The Valley Megaphone

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

July 2011, Volume XXV, Number 7

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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

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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
nleonardi@ieee.org
Student Activities Chair

Student Branches

ASU Main, Engineering
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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
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 Leornardi 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.

IEEE CPMT Society Phoenix Chapter is seeking volunteers to serve as Chapter Officers during remaining of 2010 and 2011. 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)

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
Next Date: Thursday, September 15th
Check the website for further information

IEEE Phoenix Section 70th Anniversary

Date: Saturday, June 11th
More information:
http://ewh.ieee.org/soc/pes/phoenix/phx70th.php

54th Annual IEEE PES Phoenix Chapter Golf Tournament!

Date: Saturday, September 24th
Location: Antelope Hills Golf Club, Prescott
Check the website for further information

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

Phoenix Section Life Member Affinity Group

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:

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

Officers:

Chair	A. Barry Cummings	*Barry.Cummings@srpnet.com*
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THE ARIZONA SCIENCE LAB AT THE ARIZONA SCIENCE CENTER

The Arizona Science Center and IEEE Teacher In Service Program / Engineers In The Classroom have teamed to present the Arizona Science Lab at the Science Center:

- **THIS WHOLE PROGRAM IS ABSOLUTELY FREE TO THE STUDENTS, TEACHERS AND SCHOOLS**
- **This is a true laboratory facility in a central location for the Phoenix area schools**
- **The teachers bring their grade 5 to 8 science class (up to 60 students) to the Arizona Science Lab for the day**
- **Each Lab Workshop uses a lab setting to conduct a project-based lesson plan, complete with demonstrations, lecture and a construction project in a single 4 hour session (excluding breaks)**
- **Each Workshop is conducted by retired engineers who**
  - **Are highly qualified in math, physics, computers, software, etc.**
  - **Have "real world applications" experience and can relate the theory being taught to the everyday application**
- **The teachers choose a Lab Workshop from a list of ready-to-run Workshops that support the Arizona Science Education Content Standards**
- **Each Workshop emphasizes the "Wow!" factor of hands-on construction projects**

Building sail boats

Building water wheels

Building electric motors

Building solar powered cars

Building bottle rockets

FOR MORE INFORMATION, CONTACT:

JOHN PURCHASE, SCIENCE LAB LEADER JPURCHASE@COX.NET 480-921-3217

TISP/EIC IS SEEKING VOLUNTEER ENGINEERS TO HELP WITH THE NEW "ARIZONA SCIENCE LAB" VENTURE

AS YOU CAN SEE FROM THE ABOVE BROADSHEET SENT TO MIDDLE SCHOOL SCIENCE TEACHERS IN THE VALLEY, THERE HAVE BEEN SOME EXCITING NEW DEVELOPMENTS IN THE "TEACHER IN SERVICE PROGRAM / ENGINEERS IN THE CLASSROOM":
THE ARIZONA SCIENCE CENTER AND IEEE TISP/EIC HAVE TEAMED TO PRESENT THE "ARIZONA SCIENCE LAB AT THE ARIZONA SCIENCE CENTER":

- This is a true laboratory facility in a central location for the Phoenix area schools
- The teachers bring their grade 5 to 8 science class (up to 60 students) to the Arizona Science Lab for the day
- **EACH LAB WORKSHOP USES A LAB SETTING TO CONDUCT A PROJECT-BASED LESSON PLAN, COMPLETE WITH DEMONSTRATIONS, LECTURE AND A CONSTRUCTION PROJECT IN A SINGLE 4 HOUR SESSION (EXCLUDING BREAKS)**
- **EACH WORKSHOP IS CONDUCTED BY RETIRED IEEE ENGINEERS WHO**
  - Are highly qualified in math, physics, computers, software, etc.
  - Have "real world applications" experience and can relate the theory being taught to the everyday application
- The teachers choose a Lab Workshop from a list of ready-to-run Workshops that support the Arizona Science Education Content Standards
- **THE WORKSHOPS WILL OPERATE DURING THE REGULAR SCIENCE CENTER HOURS: 10:00 AM TO 5:00 PM EACH WEEK DAY.**

HENCEFORTH THE EIC GROUP WILL NOT BE GOING TO THE SCHOOLS BUT WILL INSTEAD BE IN THE ONE LOCATION: THE NEW ARIZONA SCIENCE LAB AT THE ARIZONA SCIENCE CENTER, AND THE SCHOOLS WILL COME TO US.
PLUS, INSTEAD OF CONDUCTING A LESSON PLAN OVER FOUR DAYS, WITH MULTIPLE CLASSES OF THE SAME GRADE IN EACH DAY, WE WILL HENCEFORTH BE CONDUCTING A SINGLE 4 HOUR SESSION (NOW TERMED "WORKSHOPS") ON THE ONE DAY WITH AROUND 60 KIDS OF THE SAME GRADE. THAT IS, THE LESSON WILL BE COMPLETED IN THE ONE 4 HOUR WORKSHOP.

Schools with multiple classes in a grade level will bring different groups on different days. The 60 kid limit can accommodate the kids from two regular school classes. A single workshop will be devoted to a single school. Ultimately we expect to be running workshops each day of the week and at some future time, multiple workshops in parallel each day.
Obviously this reduces our work load even if all our current schools were to book us for the new 2011/2012 school year as:

- We don't have to make four visits to each school, only one to the Science Center
- We don't have to carry all our equipment and materials around the Valley
- Each workshop is equivalent to two school classes in numbers of kids
- **EACH VOLUNTEER CAN COMMIT TO ONE PARTICULAR DAY IN A WEEK INSTEAD OF FOUR, AND IT WILL BE IN A SINGLE CENTRAL LOCATION: THE SCIENCE CENTER.**

SO I AM ASKING YOU TO VOLUNTEER YOUR TIME AND LABOR TO SUPPORTING EIC IN THIS NEW APPROACH AND TO TELL ME (JPURCHASE@COX.NET) HOW MANY DAYS PER WEEK OR PER MONTH YOU WOULD BE AVAILABLE. IF YOU CAN ALSO SPECIFY WHICH WEEKDAY(S) YOU COULD SUPPORT, ALL THE BETTER. You are also welcome to email me any questions before making a commitment.
We will be starting the Lab as a pilot program at the beginning of September and fleshing out the operational details with the Science Center during the September pilot program before running full tilt for the rest of the school year.
I am looking forward to working with you, the rest of the EIC team, and the Science Center in this exciting new Science Lab venture!
John F. Purchase
Arizona Science Lab Leader
IEEE TISP/EIC
jpurchase@cox.net
(480) 921-3217

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 (shamala@ieee.org), Lesley Polka (lesley.a.polka@intel.com) and 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:
http://www.ieee.org/membership_services/membership/women/women_about.html

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

IEEE Advancing Technology for Humanity

IEEE Phoenix Section
Women in Engineering
Affinity Group

IEEE Women in Engineering WIE

In May, the IEEE Phoenix Section submitted the paperwork to the national office to establish 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 host 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

Our speakers did a great job of inspiring the audience with their experiences in creating positive change in their communities through science, engineering and technology.

The IEEE Phoenix Section WIE AG 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. For the immediate future, we are planning a September outreach event to local colleges and a December event at a local women's shelter. As more details become available, we will publish them through the Megaphone and to our distribution list. If you would 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:

Shamala Chickamenahalli (shamala@ieee.org)
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 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

July, 2011

News

- 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 13 – (note date change) – Chapter meeting, DeVry University; speaker Mark Brecher, "Virtualization"
- September 7 – Chapter meeting, DeVry University; speaker Mike Andrews, "Advanced Video Security Systems"
- November 1 (note date change) – Chapter meeting, DeVry University; speaker Kristy Westphal, "Mobile Device Forensics"

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: 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 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	Speaker	Affiliation
17-Jan	5:00 PM	Freescale	1) Electromagnetic Band Gap (EBG) Structures in Antenna Engineering: From Fundamentals to Recent Advances 2) Green" RFID and Wireless Sensor Nodes: The Final Step to Bridge Cognitive Intelligence, Nanotechnology and RF?	1) Dr. Yahya Rahmat-Samii 2) Dr. Manos Tentzeris	1) UCLA 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	ASU	Radio Communications Systems on Next Generation Manned Space Vehicle	Mr. William Boger	General Dynamics
18-Aug	6:00 PM	Freescale	Advanced Silicon Technology and MEMS Reliability	Dr. Jeremy Muldavin	MIT Lincoln Labs
Sept (TBD)	TBD	ASU	Antennas Topic	Dr. Constantine Balanis	ASU
Oct (TBD)	TBD	TBD	Wide Band Gap Materials & Applications	Dr. Chuck Weitzel	Consultant
Nov (TBD)		Agilent/Freescale	Multiport Vector Network Analyzer: From the beginning to modern signal integrity applications	Prof. Andrea Ferrero	Politecnico di Torino

Advanced Silicon Technology and MEMS Reliability

Dr. Jeremy Muldavin

Assistant Group Leader
MIT Lincoln Laboratory
Advanced Silicon Technology Group (G88)
muldavin@ll.mit.edu

Abstract
This talk will highlight some of the advanced Si technologies being developed at MIT Lincoln Laboratory, including FDSOI CMOS for extreme environments, 3D integration, digital focal planes, RF MEMS and microfluidics. RFMEMS reliability and science will be covered more detail.

RFMEMS technologies have been developed by many researchers and companies over the last 10 years. The RF excellent performance of these devices and circuits has been clearly demonstrated. Hero results for reliability have been demonstrated, several achieving over 1 trillion cycles. Reliability for DoD and commercial applications is still an issue for RF MEMS. Packaging, surface conditions, and ambient environments play a key role. This talk will discuss some of the successful RF MEMS switch designs and applications as well as provide insight to reliability aspects of these devices.

Biography
Jeremy Muldavin received his BSE in Engineering Physics from the University of Michigan in 1995 where he performed research in the area of high energy spin physics. He went on to receive his MSE and PHD (2001) in Electrical Engineering with a major in Electromagnetics and a minor in Communications. His graduate research focused on micro-machined circuits and devices for RF and millimeter-wave circuit and antenna applications.

He is currently an Assistant Group Leader of the Advanced Silicon Technology Group at MIT Lincoln Laboratory where he has continued his interest in RF micro-electro-mechanical-systems (MEMS) design, fabrication, and modeling as well as 3D integrated circuits, advanced read-out integrated circuits (ROIC), and flexible electronics.

Dr. Muldavin has served for 9 years on the IEEE Radio & Wireless Symposium Steering Committee, for four years as a chair of the IEEE MTT-S Boston Section, and served as the Registration Chair for the 2009 IEEE International Microwave Symposium, and received the Outstanding Young Engineer Award from the MTT-S in 2011.

Date: **Thursday, August 18, 2011**
Time: **6:00pm Presentation; 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) 413-5644**	**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 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.

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.

Semiconductor Electrical Test Engineer – Tempe

Premier Semiconductor Services LLC www.premiers2.com

Position Open: Electrical Test Engineer

An established National Semiconductor Company has an immediate opening for an Electrical Test Engineer who has at least five years assembly design experience and/or electrical bench testing experience. The Engineer will be working in conjunction with Engineers at the Company's other locations. This Engineering position will require very little travel to the Company's other locations. The candidate must be detail oriented, able to multi-task, be a quick learner and able to use a computer. The candidate should also be team-oriented, reliable and have a positive attitude. Compensation will depend on experience and qualifications for this position.

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.

Duties: Given a technical drawing or datasheet schematic, the Engineer must be able to breadboard a basic Integrated Circuit (IC) for testing (analog, digital, and mixed signal components), and understand the appropriate test equipment to measure data from that IC. Upon completion of the IC tests, the Engineer will complete a general test report consisting of test setup conditions and parameters, observations, and assembly of non-automated test data to report findings and results.

Required Skills: 5 years assembly design and/or bench testing experience in which the following skills and experience were utilized:

1. Able to use Multimeters, Oscilloscopes, Function Generators, LCR Meters, and Curve Tracers.
2. Able to read schematics and diagrams; able to breadboard small electrical circuits for limited functional testing of active and discrete components.
3. Able to demonstrate a working knowledge of electrical principals (ohms law, SI units, and technical math skills and statistical analysis).
4. Able to easily use Microsoft Office products including Word and Excel.
5. Have a strong work ethic and ability to operate with minimal instructions (after training period).
6. Have ability to direct and lead lab technician subordinates to ensure timely progression of work load and related tasks.
7. Able to use Instrumentation and Data Acquisition equipment, LabView or Signal Express software.

The ideal candidate: The person should be able to demonstrate an ability to read a basic component datasheet to create a working test circuit, and be able to make appropriate connections from that circuit to bench test equipment for data measurement. Knowledge of basic electrical theory including ohms law and basic math skills are necessary to perform in this position.

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

IEEE-USA Government Fellowships:

Linking Science, Technology & Engineering Professionals with Government

(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
  - 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
  - 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

  - 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

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 steve.rockwell@ieee.org), copying also Nominating Committee members Mike Andrews (e-mail: m.andrews@ieee.org) and Mohamed Arafa (e-mail: mohamed.arafa@intel.com).

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.

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.