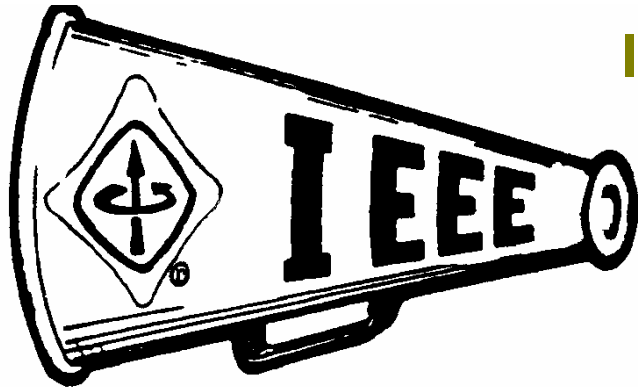


# The Valley Megaphone



Newsletter of the  
**IEEE – Institute of Electrical and  
Electronics Engineers, Inc.**  
**Phoenix Section**  
August 2004, Volume XVIII, Number 8

## Executive Committee

### Past Chair

James E. Drye, 480-413-5685  
jdrye@ieee.org

### Chairman

George Karady, 480-965-6569  
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### Vice-chair

Shamala Chickamenahalli, 480-554-6774  
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### Conferences

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braunsch@ieee.org

## *This Issue of Valley Megaphone Features: Contacts and Links*

*Executive Committee (page1)*

*Chapters and Branches (pages 1 and 2)*

*Student Branches (page 2)*

*The contacts are being updated this month: new  
conference chair and student chapter chairs and  
advisors.*

## *Contents:*

- 1. IEEE Senior Member and Fellow Grades: page 2**
- 2. IEEE Phoenix Section Gold Chapter: page 2**
- 3. Microelectronics Packaging Program at ASU:  
page 2**
- 4. PACE August Seminar: page 3 to page 4**
- 5. PACN August Meeting: page 4**
- 6. CPMT August Seminar: page 5 to page 6**
- 7. IEEE Phoenix Section Scholarship Application:  
page 6 to page 10**

**IEEE Phoenix Section Executive Committee meeting  
minutes can be found at: <http://www.ieee.org/phoenix>.**

## Executive Committee contd..

### Awards

Vasu Atluri, 480-554-0360  
vpatluri@ieee.org

### Inter-Society

Mike Andrews, 480-991-1619  
m.andrews@ieee.org

### Web Master

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## Chapters & Branches

### Comm & Signal Processing

Cihan Tepedelenioglu, 480-965-6623  
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### Computer Society

Bob Bianca, 623-582-1700  
[Bob.Bianca@Computer.org](mailto:Bob.Bianca@Computer.org)

### Consultants Network (PACN)

Paul Everett, 480-706-4753  
peverett@ieee.org

### CPMT Society

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Eric.c.palmer@intel.com

### EMC Society

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### Power Engineering Society

Raja Ayyanar, 480-7277307  
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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, usually September through June. The publication reaches about 4000 members. Submit articles, advertisements, and announcements to Dongming He at the above email address. Deadline for announcements and advertisements is the third Friday of the month prior to publication.

Advertising Rates: Full page: \$200, 3/4page: \$125, 1/2 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://www.ieee.org/phoenix>



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Contd.. from page 1

#### Waves & Devices Society

Chuck Weitzel, 480-413-5906  
Chuck.weitzel@motorola.com

#### GOLD

Vasu Atluri, 480-554-0360  
vpatluri@ieee.org

### Student Branches

#### ASU Main, Engineering

Chair: Rouzbeh Brumand

[Rouzbeh.Brumand@asu.edu](mailto:Rouzbeh.Brumand@asu.edu)

Advisor: Cihan Tepedelenlioglu, (480) 965-6623  
[Cihan@asu.edu](mailto:Cihan@asu.edu)

#### ASU Main, Computer Society

Chair: Bob McCornaghy

[afterdrk@asu.edu](mailto:afterdrk@asu.edu)

Advisor: Joseph Urban, 480-965-3374,  
[joseph.urban@asu.edu](mailto:joseph.urban@asu.edu)

#### ASU East, Technology

Chair: Curtis Ritter

[emceei@aol.com](mailto:emceei@aol.com)

Advisor: Dr. Raji Sundararajan, 480-727-1507  
[Raji@asu.edu](mailto:Raji@asu.edu)

#### DeVry, Phoenix

Chair: Val Shulfer

[VShulfer@cox.net](mailto:VShulfer@cox.net)

Advisor: Dion Benes

Phone: (602) 870-9222

#### DeVry, Computer Society

Chair: Mike Lewis

[Mike\\_Lewis@ieee.org](mailto:Mike_Lewis@ieee.org)

Advisors: Terri Barnes, 602-870-9222  
[tbarnes@devry-phx.edu](mailto:tbarnes@devry-phx.edu), Diane Smith  
602-870-9222, [dianesmith@devry-phx.edu](mailto:dianesmith@devry-phx.edu)

#### NAU, Engineering

Chair: Cari Fischer

[cdf5@dana.ucc.nau.edu](mailto:cdf5@dana.ucc.nau.edu)

Advisor: Peter Blakey, 928-523-3493

[Peter.Blakey@nau.edu](mailto:Peter.Blakey@nau.edu)

#### NAU, Computer Society

Chair: Jamie Warnke

[jmw46@dana.ucc.nau.edu](mailto:jmw46@dana.ucc.nau.edu)

Advisor: Phil Mlsna, 928-523-2112

[Phillip.Mlsna@nau.edu](mailto:Phillip.Mlsna@nau.edu)

#### Embry-Riddle, Prescott

Advisor: Chuck Cone

[conec@erau.edu](mailto:conec@erau.edu)

#### Embry-Riddle Computer Society

Advisor: Susan Gerhart, (928) 777-3882

[gerharts@erau.edu](mailto:gerharts@erau.edu)

### IEEE Senior Member and Fellow Grades

All IEEE Phoenix Section Members interested in getting nominated to Senior Member or Fellow Grade, please contact Vasu Atluri by telephone at (480)554-0360 or by email at [vpatluri@ieee.org](mailto:vpatluri@ieee.org). Please refer to [www.ieee.org](http://www.ieee.org) for more information related to senior member and fellow grades.

### Graduate of Last Decade (GOLD) Phoenix Chapter

IEEE Graduate of Last Decade (GOLD) Phoenix Chapter is seeking volunteers to serve as officers. To serve as an officer, you have to be a member of IEEE and should have graduated within last decade. If you are interested, please contact Vasu Atluri at [vpatluri@ieee.org](mailto:vpatluri@ieee.org) or (480) 554-0360.

### Microelectronics Packaging Program at Arizona State University

Ira A. Fulton School of Engineering, Arizona State University, Center for Professional Development is offering a Master of Engineering as well as an Introductory Certification in Microelectronics Packaging starting in Fall Semester, 2004. Through an innovative collaboration between Intel Corporation and ASU Fulton School of Engineering, students learn packaging principles and analysis tools through direct interaction with experts from Intel Corporation and renowned ASU faculty. For additional information, please refer to the following web links:

Online Master of Engineering Area of Study in Microelectronics Packaging

[http://asuengineeringonline.com/online/?page=online\\_mp](http://asuengineeringonline.com/online/?page=online_mp)

Online Introductory Certification in Microelectronics Packaging

[http://asuengineeringonline.com/certmgt/?page=cert\\_mpc](http://asuengineeringonline.com/certmgt/?page=cert_mpc)

Schedule for Fall Semester, 2004, Online Graduate Courses:

<http://asuengineeringonline.com/online/>

Arizona State University is currently accepting registrations and applications for admission.



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# IEEE ANNOUNCEMENTS

## IEEE-Phoenix Section PACE

THE TWO-PART CHALLENGE: CHANGING JOBS AND FINANCIAL BALANCE

**Wednesday, August 4, 2004**

**Scottsdale Mustang Library**

**3:00 PM – 8:00 PM**

Presented by: Michael Andrews and Gail Waytena

Changes in the Valley job market have provided numerous opportunities for the experienced engineer. There are companies downsizing, discontinuing or relocating product lines, re-engineering their organization or being acquired by other companies. The challenge for the displaced individual or person in a career transition is how to effectively identify/qualify job leads and hiring organizations, develop an effective resume/job application package, and have a successful interview. In addition, it's important to carefully manage personal finances and investments to assure a "normal" family lifestyle during the transition period.

The workshop will consist of two parts.

In **Part One** of the workshop you will:

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

In **Part Two** of the workshop you will develop a personal financial map that outlines how to approach the financial aspects of a job transition, including:

- Evaluating a buyout or severance package and all of your transition options.
- Developing and implementing a plan to manage your finances and portfolio during a job transition without jeopardizing you financial future or lifestyle.
- Understanding the financial implications and decision options relating to company stock and rollovers when you leave the company
- Retaining the retirement benefits for which you've worked



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## Registration

The registration fee for the program is \$10.00, payable to the IEEE-Phoenix Section. Registration and course related questions should be made directly to Michael Andrews, [m.andrews@ieee.org](mailto:m.andrews@ieee.org). Registration is limited. Each participant will utilize a computer and Microsoft Word. You should bring a personal computer (optional). Food and beverages will be provided. If there are special dietary needs, please include them in your response.

Participants should bring an existing resume and current work history (soft copy and hard copy).

## IEEE PACN August MEETING

### *Field Programmable Analog Arrays*

**Chris Schene**

The next meeting of the IEEE Phoenix Area Consultants Network will be held on Thursday, August 12<sup>th</sup>. Again we will be at the Arthur and Louise Price Community Room at the Chandler Fashion Center. As usual this will be a dinner meeting, and each person can get what he or she wants from any of the Fashion Center's establishments, any of the regular restaurants or the food court. Networking and general socializing will start at 6:30 PM with dinner at 7-8. The program will start a bit after 8 and ends by 9:30. Come at anytime, and everyone is welcome.

Chris Schene will be speaking about AnadigmVortex field programmable analog arrays (FPAAs) and the associated EDA tool set. The AnadigmVortex FPAAs are programmable analog devices that are configured using an intuitive drag and drop tool set, the AnadigmFilter filter designer tool and the AnadigmPID PID design tool. Complex analog design and implementation time are often reduced from months to days and changes can be made in literally minutes. He will give a brief presentation and then spend the rest of the session demonstrating the FPAA device.

Prior to working at Anadigm, Chris worked at Bell Laboratories, Harris, Paradyne, ITT, and Honeywell. He holds the BSE EE degree from Arizona State University. He has published a number of articles on industrial process control and made presentations at the Embedded Systems Conferences. He has three patents pending for work done at Anadigm.

### **SBIR Poster Presentation**

**Eli Kawam**

Eli Kawam, one of our members and President of Elkla-tek LLC, an aerospace consulting company, is submitting a Small Business Innovative Research (SBIR) proposal later this month. He will have a poster presentation at the meeting outlining the process and procedure that he went through to identify the opportunity, prepare the proposal and market it to the appropriate government decision makers. This will be of particular interest to anyone considering applying for a portion of this largesse that is set aside for the little guy.



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## IEEE Components, Packaging and Manufacturing Technology Society Phoenix Chapter

**Via - A Noise Source and Coupling Element in High-Speed Multi-layer PCBs and SiP**

*Dr. Joungho Kim*  
*KAIST, Taejon, Korea*

### Abstract

Via is the most popular interconnection structure in high-speed and high-density multi-layer PCB and SiP(System-in-Package). Vias are used to enhance routing capability for signal traces, to lower impedance of power supply network, and to provide low impedance return current path. However, even though the physical dimensions of a via is relatively small, this interconnection structure produces significant amount of inductive parasitic elements and disconnects the return current path at the via transition. Combined with network electrical components, and cavity dimensions, the via is becoming a major source of noise including simultaneous switching noise, power/ground plane resonance, noise coupling and edge radiation.

In this seminar, physical phenomena associated with the noise generation and coupling by the via will be thoroughly discussed. Furthermore, noise reduction method and design methodologies related to the via transition will be covered with the examples of modeling, measurement, and analysis results.

### Biography

Dr. Joungho Kim received B.S. and M.S. degrees in electrical engineering from Seoul National University, Seoul, Korea, in 1984 and 1986, respectively, and Ph.D degree in electrical engineering from the University of Michigan, Ann Arbor, in 1993. During his graduate study, he was involved in femtosecond time-domain optical measurement technique for high-speed device and circuit testing. After a brief stint at Picometrix, Inc, Ann Arbor, as a Research Engineer responsible for development of picosecond sampling systems and 70-GHz photo-receivers, Dr.Kim joined Memory Division of Samsung Electronics, Kiheung, Korea in 1994, where he was engaged in Gbit-scale DRAM design.

In 1996, Dr. Kim moved to KAIST (Korea Advanced Institute of Science and Technology), Taejon, Korea, where he is currently an Associate Professor at Electrical Engineering and Computer Science Department. Since joining KAIST, his research has centered on modeling, design and measurement of high-speed interconnection, package and PCB. His research topics include design for signal integrity, power/ground noise, and radiated emission in high-speed SerDes channel, System-in-Package and multi-layer PCB. During his sabbatical leave from 2001 to 2002, he was at Silicon Image Inc., Sunnyvale CA, as a staff engineer, being responsible for low noise package design of SATA, FC, and Panel Link SerDes devices.

Dr. Kim has authored or co-authored over 100 technical articles and numerous patents. He has served as the chair or the co-chair of the EDAPS workshop since 2002. He is an associate editor of IEEE Transactions on Electromagnetic Compatibility.

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**Date:** Tuesday, August 17, 2004



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**Location:** Freescale Semiconductor (formerly Motorola SPS), 2100 E Elliot Rd. Tempe, AZ (Group Conference Room) Enter the facility through the Main (South) lobby, by the flag poles; you will be escorted to the meeting venue.

**Time:** 5:30-6:00 Social/Refreshments, 6:00-7:00 Presentation, 7:00 Dinner  
(Pizza and Soda are being provided by the CPMT Phoenix Chapter)

IEEE members and non-members all are welcome to attend.

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***For more information please call any of the following officers:***

Sam Karikalan, STATS (480) 222-1722  
Eric C. Palmer, Intel (480) 554-8710  
Ravi Sharma, Microchip (480) 792-7920

Mali Mahalingam, Freescale (480) 413-5368  
Rao Bonda, Freescale (480) 413-6121  
Vasu Atluri, Intel (480) 554-0360

## **IEEE Phoenix Section Scholarship Application**

Please see page 7 to page 10 for IEEE Phoenix section scholarship application. Application deadline is October 15<sup>th</sup>, 2004. For official application form in word format that you need to fill in or further information, please contact:

Dr. Xuezhen (Susan) Wang  
Xuezhen.Wang@motorola.com  
(480) 650-8593



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## IEEE PHOENIX SECTION SCHOLARSHIPS

**Applications Due: October 15, 2004**  
**Awardees Announced: December 2004**

Institute of Electrical & Electronics Engineers

<b>Entering Freshman Scholarship</b>	<b>IEEE Student Member Scholarship</b>
<ul style="list-style-type: none"> <li>• Four \$250 Scholarships per year</li> <li>• For incoming college freshmen who enroll electrical engineering related fields: approved majors are Electrical Engineering, Computer Systems Engr., Electr. Engr. Technology, Computer Engr. Technology, or Computer Science</li> <li>• Must attend a university in the Phoenix Section (<i>i.e.</i>, ASU, DeVry, Embry-Riddle, or NAU) during 2004-05 and join IEEE</li> </ul> <p><b>Scholarship Application Requirements</b></p> <ul style="list-style-type: none"> <li>• Application form (attached) with general information and qualifications including:               <ul style="list-style-type: none"> <li>○ financial aid statement, and</li> <li>○ one-page personal statement of attainments, interests and goals</li> </ul> </li> <li>• Official transcripts of all high school work</li> <li>• SAT and/or ACT scores</li> <li>• Recommendation letters (optional, but helpful)</li> </ul>	<ul style="list-style-type: none"> <li>• Two \$1,000 Scholarships per year</li> <li>• For full-time undergraduates who are members of IEEE: approved majors are Electrical Engineering, Computer Systems Engr., Electr. Engr. Technology, Computer Engr. Technology, or Computer Science</li> <li>• Must attend a university in the Phoenix Section during 2004-05 (<i>i.e.</i>, ASU, DeVry, Embry-Riddle, or NAU)</li> </ul> <p><b>Scholarship Application Requirement</b></p> <ul style="list-style-type: none"> <li>• Application form (attached) with general information and qualifications including:               <ul style="list-style-type: none"> <li>○ financial aid statement, and</li> <li>○ one-page personal statement of attainments, interests and goals</li> </ul> </li> <li>• Official transcripts of all college work</li> <li>• Recommendation letters (optional, but helpful)</li> </ul>

For Application Forms or Further Information Please Contact:

Dr. Xuezhen (Susan) Wang  
Xuezhen.Wang@motorola.com  
(480) 650-8593

Send Completed Application Materials to:

Dr. Xuezhen Wang  
2900 S. Diablo Way  
Motorola, Mail Drop TCG1  
Tempe, AZ 85282





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## IEEE PHOENIX SECTION SCHOLARSHIP FINANCIAL AID STATEMENT

Name \_\_\_\_\_

Marital Status: Married \_\_\_\_\_ Single \_\_\_\_\_

Can anyone claim you as a dependent? Yes \_\_\_\_\_ No \_\_\_\_\_

Number of dependents you are able to claim \_\_\_\_\_

Who sponsors your education? Yourself \_\_\_\_\_ Other \_\_\_\_\_ (please specify) \_\_\_\_\_

### Projected College Costs and Financial Resources (for the 2004-05 School year)

#### Projected Expenses

Tuition and Fees:	\$ _____
Books and Supplies:	\$ _____
Transportation (Car/Bus/Insurance)	\$ _____
Room & Board (Dorm/Apt/Food/Utilities/Phone)	\$ _____
Personal (Clothes/Insurance/Recreation)	\$ _____
<b>Total Expenses:</b>	<b>\$ _____</b>

#### Projected Financial Resources

Education Loans	\$ _____
Government Grants	\$ _____
Federal Benefits (GI Bill/Social Security/etc)	\$ _____
Scholarships	\$ _____
Parent and/or Spouse Support	\$ _____
Employment (your job income)	\$ _____
<b>Total Resources:</b>	<b>\$ _____</b>

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Date**



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## IEEE PHOENIX SECTION SCHOLARSHIP PERSONAL STATEMENT

**Name** \_\_\_\_\_

Please provide a one-page statement summarizing your interests, academic accomplishments, school & athletic activities, community service, education and career goals, and employment history (position, company, dates).