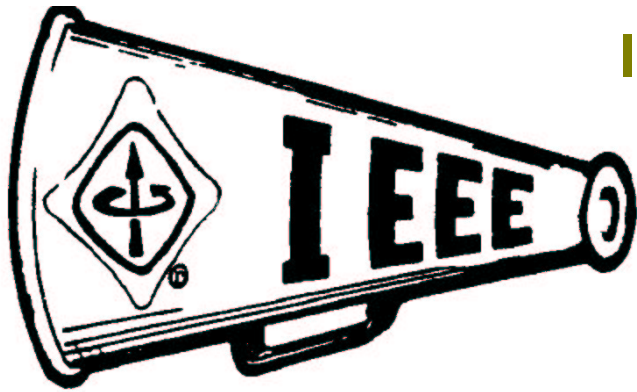


# The Valley Megaphone



Newsletter of the  
**IEEE – Institute of Electrical and  
Electronics Engineers  
Phoenix Section**  
January 2003, Volume XVII, Number 2

## Executive Committee

### Past Chair

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

### Chairman

Charles A. Smith, 480-814-6617  
Smith@ieee.org

### Vice-chair

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

### Secretary

George Karady, 480-965-6569  
Karady@asu.edu

### Treasurer

Lesley Polka 480-554-1728  
lesley.a.polka@intel.com

### Publicity

Shamala Chickamenahalli, 480-554-6774  
shamala@ieee.org

### PACE

Ron Sprague, 480-962-8183  
r.sprague@ieee.org

### Membership

Ravi Prasher, 480-554-0593  
ravi.s.prasher@intel.com

### Student Activities

Keith E. Holbert, 480-965-8594  
holbert@asu.edu

### Conferences

Rao Thallam, 602-236-5481  
rsthalla@srpnet.com

## *This Issue of Valley Megaphone Features:*

### *Contacts and Links*

*Executive Committee (page 1)*  
*Chapters and Branches (pages 1 and 2)*  
*Student Branches (page 2)*

### *Announcements:*

*Message from Section Chair (page 1)*  
*Phoenix Section Banquet (page 1, 4-6)*  
*2003 Phoenix Section officers (page 2)*  
*PACN Meeting (page 2)*  
*WAD Society Chapter meeting (page 3)*  
*Future Golf Classic (page 7, 8)*  
*EMC Chapter meeting (page 9)*  
*PES Society meeting (page 9)*

## Message from Section Chair

### Greetings and Best Wishes for 2003 !!!

The Section Awards Banquet is scheduled for Saturday, Feb 1st 2003 at the Phoenix Airport Hilton. The program includes: 6:00pm-7:00pm social hour followed by dinner, keynote presentation and award ceremony from 7:00pm-9:00pm. The IEEE Phoenix Section executive committee encourages all members to attend the banquet.

**Contd. in page 9**

## Executive Committee contd..

### Awards

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

### Inter-Society

James R. Hunt, 602-236-8080  
Jim.hunt@ieee.org

### Web Master

Chandan K. Das, 480-554-1300  
cdas@ieee.org

## Chapters & Branches

### Comm & Signal Processing

Junshan Zhang, 480-727-7389  
junshan.zhang@asu.edu

### Computer Society

S. Diane Smith, 480-461-8440  
diane@fuseki.com

### Consultants Network (PACN)

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

### CPMT Society

Dong-Ming He, 480-552-0947  
Dongming.he@intel.com

### EMC Society

Harry Gaul, 480-441-5321  
Harry.gaul@ieee.org

.....Contd... on page 2

The Valley Megaphone is the newsletter of the Phoenix Section of the Institute of Electrical and Electronics Engineers. Published Monthly, September through June. The publication reaches about 4000 members. Submit articles, advertisements, and announcements to Shamala Chickamenahalli at the above email address or by Fax to 480-554-7615. 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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# IEEE ANNOUNCEMENTS

## Chapters & Branches

Contd.. from page 1

### Power Engineering Society

Baj Agrawal, 602-371-6386,  
bajarang.agrawal@aps.com

### Waves & Devices Society

Bruce Kim, 480-965-3749  
[bkim@asu.edu](mailto:bkim@asu.edu)

### GOLD

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

## Student Branches

### ASU Engineering Student Branch

Chair: Maziar Brumand,  
[m\\_brumand@yahoo.com](mailto:m_brumand@yahoo.com)  
Advisor: Tony Rodriguez, 480-965-3712,  
[aar@asu.edu](mailto:aar@asu.edu)

### ASU Computer Society Chapter

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

### ASU Engr. Tech Student Branch

Chair: Candy Wood  
[bikydoo@att.net](mailto:bikydoo@att.net)  
Advisor: Dr. Raji Sundararajan, 480-727-1507,  
[Raji@asu.edu](mailto:Raji@asu.edu)

### DeVry Student Branch

Chair: Dennis Mercer, [dennismercer@ieee.org](mailto:dennismercer@ieee.org)  
Advisor: Gary Bryan, 602-870-9222,  
[gebryan@devry-phx.edu](mailto:gebryan@devry-phx.edu)

### DeVry Student Branch

Chair: Christopher Roan, [croan@hotmail.com](mailto:croan@hotmail.com)  
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 Student Branch

Chair: Lamont Serbousek  
[lgs6@dana.ucc.nau.edu](mailto:lgs6@dana.ucc.nau.edu)  
Advisor: Walter Hopkins, 928-523-4359  
[Walter.Hopkins@nau.edu](mailto:Walter.Hopkins@nau.edu)

### NAU Computer-Society Student Branch

Chair: Billy Olsen, [wdo@dana.ucc.nau.edu](mailto:wdo@dana.ucc.nau.edu)  
Advisor: Phil Mlsna, 928-523-2112  
[Phillip.Mlsna@nau.edu](mailto:Phillip.Mlsna@nau.edu)

### Embry-Riddle Student Branch

Chair: Brook Heiling, [bheiling@heitek.biz](mailto:bheiling@heitek.biz)  
Advisor: Steve Chadwick, 928-777-6980  
[chadw202@erau.edu](mailto:chadw202@erau.edu)

## PACN Meeting

The next meeting of the IEEE Phoenix Area Consultants Network will be held on January 9 at Monti's La Casa Vieja at the southwest corner of Mill Ave and Rio Salado Parkway in Tempe. Networking and the social hour begin at 6:30 with dinner starting about 7 PM. Lane Garrett, President of ETA Engineering, will talk about applications of solar power with reference to the all solar powered building his company recently designed. This presentation was delayed from last November when Lane was called out of town on business. Solar power, or the more general category of renewable energy, is a rapidly growing industry especially in Arizona. Those of you who were looking forward to learning something about solar power, this is your chance. Everyone is welcome. If you want to skip dinner, just come around 8 for the program. There is no charge for the program, and dinner is only \$10. Please let us know by sending an email to [peverett@everettinfrared.com](mailto:peverett@everettinfrared.com) if you are planning to come so that we will make sure that Monti's sets aside a large enough room for us.

PACN and the Alliance of IEEE Consultants Networks co-sponsored a very successful Consultants Workshop on November 9 at the Hilton Phoenix East in Mesa. The attendees, both those just putting their feet into the waters of independent employment and those who are fully immersed, learned a lot about the consulting business which will benefit them considerably.

## 2003 IEEE Phoenix Section Section Officers

"The following Officers were elected as new officers for IEEE Phoenix Section for the year 2003:

Chair:	Mr. James E. Drye
Vice-Chair:	Dr. George G. Karady, Ph.D.
Secretary:	Dr. Lesley A. Polka, Ph.D.
Treasurer:	Dr. Shamala Chickamenahalli, Ph.D.

Dr. Dongming He, Ph.D. has graciously agreed to serve as Publicity Coordinator for 2003. Dr. Shamala Chickamenahalli will transfer her current responsibilities to him starting during January, 2003. Please welcome the new officers and provide them your complete support.

Dr. Vasu Atluri, Ph.D.  
Nominations Coordinator  
IEEE Phoenix Section - 2002"

# INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS



## WAVES AND DEVICES PHOENIX CHAPTER

January 29, 2003 MTTs  
Meeting

[www.eas.asu.edu/~wadweb](http://www.eas.asu.edu/~wadweb)



## RF/Analog Circuit Design for Multi-mode Wireless Communication

**Mohammad Madihian**

Head of Microwave & Signal Processing Department  
NEC Laboratories America, Inc., Princeton, New Jersey

### Abstract

Wireless Networking is no longer a fancy or luxury in the 21<sup>st</sup> century. It has become something indispensable to everyday life. It is projected that the number of Internet-enabled handsets will surpass the number of PCs connected to the Internet by the end of 2003. Such an explosive popularity of wireless networking services and increasing demand for higher quality have urged development of low-cost high-speed low-power multi-functional RF, IF, and baseband chips. To satisfy these conditions, selection of the optimum device technology is crucial. Silicon technology with continuing progress and downsizing for both the bipolar and MOS transistors and with possibility for System-On-Chip realization is an attractive candidate for such an application. This talk will review the latest activities and advancements of Si BiCMOS device-based circuits for multi-mode and software defined radio applications.

### BIOGRAPHY

**Mohammad Madihian** received the B.Sc. degree from Iran University of Science and Technology in 1976, and the M.Sc. and Ph.D. Degrees from Shizuoka University, Japan, in 1980 and 1983, respectively, all in electronic engineering. In 1983, he joined NEC Central Research Laboratories, Kawasaki, Japan, where he worked on research and development of GaAs and Silicon device-based digital as well as microwave and millimeter-wave monolithic IC's. In 1999, he moved to NEC Laboratories America, Inc., Princeton, New Jersey, and is presently the Head of Microwave & Signal Processing Department where he conducts analog/RF front-end IC's and baseband processing activities for high-speed wireless networks and personal communications applications. Dr. Madihian has received the IEEE MTT-S Best Paper Microwave Prize in 1988, and IEEE Fellow Award in 1998. He has authored or co-authored more than 130 scientific publications including 50 IEEE journal/conference papers, and holds 35 granted as well as 30 pending patents on device and circuit applications. He has served as Guest Editor to the IEEE Journal of Solid-State Circuits and IEICE of Japan. Dr. Madihian is presently serving on the IEEE GaAs IC Symposium Executive Committee, IEEE Int. Microwave Symposium TPC, Int. Conference on Solid State Device and Materials TPC, Asia Pacific Microwave Conference TPC, IEEE MTT-6 Subcommittee, and IEEE MTT Editorial Board. He is on the Steering Committee of the upcoming IEEE 2003 Int. Microwave Symposium (Philadelphia), and a Guest Editor to the Special Issue of IEEE MTT Transactions, December 2003.

**Date: January 29, 2003**

**Location: Arizona State University, Main Campus, Gold Water Center (GWC) Room 487**

Enter the facility through the main (south) lobby and take the elevator to the fourth floor. The conference room is on your right. See <http://www.asu.edu/map/> for more details.

**Time: 5:30-6:00pm Social/Refreshments, 6:00-7:00pm Presentation, 7:00pm Dinner (Pizza & soda are being provided by the WAD Phoenix Chapter)**

For more information, please call Bruce Kim (Chapter Chair) at (480) 965-3749.



# IEEE PHOENIX SECTION AWARDS BANQUET



## Hilton Phoenix Airport Grand Ballroom

2435 South 47th Street  
Phoenix, Arizona 85034  
Tel: (480) 894-1600

- Program:** 6:00 P.M. Registration and Social Hour  
7:00 P.M. Dinner and Program
- Keynote Speaker:** Dr. Eric J. Guilbeau, Ph.D  
Olin Endowed Professor and Chair, The Harrington Department of Bioengineering
- Keynote Presentation:** The Impact of Electrical Engineering Enabling Technologies on Bioengineering Research Achievements

### AWARD RECOGNITION CATEGORIES

#### Member

Graduates of Last Decade (GOLD) Engineer of the Year  
Engineer of the Year  
Senior Engineer of the Year

#### Advance Member Grade

Fellows, Senior Members

#### Corporate

Large Company: Technical Contribution  
Large Company: Professional Contribution  
Small Company: Technical Contribution  
Small Company: Professional Contribution

#### Chapter/Society

Individuals, Teams, and Organizations

#### Non-IEEE Member

Contributions to the Engineering Profession

#### Special Chair Awards

Phoenix Section Recognition  
2002 Section Officers

#### Educational Institution

Outstanding IEEE Student Branch  
Outstanding IEEE Student Branch Advisor  
Outstanding IEEE Student Branch Officer  
Outstanding Educator (Teaching)  
Outstanding Teaching Faculty  
Outstanding Research Faculty

#### Future Cities Competition

Phoenix Section Award

#### Continued Contribution

Profession and Technology Development

<b>Banquet Fees:</b>	IEEE Members and Guests	\$30.00	IEEE Student Members	\$20.00
	IEEE Student Member Guests	\$30.00	IEEE Chapter Table	\$240.00*
	Corporate Sponsorship	\$400.00**		

\*Table sits 8 persons

\*\*Sponsorship includes recognition at program, table of eight for dinner, and space for display

The deadline for receiving the registration fee is Monday, **January 27<sup>th</sup>, 2002**

#### For Making Reservations and Sending Checks Please Contact:

Dr. Lesley A. Polka  
IEEE Phoenix Section  
c/o Intel Corporation  
Mail Stop: CH5-157  
5000 W. Chandler Blvd.  
Chandler, AZ - 85226  
Tel: (480)554-1728 / Fax: (480)552-1304  
email: lesley.a.polka@intel.com (preferred)

#### For Further Information Please Contact Award Banquet Organizing Committee Members:

Vasudeva P. Atluri	(480) 554-0360
Charles A. Smith	(480) 814-6617
James E. Drye	(480) 413-5685
George Karady	(480) 965-6569
Keith E. Holbert	(480) 965-8594
Rao S. Thallam	(602) 236-5481
Shamala Chickamenahalli	(480) 554-6774

For more information visit our web page: <http://www.ieee.org/phoenix>



# IEEE PHOENIX SECTION AWARDS BANQUET

Saturday February 1, 2003



at  
**Hilton Phoenix Airport**  
**Grand Ballroom**  
2435 South 47th Street  
Phoenix, Arizona 85034  
Tel: (480) 894-1600

## Registration Form

### Banquet Fees:

<b>IEEE Members and Guests -</b>	\$30.00
<b>IEEE Student Members -</b>	\$20.00
<b>IEEE Student Member Guests -</b>	\$30.00
<b>IEEE Chapter Table -</b>	\$240.00*
<b>Corporate Sponsorship -</b>	\$400.00**

\*Table sits 8 persons

\*\*Sponsorship includes recognition at program, table of eight for dinner, and space for display

For additional information access [www.ieee.org/phoenix](http://www.ieee.org/phoenix)

The deadline for receiving the registration fee is Monday, **January 27<sup>th</sup>, 2002**

Please mail completed registration form along with your check, payable to: **"IEEE Phoenix Section"** and mail to:

**Dr. Lesley A. Polka**  
**IEEE Phoenix Section**  
**c/o Intel Corporation**  
**Mail Stop: CH5-157**  
**5000 W. Chandler Blvd.**  
**Chandler, AZ 85226**

**Tel: (480) 554-1728**

**Email: [lesley.a.polka@intel.com](mailto:lesley.a.polka@intel.com)**

### Banquet Timings:

Registration / Social Hour with Cash Bar:	6 PM – 7 PM
Dinner:	7 PM – 8 PM
Awards Program / Keynote Presentation:	8 PM – 10 PM

### Social Hour Hors D'Oeuvres:

Tequila Jalapeno Poppers	Crab Stuffed Mushrooms
Teriyaki Beef Kabobs	Cheese and Cracker Tray
Vegetable Tray with Ranch Dip	

### Cash Bar:

Sodas and Alcoholic beverages

### Dinner Menu:

- 1) Petite Filet Mignon and Chicken Piccata Combo Dinner
- 2) Chilean Sea Bass Dinner
- 3) Pasta Primavera Vegetarian Dinner

Dinner Menu also includes Field Green Salad with Ranch and Vinaigrette Dressings, Garlic Mashed Potatoes, Rolls and Butter, Fresh Vegetables, Ice Tea and Water

### Dessert:

White Chocolate Mousse Cake  
Coffee, Decaffeinated Coffee and Tea are served with Dessert

Please limit Registration to two persons per form, attach multiple forms if necessary. Detach below and mail with check.

## IEEE PHOENIX SECTION AWARDS BANQUET – 2003 Registration

(please print in bold and capital letters)

**Name:**

**Guest Name:**

**Address:**

**Telephone Number:**  **email:**

**IEEE Member:** Yes  No  **Student**  **Membership #**

### Dinner Choice (please select one per person)

- (1) \_\_\_ Petite Filet Mignon and Chicken Piccata Combo Dinner
- (2) \_\_\_ Chilean Sea Bass Dinner
- (3) \_\_\_ Pasta Primavera Vegetarian Dinner



# IEEE PHOENIX SECTION AWARDS BANQUET

Saturday, February 1, 2003



## Directions to Banquet Location



Hilton Phoenix Airport  
is located at  
2435 South 47th Street  
Phoenix, Arizona 85034

West of 143 freeway and north of  
University Drive

For Further Assistance Call  
(480) 894-1600



2<sup>nd</sup> Annual  
 Design the Future Golf Classic  
 Benefiting the Phoenix Region Future City Competition

**TOURNAMENT HIGHLIGHTS:**

**Saturday February 8, 2003**  
**Thunderbirds Golf Club**  
**7<sup>th</sup> Street, South of Dobbins Road**  
[www.thunderbirdsgolfclub.com](http://www.thunderbirdsgolfclub.com)

**7:30 AM**  
**Registration**

**8:30 AM**  
**Shotgun Start**

**Four-Person Teams**  
**18-hole Modified Scramble**

**\$150 per player**  
**(Includes cart, fees, balls, lunch &**  
**2 Mulligan's per player)**

**WIN GREAT PRIZES!!!**

**Hole-In-One**

**Vegas Hole**  
 (featuring Rock Bottom Brewery)

**PLUS:**

Closest to Pins

Longest Putts

Longest Drives



The Phoenix Region Future City Competition is open to 7<sup>th</sup> and 8<sup>th</sup> graders across the state. Additional information can be found at [www.futurecityphoenix.org](http://www.futurecityphoenix.org). For further information on the golf tournament, contact Andrew Smigielski at Carter & Burgess 602.650.4937 or [SmigielskiAR@C-B.com](mailto:SmigielskiAR@C-B.com).

**Design the Future Golf Tournament Entry Form**

Name	Company	Phone/E-mail
1		
Address		
2		
Address		
3		
Address		
4		
Address		
<input type="radio"/> Please keep players 1-2-3-4 together <input type="radio"/> Please pair us with others <input type="radio"/> Sorry, I cannot attend, but please accept my contribution		_____ Players @ \$150  _____ Total
<b>MAKE CHECKS PAYABLE TO: Future City Competition.</b> Please complete and return this entry form by January 31, 2003 to: Andrew Smigielski, Carter & Burgess, 3003 North Central Avenue, Suite 1700, Phoenix, AZ 85012 (phone-602.650.4937, fax -602.263.8373).		
Thank you for participating!		

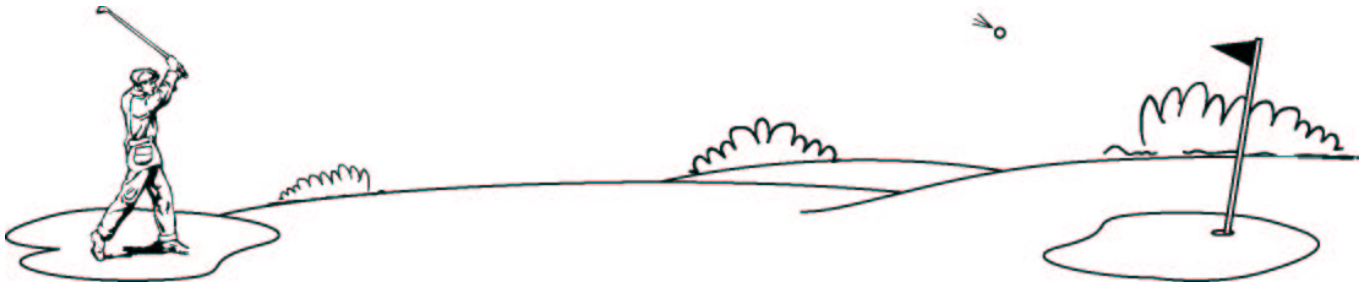
### Sponsorships Available

Sponsorship is an opportunity to promote your organization while supporting the Phoenix Region Future City Competition. This year we offer the following:

# Needed	Description	Cost
6	<b>Contest Hole Sponsors</b> Two closest to pin, three long putts, and one Vegas Hole. Name is published in sponsor list along with advertisement at the tee and given the opportunity to award the prize.	\$350
1	<b>Hole-in-One Sponsor</b> Name published in sponsor list, advertisement sign displayed with the prize.	\$500
1	<b>Practice Range Sponsor</b> Name published in sponsor list, advertisement sign displayed at the range.	\$200
0	<b>Lunch Sponsor</b> Name published in sponsor list, advertisement sign displayed at the lunch.	\$300
1	<b>Beverage Cart Sponsors</b> Name published in sponsor list, advertisement sign displayed on the cart.	\$350
2	<b>Place Sponsors</b> First, Middle, and Most Honest. Name published in sponsors list.	\$300

**Reserve early! Golf Tournament sponsorship is on a first-come, first-served basis.**

*If you have questions about sponsorships or door prize donations, contact Andrew Smigielski at Carter & Burgess 602.650.4937 [SmigielskiAR@C-B.com](mailto:SmigielskiAR@C-B.com).*



<b>Design the Future Golf Classic Tournament - Sponsorship Entry Form</b>	
Name	
Company Name	Phone
Address (including zip code)	
Type of sponsorship	Amount enclosed
<b>MAKE CHECKS PAYABLE TO: Future City Competition.</b> Please complete and return this entry form by January 31, 2003 to: Andrew Smigielski, Carter & Burgess, 3003 North Central Avenue, Suite 1700, Phoenix, AZ 85012 (phone-602.650.4937, fax -602.263.8373).	
Thank you for participating!	



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# IEEE ANNOUNCEMENTS

## INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS EMC CHAPTER

**Thursday, February 27, 2003**

**Date:** Thursday, February 27th, 2003

**Place:** Garcia's Mexican Restaurant at Embassy Suites Hotel

**Address:** 4400 South Rural Road, Tempe, Arizona

**Address:** Just South of U.S. 60 on West side of Rural Rd.

**Time:** 5PM Social, 6PM Dinner (order off menu), 7PM Meeting and Presentation

**Title:** Lightning Electric and Magnetic Fields in Buildings.... and How to Keep Them Out!

**Speaker:** Dr. Mike Stringfellow, [PowerCET](#)

**Abstract:** Dr. Stringfellow will present some of his latest research into the propagation of electric and magnetic fields into buildings. He will also provide guidance on the various means to prevent these damaging fields from entering a building.

**About the speaker:** Michael F. Stringfellow, Ph.D., P.E. is Chief Scientist for PowerCET Corporation. Prior to joining PowerCET he held the positions of Chief Scientist and Director of Research for EFI Corporation. Other experiences include 9 years with the Electric Supply Commission (Eskom) in South Africa, and work with Kearney National and Atlantic Scientific Corporation. His research has focused on lightning surges and their impact on commercial and industrial facilities, and utility transmission and distribution systems. Dr. Stringfellow has published numerous articles and research papers during his distinguished career. He is a member of the IEEE and is an active member on several committees. He earned a B.S. Honors Degree in Physics from the University of London and his Ph.D. in Atmospheric Electricity from University of Durham.

**RESERVATIONS:** Please call Daryl or Mary at Kimmel Gerke Associates in Mesa AZ at 480-755-0080. (If no answer, please leave a voice mail.) You may also register by email at [dgerke@emiguru.com](mailto:dgerke@emiguru.com). There is no charge for meetings, but you pay for your own meal and drinks.

### Message from Section Chair

Contd from page 1

A registration form, map and directions are included with this letter. For additional details, please logon to section web page at [www.ieee.org/phoenix](http://www.ieee.org/phoenix). For reservations please contact Lesley Polka of Intel Corporation at **480-554-1728** or send an email to [lesley.a.polka@intel.com](mailto:lesley.a.polka@intel.com). Please mail the enclosed registration form to Lesley Polka so as to reach her by Monday, January 27, 2003.

Sincerely,

Charles A. Smith  
2002 Chair, IEEE Phoenix Section

### Power Engineering Society Meeting

Date: February 13, 2003

Time: Registration 11:30, Lunch 12:00 Noon, Program 12:30 PM

Place: Wyndham Phoenix Airport, 427 N. 44th St., Phoenix.

Cost: \$ 12.00

Speaker: John Joyce, Siemens High Voltage Systems Group

Topic : Flexible AC Transmission Lines (FACTS)

Application

Reservations Required: Please email Raja Ayyanar [[rayyanar@asu.edu](mailto:rayyanar@asu.edu)] or call Angela at 480-965-2896 or Raja Ayyanar at 480-965-7307.