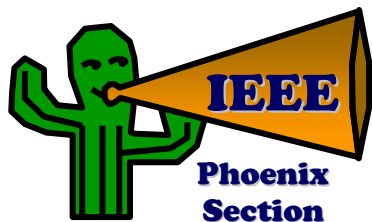


The Valley Megaphone

Newsletter of the
**Institute of Electrical and
Electronics Engineers, Inc.,
Phoenix Section**
October 2011,
Volume XXV, Number 10



Executive Committee - 2011

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

Chapters

Signal Processing & Communications

David Frakes, 480-727-9284
dfrakes@asu.edu

Computer Society

Jerry Crow
jerry.crow@computer.org

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

Chaturvedi Gogineni
cogoginen@asu.edu

Power & Energy Society

Naim Logic, 602-236-3838
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Solid State Circuits

Mohamed Arafa
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Teacher-In-Service

Mike Poggie
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Waves & Devices Society

Steve Rockwell
steve.rockwell@ieee.org

Life Members

Barry Cummings
abarrycummings@gmail.com

Women In Engineering

Shamala Chickamenahalli
shamala.chickamenahalli@intel.com

U – News

(for Student Members)

Updates of Student Advisors and Committee Members

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

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

Student Branches

ASU Main, Engineering
Chair: Saurabh Naik,
480-252-0504, svnaik@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: Donovan Benedict
Don4ben5@gmail.com
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: Tim Lemm
timothy.lemm@erau.edu
Advisor: John E. Post
postj@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 Leonardi at nleonardi@ieee.org.
- View pictures from the MicroMouse contest at the Southwest Area Spring 2010 meeting at <http://picasaweb.google.com/ieeegoldphx/2010IEEESWASpringMeeting> (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 (dfrakes@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 Phoenix Chapter Scholarships are available:
<http://ewh.ieee.org/r6/phoenix/Scholarships.htm>
- 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:
http://www.ieee.org/membership_services/membership/senior/index.html

Schedule of Upcoming 2011 Events

October 2011 Luncheon Meeting

- Date:** Thursday, October 20, 2011
- Time:** 11:30 am - 11:45 noon: Registration
11:45 noon: Lunch
12:15 pm: Program
- Location:** SRP PERA Club ([map](#))
1 E Continental Dr
Tempe, AZ
- Speakers:** Prof. Raja Ayyanar, ASU
- Topic:** "Recent Advances in Power Electronics with Focus on Solid State Transformers (SST)"
- 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

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
11:30pm to 1:00pm, Wednesday, October 19th, 2011
Arizona State University- GWC 487 ([map](#))

Top-Down Approach to Mixed-Signal Design

Speaker: Mike Woodward. The MathWorks

Abstract:

This seminar will demonstrate techniques used to rapidly design and verify mixed-signal systems (ADCs, PLLs, etc.) by using a top-down approach that complements your existing tool flow. We will use Simulink as a system-level design tool and show how these system-level designs can be elaborated and linked with a circuit-level simulator. We will show design cases and provide examples from industry of the successful use of system-level methods.

Analog Design

- Architectural exploration of ADCs through rapid system simulation
- Combining analog and digital models
- Co-simulation with Cadence AMS (Spectre) environment

Digital Design

- Design and simulation of digital components (e.g. digital filters)
- HDL code generation
- Co-simulation with digital simulators, e.g. Mentor Graphics ModelSim.

Biography

Mike Woodward has been active in the design community for almost twenty years. He started by designing GaAs microwave power amplifiers and later moved onto digital baseband design. The British Computer Society awarded him their IT Award for Excellence for his work on a digital audio broadcasting (DAB) system and his work on DAB receivers was included in several consumer products. Mike created UMTS modeling software that was one of EDN Magazine's "Hot 100" products and worked on a HSDPA basestation implementation. He has been awarded multiple patents, has spoken at several international conferences, and has been published in several journals. Mike is currently employed as an industry manager for The MathWorks where he is concerned with industry design flows topics.

Registration Link: <http://www.mathworks.com/company/events/seminars/seminar60352.html>

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

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



Phoenix Section Life Member Affinity Group

2011 October Technical Meeting

Topic: ESTATE PLANNING by Mr. Lou Silverman

Mr. Silverman is an estate planning and business planning attorney practicing in Tempe, Arizona. His areas of professional emphasis include wills, trusts, estate and wealth planning, business succession planning and counseling, corporations, partnerships, and limited liability entities. Additionally, Mr. Silverman serves as a Judge Pro Tem on the Maricopa County Superior Court and regularly serves as a mediator for the Court.

Mr. Silverman is married with two daughters. He is active in his community and enjoys the opportunity to participate in non-profit organizations.

Current Employment Position(s):

Owner and President of Louis A. Silverman, P. C., Member of Central and East Valley Arizona Estate Planning Counsel, Member of National Network of Estate Planning Attorneys

When: Tuesday, October 11, 2011, 11:00am – 1:00pm

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>

RSVP: Please respond as soon as possible to Program Chair, Ronald Sprague by email: rlsprague@q.com

About IEEE Phoenix Section Life Member Affinity Group:

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

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 suggested speakers are encouraged. Contact any Officer.

Future Technical Meetings:

- Tuesday, December 6, 2011 SRP PERA CLUB

Officers:

Chair	A. Barry Cummings	<u>Barry.Cummings@srpnet.com</u>
Vice Chair	Michel Ebertin	<u>Michel@ebertin.net</u>
Secretary	Tom Lundquist	<u>Tom.Lundquist@ieee.org</u>
Treasurer	Leslie Daviet II	<u>lesdaviatii@cs.com</u>
Program	Ronald L. Sprague,	<u>rlsprague@q.com</u>
Past Chair	C Bruce Johnson	<u>cbj@johnsonscientificgroup.co</u>



IEEE Phoenix Section
Women in Engineering
Affinity Group



The IEEE Phoenix Section submitted the paperwork to the national office in May 2011 to establish a local **Women in Engineering (WIE) Affinity Group**. The national office formally approved our application at the end of June. 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 several other activities for the immediate future, including participating in the IEEE Teacher-in-Service Program's Arizona Science Lab at the Arizona Science Center and a speaker and networking event in the November/December timeframe. As more details become available, we will publish them through the Megaphone and to our distribution list. If you would like to be added to our distribution list, 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

October, 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, Monday, October 17, 2011

Arizona State University
Goldwater Center, GWC487
650 E. Tyler Mall, Tempe, AZ



Graphene-Based Novel Device

*Professor Tian-Ling Ren,
Institute of Microelectronics, Tsinghua University*

Abstract

Graphene is a novel material with excellent electronic, mechanical, thermal, and optical properties. Mechanical stripping and CVD are two of the important fabrication methods of graphene. Many interesting new devices with wide applications can be developed based on graphene material. In this talk, a novel graphene-based sound source device will be introduced.

Biography

Prof. Tian-Ling Ren received his Ph.D. degree from Department of Modern Applied Physics, Tsinghua University in 1997. He has served as Distinguished Lecture (DL) of IEEE Electron Device Society, Chair of IEEE Electron Device Society Beijing Chapter, and Council Member of Chinese Society of Micro-Nano Technology. His research area is mainly on new material-based micro/nano electronic devices and MEMS devices, such as micro acoustic devices, inductor and FBAR devices for RF IC, non-volatile memory devices, and flexible devices. He has published more than 200 journal and conference papers and 40 patents.

Date: Monday, October 17, 2011

Time: Refreshment starts at 3:45
4:00 PM Presentation

Location: Goldwater Center, GWC487, Arizona State University, [650 E. Tyler Mall, Tempe, AZ](http://www.asu.edu/tyler_mall)

For more information, contact:

Steve Rockwell (WAD Chapter Chair) (480) 241-9891
Haolu Xie (Chapter Publicity) (480) 456-3513

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

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

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



Meeting Free & Open to Non-IEEE Members

5:30 to 6:30PM, Thursday, October 27, 2011

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



Design, Fabrication, Simulation and Testing of Flexible Bow-Tie Antennas and High-Impedance Surfaces

*Constantine A. Balanis, Regents' Professor
School of Electrical, Computer and Energy Engineering, Arizona State University*

Abstract

The presentation will focus on the design, fabrication, simulation and measurements of two different flexible bow-tie antennas: a conventional and a modified one with reduced metallization using both planar and curved surfaces. The antennas are mounted on a flexible substrate which is fabricated at the Flexible Display Center (FDC) of Arizona State University (ASU). The substrate is heat stabilized polyethylene naphthalate (PEN) which allows the antennas to be flexible. The antennas are fed by a microstrip-to-coplanar feed network balun. In addition to the radiation characteristics of the antennas, the effects of the feeding structure and the conductor losses on the radiation performance of the antennas will be discussed. Using thicker flexible substrates, in order to increase the bandwidth, high-impedance surfaces have been designed, simulated, fabricated and measurements have been conducted on the phase reflection characteristics of such surfaces. A very good agreement has been obtained. The ultimate objective is to design low-profile antennas to conform to the surface of complex structures, including airframes with non-planar surfaces.

Biography: Constantine A. Balanis (S'62 - M'68 - SM'74 - F'86 - LF'04) received the BSEE degree from Virginia Tech, Blacksburg, VA, in 1964, the MEE degree from the University of Virginia, Charlottesville, VA, in 1966, and the Ph.D. degree in Electrical Engineering from Ohio State University, Columbus, OH, in 1969. From 1964-1970 he was with NASA Langley Research Center, Hampton VA, and from 1970-1983 he was with the Department of Electrical Engineering, West Virginia University, Morgantown, WV. Since 1983 he has been with the Department of Electrical Engineering, Arizona State University, Tempe, AZ, where he is now Regents' Professor. He received in 2004 a Honorary Doctorate from the Aristotle University of Thessaloniki, the 2005 IEEE Antennas and Propagation Society Chen-To Tai Distinguished Educator Award, the 2000 IEEE Millennium Award, the 1996 Graduate Mentor Award, Arizona State University, the 1992 Special Professionalism Award from the IEEE Phoenix Section, the 1989 IEEE Region 6 Individual Achievement Award, and the 1987-1988 Graduate Teaching Excellence Award, School of Engineering, Arizona State University.

Date: Thursday, October 27, 2011

Time: 5:30-6:30 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

For more information, contact: Steve Rockwell (WAD Chapter Chair) (480) 241-9891 steve.rockwell@ieee.org
Haolu Xie (Chapter Publicity) (480) 458-3513 haolu.xie@ieee.org

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



IEEE Phoenix Waves and Devices Chapter
2012 Technical Workshop on



Millimeter Wave to Terahertz Devices and Technologies

Call for Papers

This one-day workshop will focus on devices and technologies for emerging applications in the upper millimeter wave and lower terahertz (submillimeter) electromagnetic spectrum, and will include invited experts from industry and academia as well as submitted contributions. Abstracts are requested for consideration on any of the represented topics.

Workshop Topics

April 27, 2012
8:00 am to 5:00 pm
University Club
Arizona State University

General Co-Chair:
Steve Rockwell
steve.rockwell@ieee.org
General Co-Chair:
Robert Anderson
robert.j.anderson@asu.edu

Phoenix IEEE Waves & Devices Chapter:
<http://ewh.ieee.org/r6/phoenix/wad/>

- | | |
|-----------------------|----------------------------|
| DEVICES | COMPONENTS |
| Semiconductors | Sensors |
| Vacuum Tubes | Sources |
| Simulation & Modeling | Passives |
| PACKAGING | APPLICATIONS |
| Waveguide | Communications |
| Integrated | 60 GHz Indoor Radio |
| Interconnects | 70/80 GHz Point to Point |
| SYSTEMS | Sensing |
| Antennas | 77 GHz Auto Radar |
| Architectures | Radio Astronomy |
| Spectrum | Spectroscopy & Bio-Medical |

Abstract Submissions: Two pages (topic, summary of significant results and conclusions – WORD or PDF files only). Abstract must include author names, affiliations, addresses, and e-mail address of lead author.

Submission Deadline: February 17, 2012
Submitting Address: Michael.Gorvill@asu.edu
Acceptance Notification: March 5, 2012
Final Presentation Due: April 13, 2012





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 twenty-minute 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.

WIRES 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.

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.

Global Patent Solutions, LLC (GPS)

Patent Researcher/Searcher – Electrical/Computer/Communications

Global Patent Solutions, LLC (GPS) is an intellectual property research and consulting firm founded to meet the demanding needs of Inventors and IP professionals around the world for high-quality patent research and consulting. From our headquarters in Scottsdale, AZ, we currently service a global client-base of IP Attorneys, Patent Agents, Business Leaders, R&D Teams, Universities, Entrepreneurs and Inventors.

This is not your ordinary, run-of-the-mill research position. Each project is unique and possesses a new challenge for you to tackle. You must be able to assess and analyze the best way to approach a project. Previous patent knowledge is great; however, it is not required. We are willing and able to train.

However, candidates applying for this position MUST have previous experience or extensive knowledge in one or more of the following technical areas:

- Wireless Networking (Cellular, CDMA, 4G, 3GPP, LTE)
- Computer Networking (Ethernet, Packet Formation, Routing Algorithms, etc)
- Computer Vision / Image processing (Feature-based, Learning Algorithms, Classifiers, etc.)
- GPS/Satellite Positioning
- Display/Pixel Technology
- Encryption / Cryptography (digests, public/private keys, etc.)
- MEMS or NANO technology

We are hiring people who desire to continuously learn and put that knowledge to use to get quick results to meet our clients' deadlines.

The Patent Researcher primarily will perform research of invention concepts related to the technologies listed above using a variety of databases and compile formal search reports to demonstrate findings to clients. A majority of work requires in-depth reading, writing and working on computers.

The position entails:

- Quickly reviewing and gaining an understanding of technical aspects of client inventions and/or technical search concepts
- Creating research strategies that best utilize time and resources when executed
- Performing extensive database research
- Reviewing, gathering and analyzing technical literature
- Reporting research findings in a timely and high-quality manner

Requirements: BS, MS or PHD in Engineering or equivalent experience required.

We are a growing company located in Scottsdale, Arizona. We are primarily interested in hiring full-time positions in our Scottsdale facility. It is possible, though not preferred, that unique circumstances would

lead us to also consider an employee working remotely; this position, however, must be filled within the U.S. Part-Time employment is also a possibility for the right individual.

We provide the following benefits:

- Competitive Salary - Compensation commensurate with capabilities and experience
- 10 Days of Vacation Leave
- 5 Days of Sick Leave
- 10 Paid Holidays
- Full Dental & Medical Insurance Coverage
- Retirement Plan

If you can manage yourself, as micro-managing is not our style, and you are motivated to get results in a timely manner, this could be a great opportunity for you to learn and grow with a quality-driven company.

This position requires you to:

- Meet and exceed client needs and deadlines by providing viable research solutions and being reliable and dedicated to getting the job done.
- Quickly, continuously and concisely Learn, Interpret, Comprehend, Retain and Apply technical abilities. Enjoy an ongoing learning and computer-based environment that is dedicated to quality.
- Thrive in ambiguity and to self-manage, prioritize and take pride in the work with the team and individually.
- Proactively, confidently and effectively communicate with internal team members and external clients. Don't be afraid to ask for help. Be supportive and helpful to others on all levels.
- Actively participate as a team member to best serve clients and the team.

You will mostly work on your own, but we do have a wonderful, supporting staff that requires some teamwork on occasion. We are looking for an efficient and flexible team player who likes to have fun too!

To apply please, please email your cover letter and resume to: robb.evans@globalpatentsolutions.com
You can also learn more about us by visiting our Website: www.globalpatentsolutions.com

Premier Semiconductor Services LLC www.premiers2.com (Tempe)

Position Open: Quality Manager & Process Engineering Manager

Quality Manager & Process Engineering Manager

Position:

Premier Semiconductor Services, an established Testing and Semiconductor Backend Service Provider, has an immediate opening for a Quality Manager & Process Engineering Manager who has at least 5 years experience in this industry. This person will oversee all process improvement opportunities and quality compliance with our Quality System which is ISO 9001 Certified.

Company:

Premier Semiconductor Services is a privately held, well diversified, rapidly growing and financially sound company, with their corporate headquarters in Tempe, AZ, plus three additional domestic manufacturing locations. We combine industry expertise with the highest quality standards in the semiconductor industry as we support the commercial, automotive, military, aerospace, medical, and industrial market segments. Premier offers the most comprehensive array of backend service offerings in the US including: Counterfeit detection testing – investigative visual inspection, blacktop/remark detection test, X-ray, XRF, decapsulation, electrical and upscreen testing. Other core services include: Tin whisker mitigation– automated processes for BGA reballing & LGA ball attach, Pb free conversion, programming, marking, scan, tape & reel, lead straightening, bake & dry pack, solderability testing and more. Premier is ISO 9001 Certified and DLA lab suitable, DSCC certified & operates from multiple locations.

The Company has a competitive compensation and benefit package which includes Medical Insurance, Holiday, Vacation, 401(k) and other benefits. The Company is an equal opportunity employer, dedicated to promoting a culturally diverse workforce. Relocation assistance is available for this position.

Job Description Summary:

As Quality & Process Manager, the responsibilities include process improvement opportunities and quality compliance. This position is responsible for maintaining customer and industry quality standards such as "ISO 9001" and "MIL-STD-883" and leading further compliance with a wide variety of JEDEC standards as well as specific customer quality requirements.

Job Responsibility:

- Maintain or obtain industry quality standards such as "ISO 9001" and "MIL-STD-883" as required by company for continuous improvement and customer satisfaction. Lead all activities in support of these quality standards as well as required JEDEC and customer quality requirements.
- Lead management quality review teams as required.
- Provide oversight for the quality and inspection group; oversee and prepare as necessary documentation for the quality systems, employee training and monitoring of production process and department shipments. Determine level of sampling for in-process and final inspections, as well as the equipment and personnel needs.
- Understand and implement any specific customer quality requirements; Includes communicating with customers as necessary.
- Take lead regarding any customer return request and RMA process. Assume the appropriate responsibilities and duties involving deviation requests, problem resolution and customer related communications.
- Continuous improvement of quality management systems; includes problem solving to increase overall quality to customer as well as to improve inspection efficiency, implementing new quality systems.

- Maintain company QA manual; Ensure employees are trained in accordance to the requirements in the QA manual, perform procedural audits of personnel as required, update manual as required.
- Oversee as necessary incoming inspection monitoring.
- Collect and distribute quality related data, yield rates and reasons/percentages for discrepant material.
- Provide final opinion as to the disposition of parts with questionable or borderline attributes.
- Take an active role in the training of employees.
- Help with DLA Certification expansion and AS 9100 Certification.

Job Requirements:

- Bachelor's degree or long term industry specific experience.
- 5+ Years of Quality management experience.
- Strong computer skills; Microsoft Office, Word, Excel.
- Military specification experience preferred (MIL-STD-883).
- Semiconductor component experience preferred.
- Ability to establish priorities and maintain multiple priorities and tasks at one time.
- Well-developed organizational and inter personal skills. A self-starting and self-motivating individual with a positive attitude and influence on the organization.
- Excellent oral and written communication skills are required.

If interested please Apply
Premier Semiconductor Services LLC
480-736-1970
www.premiers2.com



2011 IEEE Phoenix Section Calendar

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

- 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
 - 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.”

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.
