electrical characterization techniques, mask and reticle process control.
Manufacturing of Integrated Circuits and MEMS: Evaluation of individual and groups of integrated circuit, device, and MEMS process steps and elements: transistors, diodes, mechanical structures, device isolation, memory cells, and interconnect. Assessment of MMICs and RF components and products. Evaluation and optimization of standard cell macros and other circuits.
Reliability and Product Failure Analysis: Test structures for quality assurance, transistor, thin film, dielectric, and interconnect reliability, thermal monitoring and analysis, accelerated wafer level tests, wafer level burn-in, failure identification, reliability prediction.
Nanotechnology, Displays, and Emerging Devices: Test structures and methods to evaluate nanotechnology (materials and devices), displays, optoelectronic materials and devices, novel memories, and related materials.
(BIO-)MEMS, (BIO-)Sensors, and Actuators: Test structures for MEMS and micromachining including physical/chemical/optical/bio sensors, photonic devices, amorphous silicon films and devices.
Device and Circuit Modeling, Parameter Extraction: Model parameter extraction, RF device modeling, de-embedding, pulsed measurements, DC and high frequency measurement techniques and applications.
Technology R&D, Integration, and DFM: Test structures for FEOL or BEOL evaluation, design rule determination, process uniformity and worst-case analysis, test structures to assess integration and new technologies, switched array test chips/devices for large scale evaluations and reduced pad count.
Test Circuits: Novel on-wafer circuits for characterization of manufacturing technologies, variability, yield, and performance. Circuits to simplify probing, improve measurement robustness, and reduce pad count.
Yield Enhancement, and Production Process Control: Yield enhancement structures and methods, critical area calculation, defect estimation structures and methods, yield modeling, evaluation of design-manufacturing interactions, place and route methodology, and statistical process control. Large-scale, many-component test arrays and multiplexing techniques for technology assessment.
Test Structure Measurement Utilization Strategy: Test equipment, probing and programmable testing for process diagnostics, optimizing test throughput, database and data analysis methods, statistical data analysis, expert systems and related techniques, including capacitance, voltage, current, resistance, optical, and thermal measurements.
Matching and Variability Test Structures: Matching and variability of components (transistors, resistors, capacitors, inductors) and layout for circuit applications and their evaluation. Characterization of identically designed components. Modeling of matching and variability.

Authors are asked to submit an abstract of up to four pages in PDF format (font-embedded). The first page **must** consist of a title, a 50-words summary, author name(s), the full address, fax number, and e-mail address of the lead author, and author preference for oral or poster session presentation, if any. The body of the abstract should be three pages or less consisting of one page of text (800 to 1000 words) and up to two pages containing major figures and tables. Please visit the ICMTS 2015 official web site icmts2015.pdf.com for further information and paper submission. You may care to join the ICMTS group at www.linkedin.com.

The selection process will be based on the technical merit and will be highly weighted in favor of papers that have a high test structure content, include measured data and analysis, together with illustrations of the test structures involved. The submission deadline is **October 17, 2014**. Notice of paper acceptance, with instructions for manuscript preparation for the conference proceedings, will be sent to the authors of the papers selected for presentation by early December, 2014. The deadline for submission of the final paper will be January 20, 2015.

Details of the venue, hotel, registration, etc. will be posted at icmts2015.pdf.com as they are finalized.

For further technical information, please contact the technical chair:
Colin McAndrew, Freescale Semiconductor, Inc., Colin.McAndrew@freescale.com

2014 IEEE Custom Integrated Circuits Conference (CICC '14)

Showcase for Circuit Design in the Heart of Silicon Valley

September 15 –17, 2014, DoubleTree Hotel, San Jose, California

Sponsored by the IEEE Solid-State Circuits Society
Technically co-sponsored by the IEEE Electron Devices Society

Conference Registration and hotel reservation links are now active. Registration deadline is September 5. The hotel reservation deadline is August 11.

Conference Registration: The advance registration deadline for the lower registration fee is September 10. Advance registration closes on September 5. After that date, you need to register onsite at the conference. *Register now and save money.*

Online Registration: To register for the conference online, go to the website – www.ieee-cicc.org, Click on the General Information button on the left side menu, click on Registration for online registration. Follow the directions.

Hotel Reservations: The hotel reservation deadline for the IEEE Custom Integrated Circuits Conference is Monday August 11, 2014. Reservations must be made by that date to qualify for the CICC room rate. The conference will take place at the DoubleTree Hotel, 2050 Gateway Place, San Jose, California. The room rate is $149 for a single or double room. All rooms must be guaranteed with a credit card. The hotel has an outdoor swimming pool as well as exercise facilities

Online Reservations: To make your hotel reservations online, go to the CICC website at www.ieee-cicc.org. Click on General Information on the left side menu. Click on hotel to make a hotel reservation. Follow the directions to make your reservation.

Reservations by phone: To make your hotel reservations by phone, call the DoubleTree Hotel at 408-453-4000. Tell them you are with IEEE CICC to get the CICC room rate.

Here are some of the highlights of 2014 CICC:

Educational Sessions Program

This year the Educational Sessions are embedded with the technical program.
They are on Monday, Tuesday and Wednesday.
Entrance to the Educational Sessions is included in the registration fee.

Monday & Tuesday, Sept 15 & 16:

- Poster Presentations
- Vendor Exhibit

Monday - Wednesday, September 15-17:

Technical Program

The Technical Program teams are very enthusiastic about the 2014 technical papers by experts from the Industry and Academia. *This year we are continuing the Technical Forum session platform.* In addition, the traditionally popular invited papers, and panel sessions will entertain and inform the audience.

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	iamgoinbiking@gmail.com
Treasurer	Dr. Vasudeva P. Atluri	(480) 227-8411	vpatluri@ieee.org
Program Chair	Mr. David Dougherty	(480) 245-8099	david.dougherty@freescale.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 working to arrange monthly Seminars on topics of interest to our members. If you have suggestion for topics and/or speakers please contact any of the executive committee members listed above.

September 17– Dr. Jon Harris – Packaging for LED Lighting
October 15 – Dr. Stuart Bowden – Solar Cells
November – Dr. Jaynal Molla – Plating for Electronic Packaging

Additional Activities –Tutorial and Workshop

Phoenix section is planning to hold a Half Day tutorial on the topic of **Reliability Engineering** in early Fall. In addition we are working with other Society Chapters to hold a workshop on **Emerging Device and Packaging Technology** in late Spring 2015. Please wait for announcements in near future

IEEE Components, Packaging and Manufacturing Technology Society Phoenix Chapter

September 17th, 2014 at 5:30 PM

High Brightness LED Packaging Materials: Balancing High Thermal Demand, and Stringent Optical Requirements with Intensive Cost-Down Pressures

Dr. Jonathan Harris
President and Founder
CMC Laboratories, Tempe, Arizona

ABSTRACT

High brightness light emitting diodes (HBLED), defined as LEDs with power approximately 5W or higher, are about a $13b dollar industry worldwide. Early markets, such as display backlighting and cell phone camera flash, are now completely penetrated by LED technology. But new emerging applications such as automotive lighting and general lighting are very early in their growth cycle and are predicted to drive the HBLED market to over $70b by 2021.

Since HBLED lighting technology competes with existing and highly mature lighting options, such as halogen, incandescent and compact fluoresce bulbs, HBLED penetration into lighting markets is a very strong function of device price and operating costs. The critical metric for HBLED market penetration is $/Lumen of light produced, which can be impacted by decreasing HBLED unit cost and/or increasing HBLED light output for fixed energy input. This relationship between market opportunity and cost puts very high pressure on the entire HBLED BOM, with particular pressure on packaging since it is the largest single cost component.

In addition to minimizing costs, there are a number of technical challenges for packaging HBLEDs. For a 5W LED, over 3W of heat is generated. In addition, LED light output efficiency, wavelength stability and device lifetime is strongly correlated to junction temperature. So it is critical to have a packaging solution that will effectively remove heat from the device. And because this is an optical device, heat can only be removed from the backside, away from the optical path.
Another key consideration to maximize light emission is packaging material reflectivity. This has driven large scale adoption of Ag metallization for HBLED applications as well as specialized highly reflecting coatings.

This presentation will describe current HBLED packaging materials and technologies. It will show how existing technologies have been expanded and refined for the HBLED application. We will also discuss the longer term strategies for reducing HBLED cost while maintaining critical thermal and optical performance.

BIOGRAPHY

Dr. Jonathan Harris has played a leadership role in the advanced ceramic materials and electronic packaging industry over the past 28 years. Dr. Harris is President and Founder of *CMC* Interconnect *Technologies*, a materials analysis and consulting firm which focuses on the electronic interconnect industry. CMC provides a range of technology services including materials characterization, failure analysis, device/package deprocessing, and technical market analysis. CMC's clients include Fortune 100 device manufacturers and advanced materials companies. Dr. Harris was prior President of *CMC Wireless Components*, a high thermal performance ceramic packaging company which served the telecommunications, optics, and medical industries. Dr. Harris received his doctorate in Solid State Physics from Brown University (Providence, RI) in 1983. He is the author of over 50 publications and book chapters and has 20 US Patents.

Date: Wednesday, September 17th, 2014

Location: Group Conference Room, Freescale Semiconductor, Inc., Discovery Business Center, 2100 E. Elliot Rd. Tempe, AZ. Enter the facility through the Main (South) Lobby in building 94 and sign in with Security (*Photo ID required*) **BEFORE 6:00 PM**. 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
Devarajan Balaraman	(480) 619-0944	Mahesh Shah	(480) 544-9438		

#

#

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

We are limiting member permissions only to receiving emails posted by the group owner - the SP-COM chapter chair.

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

We continue to post meeting notices on IEEE vtools at (https://meetings.vtools.ieee.org/main)

Phoenix Chapter of the IEEE Computer Society

September, 2014

News

The Phoenix IEEE Computer Society will meet on Wednesday Sept 3, 2014 at DeVry University on Dunlap Rd. We will meet at 6 PM for snack and networking and the presentation will start at 7 PM. Dr Brad Morantz will present "Artificial Intelligence, Past, Present, and Future."

What is intelligence? And what is artificial intelligence? How did it start and more importantly, what does it do and how do we use it? This presentation will overview these questions and more. We will discuss what are the various types of Artificial Intelligence (AI), how they are implemented, and how they are helpful, with some examples. This is not about programming but rather about knowledge and how it can be obtained. How do we convert data into information and then into knowledge. How is this being done today and how does it infringe upon our privacy. This is an expanding area and needs to be addressed.

Our next meeting will be Nov 19, 2014. We are lucky to have Dr Hal Berghel of UNLV return. He writes a monthly column in both the IEEE Computer and in the ACM Communications. He will present on computer privacy (or lack therof) and it is sure to be a very interesting lecture.

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)

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

September 2014 Luncheon Meeting

Date: Thursday, September 18, 2014

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

Location: Bobby Q's map (note location)

Speakers: Mike DeWitt, Manager - Construction Projects and Support Services, Arizona Public Service Company

Topic: Hassayampa to North Gila II (HANG 2) 500Kv Transmission Project, Down the Stretch They Come

Cost: $5.00 (No cost if you are a college student)

Reservations: Contact Gorman Company at (602) 470-0400 or submit your name here.
Reservations deadline is NOON on Monday, September 15, 2014.
If you have already registered for this luncheon but need to cancel, click here.

Abstract:
First identified in APS's Ten Year Plan in January of 2003 the Hassayampa to North Gila 500kV line is in the final stages of construction with line construction expected to be completed in February 2015. Substation work and energization of the project is expected to be complete by May 2015. This presentation will track the project from the starting gate to the sprint for the finish line.

Biography:
Mike has over 33 years of experience in the Utility/Power industry. He started his career in 1981 with the Bechtel Power Corporation as a welding inspector and quality assurance engineer working at a number of different nuclear facilities. In 1986 Mike began his career with Arizona Public Service Company (APS). He has worked in both the nuclear and fossil generation groups as well as the energy delivery organization. During his 28+ years with APS he has been involved with a number of high profile projects including several successful EHV transmission line and substation siting projects. Mike is currently the Manager of Construction Projects and Support Services as well as Executive Manager over the APS Transmission Expansion Projects. Mike is a graduate of Purdue University with a degree in Civil Engineering.

- 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

57th ANNUAL IEEE-PES FUNDRAISING GOLF TOURNAMENT

NOVEMBER 15, 2014

Be sure to join us at Rio Verde Golf Club, located at 18731 E 4 Peaks Blvd, Rio Verde, AZ 85263, for a 12:45 PM Shotgun Start. The course is located 10 Minutes north of Fountain Hills. (480) 471-9420 http://www.rioverdecc.com/Map

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 to last 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 _____

Player _____ **Dinner?** _____

Email _____

Additional Dinner Guests: _____

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

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

WAVES AND DEVICES

PHOENIX CHAPTER

http://ewh.ieee.org/r6/phoenix/wad/

2014 Calendar

Date	Location	Topic / Title	Speaker	Affiliation	IEEE Society
29-Jan	ASU Brickyard	Expanding your knowledge of Laser Fusion and Optical Accelerators	Ken Barat	Consultant	Photonics
6-Mar	ASU Goldwater	Embrace Circuit Nonlinearity to get Transmitter Linearity and Energy Efficiency	Earl McCune	MTT DML	Microwaves
4-Apr	Agilent	Current and Future Trends in Photovoltaics Technologies	Christina Honsburg	ASU	Electron Devices
25-Apr	Freescale	Bio Medical Devices	Jennifer Christen	ASU	Electron Devices
1-May	ASU	Software Defined Radio	Hossein Hashemi	USC	Microwaves/ Electron Devices
22-May	ASU	Antennas	Kathleen L. Melde	UofA	Antennas
24 - Sept	**Freescale**	**Device Modeling**	**Colin McAndrew**	**Freescale**	**Microwaves / Electron Devices**
Oct	**ASU / Freescale**	**Software Defined Radio**	**Jeffrey Pawlan**	**MTT DML**	**Microwaves**
Nov	**TBD**	**Microwave Board Materials**	**John Coonrod**	**Rogers Corp**	**Microwaves**
Dec	**ASU**	**Antenna System**	**Ron Lavin**	**Boeing Corp.**	**Antennas**

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

WAVES AND DEVICES - Phoenix Chapter

Meeting Free & Open to Non-IEEE Members

6:00 to 7:00PM, Wednesday, Sept 24, 2014

Freescale Semiconductor
2100 E. Elliot Rd., Tempe, AZ
Group Conference Room

How Really Smart Engineers Make Really Dumb Mistakes

Dr. Colin McAndrew

Freescale Semiconductor

Abstract

As engineers we are confronted daily with the need to solve problems. We must analyze and interpret data. We often have to build mental pictures of what is going on in circuits and devices to help develop solutions to overcome the problems. And in the background we should always try to remember the mathematics and physics we learned in school, but may not have applied for some years, to both guide us and, where necessary, limit us (Ohm's law is not a law; the laws of thermodynamics are). This talk will present "bloopers" that I have seen (and unfortunately some that I have made) over more than 35 years as an engineer, and provide some high-level guidelines for avoiding general problems. Examples will extend from basic math they taught you incorrectly in school to violating the laws of physics, with an emphasis on semiconductor device modeling.

Biography

Colin McAndrew received the B.E. degree in Electrical Engineering from Monash University, Victoria, Australia, in 1977 and the M.A.Sc. and Ph.D. degrees in Systems Design Engineering from the University of Waterloo, Ontario, Canada, in 1982 and 1984, respectively. He worked in the electric power industry for 7 years, then spent 7 years at AT&T Bell Labs, before moving to Freescale (formerly Motorola Semiconductor Products Sector) in 1995. He is an IEEE and Freescale Fellow, was an editor of the IEEE Transactions on Electron Devices from 2001 to 2010, is at present and editor of the IEEE Journal of the Electron Devices Society, and is or has been a member of the technical program committees for the IEEE BCTM, ICMTS, CICC, and BMAS conferences.

Date: **Wednesday, Sept. 24, 2014**

Time: **6:00-7:00 PM Presentations (Pizza will be served following the Seminar)**

Location: Group Conference Rm, Bldg 94, Freescale Semiconductor, 2100 E. Elliot Rd, Tempe, AZ
Use Freescale Main Entrance (South) facing Elliot Road. Sign-in with Security before 6:00 PM. Photo ID will be required

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/

WAVES AND DEVICES - Phoenix Chapter

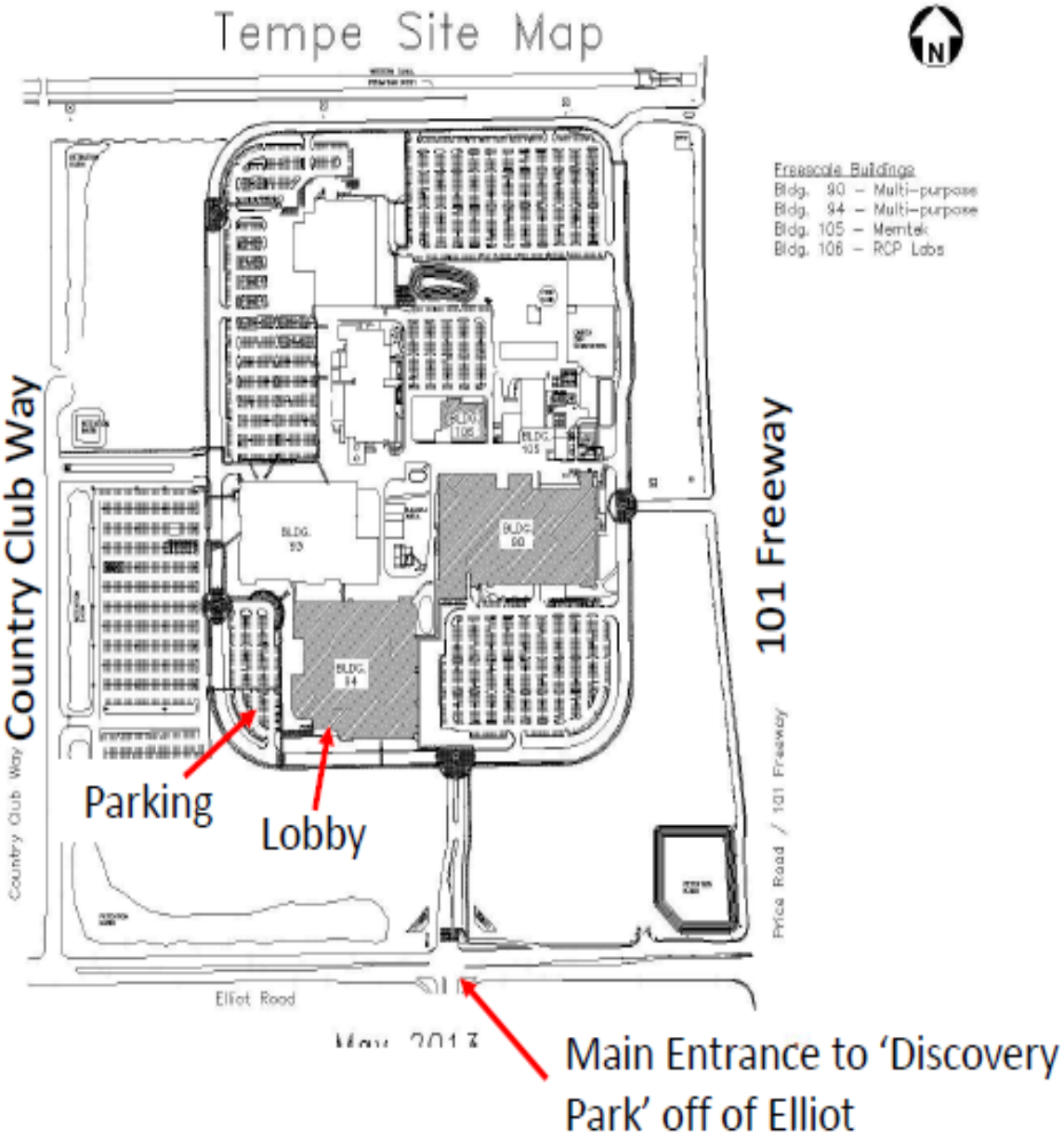
Meeting Free & Open to Non-IEEE Members

6:00 to 7:00PM, Wednesday, Sept 24, 2014

Freescale Semiconductor
2100 E. Elliot Rd., Tempe, AZ
Group Conference Room

How Really Smart Engineers Make Really Dumb Mistakes

Dr. Colin McAndrew



IEEE Phoenix Section Life Member Affinity Group

Technical & Administrative
Meeting October 14, 2014

Program Presentation: TBD

Meeting Agenda:

Attendee introductions
Program Presentation
Continued discussion of LMAG program for student assistance and possible scholarship program for HS students.
Start acceptance of officers nominations for elections at December meeting.
Administration Meeting.

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, October 14, 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:

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.

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, October 14, 2014
- 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 Young Professionals (formerly GOLD) Phoenix Section Executive Board

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

Organizer: Shafiul "Jacky" Islam (shafiul.islam@intel.com)

August 28, 2014, IEEE Phoenix Young Professionals Board Meeting with IEEE / IEEE-HKN ASU, and IEEE Phoenix WIE

Shafiul "Jacky" Islam, Nick Spirakus, George Chen, Jennifer Taggart (over Google Hangouts) attended the meeting from 6:00pm – 7:30pm in GWC 487 at ASU Tempe Campus, primarily for financial planning in addition to plan for sponsor outreach, registration, and event promotion for Career Mixer in October taking into account various potential scenarios. We also discussed our Fall speaker series and financial plan for it.

Organizers: Shafiul "Jacky" Islam (shafiul.islam@intel.com) [Meeting Chair] and Jennifer Taggart (jennifer.taggart@asu.edu)

Upcoming Events

September 26, 2014, On-Chip Antennas for Multi-Chip RF Data Transmission

IEEE Phoenix Young Professionals in alliance with IEEE Phoenix Women in Engineering, and IEEE / IEEE-HKN ASU is organizing this technical talk / lecture by Professor Kathleen L. Melde.

When: September 26, 2014 6:00pm Where: ERC 490, ASU Tempe Campus, 551 E. Tyler Mall Tempe, AZ 85281

This talk will present some of the recent developments to overcome package design challenges – providing a hybrid computing architecture with implemented 60 GHz antennas as the high efficient wireless interconnect which could generate over 10 Gbps bandwidth on the data transmissions.

Kathleen L. Melde is a Professor in Electrical and Computer Engineering Department, University of Arizona, Tucson, AZ, USA and a Fellow of the IEEE. Her current projects include tunable RF front ends for cognitive radio, high-speed electronics packaging, on chip antennas, and computational photovoltaics. She has published over 90 publications and has co-authored five U.S. patents.

For more information and registration, please visit: https://meetings.vtools.ieee.org/m/28319

Organizers: Shafiul "Jacky" Islam (shafiul.islam@intel.com) and Nick Spirakus (nmspirak@asu.edu)

October 3, 2014, 1st Annual Career Mixer with IEEE Phoenix Young Professionals, Women in Engineering, and IEEE / IEEE-HKN ASU groups

IEEE Phoenix Young Professionals in alliance with Women in Engineering and IEEE/IEEE-HKN ASU groups is organizing first annual career mixer for fundraising, networking, and recruitment.

When: October 3, 2014 4:30-7:30pm Where: Old Main @ ASU, 400 East Tyler Mall, Tempe, AZ 85287

Become a Sponsor! Donations will support the cost of the mixer and support IEEE Phoenix Young Professionals, Women in Engineering, and ASU groups. Suggested donation: $1000 for two tables or $500 for one table.

- Meet and interact with diverse group of students and young professionals
- Find qualified and engaged candidates
- Support the Community
- Promote your brand

For more information and registration please visit: https://meetings.vtools.ieee.org/m/28127

2014 IEEE Phoenix Section News

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.

2014 Executive Committee

Chair:	Bruce Ladewig
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 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.

You can also go to IEEE Phoenix Section LinkdIn page by clicking button on the IEEE Phoenix Section home page

IEEE Phoenix Section Ventures into Social Media

You can access the web page three ways:
Use the URL: https://www.facebook.com/IEEEPhoenixSection

Click on the Facebook logo link from IEEE Phoenix section home page.
Search for IEEE Phoenix Section from your Facebook page.

We need following help.

1. Each of you access the IEEE Phoenix Section Web page and click on "Like" hyperlink.
2. Go on the Friends section of the page and "Invite Your Friends." Once 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-USA Offering Survivor Planning E-book Free to IEEE Members

September Free E-Book

In September, IEEE-USA will offer "Leading and Managing Engineering and Technology -- Book 2: Developing Leaders and Managers" free to IEEE members.

This e-book examines how high-tech professionals at all levels should lead and manage, and introduces the Individual Professional Contributor (IPC)/knowledge worker. "Success in either of these two options depends on being authentic, being yourself, and recognizing your capabilities and limitations," author Gus Gaynor said.

Gaynor provides background information for managers and IPCs to make their own judgments regarding how to connect leading and managing -- different in an organization that promotes innovation -- from one focused only on today's performance.

"Only you can decide whether you meet requirements more effectively by managing and leading simultaneously or by considering managing and leading as two totally independent functions," he said.

"Leading and Managing Engineering & Technology – Book 2: Developing Leaders and Managers" can be downloaded at http://www.ieeeusa.org/communications/ebooks/files/sep14/n2n802/Leading-and-Managing-Engineering-and-Technology-Book-2.pdf for free to IEEE members. $9.99 for non-members.

October E-Book

IEEE-USA will offer "The Best of Backscatter from IEEE-USA Today's Engineer – Volume 2" by Donald Christiansen free to IEEE members in October.

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 Communications Committee Chair Gus Gaynor at g.gaynor@ieee.org.

IEEE-USA serves the public good and promotes the careers and public policy interests of more than 200,000 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

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.