# **The Valley Megaphone**



**Executive Committee** - 2011

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m

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IEEE

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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 Banguet pictures are up, see http://ewh.ieee.org/r6/phoenix/AnnualBanguet.ht

### Chapters

Newsletter of the

**Institute of Electrical and Electronics Engineers, Inc.,** 

> **Phoenix Section** June 2011.

Volume XXV, Number 6

Signal Processing & Communications David Frakes, 480-727-9284 dfrakes@asu.edu

**Computer Society** Jerry Crow jerry8128@gmail.com

> **CPMT Society** Vasudeva P. Atluri 480-227-8411 vpatluri@ieee.org

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

> **EMBS Chapter** TBD

**EMC Society** Harry Gaul, 480-441-5321 harry.gaul@ieee.org

GOLD David Huerta huertanix@ieee.org

**Power & Energy Society** Naim Logic, 602-236-3838 nlogic@ieee.org

Solid State Circuits Mohamed Arafa mohamed.arafa@ieee.org

**Teacher-In-Service** Mike Poggie mike.poggie@ieee.org

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

Life Members Barry Cummings abarrycummings@gmail.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 dvertisements 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://ewh.ieee.org/r6/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.

Nick Leonardi 480-720-1435 Cell <u>nleonardi@ieee.org</u> Student Activities Chair

# **Student Branches**

ASU Main, Engineering Chair: Saurabh Naik, 480-252-0504, <u>svnaik@asu.edu</u> Advisor: Cihan Tepedelenlioglu, 480-965-6623, <u>cihan@asu.edu</u>

ASU Main, Computer Society Chair: TBD Advisor: Guoliang Xue 480-965-6218, <u>xue@asu.edu</u>

> ASU Polytechnic Chair: TBD Advisor: TBD

DeVry, Phoenix Chair: TBD Advisor: Diane Smith dsmith2@devry.edu

DeVry, Computer Society Chair: TBD Advisor: Diane Smith dsmith2@devry.edu

NAU, Engineering Chair: TBD Advisor: Niranjan Venkatraman <u>v.niranjan@ieee.org</u>

Embry-Riddle, Prescott Chair: Tim Lemm timothy.lemm@erau.edu Advisor: John E. Post posti@erau.edu

# U – Newsbytes

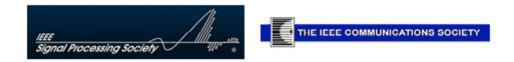
• ASU Polytechnic is currently seeking Advisor for the Student Branch. Please email Nick (at email address above) with Recommendations.

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, Nick Leornardi at <a href="mailto:nleonardi@ieee.org">nleonardi@ieee.org</a>.
- View pictures from the MicroMouse contest at the Southwest Area Spring 2010 meeting at <a href="http://picasaweb.google.com/ieeegoldphx/2010IEEESWASpringMeeting">http://picasaweb.google.com/ieeegoldphx/2010IEEESWASpringMeeting</a> (photography by David Huerta, GOLD Affinity Group Chair) check with Nick



# 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 (<u>dfrakes@asu.edu</u>) to volunteer or propose a speaker for upcoming meetings.



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC



# IEEE Components, Packaging and Manufacturing Technology Society Phoenix Chapter

Wednesday, June 15<sup>th</sup>, 2011 at 6 PM

# Flip Chip Technology – A Status Update Dr. Dev Gupta Chief Technical Officer Advanced Packaging & Systems Technology Laboratories LLC Scottsdale, Arizona 85262

### **ABSTRACT:**

Over the past 15 years the application of Flip Chip interconnects technology has grown at a CAGR of 20 to 30 % driven by its advantages for high performance computing. Recently, handheld systems such as smart phones and tablets have also reached the performance threshold where flip chip becomes indispensable, thus expanding its application space. Current volume for flip chip technology is estimated to exceed \$10 billion/ year, nearly a third of the total A&T market worldwide. Flip Chip related activity including R&D has now inevitably migrated from pioneer IDMs to leading OSATs and several variations of Flip Chip technology are now being offered by them for emerging applications like Smart Phones and 3D die stacks using TSVs. This talk will review several aspects of flip chip technology including the traditional solder bump flip chip technology, chip package interaction issues in migrating to Pb-free solder bumps, low-k and ultra low-k dielectrics and various pillar bump technologies including the Cupillar bumps. Theoretical understanding of electro-migration related reliability issues in Cu pillar interconnect will also be discussed.

### **BIOGRAPHY:**

Dr. Dev Gupta is Chief Technical Officer at APSTL LLC, Scottsdale, AZ, a company specialized in turnkey engineering of Fabs and Advanced Packaging facilities. APSTL has developed Column Bump Flip Chip technology, set up wafer bumping and assembly lines and new substrate technologies to minimize chip package interaction, for its customers in the US and Japan. Dr. Gupta has been active in the Advanced Packaging field for over 20 years mostly in the flip chip area. At Motorola, he developed one of the earliest electroplated solder bump technology and assembly robots that went into ASIC production in the early 1990s. He also developed world's first column bump flip chip technology that improved the packaging of GaAs power amplifiers. At Intel he managed the development and high volume manufacturing of organic substrates for flip chip. Dr. Gupta has been granted 13 US patents and others are pending. He chaired a very successful IEEE Workshop on Packaging needs for portable systems. He holds a PhD in Materials Science and Mathematics from the University of Arizona, Tucson.

Date:	Wednesday, Wednesday June 15 <sup>th</sup> , 2011
Location:	Group Conference Room, Freescale Semiconductor, Inc., 2100 E. Elliot Rd. Tempe, AZ. Enter the facility through the Main (South) lobby in building 94, by the flag poles;
Time:	you will be escorted to the meeting venue. 5:30–6:00 Social/Refreshments, 6:00–7:00 Presentation, 7:00 Dinner (Pizza and Soda will be provided by the IEEE CPMT Phoenix 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 6:00 pm, as there will be no escorts available after that.

For more information, please contact any of the following CPMT officers:				
Vivek Gupta (480) 413-5849	Vasu Atluri (480) 227-8411			
Guat Li Chew (480) 552-1128	Samir Pandey (480) 552-7502			



# IEEE Power and Energy Society



# Phoenix Chapter

# **News and Announcements:**

- Want to know more about IEEE PES? Watch this video: http://www.youtube.com/watch?v=BRKM4lpo\_tk
- IEEE PES Scholarships are available: http://www.ee-scholarship.org/

# **Schedule of Upcoming 2011 Events**

Monthly Luncheon and Seminar	Luncheons on hold over summer <b>Next Date: Thursday, September 15<sup>th</sup></b> Check the website for further information
<b>IEEE Phoenix Section</b> <b>70<sup>th</sup> Anniversary</b>	Date: Saturday, June 11 <sup>th</sup> More information: http://ewh.ieee.org/soc/pes/phoenix/phx70th.php
54 <sup>th</sup> Annual IEEE PES Phoenix Chapter Golf Tournament!	<b>Date: Saturday, September 24<sup>th</sup></b> <b>Location:</b> Antelope Hills Golf Club, Prescott Check the website for further information

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

IEEE Phoenix Valley Megaphone June 2011



# **Phoenix Section Life Member Affinity**

# About IEEE Phoenix Section Life Member Affinity Group:

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.

# Future Technical Meetings:

IEEE Celebrating 125 Years

- Tuesday, October 11, 2011 SRP PERA CLUB
- Tuesday, December 6, 2011 SRP PERA CLUB

### **Officers:**

Chair A. Barry Cummings Vice Chair Michel Ebertin Secretary Tom Lundquist Treasurer Leslie Daviet II Program Chair Ronald L. Sprague, P.E. Past Chair C Bruce Johnson

Barry.Cummings@srpnet.com Michel @ebertin.net Tom.Lundquist@ieee.org lesdavietii@cs.com rlspraque@q.com cbj@johnsonscientificgroup.com

# <u>Teacher In Service Program / Engineers In The</u> <u>Classroom</u>

We finished the 2010 / 2011 school year last week with a "Rockets" class at Connolly Middle School in Tempe for the 7<sup>th</sup> grade. A fitting end to the year! Prior to that we had done two weeks at Fees Middle School in Tempe doing "Here comes The Sun" with the 6<sup>th</sup> grade. Over the past school year we have taught around 2500 students and we are already booked up for October and November, and part of May, in the 2011 / 2012 school year. This link: <u>http://www.youtube.com/watch?v=UYzatTm-Y-k</u> will show you a short video of the Rockets class we did at Orangewood Middle School in Washington District earlier in the year; it is a good example of how our lessons go. Some pictures follow:



By timing the fall from apogee we calculated rockets were going as high as 80 - 125 meters.





This month three of us will be putting on a "classical" TISP session with 46 teachers at the Biosphere, and three more will be supporting Kid Zone at their summer school.

A short while ago on April 6<sup>th</sup>, all those in EIC who have worked with Kid Zone until now were honored by the City of Tempe at their Volunteer Breakfast, and given a group award for outstanding volunteer service:



The young lady is Michael Doherty, an ASU civil engineering graduate who we support at Kid Zone. The EIC members are: Tom Innes, Stu Wecker, John Fitch, John Purchase, Ray Heinle, Charles Slivinsky; not present: Roy Zaborowski, Richard Meyer, Les Holland, Thad Enloe.



# Women In Engineering Affinity Group (WIE)

The IEEE Phoenix Section supports establishing a local **Women in Engineering (WIE) Affinity Group**. Before moving forward with the process, we would like to ascertain the level of interest in the area of the Phoenix Section. If you see value in having this group and if you would be interested in participating in local WIE Affinity Group activities, please contact Shamala Chickamenahalli (<u>shamala@ieee.org</u>), Lesley Polka (<u>lesley.a.polka@intel.com</u>) and Diane Watkins (<u>diane.watkins@srpnet.com</u>).

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 their website:

http://www.ieee.org/membership services/membership/women/women about.html

Looking forward to hearing from you, Shamala, Lesley and Diane



IEEE Phoenix Section Women in Engineering Affinity Group



The IEEE Phoenix Section has submitted the paperwork to the national office to establish a a local **Women in Engineering (WIE) Affinity Group**. We held a kick-off event on May 20, 2011, at the Embassy Suites – Biltmore in Phoenix in conjunction with the 2011 international IEEE WIE committee meeting held the same weekend at the same venue. Our local group was pleased to welcome an audience of about 50 that included IEEE WIE committee members from around the world as well many local woman and men interested in our theme for the evening: "Together We Lead: Locally, Nationally, and Internationally." Our three speakers for the evening were:

- Dr. Ramalatha Marimuthu, 2011 IEEE WIE Committee Chair
  - Dr. Jan Belt, Chairman, Agilesys
  - Dr. Karen Panetta, IEEE Fellow & Editor-in-Chief of the IEEE WIE Magazine

They inspired the audience with their experiences in creating positive

change in their communities through science, engineering and technology.

The local IEEE Phoenix WIE Affinity Group is presently planning its Fall 2011 activities and events. If you would be interested in participating in future local WIE Affinity Group activities and would like to be added to our distribution list, please contact one of the members of our organizing committee: Shamala Chickamenahalli (shamala@ieee.org), Lesley Polka (lesley.a.polka@intel.com) or Diane Watkins (diane.watkins@srpnet.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 their website: <a href="http://www.ieee.org/membership\_services/membership/women\_women\_about.html">http://www.ieee.org/membership\_services/membership/women\_about.html</a>

# **IEEE Computer Society**



# Phoenix Chapter of the IEEE Computer Society June, 2011

### <u>News</u>

• The May meeting was well attended and featured presentations by Dr. Brad Morantz on using contemporary multi-core processor platforms to more efficiently solve complex mathematical problems and David Surrett on the creation and testing of avionics software for the aircraft industry.

# Future Events

We continue with our bi-monthly schedule for 2011:

- July 6 Chapter meeting, DeVry University; speaker TBD
- September 7 Chapter meeting, DeVry University; speaker TBD
- November 2 Chapter meeting, DeVry University; speaker TBD

Meetings start at 6:00 pm with networking and light refreshments in the courtyard 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: <u>http://ewh.ieee.org/r6/phoenix/compsociety/</u>. 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 2011 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	<u>Speaker</u>	Affiliation
17-Jan	5:00 PM	Freescale	1) Bectromagnetic Band Gap (EBG) Structures in Antenna Engineering: From Fundamentals to Recent Advances	1) Dr. Yahya Rahmat-Samii	1) UCLA
			2) Green" RFID and Wireless Sensor Nodes: The Final Step to Bridge Cognitive Intelligence, Nanotechnology and RF?	2) Dr. Manos Tentzeris	2) Georgia Tech
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 Voltage Regulators for Future Microprocessors and SOC's	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	TBD	Radio Communications Systems on Next Generation Manned Space Vehicle	Mr. William Boger	General Dynamics
July (TED)	TBD	TED	Wide Band Gap Materials & Applications	Dr. Chuck Weitzel	Consultant
Aug 18 (Tentative)	TBD	TED	Microwave topic	Dr. Jeremy Muldavin	MIT Lincoln Labs
Sept (TBD)	TBD	ASU	Antennas Topic	Dr. Constantine Balanis	ASU

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



Meeting Free & Open to Non-IEEE Members <u>6:00 PM. Wednesday. June 29th. 2011</u> Arizona State University Goldwater Center, GWC487 650 E. Tyler Mall, Tempe, AZ



# Radio Communications for Next Generation NASA Manned Spacecraft

#### Mr. William Boger

General Dynamics - AIS

#### Abstract

Although NASA's manned space program has evolved with the changes in political leadership, there continues to be a need for a new generation of manned space transportation systems to replace the retiring space shuttle fleet and provide access to the International Space Station (ISS). Although immediate needs are for near earth missions such as the ISS, NASA is aligning the design of its transportation system elements to allow for easy modifications for future lunar and deep space missions. These goals have resulted in the need for a communications system with some new and unique capabilities for the spacecraft being developed by Lockheed Martin for NASA. General Dynamics is developing a high reliability radio to fill these needs, and provide the flexibility required for the future using a software-programmable radio architecture. This presentation will provide some background and overview of the communications system and the new radio architecture and technologies being developed for NASA's manned space program.

#### Biography

Mr. William Boger is a Member of the Technical Staff in Space Communications at General Dynamics AIS in Scottsdale, AZ. This part of General Dynamics was formerly part of Motorola Corporation and is the same engineering group that has been providing communications for the space program since the beginning. Mr. Boger was granted the BSEE degree from the University of North Dakota in 1979 and the MSEE with emphasis in communications systems from Arizona State University in 1992. Prior to General Dynamics, Mr. Boger has worked for Sperry Corporation and Motorola.

Date: Thursday, June 29, 2011

Time: 6:00 PM Presentation, Pizza will be served following the Seminar

Location: Goldwater Center, GWC487, Arizona State University, <u>650 E. Tyler Mall. Tempe. AZ</u>

For more information, contact:

Steve Rockwell (Chapter Chair) Haolu Xie (Chapter Publicity) (480) 241-9891 (480) 413-5644

steve.rockwell@ieee.org haolu.xie@ieee.org

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









# CALL FOR PAPERS

#### 2011 BIPOLAR/BICMOS CIRCUITS AND TECHNOLOGY MEETING

Atlanta, Georgia, USA

http://2011.ieee-bctm.org

Short Course: Sunday, October 9, 2011, Conference: Monday and Tuesday, October 10-11, 2011

The Bipolar/BiCMOS Circuits and Technology Meeting (BCTM) is a forum for technical communication focused on the needs and interests of the bipolar and BiCMOS community. Papers covering the design, performance, fabrication, testing and application of bipolar and BiCMOS integrated circuits, bipolar phenomena, and discrete bipolar devices are solicited. All papers must be suitable for a <u>twenty-minute</u> presentation. Text and figures must not have been presented at other conferences or published in any scientific or technical publications prior to BCTM.

Publication in the BCTM 2011 Proceedings does not preclude publication in an IEEE journal, and authors are encouraged to do so. A Special Issue of the *IEEE Journal of Solid-State Circuits* will include selected papers from BCTM 2011.

Papers are solicited in the following areas

ANALOG / DIGITAL CIRCUIT DESIGN: Analog ICs - Digital ICs - Mixed analog/digital ICs - Novel design concepts and methods - DACs and ADCs - Amplifiers - Integrated filters - Communications ICs - Sensors - Gate arrays - Cell libraries -Voltage references - Analog subsystems within a VLSI chip - Packaging of high-performance ICs. High-voltage ICs -Automotive electronics, disc drives, display drivers, power supplies, electric utility, medical electronics, motor controls, regulators, amplifiers, converters, aerospace electronics.

RADIO FREQUENCY CIRCUIT DESIGN: Low Noise Amplifiers - Automatic gain control - VCOs - Mixers - Active gyrators - Power amplifiers - RF DMOS-based circuits - Switches - Noise suppression techniques - Frequency synthesizers - Radio subsystems - Packaging of RF components - Designing with integrated passive components at RF frequencies - Millimeter-wave circuits and systems.

WIRELINE COMMUNICATIONS: LAN, WAN, FDDI, Ethernet, Metro, Fiber channel, SONET, ATM, ISDN, xDSL, optical data links - Power-line/phone-line networks - Cable modems, broadband circuits - MUX/DEMUX - Clock and data recovery - Error coding and correction - Crosspoint switches - Laser and modulator drivers - Preamplifiers - AGC amplifiers - Decision circuits - Equalizers - Optical networking ICs.

**DEVICE PHYSICS:** New device physics phenomena in Si, SiGe, and III-V devices - Device design issues and scaling limits -Hot electron effects and reliability physics - Transport and high field phenomena - Noise - Linearity/Distortion - Novel measurement techniques - Operation in extreme environments (low and high temperatures, radiation effects).

MODELING / SIMULATION: Improved BJT and HBT models - Behavioural modeling techniques - Parameter extraction methods and test structures - De-embedding techniques - RF and thermal simulation techniques - Modeling of passives, interconnect and packages - Statistical modeling - Device, process and circuit simulation. CAD/modeling of power devices, packaging of power devices, and ESD phenomena.

PROCESS TECHNOLOGY: Advances in processes and device structures demonstrating high speed, low power, low noise, high current, high voltage, etc. BiCMOS processes - Advanced process techniques - Si and Si-C homojunction bipolar/BiCMOS devices, III-V and SiGe heterojunction bipolar/BiCMOS devices. Manufacturing solutions related to Bipolar and BiCMOS yield improvements. Fabrication of high-performance passive components, including, MEMs. Process technology related to discrete and integrated bipolar/BiCMOS power devices, IGBT, RF power devices including DMOS. Wide bandgap bipolar devices (i.e. SiC, GaN, GaAs etc.) and related process technology.

STUDENT paper submissions are highly encouraged. Papers must be clearly marked as 'STUDENT SUBMISSION' in the abstract cover sheet to be eligible for the Best Student Paper Award.

#### If you know of people who may have a paper to contribute please bring this Call for Papers to their attention.

#### IMPORTANT DEADLINES FOR AUTHORS

Monday, May 2, 2011 Deadline for receipt of abstract and summary Friday, June 10, 2011 Notification of acceptance to be sent by email Friday, July 8, 2011 Final proceedings manuscript due

#### SUBMISSION AND CONTACT INFORMATION

Visit the conference website: http://2011.ieee-bctm.org, or contact: Jan Jopke, Conference Manager, CCS Associates, 6611 Countryside Drive, Eden Prairie, MN 55346, USA TEL: 1-952-934-5082, FAX: 1-952-934-6741 E-mail: ccsevents@comcast.net.





FIC 2





### www.rfic2011.org

# 2011 IEEE Radio Frequency Integrated Circuits Symposium Baltimore Convention Center Baltimore, MD, USA Sunday, June 5<sup>th</sup>, 2011 – Tuesday, June 7<sup>th</sup>, 2011

Topics related to original work in RFIC design, system engineering, system simulation, design methodology, RFIC circuits, fabrication, testing and packaging to support RF applications in areas such as: Cellular System ICs, Wireless Data System ICs, Wideband System ICs, Silicon mm-Wave ICs, Small-Signal Circuits, Large-Signal Circuits, Frequency Generation Circuits, RFIC Device Technologies, RFIC Testing, RFIC Modeling and CAD.



Image Courtesy of Ed Niehenke

Plenary Speakers Dr. Samuel Sheng, Telegent Systems "RF Coexistence – Challenges and Opportunities."

Mr. Ron Ruebusch, Avago Technologies "3G to 4G Transition – Challenges and Opportunities."

Technical papers will be presented during oral sessions throughout Monday and Tuesday. There will be a total of 130 papers presented in 23 technical focused sessions. The technical program will conclude with the Interactive Forum session on Tuesday afternoon, which will feature 31 poster papers and the chance to speak directly with authors regarding their work.

Workshops (Sunday): Introduction to GaN MMIC Design Advancements and Challenges toward Radio-in-Package and Radio-on-Chip Imaging at mm-Wave and Beyond RF Bio-Medical Electronics and Sensors Re-configurability Requirements for Multi-Standard Low-Power Operation Advancements in Linear Power Amplifiers for Cellular Infrastructure EMI Compliant Product Design Practices: Interference Analysis, Floor Planning, Grounding Strategies, Chip-Package-Board Co-Design New Architectures for Digitized Receivers Design for Manufacturability and Self-Testability of RFICs

Design for Manufacturability and Self-Testability of RFICs Systems & Circuits for Sensing, Co-Existence, and Interference Mitigation in SDR and Cognitive Radios Efficiency Enhancement Techniques of Power Amplifiers and Transmitters for Mobile Applications

Panels (Monday & Tuesday): Software Defined Radios - Facts and Fantasies What is the limit of multi-radio integration ... or rather, is it 'disintegration'?

Short Courses (sponsored by IMS): Techniques and Realizations of Microwave and RF Filters Nonlinear Dynamics and Stability Analysis/Design of Microwave Circuits

General Chairman: David Ngo RFMD, Inc. Chandler, AZ, USA Phone: 480-763-2108 E-mall: dngo@rfmd.com Technical Program Chairman: Albert Jerng Rallnk Technology Jhubel, Talwan Phone: +886-3-560-3868 x1713 E-mall: ajerng@gmall.com Technical Program Co-Chairman: Chris Rudell University of Washington Seattle, WA, USA Phone: 206-685-1600 E-mail: jcrudell@u.washington.edu Advance Program and Registration on-line: www.imaps.org/opto

# IMAPS/IEEE-CPMT Advanced Technology Workshop on Optoelectronic Packaging

# June 29 - 30, 2011

McDonnell Douglas Engineering Auditorium University of California - Irvine Irvine, California

### General Chair:

John Mazurowski Senior Research Engineer Penn State Electro-Optics Center jmazurowski@eoc.psu.edu

### Technical Chair:

Mark Bachman Electrical Engineering and Computer Science University of California - Irvine mbachman@uci.edu

### **Organizing Committee:**

Dr. Benson Chan, Endicott Interconnect Mr. Jack Cunningham, Oracle Labs Dr. Boris Kolodin, GE Lighting Solutions Dr. Chin Lee, University of California - Irvine Dr. Kannan Raj, Oracle Labs Mr. Alex Rosiewicz, EM4 Inc.



# Early Registration Deadline: June 17, 2011 No Host Hotel - see registration page.



(http://ieeeusa.org/policy/govfel/default.asp\)

Each year, IEEE-USA sponsors three government fellowships for qualified IEEE members. The fellows - chosen by the IEEE-USA Government Fellows Committee and confirmed by the Board - spend a year in Washington serving as advisers to the U.S. Congress and to key U.S. Department of State decision-makers. Known as either a Congressional Fellowship or an Engineering & Diplomacy Fellowship, this program links science, technology and engineering professionals with government, and provides a mechanism for IEEE's U.S. members to learn firsthand about the public policy process while imparting their knowledge and experience to policymakers.

2012 Application materials are now available online. The deadline is March 18, 2011

Application Kit for 2012 Congressional Fellowship

http://ieeeusa.org/policy/govfel/documents/cfappkit12\_000.doc

Application Kit for 2012 Engineering & Diplomacy (State Department) Fellowship

http://ieeeusa.org/policy/govfel/documents/Stateappkit12\_000.doc



# 2011 IEEE Phoenix Section Calendar

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

- April 2011
  - Student-Industry Mixer
  - MicroMouse registrations due to Southwest Area: TBD
  - Student papers due to Southwest Area: TBD
  - $\circ$  Southwest Area Spring meeting incl. Student Paper and MicroMouse contests: TBD
  - Nominating Committee formed for election of next year's Section officers
    - At least three members that are not Section officers (Chapter officers okay)
- May 2011
  - Student Branch reports to IEEE HQ and Student Activities Chair due: May 1, 2011
  - Call for Nominations issued by Nominating Committee
- June 2011
  - Review meeting schedules of Chapters
  - Nominations received by Nominating Committee
- July-August 2011
  - Summer break
- IEEE Congress August 19 -22, San Francisco
- September 2011
  - Student Branches send annual plan of activities to IEEE
  - o Annual Banquet: Determine date, confirm hotel, speaker
  - Announcement of Student Paper Contest
  - Announcement of Student Scholarships
  - Call for nominations for awards
    - Categories: Young Engineer/GOLD, Engineer, Company, Educator
- October 2011
  - Announcement of Student Paper Contest
  - Announcement of Student Scholarships
  - Call for nominations for awards: see September
  - Southwest Area Fall meeting: TBD
- November 2011
  - Election of new officers
  - 2011 budget proposal
  - Start ad for Student Paper Contest and Scholarships
    For dates see under February
    - Tor uales see under Tebr
  - 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

# **IEEE** 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

# **IEEE Phoenix Section Nomination of Officers**



The IEEE Phoenix Section is seeking nominations for the following elected Section officer positions for the 2012 term:

- Chair
- Vice Chair
- Secretary
- Treasurer

Additionally, the Nominating Committee is seeking candidates for the following non-elected appointed standing committee chair positions for the 2012 term:

- Publicity
- Membership
- Student Activities
- Conferences
- Awards
- Inter-Society
- PACE (Professional Activities Committees for Engineers)
- TISP (Teacher In-Service Program)
- Web Master

Section officers must be IEEE members. Self-nominations are acceptable.

Please send nominations or any questions to Steve Rockwell (e-mail <u>steve.rockwell@ieee.org</u>), copying also Nominating Committee members Mike Andrews (e-mail: <u>m.andrews@ieee.org</u>) and Mohamed Arafa (e-mail: <u>mohamed.arafa@intel.com</u>).

Section members are urged to submit your nominations by no later than September 1.

Sincerely, Steve Rockwell Chair, Nominating Committee, Phoenix Section

# 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.

### <u>Treasurer</u>

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 <u>PACE (Professional Activities Committees for Engineers) Chair</u>
  - 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 <a href="http://www.ewh.ieee.org/r6/phoenix">www.ewh.ieee.org/r6/phoenix</a>. Please download the survey and send by email to IEEE Phoenix Section Secretary, Dr. Chuck Weitzel, at <a href="http://www.ewh.ieee.org">c.weitzel@ieee.org/r6/phoenix</a>. Please download the survey and send by email to IEEE Phoenix Section Secretary, Dr. Chuck Weitzel, at <a href="http://www.ewh.ieee.org">c.weitzel@ieee.org/r6/phoenix</a>.

# **"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."

# **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: <u>r.kinner@ieee.org</u>

# **Phoenix Section LinkedIn Group**

If you are interested in professional networking and shared Section related updates & discussions join the <u>IEEE Phoenix Section Group on LinkedIn</u>. Signing up only takes minutes and is free. A job board is available as well.