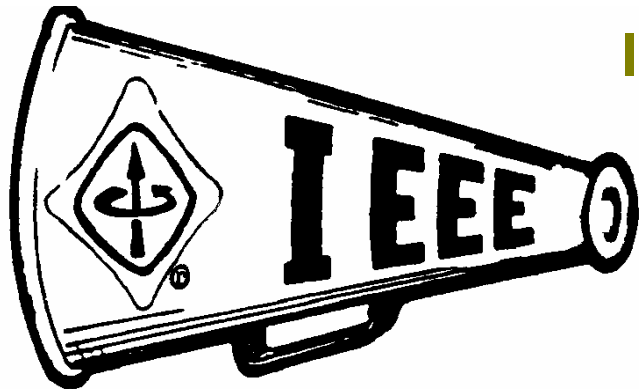


The Valley Megaphone



Newsletter of the
**IEEE – Institute of Electrical and
Electronic Engineers, Inc.
Phoenix Section**

May 2003, Volume XVII, Number 5

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Seminar at May 6th IEEE Phoenix Section

**Executive Committee Meeting: all IEEE
members are welcome!**

Mike Andrews will make a 30 minutes technical presentation "An Engineer's role in Emergency Planning and Disaster Response". The participation is open for all IEEE members. The location is at the Salt River Project (SRP) Information Systems Building (ISB). The SRP ISB is located at 1600 N. Priest Drive in Tempe. The Executive Committee Meeting is from 6:00 pm to 8:30 pm. Please check in with security and mention the IEEE meeting. You will be instructed to go to the right meeting room.

Executive Committee contd..

Awards

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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, 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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Chapters & Branches

[Contd.. from page 1](#)

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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. Please refer to www.ieee.org for more information related to senior member and fellow grades.

IEEE Phoenix Section Graduate of the Last Decade (GOLD) Affinity Group

Volunteers are needed to serve as officers for IEEE Phoenix Section Graduate Of the Last Decade (GOLD) Affinity Group. Volunteers should be active IEEE members from IEEE Phoenix Section who have obtained their first professional degree, preferably a Bachelor of Science in Engineering, within last decade. If interested, please contact Vasu Atluri by telephone at (480) 554-0360 or by email at vpatluri@ieee.org. Please refer to www.ieee.org for more information related to GOLD Affinity Group.

SC2003 Conference on High Performance Computing and Networking to Be Held In Phoenix

From Nov. 15th to 21st, 2003, thousands of high-performance computing and networking experts will flock to the Phoenix Civic Plaza Convention Center to attend SC2003, the annual high performance networking and computing conference. The conference combines two days of tutorials, four days of technical papers and discussions and three days of exhibits featuring systems and applications by the world's leading vendors and research organizations.

SC2003 brings together scientists, engineers, educators, visualization artists, programmers, and business leaders to share ideas and glimpse the future of high performance networking and computing, data analysis and management, visualization, and computational modeling. Held each year in a different U.S. city, this year's conference will be held in Phoenix.

For more information about the conference, go to <http://www.sc-conference.org/sc2003/>. SC2003 is sponsored by the Institute of Electrical and Electronics Engineers Computer Society and the Association for Computing Machinery's Special Interest Group on Computer Architecture.



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2003 International Conference on Compound Semiconductor Manufacturing Technology

May 19-22, 2003

Camelback Inn, Marriott Resort, Scottsdale, AZ, USA

Web address: www.GaAsMANTECH.org

Join Us at the 18th Edition of the Premier Conference dealing with Compound Semiconductor Manufacturing

During recent years, market forces have produced a slowdown in the industries served by the compound semiconductor community. Looking forward to the coming turnaround, we must redouble our efforts to develop techniques and processes to drive our cost lower and reliability higher to meet the competitive challenges. In our 18th year, the 2003 MANTECH conference will present:

- Technical Sessions:** Over 80 papers addressing manufacturing, processing, reliability, device technologies, optical devices, materials (GaAs, InP, GaN, SiC, SiGe) and packaging. The plenary session includes talks by internationally-recognized technologists. Invited talks will also be presented on subjects including a review of the technology in Asia, the outlook for military technology, and a variety of other important topics.
- Workshop:** GaAs MANTECH will again sponsor an intensive one-day workshop led by industry experts on May 19th. Subjects covered will be:
 - Integrated Circuits Processing Tutorial
 - Wireless Principles (for Dummies)
 - Power Amps for Wireless Applications
- Interactive Forum:** This popular session provides an opportunity for all conference attendees to engage in personal discussion and information exchange with the authors/presenters in an open and informal environment.
- Rump Sessions:** Following on last year's success, a series of rump sessions are again planned as an opportunity for free-wheeling discussion of important issues.
- Ugly Picture Contest:** This is a very entertaining and informative contest. It gives everyone a chance to benefit from their problems by winning a prize for the most photogenic example of a manufacturing problem and its solution.
- Social events:** The Exhibits Reception, the International Reception, and the Awards Luncheon provide opportunities for attendees to communicate with international colleagues and develop business contacts.
- Exhibits:** MANTECH is the premier venue bringing the world's leading compound semiconductor manufacturers together with their suppliers. In this one location you will get to see the latest equipment and manufacturing solutions. Over 100 equipment and materials exhibitors are expected to participate.

New in 2003, MANTECH extends an invitation to all local professionals not registered for the conference to visit the exhibits at no charge on Tuesday after lunch from 1:30 PM to 4:00 PM. We hope this will give you an opportunity to interact with your existing suppliers and meet new ones.



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IEEE PHOENIX SECTION SCHOLARSHIPS

**Applications Due Wednesday, May 14, 2003
Awardees Announced June 4, 2003**

Institute of Electrical & Electronics Engineers

Entering Freshman Scholarship	IEEE Student Member Scholarship
<ul style="list-style-type: none"> • Four \$250 Scholarships per year • For incoming college freshmen who enroll electrical engineering related fields • Must attend a university in the Phoenix Section (<i>i.e.</i>, ASU, DeVry, Embry-Riddle, or NAU) during 2003-04 and join IEEE • Approved majors are Electrical Engineering, Computer Systems Engr., Electr. Engr. Technology, or Computer Engr. Technology <p>Scholarship Application Requirements</p> <ul style="list-style-type: none"> • Application form with general information and qualifications including: <ul style="list-style-type: none"> ○ financial aid statement, and ○ one-page personal statement of attainments, interests and goals • Official transcripts of all high school work • SAT and/or ACT scores • Recommendation letters (optional, but helpful) 	<ul style="list-style-type: none"> • Two \$1,000 Scholarships per year • For full-time undergraduates who are members of IEEE • Must attend a university in the Phoenix Section during 2003-04 (<i>i.e.</i>, ASU, DeVry, Embry-Riddle, or NAU) • Approved majors are Electrical Engineering, Computer Systems Engr., Electr. Engr. Technology, or Computer Engr. Technology <p>Scholarship Application Requirement</p> <ul style="list-style-type: none"> • Application form with general information and qualifications including: <ul style="list-style-type: none"> ○ financial aid statement, and ○ one-page personal statement of attainments, interests and goals • Official transcripts of all college work • Recommendation letters (optional, but helpful)

For Application Forms or Further Information Please Contact:

Dr. Keith Holbert
holbert@asu.edu
(480) 965-8594

Send Completed Application Materials to:

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Arizona State University
Tempe, AZ 85287-5706



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ASU IEEE MIXER Spring 2003 Report

ASU Spring 2003 IEEE Mixer A Tremendous Success

IEEE Student-Faculty-Industry Mixer. The Institute for Electrical and Electronics Engineers (IEEE) is the world's largest professional organization. On Friday March 28th, the ASU IEEE student branch held their semiannual student-faculty-industry mixer. Although smaller than recent years, over 160 attended the event – a tremendous turnout given the economic climate facing the nation. The mixer was held at Old Main on the Arizona State University campus. Attendees included students from across engineering, computer science, the college of business, and the sciences. Many Faculty members attended the Mixer, including Dr. Peter Crouch, the Dean of Engineering and Dr. Stephen Goodnick, the Chair of the Electrical Engineering Department. Some of the highlights of this Mixer included: the beginning of the Student-Faculty Volleyball game tradition, two professors were recognized with an Outstanding Professor Award and one student was recognized with Outstanding Student Scholarship Award. IBM, Motorola, Raytheon, Exxon, Accenture and the Navy representatives supported and interacted with students at this semester's Mixer.

The purpose of the mixer is to promote true interaction between ASU students (undergraduate and graduate), university faculty, and engineers/scientists/recruiters from industry. The mixer is intended to provide students with opportunities to:

- Learn what industry expects of its prospective employees who graduate from science, engineering, and business programs.
- Discuss future coursework with colleagues, faculty, and industrial representatives. The goal is for students to become aware of those skills they will need upon entering the job market (e.g. technical writing and reading, verbal, presentation, etc.)
- Develop professional ties.
- Learn about the benefits of membership in IEEE and other professional organizations.
- Discover career and pre-career industrial programs with practicing engineers, scientists, business leaders, and recruiters. These include summer internships, cooperative education programs, part-time employment, and full-time employment. Students apply for these programs by submitting resumes.
- Discuss senior design projects, undergraduate research projects, and graduate school with one another, faculty, and industrial representatives.

Companies that have attended mixers include:

- AG Communications, Altera, Andersen Consulting, Boeing, Dollarhide Mass Mutual, Exxon, Honeywell, Hughes, IBM, Intel, Integrated Information Systems, International Rectifier, Lockheed Martin, Medtronic, Mobilian, Motorola, National Instruments, Nextel, Orbital Sciences, ONSemiconductor, Raytheon, Schlumberger, Sundstrand Aerospace, and TDK Systems.

Mixing at the Mixer. Mixers provide students with a chance to interact with faculty at the mixer in a friendly informal setting. Faculty members offer guidance on courses, career options, and everyday issues.



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The mixer provides students with an excellent opportunity to discuss summer internships, full-time positions, general career options, company initiatives, and the latest technologies with representatives from major corporations. Company representatives provide students with information regarding company requirements, needs, and expectations. They often provide students with useful advice on resume preparation, on minor selection, and even on specific course selection. Some students are presented with career opportunities that they were completely unaware of. Company representatives collect student resumes. Many students have received job offers as a result of submitting their resume at the mixers. Companies have found the mixers to be a great place for initiating the recruitment process.

Student Faculty Volleyball Game

This year initiated the beginning of what is to become a traditional Mixer Student-Faculty Volleyball Tournament. This year the Faculty team, lead by the Chair of the Electrical Engineering Department, Dr. Stephen Goodnick, triumphed over the students to receive the Mixer Cup. However the students are anxiously awaiting their rematch in the fall.

Outstanding Student Scholarship Award

At this Mixer one student was recognized for his or her scholarship, leadership involvement and research endeavors at Arizona State University. This semester the award, a scholarship in the amount of one hundred dollars was given to Meena Nimmagadda, a Computer Science student. Congratulations Meena!

Outstanding Professor Awards

An award of appreciation was also given to one member of the Electrical Engineering Faculty and one member of the Computer Systems Engineering Faculty. The winners of these awards were selected by students via the IEEE student branch website. This semester the award was given to Dr. James Aberle, of Electrical Engineering and Dr. David Pheanis, of Computer Systems Engineering. Congratulations Dr. Aberle and Dr. Pheanis!

Other mixer amenities have included: an all-you-can-eat buffet, beverages, a live DJ, and very “cool” - industry donated - door prizes (e.g. walkie-talkies, shirts, sweatshirts, duffle bags, microprocessors, hand held color TV, digital voice recorder, cash, etc.). The door prize raffles are always a lot of fun – generating tremendous crowd enthusiasm – particularly when the prize is cash!

Increasing IEEE Branch Membership. Last year, the ASU IEEE Student Branch was ranked 13th in the world in terms of membership – just behind top schools such as the Georgia Institute of Technology (ranked 1st), University of Texas-Austin (ranked 3rd), Stanford University (ranked 5th), Texas A&M (ranked 6th), University of California-Berkeley (ranked 9th), and Purdue University (ranked 10th). The branch hopes to significantly increase its membership to move it into the top five (5). To join the IEEE, visit the branch’s on-line membership application system at: <http://www.eas.asu.edu/~ieec/style1/membership.shtml>. Joining is very simple.

ASU IEEE Branch Officers and Funds. The branch officers – Maziar Brumand (Chair), Anouar Zine (Vice-Chair), Merrill Jordan (Secretary), Rouzbeh Brumand (Treasurer), Christel Amburgey (Publicity), Jay Knobloch (Activities), John Nyman (Activities), Prashant Nair (Web Master), Anil Kandangath (Web Master) and Eric Cope (Web Master) – worked very close with one another, industry, and their branch advisor and mentor, Professor Rodriguez to plan and put on the mixer.). “The branch officers did an exceptional job,” said Rodriguez. “Without their steadfast commitment to the mixer and improving the ASU environment, the mixer would not have been possible. They deserve an outstanding branch award from IEEE.”

Support from IEEE Societies



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This semester's Mixer was sponsored by three IEEE societies and the Department of Electrical Engineering. The IEEE Communications and Signal Processing Society, the IEEE Electromagnetic Compatibility Society and the IEEE Waves and Devices Society, along with the Electrical Engineering Department, all played a significant role in supporting this semester's Mixer. Thank you all very much!

Mixer funds are used to support branch activities and student projects in the area of *Flexible Autonomous Machines operating in an uncertain Environment (FAME)*. The branch – with the help of IEEE funds – established an *ASU IEEE Center of Excellence for FAME Research* in 1999. Industry funds have permitted the center to expand the number of student projects funded.

Next IEEE MIXER. The ASU IEEE Student branch will hold its next *ASU Mixer* in Fall 2003 (sometime in October). For additional information about the ASU IEEE Student Branch, visit their award winning web site at <http://www.eas.asu.edu/~iee/> or contact the branch advisor, Professor Armando A. Rodriguez at aar@asu.edu.

Motorola Welcomes IEEE Student Members to Their Labs

On Friday, April 25, 2003, Motorola Inc. welcomed approximately 20 Arizona State University students to tour their labs at the Semiconductor Products Sector Facility. The tour was organized by the ASU Main IEEE student branch to give IEEE members an additional benefit for being a member of IEEE. The selection was based on student résumés that were submitted to ASU IEEE student branch who forwarded them to Motorola Managers. The goal of the tour was to give students an insight into Motorola's culture and work environment and also to meet and network with Motorola managers and recent graduates.

IEEE arranged transportation via carpools from campus to the facility located on Price and Elliot Tempe, Arizona. At arrival, the students were given security badges and escorted into a meeting hall where Motorola provided Sandwiches and sodas. While eating, students socialized with managers from different divisions within the Semiconductor Products Sector such as: Analog Circuit Design, Digital Circuit Design, and RF design.

After the "Munch & Mingle", a tour of several labs were given. The first lab was RF Infrastructure Division Lab that focused on researching circuits that pertain to the frequency and power ratings of current and future cell phone base stations. The tour continued with Radio Products Division lab, where they test the software and radiation levels of the cell phones. Both of these tours were very informative and intriguing.

After the lab tours, Motorola held a raffle and gave away items such as a backpack, a brief, a fleece blanket, and a 2.4GHz cordless phone. Everyone who attended sincerely enjoyed the tour. Our advisor, Dr. Armando Rodriguez wished he could be there, but was very busy writing a proposal to NASA addressing the design of robotic space vehicles for planetary exploration. The ASU Main IEEE Student Branch would like to especially thank Betty Grimes and Becki Luckenbill for organizing the event and all the other Motorola employees for participating. We look forward to another joint event.



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Phoenix Area Consultants Network (PACN) Announcement

The IEEE Phoenix Area Consultants Network will hold its annual family picnic on May 10. The regular monthly dinner meeting then will not be held this month. However, we will be back at Monti's at Rio Salado and Mill on the second Thursday in June. At that meeting Bruce Johnson will present the latest data from the Alliance of IEEE Consultants Networks on consultant compensation. The data are organized both geographically and by area of expertise. We will find out how much the other guy is making and be able to decide if we are charging enough (or perhaps too much?) for our services. While our attendance has been steadily increasing, have outgrown the Senator's Room at Monti's and will move to a larger room on a regular basis, we expect a particularly large crowd in June. Everyone is welcome, of course, and we will find a seat at the table for all.

Bruce was going to talk about "Electric Windmills", but we had a change in plan when the compensation data became available. Lane Garrett is going to talk later in the year about "Wind Turbines" which is a related subject. We will get Bruce to follow that talk with his windmill presentation, probably early in '04.

The ASU Student Branch brought a projector to our March meeting that our speaker used for his PowerPoint presentation. The whole thing worked very well, and we sincerely thank the students for helping us out.