

The Valley Megaphone

Newsletter of the
**Institute of Electrical and
Electronics Engineers, Inc.,
Phoenix Section**
November 2011,
Volume XXV, Number 11



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In this Issue of the Valley Megaphone:

Contacts:

Executive Committee	1
Chapters and Branches	1
Student Branches.....	2

Contents:

U - News	2
U - Newsbytes	2
IEEE Signal Processing Society and Communications Society.....	3
IEEE Components, Packaging and Manufacturing Technology Society	4
EMC Society.....	5
IEEE Power and Energy Society	6
IEEE Solid State Circuit HSIO November '11.....	7
IEEE Solid State Circuit substrate Dec '11.....	8
ARFTG Microwave Power Amplifiers.....	9
IEEE Phoenix Section Life Member Affinity.....	10
Women In Engineering Affinity Group (WIE).....	11
IEEE Computer Society.....	12
IEEE Waves and Devices Chapter Calendar.....	13
IEEE Waves and Device Multiport vectors	14
New Tool for Successful Job Search.....	15
Workshop Job Search.....	16
IEEE CPMT Orange County workshop.....	17
Future City Competition.....	18
2011 IEEE Phoenix Section Calendar.....	19
Phoenix Section Executive Committee	19
IEEE Phoenix Section Officer Job Desp.....	20
IEEE Phoenix - Section Survey	21
IEEE Member Grade Advancement.....	21
IEEE-USA Government Fellowships.....	22
Washington Internship for Students of Eng.....	23
IEEE USA E Book Transition.....	24
IEEE Phoenix Calendar of events.....	25
Phoenix Section LinkedIn Group.....	25

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

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

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

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

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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.

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Student Activities Chair

Student Branches

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ASU Polytechnic
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NAU, Engineering
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Embry-Riddle, Prescott
Chair: Tim Lemm
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Advisor: John E. Post
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U – Newsbytes

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

Start your own MicroMouse and compete for cash prizes!

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

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



Phoenix Chapter of IEEE Signal Processing Society and Communications Society



Thanks to all of the attendees who have made this year's technical meetings so successful. More to come in the coming months...

Please contact Chapter Chair David Frakes (dfraakes@asu.edu) to volunteer or propose a speaker for upcoming meetings.



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.



IEEE COMPONENTS, PACKAGING AND
MANUFACTURING TECHNOLOGY SOCIETY

IEEE CPMT Society Phoenix Chapter is seeking volunteers to serve as Chapter Officers during remaining of 2011 and 2012. One has to be a member of IEEE CPMT Society to serve as the IEEE CPMT Society Phoenix Chapter Officer. If interested, please contact Dr. Vasudeva P. Atluri, Chair, IEEE CPMT Society Phoenix Chapter, by sending an email to vpatluri@ieee.org. Regards Vasu AtluriTel: (480) 227-8411 (C)

**EMC Society
Technical Meeting
Announcement on Smart**



Date: Thursday, November 10th, 2011

Place: Garcia's Mexican Restaurant at Embassy Suites Hotel

Address: 4400 South Rural Road, Tempe, Arizona

Address: Just South of U.S. 60 on West side of Rural Rd.

Time: 5:30PM Social in Garcia's, 6PM Dinner in Garcia's (order off the menu), 7PM Meeting in Embassy Suites Junior Ballroom (upstairs)

Title: Smart Grid And Low Frequency EMC: What Is Needed To Make It Work?

Speaker: Alex McEachern, President of Power Standards Lab, Alameda, California

Abstract: The Smart Grid has great potential, but it's not going to be all good. Experts expect challenges to grid stability, possible harmonic resonance issues, and increased EMC/power quality disturbances. This evening we'll discuss why these problems may show up when the Smart Grid is implemented. We'll also discuss historical worldwide parallels: abrupt changes to grid design that had the desired effect, but led to unexpected problems. Finally, we'll conclude by considering various solutions to the Smart Grid EMC/power quality problems - it's reassuring to know that they can, in fact, be solved.

Biography: Alex McEachern is well known for his cheerful, thought-provoking speeches, and he regularly speaks at national and international conferences on electric power quality. He is the president of Power Standards Lab in California, the founder of BMI, the former president of both BMI and Electrotek, and the author of everything from the Electric Power Measurements chapter of the Encyclopedia of Electrical and Electronics Engineering to the industry-standard Handbook of Power Signatures. Active in drafting and approving international power standards, Alex is the chairman of the International Electrotechnical Commission (IEC) TC77A Working Group 9, which sets the standard for power quality instruments. He also participates in the drafting of the voltage dip immunity standards, IEC 61000-4-11 and IEC 61000-4-34. He is a Senior Member of the IEEE, former Chairman of IEEE 1159.1, a co-author of IEEE 519 and IEEE 1459, and a voting member of the IEEE Standards Coordination Committee on Power Quality. Among all his accomplishments, McEachern is proudest of the fact that companies that he has created have been responsible for over 2,400 man-years of employment. He is a reasonably inventive fellow, with 29 U.S. patents awarded so far.

Reservations: To help us get an accurate headcount, please send an email to Harry Gaul (harry.gaul@ieee.org). There is no charge for meetings, but you pay for your own meal and drinks. Since we order off the menu, we do not need an exact number, so if you decide at the last minute, please come anyway. You don't need to be an IEEE or EMC Society member to attend -- all are welcome.



IEEE Power and Energy Society

Phoenix Chapter



News and Announcements:

- IEEE PES Phoenix Chapter was awarded the **Outstanding Chapter Award for 2010** at the IEEE Phoenix Section Annual Banquet.
- Want to know more about IEEE PES? Watch this video:
http://www.youtube.com/watch?v=BRKM4lpo_tk
- IEEE PES Scholarship Plus Initiative: Scholarships for undergraduates pursuing electric power and energy: <http://www.ee-scholarship.org/>
- 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 the [IEEE Senior Member Program](#) website.

Schedule of Upcoming 2011 Events:

November 2011 Luncheon and Seminar

- Date:** Thursday, November 17th, 2011
- Time:** 11:30 am – 11:45 noon: Registration
11:45 noon: Lunch; 12:15: Program
- Location:** Radisson Hotel Phoenix Airport North
427 N. 44th St.
Phoenix, AZ
- Speakers:** **James Petersen, SRP and Kevin Neese, APS**
- Topic:** **Future of Nuclear Energy in Arizona**
- Cost:** \$5.00 (No cost if you are a college student)
- Reservations:** Contact Nancy or Stacy at (480) 991-9191 Ext 10 or Ext 16 or register online for the event:
<http://ewh.ieee.org/soc/pes/phoenix/lunch1110.php>

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



INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS



Solid State Circuits Society - Phoenix Chapter

Meeting Free & Open to Non-IEEE Members
12:00pm to 1:30pm, Wednesday, Nov 16th, 2011
Arizona State University- ERC 490 ([map](#))

VLSI High Speed I/O Overview

Dr. Hongjiang Song. (Hongjiang.song@intel.com) **Intel Corporation**

Abstract:

The seminar will cover the architectures, building blocks (such as Tx, Rx, clocking, CDR, Equalizer), modeling methods. This is a scaled down version of a one semester course offered at ASU covering theoretical basis, design, modeling, and validation techniques for various VLSI high-speed I/O circuits. The objective of that course is to build a practical knowledge of the high-speed I/O circuits and the applications for various industry high-speed I/O circuit standards, such as LVDS, USB2.0, 1394, S-ATA, PCI-Express, etc.

Biography

Dr. Song, Hongjiang received his B.S. and Master of Science (M.S.) degrees in Physics from Yunnan University, China in 1983 and 1986 respectively, where he also served as faculty member in department of Physics. He graduated from Arizona State University with Master of Science in engineering (M.S.E.) in electrical engineering, Master of Technology (M.T.) degree in computer technology, and the Ph.D. degree in electrical engineering in 1992, 1994 and 1996 respectively. Dr. Song is currently an [adjunct professor](#) in electrical engineering department at Arizona State University, where he has been teaching VLSI signal processing circuit design courses and serving as member of advisory committee for a number of Ph.D. students. He is also serving as board member of the Industry Advisory Board (IAB) for ECET department at Arizona State University. Dr. Song has been with [Intel Corporation](#) as design engineer since 1994, worked on CPU (Pentium, Pentium Pro., Itanium) design and high-speed I/O circuits (USB2.0, SATA, PCI-Express) and RF/wireless circuits (LNA, Mixer, VCO, Polyphase filter) developments. Dr. Song has published three [books](#) and a number of technical papers in VLSI circuit designs. He holds 24 US [patents](#) in related fields. Dr. Song is a member of [Technical Program Committee](#) (TPC) of IEEE International System-On-Chip (SOC) Conference, where he serves as track chair for the [Analog and RF Circuits and Systems](#) track.

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

Contact: Dr. Mohamed Arafa (Mohamed.arafa@ieee.org), SSCS-PHX Chapter Chair



INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS



Solid State Circuits Society - Phoenix Chapter

Meeting Free & Open to Non-IEEE Members
11:00am to 12:00pm, Thursday, December 1st, 2011
Freescale Semiconductor- Dan Noble Room,
2100 E. Elliot Road Tempe, AZ 85284

Techniques to Prevent Substrate Injection Induced Failure During ESD Events in Automotive Applications

Speaker: Chai Gill. Freescale Semiconductor

Abstract:

This talk presents several techniques to improve ESD robustness for high voltage IO designs in automotive applications. SCR-based ESD clamps designed on isolated wells can generate high level of substrate injection during ESD events, causing false triggering and irreversible failures of internal components. To mitigate substrate injection effects, we have defined design strategies leading to a set of design rules for proper integration with ESD clamps.

Biography

Chai Gill has worked for more than 20 years in the area of RF device development, analog IO designs and ESD development for Motorola and Freescale Semiconductor after graduating from Georgia Institute of Technology. Currently, she is the Analog ESD Design Manager for Freescale located at Tempe, AZ.

SSCS-PHX Chapter Website: http://www.ieee.org/go/sscs_phx
Contact: Dr. Mohamed Arafa (Mohamed.arafa@ieee.org), SSCS-PHX Chapter Chair



ARFTG 78th Microwave Measurement Symposium
and
IEEE Topical Symposium on Power Amplifiers
Tempe Mission Palms Hotel, Tempe, AZ Nov 29th - Dec 2nd, 2011
www.arftg.org pasymposium.ucsd.edu



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Dave Blackham – Agilent Technologies
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Neil Braidwaite – Powerwave Technologies
Gayle Collins – Freescale Semiconductor
Juan-Mari Collantes – Univ. of the Basque Country
Steve Cripps – University of Cardiff
Paul Draxler – Qualcomm Inc
Andrea Ferrero – Politecnico di Torino
Ed Godshalk – Maxim Integrated Products
Leonard Hayden – Cascade Microtech
Steve Kenney – Georgia Tech
Jon Martens – Auritsu
Karam Noujaim – Auritsu
Nick Ridler – National Physical Laboratory, UK
Patrick Roblin – Ohio State University
Yves Rolain – Vrije Universiteit Brussel
David Runtton – RFMD
Mohamed Sayed – MMS Consulting
Dominique Schreurs – KU, Leuven
Paul Tasker – Cardiff University
Peter Zampardi – Skyworks

Executive Secretary

Jim L. Taylor

ARFTG: "HIGH POWER RF MEASUREMENT TECHNIQUES"

ARFTG will hold its 78th Microwave Measurement Conference at the Tempe Mission Palms Hotel in Tempe, AZ, Nov 29th - Dec 2nd, 2011, in partnership with the IEEE Topical Symposium on Power Amplifiers for Wireless Communications.

You can register for all the conferences & courses at: <http://www.arftg.org>

For the ARFTG Conference, we have invited and submitted technical papers of a high standard, describing original work in the areas of high-power RF and microwave measurements, modeling, and design for power amplifiers. Topics Include:

- RF/microwave PA & system measurements – power, vector, signal, envelope
- RF/microwave PA modeling – linear, nonlinear, behavioural
- PA Linearization Techniques – digital & RF pre-distortion, crest factor reduction
- High-power/nonlinear calibration techniques
- Wide bandwidth PAs, measurements
- Novel RF/microwave/mm-wave measurement systems & techniques
- Other areas of RF and microwave measurements and applications

POWER AMPLIFIER SYMPOSIUM

This one-day meeting provides a informal forum for discussing innovative work in the area of power amplifiers, covering handset and base-station technologies, voice, video and data, from HF through mm-wave. We have invited presentations from Dr. Rik Jos, (NXP Semiconductor), Prof. Leo DeVreede (TU Delft), Dr. Earl McCune (Consultant), and submitted technical papers in the following topics:

- Design techniques for power amplifiers
- PA architectures for handsets and base-stations
- Device & IC technology for power amplifiers
- System requirements and transmitter architectures
- Linearization techniques and implementations

ADVANCED COURSE ON RF PA CONCEPTS

Join us in an advanced short course that will present several important aspects of RF power amplifier and system design. Invited lectures include:

- Digital Wireless Communications Signals – Dr. Earl McCune (Consultant)
- Harmonic Loading for High Efficiency PAs – Prof. Steve Cripps (Cardiff Univ)
- Doherty PA Design – Dr. John Gajadharsing – (NXP Semiconductor)
- Drain Modulation for High Efficiency PAs – Prof. Peter Asbeck (UC San Diego)
- Linearization Techniques for PAs – Dr. Neil Braidwaite (Powerwave)
- Roadmap for Handset PA Design – Dr. Upkar Dhaliwal (Consultant)

EXHIBITION

The 78th ARFTG also includes an outstanding exhibition: we have demonstrations from the leading RF & Microwave instrument and components manufacturers.

Please contact our Exhibits Chair directly for further details (exhibits@arftg.org).



www.arftg.org





Phoenix Section Life Member Affinity Group

2011 November News

Next Meeting - Tuesday, December 6, 2011, 11:00am – 1:00pm Luncheon \$10

Officers Election – December 6th, nominations for officers may be submitted at this time or at the meeting. To nominate please insure they are willing to serve and send the nominations to Barry Cummings - Chairman

Technical Meeting Topic December 6th – CLOUD COMPUTING presented by Mr. Harold Wong

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

Click this map link to SRP PERA Club:

<http://insidesrp/pera/facilities/PERAstreetmap.pdf>

About IEEE Phoenix Section Life Member Affinity Group:

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

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

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

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

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

Future Technical Meetings:

- Tuesday, December 6, 2011 SRP PERA CLUB
- Tuesday, February 14, 2011 SRP PERA CLUB
- Tuesday, May 15, 2011 SRP PERA CLUB
- Tuesday, October 16, 2011 SRP PERA CLUB
- Tuesday, December 6, 2011 SRP PERA CLUB

Officers:

Chair	A. Barry Cummings	Barry.Cummings@srpnet.com
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Past Chair	C Bruce Johnson	cbj@johnsonscientificgroup.com



IEEE Phoenix Section
Women in Engineering
Affinity Group



The IEEE Phoenix Section **Women in Engineering (WIE) Affinity Group** was formally established in June 2011. Our Chair is Shamala Chickamenahalli (shamala@ieee.org), and the other members of our organizing committee are:

Lesley Polka (lesley.a.polka@intel.com)
Diane Watkins (diane.watkins@srpnet.com)
Joy Harris (jharris@exponent.com)
Barbara McMinn (barbara.mcminn@aps.com)

The organizing committee held a Fall 2011 planning meeting in June. Our goal is to host at least one event per quarter throughout the year focused on the various technical, career and humanitarian aspects of the IEEE WIE mission.

In September, we participated in the ASU Engineering Career Exploration Night at Arizona State University. This was an outreach event sponsored by ASU's Ira A. Fulton School of Engineering to provide a casual networking environment for the 1,400 incoming ASU freshmen engineering students to meet professionals in various engineering disciplines. The event was designed to help students learn more about various engineering disciplines from professionals sharing their career insights, information and experiences with the students.

We are planning a speaker and networking event in the November/December timeframe and are finalizing the date and logistics. If you would like to be added to our distribution list for information about this event, please contact Lesley Polka (lesley.a.polka@intel.com).

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

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.



Phoenix Chapter of the IEEE Computer Society

November, 2011

News

- Chapter officers are now planning for the 2012 meeting calendar. Comments from chapter members as to possible topics, presenters, etc., for 2012 are welcome. See below for email addresses.
- Chapter elections for officers for 2012 will be held at the November 2nd meeting. Any member who is interested in participating in the governance and planning for the Phoenix IEEE CS Chapter is encouraged to contact one of the officers listed below.

Future Events

2011

- November 2 – Chapter meeting, DeVry University; speaker Kristy Westphal, “**Mobile Device Forensics**”; also, chapter elections for 2012

2012

- January 11 – Chapter meeting, DeVry University; speaker TBD
- March 7 – Chapter meeting, DeVry University; speaker TBD

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

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

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

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



INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS

WAVES AND DEVICES PHOENIX CHAPTER

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

2011 Calendar



Date	Time	Location	Topic/Title/Status	Speaker	Affiliation
17-Jan	5:00 PM	Freescale	1) Electromagnetic Band Gap (EBG) Structures in Antenna Engineering: From	1) Dr. Yahya Rahmat-Samii	1) UCLA
18-Feb	4:00 PM	ASU GWC487	Miniaturized Directional Microphones and Microspeakers for Hearing Aids Applications	Dr. Junseok Chae	ASU
28-Feb	1:00 PM	ASU GWC487	Joint Meeting With SSCS: Technology Challenges of Integrated	Dr. Shamala A. Chickamenahalli	Intel
24-Mar	5:30 PM	ASU GWC487	Semiconductor Device Characterization and Failure Analysis	Dr. Dieter Schroder	ASU
18-Apr	1:30 PM	ASU	Analog-to-Digital Converters for Software-Definable Radios	Dr. Doug Garrity	Freescale
2-May	6:00 PM	ASU	Modeling and Simulation of Submillimeter Wave Semiconductor Devices	Dr. Stephen Goodnick	ASU
29-Jun	6:00 PM	ASU	Radio Communications Systems on Next Generation Manned Space Vehicle	Mr. William Boger	General Dynamics
17-Aug	Noon	ASU	CMOS Switched-Capacitor Circuits: Recent Advances in Bio-Medical and RF Applications	Dr. David J. Allstot	Univ. of Wash
18-Aug	6:00 PM	Freescale	Advanced Silicon Technology and MEMS Reliability	Dr. Jeremy Muldavin	MIT Lincoln Labs
5-Oct	6:00 PM	Agilent	Wide Band Gap Materials & Applications	Dr. Chuck Weitzel	Consultant
17-Oct	4:00 PM	ASU	Graphene-Based Novel Device	Professor Tian-Ling Ren	Tsinghua University
27-Oct	5:30 PM	Freescale	Analysis, Design and Measurements of Flexible Bow-Ties and High-Impedance Surfaces	Dr. Constantine Balanis	ASU
2-Dec		Freescale	Multiport Vector Network Analyzer: From the beginning to modern signal integrity applications	Prof. Andrea Ferrero	Politecnico di Torino

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

Meeting Free & Open to Non-IEEE Members

4:00 to 5:00PM, Friday, December 2, 2011

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



Multiport Vector Network Analyzer: From the beginning to modern signal integrity applications

*Prof. Andrea Ferrero
Politecnico di Torino*

Abstract

With the recent digital systems and circuits outstanding increase in speed and complexity, multiport characterization at microwaves and millimeter waves is experiencing an impressive growth in demand and importance. Today the application of multiport techniques is shifting from typical microwave applications to signal integrity in computer technologies. The importance of the VNA design as well as the calibration techniques which guarantees the accuracy is a must when low level crosstalk needs to be measured or when differential S-parameters are used. The talk will present the most modern solutions for multiport measurements at microwave frequencies as well as their advance calibration techniques.

In particular the following topics will be given with the focus on multiport application:

- Single-Ended and Differential S-Parameters Review
- VNA Architectures
- Error Models and Calibration Techniques
- Accuracy of Multiport Measurements
- Interconnection and Fixture Design for Multiport Measurement
- On-Wafer Design of Multiport Standards

Biography: Prof. Andrea Ferrero took the Laurea and the Ph.D. in Electornics at Politecnico di Torino in 1987 and 1992 respectively. During the same period he joined Hewlett Packard Microwave Technology Division in Santa Rosa as visiting scientist and started his career in the same Politecnico di Torino as Assistant Professor. In 1988 he worked for Aeritalia (Gruppo Sistemi Avionici) as Microwave Measurement System consultant on EMC problems for Avionics. In 1994 he won the Canadian National Scientist Fellowship and spent one year at the Ecole Politechnic of Montreal. In 1997 he won the Italian National Contest for Associate Professor Chair becoming Associate Professor of Politecnico di Torino for Microwave Measurements. In 2006 he became Full Professor at the Politecnico di Torino. He currently teaches Electronic Instrumentation and Measurements and Microwave Instrumentation in the Electronic Engineering course. Prof. Ferrero is the author or coauthor of over 80 papers on microwave technologies and measurements techniques and his current interests are focused on device characterization, calibration techniques and measurement system design.

Date: Friday, December 2, 2011

Time: 4:00-5:00 PM Presentations

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

For more information, contact: Steve Rockwell (WAD Chapter Chair) (480) 241-8891 steve.rockwell@ieee.org
Haolu Xie (Chapter Publicity) (480) 456-3513 haolu.xie@ieee.org

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

THE NEW TOOL FOR A SUCCESSFUL JOB SEARCH

MATCHING YOU TO YOUR DREAM JOB:

Creating a better resume, targeting the right employers and having more effective interviews are all elements of finding that ideal next job. With that framework, the Phoenix Section has created a partnership with Top Talent Consulting and Target Training International designed to increase your chances of getting hired for the job you're really looking for...a job that not only uses your technical talents but matches your personal skills.

It begins with the creation of your behavioral profile. Free to IEEE members, the results will enable you to improve your resume and help companies find you. The profile measures 55 soft skill requirements in jobs and in people. When the jobs and people match, the synergy begins. Top Talent Consulting will shop your skills against the requirements of their clients...companies hiring engineers and technical professionals. Target Training International is the only company that uses this time-tested, scientific knowledge to match people to jobs. Their system is designed to identify your talents and match them to your ideal job, which ensures a culture that matches your needs and provides natural on-the-job motivation.

As an IEEE member, there's no cost you! Normally the behavioral profile costs \$90.00 but this is a benefit for Section members. Your detailed personal profile includes General Characteristics, Value to the Organization, Do's and Don'ts on Communicating, Ideal Environment, Perceptions, Descriptors, Keys to Motivating, and Action Plan and much more.

What else is in it for you? The immediate benefits to you include:

1. An increased understanding of your strengths
2. The ability for you to articulate your strengths in your resume and interview
3. Improving your resume
4. Utilizing key action words and phrases in your resume that will increase it's power
5. Conduct a stronger interview
6. Have access to resources to assist you in your job search

When you're finished, Top Talent Consulting will place your resume and skills will be placed in front of many prospective employers and recruiters based on your best job fit!

For more information and to receive your profile code, contact Mike Andrews, m.andrews@ieee.org.

IEEE-Phoenix Section

Workshop



A PROFESSIONAL CHALLENGE: Your Job Search

Wednesday, November 30, 2011 4:00 – 8:00 PM
Phoenix Burton Barr Library Lecture Hall
1221 N Central Ave
Phoenix, AZ

The challenges related to finding the right job in the Valley's market has changed greatly. Companies are not only looking at technical abilities but also trying to assure the correct fit of your skills and their skill requirements. Creating a better resume, targeting the right employers and having more effective interviews are all elements of finding that ideal next job. It is essential that the displaced technical professional or the individual searching for a new opportunity effectively identify/qualify job leads and hiring organizations, develop an effective resume/job application package, and have a successful interview.

The Job Search workshop will go through each phase of your job search including: preparation, search, contact, interview, selection, and growth.

Major workshop topics include:

- Resume development
- Integrating your competency skill profile and technical profile
- Exploring using your personal and professional network
- Market analysis
- Search (industry and market)
- Interviewing (competency based and technical)
- Follow-up

In this workshop, you will:

- Identify and analyze your attributes, interests, skills and accomplishments and the impact you can make on an organization
- Develop a competency based resume and companion introduction letter
- Determine methods for making effective contacts and distributing your materials
- Identify of the different resources and personal networks that can be used in your job search
- Discuss elements of effective interviewing, including competency-based interviews, technical interviews and interview scoring
- Identify personal improvement opportunities and options
- Develop a marketing and tracking plan for all applications, interviews and feedback.

REGISTRATION

The registration fee for the program is \$20.00, payable to the IEEE-Phoenix Section. Registration and course related questions should be made directly to Michael Andrews, m.andrews@ieee.org. Registration is limited.

Participants must bring an existing resume and current work history (soft copy and hard copy). You may bring a personal computer (optional).



The Institute of Electrical and Electronics Engineers, Inc.



COMMENTS, ENQUIRIES
CONTACT US

Components, Packaging and Manufacturing Technology Society

Orange County Chapter

Presents an All-Day Workshop on 3D Integrated Circuits: Technologies Enabling the Revolution

Date : Friday, December 9, 2011

Location: Jazz Semi Auditorium, [Conexant Systems, Inc. 4321 Jamboree Road, Newport Beach, CA 92660](#)

Program Agenda

09:00 – 09:05am: Welcome & Introduction

Session – 1: Market, Architecture & Design

09:05 – 09:35am: “Opportunities and Challenges for 3D Integrated Heterogeneous Electronic Systems” – **Prof. Muhannad Bakir, Integrated 3D Systems Group, Georgia Tech, Atlanta, GA**

09:35 – 10:05am: “Economics to Drive 3D Stacking” – **Dr. Phil Garrou, Microelectronic Consultants of North Carolina, Research Triangle Park, NC**

10:05 – 10:35am: “Stack Silicon Interconnect Development and Key Role of Supply Chain Collaboration” – **Dr. Suresh Ramalingam, Sr. Director, Xilinx, San Jose, CA**

10:35 – 10:45am: Break

10:45 – 11:15am: “Emerging Challenges for Power, Signal, and Reliability Verification on 3D-IC/Silicon Interposer Designs” – **Dr. Norman Chang, Co-Founder, Apache Design Systems, Ansys, San Jose, CA**

11:15 – 11:45am: “3D IC Test Challenges and Solutions” – **Dr. Stephen Pateras, Product Marketing Director, Silicon Test, Mentor Graphics, San Jose, CA**

11:45 – 12:15pm: “<Presentation Title to be announced>” – **A. La Manna, K. Rebibis, Dr. Eric Beyne, Dr. B. Swinnen, IMEC, Leuven, Belgium**

12:15 – 01:15pm: Lunch

Session – 2: Manufacturing Technologies & Materials

01:15 – 01:45pm: “Cost-Effective 3D Semiconductor Packaging Solutions Based on Embedded Die in Laminate Technology” – **Ted Tessier, Senthil Sivaswamy, Flip Chip International LLC, Phoenix, AZ, Dr. Kazuhisa Itoi, Fujikura Ltd, Tokyo, Japan**

01:45 – 02:15pm: “Challenges and Solutions in Mid-end and Back-end Processes for 2.5D and 3D TSV – an OSAT Perspective” – **Dr. Yeong Lee, Product and Tech. Marketing Director, STATS ChipPAC, Fremont, CA**

02:15 – 02:45pm: “Advanced Underfills for 2.5D and 3D Applications” – **Dr. Rose Guino, Dr. Betty Huang, Dr. Kevin Becker, Dr. T. Takano, Henkel Electronic Materials, LLC, Irvine, CA**

02:45 – 03:00pm: Break

03:00 – 03:30pm: “3D TSV Interposer and its Applications” – **Dr. GS Kim, Founder & CEO, EPWorks, Ltd. Seoul, Korea**

03:30 – 04:00pm: “Via Reveal – High rate Si Thinning and Low Temperature Dielectrics for Post-TSV Processing” – **David Butler, Vice President – Marketing, SPTS Technologies, Newport, UK**

04:00 – 04:05pm: Vote of Thanks

Registrations:

Early-Bird Registration Fees: IEEE Members - \$40; Non-Members of IEEE - \$30; Students - \$20 (includes lunch & parking)

Prices will go up by \$20 for each category, after November 25, 2011.

Registration Instructions at http://meetings.vtools.ieee.org/meeting_view/list_meeting/8019

Platinum Sponsors



Gold Sponsors



General Chair

Dr. Lawrence Williams, ANSYS Corporation, lwilliams@ansys.com

Technical Program

Dr. Donald Frye, Henkel Electronics Materials LLC, dfrye@hcm.com

Robert Warren, Conexant Systems, Inc. Robert.Warren@conexant.com

Sam Karikalan, Broadcom Corporation, samkarikalan@ieee.org

Vendor Exhibits:

Mark Kuhlman, Semtech Corporation, MKuhlman@semtech.com

Workshop Organizing Committee

Publicity & Local Arrangements:

Jaydutt Joshi, Skyworks Solutions, Inc., jaydutt@gmail.com

Aaron Edwards, ANSYS Corporation, aaron.edwards@ansys.com

University Relations:

Prof. Mark Bachman, Univ. of California – Irvine, mbachman@uci.edu

Registration & Finances:

Melissa Lau, Broadcom Corporation, melissa@broadcom.com

Vendor Exhibits and Sponsor Displays!



15 Years of AZ Region Future City Competition

Phoenix, AZ: It's *back to the future* for middle school students! Since 1997, the region competition has asked 7th and 8th graders, working in teams of three, to design a city of the future. Students will use problem solving skills, team work, research and presentation skills, practical math and science applications, computer software and skills, etc. to meet this challenge.

The competition engages students by challenging them with real-world engineering problems. The topic of interest for the 2011-2012 competition is *Fuel Your Future*. Students are asked to imagine new ways to meet our energy needs, maintain the health of the earth or other planets, and incorporate these innovative design features into their future city.

Members of the Phoenix engineering community came together 15 years ago to identify more creative options to increase student participation and interests in science, technology, engineering, and math (STEM). The real challenge was to get students interested in STEM subjects while creating a fun and exciting educational experience for young minds at the same time. IEEE's Phoenix Section has supported the competition over the years with a society sponsored award, volunteers, financial sponsorship, and other in-kind contributions.

A 15th anniversary celebration is also planned. The theme is *Back to the Future*. We are inviting schools that have participated in a previous competition(s) as well as student alumni, teachers, engineers, and other volunteers who have worked with the competition over the years to join us in several special events to be hosted during the week of January 23, 2011.

Competition day is Saturday, January 28, 2012. The event will be held at the ASU Preparatory Academy (formerly Phoenix Preparatory Academy) in Phoenix, AZ (7th Street and Fillmore). More information will be provided on upcoming events.

For information regarding this news release, contact Vi Brown at 480.205.2616 M or v.brown@futurecityarizona.org.

About the Future City Competition: The Future City Competition is a national program sponsored by the engineering community to promote technological literacy and engineering to middle school students. The program fosters an interest in math, science, and engineering through hands-on, real world applications. The competition is open to all public, private and parochial schools. The National Finals of the Future City Competition are a featured event during National Engineers Week with students from across the country competing in Washington, D.C. The Future City Competition offers students a fun way to learn about engineering and cities of the future.



2011 IEEE Phoenix Section Calendar

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

- November 2011
 - Election of new officers
 - 2011 budget proposal
 - Start ad for Student Paper Contest and Scholarships
 - For dates see under February
 - Student Industry Mixer: TBD

 - December 2011
 - Report of Section activities for 2011
 - Appoint chairs of Section committees
 - Student Scholarship applications due: TBD
 - Annual Banquet: Finalize speaker
 - Annual Banquet: E-mail program
-



Phoenix Section Executive Committee Meeting

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

More Info: Meetings are held on the first Tuesday of the month, 6–8 PM.
- Except for July & August

All interested IEEE members are welcome to attend.

Contact: Jim Hudson, Phoenix Section Chair
jim.hudson@srpnet.com

Section Officer Job Descriptions

Section Chair

The Section Chair shall serve as Chair for all meetings of the Section, the Section Committee and the Section ExCom where such ExCom exists.

Roles:

- Preside at meetings of the Section Executive Committee
- Represent the Section at IEEE gatherings
- Represent the Section at Regional Committee Meetings and vote on issues on the basis of the best interest of IEEE

Vice Chair

The Section Vice Chair shall assist the Chair in the coordination of all Section activities. At the request of the Section Chair or in the absence of the Section Chair, the Section Vice Chair shall chair meetings of the Section, Section Committee or Section ExCom.

Secretary

The duties of the Section Secretary shall include correspondence, the keeping of the minutes of the Committee meetings, mailing notices, and submission of meeting and officer reports to the Member and Geographic Activities Department at the end of each year and such other duties as are assigned to him/her by the Chair.

Treasurer

The duties of the Section Treasurer shall include the development of a Section budget for approval by the Section, accounting of all Section funds, keeping financial records, and submitting the Financial Operations Report of the Section to the IEEE Staff Director, Financial Services.

Publicity

- Publish and distribute monthly section newsletter
- Maintain section email lists
- Support chapter publicity submissions to the the IEEE E-Notice system

Membership Chair

- Monitoring a current record of membership.
- Analyzing membership trends.
- Ensure adequate supplies of membership development materials available for distribution (chapter meetings, conferences, job fairs, etc.).
- Coordinating membership exhibits for local meetings and conferences, soliciting materials for exhibits, indentifying volunteers to staff booth.

Student Activities Chair

- Coordinate and support student chapters by working with the student chapter representatives and their faculty advisers.
- Organize the annual student paper competition
- Organize the annual student scholarship awards program

Conferences Chair

- Support and act as liaison between the section and locally held IEEE affiliated conferences
- Maintain calendar of IEEE related conference events on the section website calendar

Awards Chair

- Plan, coordinate, and organize the annual awards banquet

Inter-Society Chair

- Coordinate and act as liaison between section and other engineering or relevant organizational entities

PACE (Professional Activities Committees for Engineers) Chair

- Coordinate and support professional and career developmental activities

TISP (Teacher In-Service Program) Chair

- Coordinate the local TISP program

Web Master Chair

- Maintain and update the Section website as needed

“IEEE Phoenix Section Survey

IEEE Phoenix Section Executive Committee is requesting all IEEE Phoenix Section Members to provide their valuable inputs to help with continuous improvement of section activities. The survey can be accessed at www.ewh.ieee.org/r6/phoenix. Please download the survey and send by email to IEEE Phoenix Section Secretary, Dr. Chuck Weitzel, at c.weitzel@ieee.org. Your support in this matter will be greatly appreciated.”

“IEEE Member Grade Advancement

All IEEE members are advised to look into advancing their IEEE membership to higher grades – senior member and Fellow. Please refer to www.ieee.org for additional information, requirements, and process for obtaining senior member and fellow grades. Please contact Dr. Vasudeva P. Atluri, Membership Chair, IEEE Phoenix Section at vpatluri@ieee.org for guidance and support.”

Enhanced Senior Member Application Launched

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

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

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

IEEE-USA Government Fellowships:

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

The congressional fellowship consists of an appointment to the personal staff of a U.S. Senator or Congressman, or to the professional staff of a Congressional Committee. The Fellow along with the Congressional sponsor and IEEE-USA, negotiates a starting date, although IEEE-USA recommends that Fellowship terms run from January 1st to December 31st. For an application Kit for the 2013 Congressional Fellowship Program, visit:

http://ieeusa.org/policy/govfel/documents/cfappkit13_000.doc

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

<http://ieeusa.org/policy/govfel/documents/Stateappkit13.doc>

The postmark application deadline for 2013 Fellowships is 16 March 2012. For more information, visit: <http://www.ieeusa.org/policy/govfel/default.asp>

Washington Internships for Students of Engineering (WISE)

SUMMER 2012 PROGRAM Monday, 4 June - Friday, 3 August:

WISE seeks applications from outstanding engineering students who display evidence of leadership skills and have a keen interest in public policy. Minority students are encouraged to apply.

Applicants should select a sponsoring society(s), fill out an application form, write two (2) brief essays in response to questions, arrange for two (2) faculty references, and forward an official transcript. The deadline for Summer 2012 applications is December 31, 2011. For more info and application forms, please visit: <http://wise-intern.org/application/index.html>

“...one of the best summers of my life. One which truly transformed my dreams and goals.when I left D.C. I really wanted to instill in my fellow engineers the appreciation of the interaction between public policy and engineering.” -- Marc Canellas, WISE 2011

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IEEE-USA E-Book on Transition from School to Work to be Offered Free as Special Benefit to IEEE Members

WASHINGTON (31 October 2011) -- As a special benefit of IEEE membership for November, IEEE-USA is offering a free e-book, "Engineer's Guide to Lifelong Employability: The Transition from School to Work." This e-book, prepared by the IEEE-USA Employment and Career Services Committee, provides a road map for the student preparing to enter the job market -- what employers are looking for, how they can best find a job and what career paths are open to a new grad.

Topics include:

- * Finding a Job the Old-Fashioned Way
- * Networking
- * The Campus Interview
- * Making up Your Mind
- * Four Career Paths
- * Business -- Big or Small?
- * A Non-Technology Company

"Demand for new BSEEs may be soaring, but so are employer's standards and expectations," writes Jean Eason, IEEE-USA Employment and Career Services Committee member. "Good grades and technical expertise aren't enough anymore."

From Nov. 1 through Nov. 30, "Engineer's Guide to Lifelong Employability: The Transition from School to Work" can be downloaded at www.ieeeusa.org/communications/ebooks for free to IEEE Members. The nonmember price is \$5.99. Members can purchase other IEEE-USA E-Books at deeply discounted prices and download other free e-books. In December the free publication will be book three in the "Engineer's Guide to Lifelong Employability" series: "What Are You Worth?"

IEEE Phoenix - Calendar of Events

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

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

For inputs and updates to the Calendar, please contact the IEEE Phoenix Section Treasurer, Russ Kinner at 602-997-2353 or e-mail: r.kinner@ieee.org

Phoenix Section LinkedIn Group

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