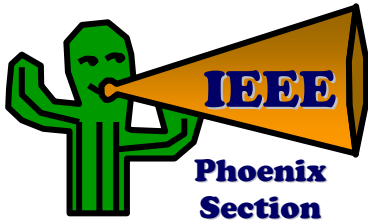


The Valley Megaphone

Newsletter of the Institute of Electrical and Electronics Engineers, Inc., Phoenix Section

November 2010,
Volume XXIV, Number 11



Executive Committee - 2010

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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 14 th DSP & 6 th SPE Workshop	3
IEEE Signal Processing Society and Communications Society	4
Future City Competition	5
36 th Annual IEEE Industrial Electronics Conference	6
Components, Packaging & Manufacturing Technology Society	9
Waves & Devices Phoenix Chapter	9
Power & Energy Society	10
Life Member Affinity Group	12
IEEE Computer Society	14
Waves and Devices Chapter	15
Become an IEEE Senior Member	17
IEEE Phoenix Section Volunteer Positions	17
Phoenix Section 2011 Executive Committee Officer Candidates	18
Upcoming IEEE Conferences in Phoenix	19
Phoenix Section Executive Committee Meeting	20
IEEE Phoenix - Calendar of Events	20
Phoenix Section LinkedIn Group	20

IEEE Phoenix Section on-line updates can be found at:

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

and on LinkedIn at:

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

Please send announcements for the *Valley Megaphone* to Satish Ayer at satish.ayer@ieee.org and to Russ Kinner at r.kinner@ieee.org for inclusion in the Section Calendar.

Chapters

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TBD

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U – News

(for Student Members)

This U-News Page, initiated last year, will continue to serve as a focal point for communications related to Student Branch Activity. The Section Executive Committee requests student recommendations for Improvements and support in expanding student branch membership.

Nick Leonardi
480-720-1435 Cell
nleonardi@ieee.org
Student Activities Chair

Student Branches

ASU Main, Engineering
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DeVry, Phoenix
Chair: TBD
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Embry-Riddle, Prescott
Chair: Tim Lemm
timothy.lemm@erau.edu
Advisor: John E. Post
postj@erau.edu

U – Newsbytes

CONGRATULATIONS to the 2010 Graduating Classes for all schools with best wishes for continued participation as industry professionals!

- 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/2010IEEEESWASpringMeeting> (photography by David Huerta, GOLD Affinity Group Chair)



**IEEE Signal Processing Society
14th DSP & 6th SPE Workshop
Enchantment Resort, Sedona, Arizona USA
January 4-7, 2011**

Call for Participation

The 2011 IEEE Digital Signal Processing (DSP) Workshop and IEEE Signal Processing Education (SPE) Workshop will be held jointly January 4 to 7, 2011, at the award-winning Enchantment Resort. The Enchantment Resort is located 5 miles from Sedona in Boynton Canyon, two hours north of the Phoenix / Scottsdale metropolitan area and two and a half hours south of the Grand Canyon. The venue is surrounded by the Coconino National Forest and Red Rock Secret Mountain Wilderness. The area is revered by the Apache Native Americans as the birthplace of their tribe and holds ancient ruins of Native American cliff dwellings.

The goals of the workshops are to bring together leading engineers, researchers, and educators in signal processing from around the world to discuss novel signal processing theories, methods, and applications. The DSP/SPE Workshops will feature prominent plenary speakers from the signal processing community as well as technical sessions for presenting contributed papers.

Submission of Accepted Camera-Ready Papers	November 8, 2010
Resort Reservation	November 15, 2010
Advance Registration	November 15, 2010

For more information, please click on the following link:

<http://www.dspe2011.org/>



Phoenix Chapter of IEEE Signal Processing Society and Communications Society



Thanks to all of the attendees who made the September 28th technical meeting a success!

An administrative meeting will be held in late October to elect officers.

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

DON'T FORGET TO REGISTER FOR THE SEDONA DSP WORKSHOP!

<http://enpub.fulton.asu.edu/ivu/Workshops/DSPE2011/>

FOR IMMEDIATE RELEASE

September 29, 2010

Contact: Michael Book
Gunn Communications
623-258-3128
or
Michael Andrews
(602) 368-6013
michael@andrews-associates.com



Future City Competition

Phoenix, AZ – The Arizona Region Future City Committee is seeking volunteers to share their engineering knowledge with students participating in this year's Future City competition. Both engineering mentors and judges are needed.

Engineering mentors will provide guidance and support to teams of students throughout the state as they prepare all competition deliverables. The time commitment is approximately 4-6 hours per month during November through January. For additional information, prospective mentors may contact Jennifer Bohac at jbohac@scottsdaleaz.gov or Charles Griffith at cgriffith@ritochpowell.com.

Competition judges work in teams to score all competition deliverables at the Arizona Future City Competition Region Finals, to be held January 22, 2010. Prospective judges may contact Jason Fort at Jason.fort@dibblecorp.com or Jeff Van Skike at jkvanskike@cox.net.

A national education program sponsored by the engineering community, Future City Competition promotes technological literacy and engineering to middle school (6–8th grade) students. Student teams, supported by teachers and volunteer engineers, design and build their vision of a future city. They use computer simulations, research essays, scale models and team presentations to communicate their vision.

"Mentoring re-energized my focus on how engineers truly make a difference in the lives of everyday people. I would encourage everyone to take the time to work with students because it is such a gratifying experience," says Charles Griffith, PE, CFM, Ritoch-Powell & Associates.

The winning team at Arizona Future City Competition Region Finals will compete in national finals in Washington, DC. For complete Arizona Region Future City information, please visit www.futurecity-arizona.org.

###





36th Annual IEEE Industrial Electronics Conference (IECON 2010)



7-10 November 2010, Glendale, AZ

Call for Participation **STARTS SUNDAY**

Industrial Electronics Conference (IECON) is an IEEE international conference on industrial applications of electronics, control, robotics, signal processing, computational and artificial intelligence, sensors and actuators, instrumentation electronics, computer networks, internet and multimedia technologies. The objectives of the conference are to provide high quality research and professional interactions for the advancement of science, technology, and fellowship. Papers with new research results are encouraged for submission. IECON'10 is being held concurrently with the 4th IEEE International Conference on E-Learning in Industrial Electronics (ICELIE'10) and the Industry Forum. Participation in all three events just requires the IECON'10 registration fee. Industry, research, and academia are cordially invited to participate in the wealth of presentations, tutorials, exhibits, plenary sessions, and social activities for the advancement of science, technology, engineering education, and fellowship. Accepted and presented papers will be published in the respective conference proceedings, and included in the IEEE *Xplore*® online digital library and EI Compendex database. Detailed information is available at the following website:

<http://iecon2010.njit.edu>

For more information please see: <http://ewh.ieee.org/r6/phoenix/>



Phoenix Section

*Components, Packaging and Manufacturing Technology Society Chapter
& Waves and Devices Chapter*



**Friday, November 19, 2010
7:00 AM - 5:00 PM
ASU Memorial Union (Arizona Room)
Arizona State University, Tempe, Arizona 85287**

Portions of the above image courtesy of Orbital Sciences Corporation and Occam Services

present an all-day workshop on

***Emerging Device and Packaging Technologies:
Sense, Compute, and Communicate***

ABSTRACT

The combination of technologies required to address societal grand challenges in areas such as energy, health, and security necessitates the creation of systems that have far-reaching abilities to sense, compute, and communicate. Such systems vary in complexity, from basic home networks to much more sophisticated remote health, security monitoring, and satellite systems, and can involve fields as diverse as biochemical sensing, ad-hoc networks, low-power/high-performance computing, and planetary surface science.

This year's one-day workshop will focus on the 'sense, compute, and communicate' topic and will pull together experts from industry, academia, research labs, and consortia to share their vision of technical challenges and opportunities in these areas. A poster session will be featured on the broader workshop topic of emerging device and packaging technologies and select vendors will exhibit products and services related to all aspects of the supply chain for design and manufacturing.

COMMITTEE MEMBERS

Workshop Chair
Dr. Vasudeva P. Atluri
(480) 227-8411
vpatluri@ieee.org

Technical Program Committee
Chair: Mel Miller
Co-chair: Dr. Henning Braunsch

Vendor Committee
Chair: Vivek Gupta
Co-chair: Dr. Rashaunda Henderson

Electronic Media Committee
Chair: Dr. Junseok Chae

Workshop Co-Chair
Steve Rockwell
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steve.rockwell@ieee.org

Registration Committee
Chair: Dr. Derrick Lim
Co-chair: Karla Reyes

Arrangements Committee
Chair: Dr. Samir Pandey
Co-chair: Dr. Hongyu Yu

Publicity Committee
Chair: Surinder Tuli
Co-chair: Dr. Rudy Emrick

For additional information and vendor registration

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

Online registration

<https://www.acticeva.com/go/ieeephxsecworkshop2010>

ALL DAY VENDOR DISPLAYS



AGENDA

Morning Session

- 7:00AM** Registration and Continental Breakfast
- 8:00AM** **Workshop Welcome**
Dr. Vasu Atluri, *IEEE Senior Member; Chairman and CEO, Renavitas Technologies LLC*
Steve Rockwell, *IEEE Senior Member; Senior Lead Systems Engineer, Advanced Information Systems, General Dynamics*
- 8:20AM** **Mars Odyssey Thermal Emission Imaging System: Exploring the Red Planet in the Infrared**
Greg Mehall, *Instrument and Mission Manager, School of Earth and Space Exploration, Arizona State University*
- 8:55AM** **Open Architectures for Space Software-Defined Radios**
Dr. John Liebetreu, *Distinguished Member of the Technical Staff, Advanced Information Systems, General Dynamics*
Carl Smith, *Senior Lead Software Engineer, Advanced Information Systems, General Dynamics*
- 9:30AM** **Free-Space Intersatellite Communications Systems**
Dr. Davis Hartman, *Member of the Technical Staff, Advanced Information Systems, General Dynamics*
- 10:05AM** Break and Vendor Session
- 10:35AM** **Terahertz Quantum Cascade Lasers at the Crossroad**
Dr. Nigam Samal, *Director, Photonics R&D, Trion Technology*
- 11:10AM** **Micromachined Sensors: From Simple Sensors to an Integrated Smart Sensor World**
Dr. Mark DaSilva, *Product Development Team Leader, Micromachined Products Division, Analog Devices, Inc.*
- 11:45AM** Lunch and Poster/Vendor Session
- Afternoon Session**
- 1:15PM** **Keynote: Participatory Sensing with Mobile Devices**
Dr. Jeff Burke, *Director, Technology Research Initiatives, School of Theater, Film and Television, UCLA*
- 2:00PM** **Microsystem Technology for Guidance in Life Sciences – Challenges and Opportunities**
Prof. Yitshak Zohar, *Professor, Department of Aerospace and Mechanical Engineering, and Department of Biomedical Engineering, University of Arizona*
- 2:35PM** Break and Vendor Session
- 3:05PM** **Low Power Medical Transceivers**
Dr. Seth Wilk, *Assistant Professor Research, School of Electrical, Computer and Energy Engineering, Arizona State University*
- 3:40PM** **Scaling Microprocessor Interconnects for the Next Decade and Beyond**
James Jaussi, *Senior Research Scientist, Intel Corporation*
- 4:15PM** **Fine Pitch Flip Chip and 3D Packaging Solutions for High Density Smartphone Applications**
Lee Smith, *VP Marketing & Business Development, Amkor Technology, Inc.*



INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS

COMPONENTS, PACKAGING AND
MANUFACTURING TECHNOLOGY SOCIETY
ECTC Electronic Components & RF Program Committee
CPMT RF & Wireless Technical Committee



61st ECTC May 31 – June 3, 2011
Walt Disney World Swan & Dolphin Resort
Lake Buena Vista, Florida USA

The ECTC Electronic Components & RF Program Committee and the CPMT RF & Wireless Technical Committee encourage you to submit an abstract to ECTC 2011 in the areas of passive components & networks, RF & Microwave components & modules, and subsystems. ECTC is the premier Electronic Components and Packaging conference held annually and attended by about 1000 delegates with equal participation from companies and academia. As in the past, Electronic Components, RF & Microwave, and MEMS related papers are solicited for focus sessions during this prestigious conference.

RF, Microwave, Terahertz Components & Modules

Integrated antennas, filters, baluns, tunable devices & switches; high power & high efficiency RF/Microwave power amplifiers – design, technology & high frequency characterization; module integration in semiconductor, organic, & glass substrates – System in Package, System on Chip, Package on Package, & 3D integration; shielding, isolation, nanoscale structures for enhancing performance

RFID

Design & development of miniature interconnects for HF, UHF & WiFi RFIDs; assembly & matching with antennas & passives; universal RFID modules; RFID enabled wireless sensor nodes; power scavengers & nanomaterials for autonomous RFID's; flexible/conformal materials & printing technologies; reliability & environmental issues; metal-mounted RFID assembly & integration; multiband RFID's; integration of RFID's & batteries; RFID reader packaging; "rugged" RFID packages for space & extreme environments

RF MEMS & Sensors

RFID, RF MEMS, MEMS, MEMS packaging; MEMS/NEMS-enabled sensors, nanotechnology-based sensors, MEMS-based power scavenging; low-cost "Smart House" & "Smart Skin" sensor integration & packaging

Medical Devices for Monitoring, Imaging, WPAN/WBAN & Biomedical Applications

Design, materials, processing, manufacture, modeling & characterization; UWB & THz imaging & monitoring devices; technology for integrated wireless implantable/wearable electronics, including energy harvesting, ultra-low power electronics & batteries; 3D packages for ultra-miniaturization; biocompatibility, BioMEMS & microfluidic packaging

Flexible & Printed Electronics

Printing electronics technologies up to mmW frequencies; 3D printed RF electronics modules; low cost substrates; flexible RF modules, interconnects & adhesives; integration with wearable/implantable wireless personal networks, smart fabrics; inkjet- & gravure-printed RF components; environmentally-friendly RF substrates, antennas & passives

Discrete and Embedded Electronic Components, Materials, Processing, Reliability, & Manufacturing

Design, materials, processes, & reliability considerations for discrete passive components: resistors, capacitors, inductors, & passive networks, including through silicon vias (TSV), wafer level RDL, nano materials & processes

SUBMISSIONS:

Please submit abstracts using the ECTC web site: www.ectc.net by October 15, 2010. Abstracts must comply with the guidelines outlined at the website. To have your paper considered for inclusion in the "Electronic Components & RF" focused sessions

YOU MUST SELECT

"Electronic Components & RF" committee as your PRIMARY subcommittee preference
when you submit your abstract at the ECTC web site. Again, to have your paper considered, please do the following:

STEP #1: Submit abstract through the ECTC web site (www.ectc.net) and select **"Electronic Components & RF" as PRIMARY subcommittee preference**

STEP #2: Email abstract copy and author's email & contact information to:
Craig Gaw at c.a.gaw@ieee.org & Rockwell Hsu at r.hsu@wilinx.com

Craig Gaw, Chair - CPMT RF & Wireless TC
Freescale Semiconductor Inc., c.a.gaw@ieee.org

Rockwell Hsu, Chair - ECTC Electronic Components & RF TC
Wilinx Corporation, r.hsu@wilinx.com



2011 IEEE Radio Wireless Week
Hotel Registration Deadline: Dec. 15, 2010 Conference Registration Deadline: Dec. 30, 2010 Visit us at <http://www.radiowirelessweek.org/>

Dear Colleague,

We would like to invite you to join us for an excellent program in wireless technologies featuring:

- The Radio and Wireless Symposium (RWS)
- The IEEE Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems (SiRF)

The Radio Wireless Week is premiering this year three new topical conferences:

- The IEEE Topical Conference on RF/Microwave Power Amplifiers (PAWR): The first archival digest dedicated to the topic of power amplifiers.
- The IEEE Topical Conference on Biomedical Wireless Technologies, Networks & Sensing Systems (BioWireleSS): targeting one of the most exciting and rapidly growing areas of wireless medical devices.
- The IEEE Topical conference on Wireless Sensors and Sensor Networks (WiSNet): utilizing technologies from the RWS, PAWR, and SiRF to develop new applications related to BioWireleSS, consumer, commercial, and military sensor markets.

This exciting week also features workshops on:

- Inter- and Intra-vehicle Wireless Communications & Networking
- Wireless Communications for Smart Grid
- Wireless Biomedical Applications
- Zigbee Applications It hosts panel sessions on
- Ultra-Wideband (UWB) Technology: Past, Present, and Future
- Cell Phone Tower Myths and Misconceptions

And distinguished lecture talks on:

- Inkjet-Printed Paper/Polymer-Based "Green" RFID and Wireless Sensor Nodes: The Final Step to Bridge Cognitive Intelligence, Nanotechnology and RF? by Dr. Manos Tentzeris
- Relay Node Placement in Wireless Sensor Networks by Prof. Guoliang (Larry) Xue
- Let Swarm of Bees Optimize Your Future Communication Antennas by Prof. Y. Rahmat-Samii

Visit us at: <http://www.radiowireless.org/> Hotel Registration Deadline: Dec. 15, 2010 Conference Registration Deadline: Dec. 30, 2010 Start the new year with a week of Wireless technologies catering to every taste.
See you in Phoenix!

Best regards,

George E. Ponchak, NASA Glenn Research Center, General Chair, RWS 2011

Power & Energy Society

November 2010 Luncheon Meeting

Date: Thursday, November 18, 2010

Time: 11:30 am - 11:45 noon: Registration
11:45 noon: Lunch
12:15 pm: Program

Location: Radisson Hotel Phoenix Airport North([map](#))
427 North 44th Street
Phoenix, AZ

Speaker: Brian Stott

Topic: Network Congestion Pricing and Hedging in Nodal Energy Markets - an Introduction

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 submit your name [here](#).

Reservations deadline is Noon on Monday, November 15, 2010.

If you have already registered for this luncheon but need to cancel, click [here](#).

Abstract:

This is an introductory talk for those engineers who are not already very familiar with the nodal-pricing markets and their hedging mechanisms, as adopted in many parts of North America and elsewhere.

An open-access electric energy market seeks to stimulate competitive energy production and consumption. A major limit on the efficiency of such a market is the finite capacity of the transmission grid. Congestion pricing is therefore a key factor in deregulated power systems. In many parts of North America the solution involves Locational Marginal Prices (LMPs). This pricing approach is analytical, exact, and (in principle) free of arbitrary rules.

In the real-time "spot" market, LMPs are computed from Security Constrained Dispatch, which is itself based on the state-estimated power flow model. In the day-ahead market, LMPs are calculated by Security Constrained Unit Commitment. LMPs penalize users who increase congestion, and they reward users who reduce it, in a very direct manner.

This lecture briefly outlines the LMP approach in the real-time and day-ahead markets. Its main focus is on the ancillary market for Financial Transmission Rights (FTRs), also called Congestion Revenue Rights (CRRs).



Power & Energy Society 2011 IEEE PES Power Systems Conference & Exhibition



<http://www.pscexpo.com/>

2011 IEEE PES

Power Systems Conference & Exposition

Focused on Power Systems Operations, Planning, Policy, Markets, Analysis, and Control

THE NEXT GENERATION GRID...PUTTING IT ALL TOGETHER

**March 20-23, 2011
Phoenix, Arizona, USA**



A comprehensive program that offers attendees in-depth information on the following topics:

- Smart sensing, communication and control in energy systems
- Smart grid for distributed energy resources
- Smart grid for cyber and physical security systems
- Emerging software needs for the restructured grid
- System-wide events and analysis methods
- Intelligent monitoring and outage management
- Integrating wind and solar energy into the grid
- Substation and distribution automation
- Internet tools for better understanding of power systems
- Dynamic performance and control of power systems
- Market interactions during system-wide events
- Asset management

and much more

The PSCE Audience-Who Should Attend: A program that has been designed for an international group of practicing power systems engineers, operators, planners, policy makers, economists, and others with interest in advancing state-of-the-art power systems. The conference will include a plenary session as well as tutorials on the most up-to-date topics on power systems. Timely and important paper, panel and poster sessions will be presented during the three-day conference.

The Exposition Offers Attendees a Look at State-of-the-Art Systems Technology: Attendees will have the opportunity to interact with the manufacturers and service providers who can provide the information that is essential to the multi-faceted field power and energy. Software and hardware systems and consulting services will be on display from leading companies in the field.

The paper submissions will open in August 2010.



Watch for program updates at: www.pscexpo.com



Life Member Affinity Group

2010 December Technical Meeting

Topic: Interaction between the existing infrastructure and a future smart grid with distributed generation

Summary: A smart distribution micro-grid has been designed in a residential area in Chandler. The structure and components of the designed micro grid will be described. The proposed distributed generation includes residential PV, fuel cells and micro-gas turbines. The amount of distributed generation that the existing infrastructure (electric, water pipes, and gas lines) can support is evaluated and limitations are determined. Finally the cost of energy (\$/kWh) generated by residential PV, fuel cell and micro-turbine is calculated and compared with the cost of energy purchased from local utility.

When: Tuesday, December 7, 2010, 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 to Section Secretary, Ronald Sprague by email:
rsprague@q.com

Speaker: Dr George G Karady (SM'70, F'78, LF 98), Power system chair professor at ASU



Biography: George G Karady received his MSEE and Doctor of Engineering degree in electrical engineering from Technical University of Budapest. At Arizona State University he teaches and performs research in Power Electronics, High Voltage Techniques and Electric Power Systems. Previously, he was with EBASCO Services as Chief Consulting Electrical Engineer, Electrical Systems Manager and Computer Technology Chief Engineer. Other positions include Electrical

Task supervisor, Tokomak Fusion Test reactor project, Princeton Program Manager Hydro Quebec Institute of Research and as Deputy Department Head, Technology University of Budapest. Dr. Karady is a registered professional engineer in New York, New Jersey and Quebec. He is the author of more than 300 technical papers. His IEEE include IEEE chairman of Chapter/ Membership's Award Committee, and Education committee's Award Subcommittee. Dr. Karady CIGRE activities include Vice President and Secretary Treasurer US National Committee.

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.

Elections

The annual election of officers will be held at this December 7 meeting. Please send your nominations or questions to any officer including our secretary Barry Cummings at Barry.Cummings@srpnet.com . Self nominations are perfectly acceptable.

Officers

Chair	C Bruce Johnson	cbj@johnsonscientificgroup.com
Vice Chair	Michel Ebertin	Michel@ebertin.net
Secretary	A. Barry Cummings	Barry.Cummings@srpnet.com
Treasurer	Leslie Daviet II	lesdavietii@cs.com
Program Chair	Ronald L. Sprague, P.E.	rlsprague@q.com
Past Chair	Professor George Karady	karady@asu.edu



Phoenix Chapter of the IEEE Computer Society

November, 2010

- Chapter annual elections will be held at the chapter meeting on November 3rd. If you are interested in learning more about any of our chapter officer or volunteer positions please contact one of the officers listed below. Results of these elections will be reported in this venue next month.
- The chapter wishes to thank Galen Updike for his excellent October presentation on the status of expanding broadband access in the state of Arizona.

Future Events

- All meetings start at 6:00 pm with networking and light refreshments in the meeting room followed by the presentation at 7:00 pm. DeVry University is located at 2149 W Dunlap Avenue, Phoenix. ASU Skysong is located at 1475 N Scottsdale Road, Scottsdale (SE corner, Scottsdale & McDowell).
- November 3, 2010 – Chapter Meeting at DeVry University, Phoenix Campus; Speaker: Jerry Crow, "Cryptography, Part 1"; Chapter Officer Elections for 2011
- December 1, 2010 – Chapter Meeting at ASU Skysong, Room 470; Speaker, Mark Skidmore, VP of Engineering, American Solar, "Issues Surrounding Installation of Solar Power"
- January 5, 2011 – Chapter Meeting at DeVry University, Phoenix Campus; Speaker: Jerry Crow, "Cryptography, Part 2"
- Spring 2011 – ½-day workshop; topic: TBD (suggestions welcome)

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

If you would like to suggest a topic and/or speaker for any of our 2011 meetings, please contact one of the chapter officers:

Jerry Crow (jerry.crow@computer.org)
Audrey Skidmore (askidmore@computer.org)
Diane Smith (diane@web-oasis.com)

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

"Ultrasonics, Ferroelectrics, & Frequency Control", "Electron Devices", and
"Microwave Theory & Techniques" Societies



Meeting Free & Open to Non-IEEE Members

3:00 PM, Friday, December 3rd, 2010

Arizona State University Brickyard on Mill, Room BYeng-660
Brickyard 6th Floor



Bio-Medical Integrated Circuits

Dr. Sayfe Kiaei

Associate Dean for Research, Arizona State University

sayfe@asu.edu

Abstract

This presentation will be an overview of two recent research projects on Bio-Medical Integrated Circuits at ASU. The first part of the presentation will be an overview of a low power Medical Implantable Communication Services (MICS) transceivers. A Dual band MICS transceiver with a reconfigurable RF front-end is presented. The receiver reuses the same circuit core for I) super-regenerative wake-up receiver, II) receive-mode LNA, and III) transmit power amplifier. The transceiver uses an All Digital Frequency Locked-Loop (ADPLL) for LO signal generation and transmitter's modulation. The second part of the presentation will be an overview of a dual-channel directional digital hearing (DHA). The DHA uses MEMS microphones, and an adaptive-power analog processing signal chain.

Biography



Associate Dean of Research at ASU college of Engineering; Professor and the Director of the Connection One Center (NSF IUCRC Center) and Motorola Chair in Analog and RF Integrated Circuits. From 1993 to 2001, he was a Senior Member of Technical Staff with the Wireless Technology Center and Broadband Operations at Motorola. IEEE Fellow and a member of IEEE Circuits and Systems Society, IEEE Solid State Circuits Society, and IEEE Communication Society. Chair & TPC chair of RFIC, MTT, ISCAS, etc. Awards: Carter Best Teacher Award, IEEE Darlington Award; Motorola 10X Design award. IEEE Fellow selection Committee Chair.

Date: Friday, Dec. 3, 2010

Time: 3:00 PM *Presentation*, Pizza will be served following the Seminar

Location: Arizona State University, [Brickyard on Mill, 6th Floor, Room BYeng-660](#)
Best parking is underground. Take elevator at west end of parking area.

For more information: Steve Rockwell (WAD Chapter Chair) (480) 241-9891 steve.rockwell@ieee.org
Chuck Weitzel (Chapter Publicity) (480) 292-0531 c.weitzel@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
6:00 PM, Thursday, December 9th, 2010
Agilent Sales Office, 4330 West Chandler Blvd, Chandler
(East side of Stellar Business Center Office Park)



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, Dec. 9, 2010

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

Location: [Agilent Sales Office, Suite 367, 4330 West Chandler Blvd., Chandler AZ 85226](#)
(In Stellar Business Center on North side of Chandler Blvd west of McClintock Rd.)

For more information, contact: Steve Rockwell (WAD Chapter Chair) (480) 241-9891 steve.rockwell@ieee.org
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Apply on-line at the following link:

http://www.ieee.org/membership_services/membership/senior/senior_application.html

Need help with reference letters or a nomination? Contact any Section officer (see page 1 for contact information).



IEEE Phoenix Section Volunteer Positions

The Section Executive Committee is currently looking for volunteers for the positions of Membership Chair and Conferences Chair! In 2011 the position of Publicity Chair will also become available. If interested please contact Section Chair Henning Braunsch (braunsch@ieee.org) for more information.



Phoenix Section 2011 Executive Committee Officer Candidates

Dear Section Members:

The membership in attendance at the Nov 2nd meeting elected the following Section officer positions in 2011:

Chair : Jim Hudson

Vice Chair: Ralph Hogan

Secretary : Charles Weitzel

Treasurer : Russ Kinner

These officers will take their positions January 1, 2011.

Regards,

Bruce Ladewig – Chair, Nominating Committee
bruceladewig@ieee.org



Upcoming IEEE Conferences in Phoenix

The ***IEEE Industrial Electronics Society (IES)*** of the IEEE is holding **IECON 2010 - 36th Annual Conference of IEEE Industrial Electronics** 7-10 November 2010 in Glendale, AZ. For more information: **STARTS SUNDAY**

<http://iecon2010.njit.edu/>

The ***IEEE Signal Processing Society*** is sponsoring the ***14th DSP & 6th SPE Workshop*** January 4-7, 2011 at the Enchantment Resort, Sedona, Arizona. For more information, please click on the following link:

<http://www.dspe2011.org/>

The ***IEEE Communications Society and IEEE Microwave Theory and Techniques Society*** will sponsor the conference entitled **2011 IEEE Radio and Wireless Symposium (RWS) along with Radio Wireless Week**. This conference will be held in Glendale, AZ on January 16-20, 2011.

For further information, please contact,
George E. Ponchak, NASA Glenn Research Center
21000 Brookpark Rd., MS 54/5
Cleveland, OH 44135
george.ponchak@ieee.org

Both of the above Conferences are being held at the Renaissance Glendale Hotel, Glendale, AZ. The hotel is adjacent to the Univ. of Phoenix Stadium and Jobing.com Arena at Westgate.

The ***IEEE Power & Energy Society*** will sponsor the conference entitled **2011 Power Systems Conference & Exhibition (PSCE)**. This conference will be held in Phoenix, AZ on March 20-23, 2011. For further information please click on the following link:

<http://www.psceexpo.com/>

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: Dr. Henning Braunisch, Phoenix Section Chair
braunisch@ieee.org

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 Conferences Chair, 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 new [IEEE Phoenix Section Group on LinkedIn](#). Signing up only takes minutes and is free. A job board is available as well.