# The Valley Megaphone
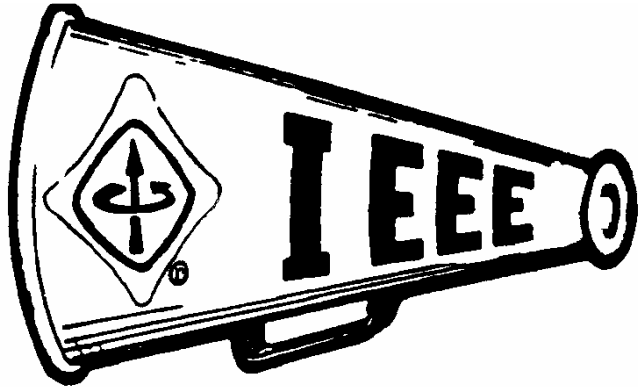
Newsletter of the
## Institute of Electrical and Electronics Engineers, Inc. Phoenix Section
January 2008, Volume XXII, Number 1

## Executive Committee

**Past Chair**
Rao Thallam, 602-236-8064
thallam@ieee.org

**Chair**
Rao Bonda, 480-413-6121
r.bonda@ieee.org

**Vice Chair**
Dongming He, 480-552-0947
dongming@ieee.org

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**Publicity**
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**PACE**
Mike Andrews, 480-991-1619
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**Membership**
Russ Kinner, 602-997-2353
r.kinner@ieee.org

**Student Activities**
Jim Drye, 480-413-5685
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**Web Master**
Monica H. Braunisch
mhbraunisch@ieee.org

## This Issue of The Valley Megaphone Features:

*Contacts:*
- **Executive Committee (page 1)**
- **Chapters and Branches (page 1)**
- **Student Branches (page 2)**

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

Please send announcements for Valley Megaphone to Eric Palmer: ecpalmer@ieee.org.

## Chapters

**Communication & Signal Processing**
Gang Qian
gang.qian@asu.edu

**Computer Society**
Joy Shetler
jsshetler@juno.com

**Consultants Network (PACN)**
Vaughn L. Treude, 602-750-3662
vaughn@nakota-software.com

**CPMT Society**
Victor Prokofiev
victor.prokofiev@intel.com

**Education Chapter**
Martin Reisslein, 480-965-8593
reisslein@asu.edu

**EMBS Chapter**
Ahmed Abdelkhalek
ahmed_a@acm.org

**EMC Society**
Harry Gaul, 480-441-5321
harry.gaul@ieee.org

**GOLD**
Mike Poggie
Mike.Poggie@ieee.org

**Power Engineering Society**
Jim Hudson
jhhudson@srpnet.com

**Solid State Circuits**
Bertan Bakkaloglu
bertan@asu.edu

**Waves & Devices Society**
Chuck Weitzel, 480-413-5906
Chuck.weitzel@freescale.com

| **Student Branches** | **Phoenix Section Executive Committee Meeting – First Tuesday of the month.** | |
|---|---|---|
| **ASU Main, Engineering**<br>Chair: Cory P. Murphy<br>ieeeasuchair@gmail.com<br>Advisor: Cihan Tepedelenlioglu,<br>(480) 965-6623, Cihan@asu.edu | | |
| | **Time:** | 6:00 pm to 8:00 pm |
| **ASU Main, Computer Society**<br>Chair: Luis Tari<br>luis.tari@asu.edu<br>Advisor: Joseph Urban, 480-965-3374,<br>joseph.urban@asu.edu | **Place:** | Phoenix Airport Hilton, 2435 South 47th Street<br>Phoenix, AZ, 85034<br>Phone: 480-804-6017 |
| **ASU Polytechnic**<br>Chair: Brian Siskoy<br>bsiskoy@gmail.com<br>Advisor: Barbara Rempel<br>Barbara.Rempel@asu.edu | **Directions:** | From 143, exit University Ave, go west, turn right on 47$^{th}$ street. |
| **DeVry, Phoenix**<br>Chair: Richard Taylor<br>RLTaylor@ieee.org | **More Info:** | Meetings held first Tuesday of month. No meetings in July and August. All interested IEEE members are welcome to attend. |
| **DeVry, Computer Society**<br>Chair: | | |
| **NAU, Engineering**<br>Chair:<br>Advisor: Phil Mlsna, 928-523-2112<br>Phillip.Mlsna@nau.edu | **Contact:** | Rao Bonda, Phoenix Section Chairman, r.bonda@ieee.org |
| **Embry-Riddle, Prescott**<br>Chair: Maria Nzmebi Ngomba<br>ngomb7db@erau.edu<br>Advisor: John E. Post<br>postj@erau.edu | | |

## Life Members Chapter in Phoenix Section

A petition to form Life Members Chapter in Phoenix section has been submitted and approved by the Section executive Committee and Region 6 Director Loretta Arellano.

As of last month there are 435 Life Members in IEEE Phoenix Section. Life Members have long IEEE experience and can contribute significantly to the Section. Life Members Chapter like GOLD Members Chapter, and Consultants Network is an affinity group recognized and supported by the IEEE.

If any Life Member is interested in becoming Chapter Executive Committee Chair, Vice Chair, Secretary, Treasurer or Program Committee Chair, please contact Rao Thallam: Phone (602) 236-8064, Cell: (602) 818-0549, e-mail: thallam@ieee.org

## NSF Scholarships in Electrical & Computer Engineering at Embry-Riddle Aeronautical Univ., Prescott, AZ

Embry-Riddle Aeronautical University is offering individual student scholarships funded through a grant provided by the National Science Foundation of up to $10,000 per academic year (up to four years with qualifying criteria) to academically talented and financially challenged students accepted into either the Electrical Engineering or Computer Engineering degree programs offered at the Prescott, Arizona Campus. These scholarships are provided to assist students in paying Embry-Riddle costs of attendance. Scholarship recipients also receive a minimum assurance of $5,000 per year in other scholarships and grants funded by Embry-Riddle. These scholarship amounts are in addition to assistance for which the student qualifies from other federal and state programs. For complete information visit http://www.erau.edu/pr/news/1007nsf.html or contact Ed Post at john.post@erau.edu .

For more information visit http://www.erau.edu/pr/news/1007nsf.html or email john.post@erau.edu

![IEEE]

# IEEE PHOENIX SECTION ANNUAL BANQUET
## Saturday, February 9th, 2008
### At

![IEEE]

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

**Program:**

| | |
|---|---|
| 6:00 PM – 7:00 PM | Registration and Social Hour with Cash Bar |
| 7:00 PM – 8:30 PM | Dinner and Keynote Presentation |
| 8:30 PM – 9:30 PM | Section Awards Program |

**Keynote:** **"Technology and Phoenix – Who cares? (Everyone should, they just don't know that)"**
Mr. Robert E. Mittelstaedt, Jr., Dean and Professor of Management
W.P. Carey School of Business, Arizona State University, Tempe, Arizona

Phoenix has been one of the fastest growing cities in the U.S. for decades. With good weather, available jobs and new houses, offices and malls are popping out of farmland like spring crops. Most people believe that our economic growth has been driven by real estate and construction. Economic growth, like many things in life, is often more complex than it appears. This talk will address myth, reality, concerns and the role of technology related companies in Phoenix's future.

**Speaker Bio:** Mr. Mittelstaedt has served as Dean of the W. P. Carey School of Business and Professor of Management at Arizona State University since June 2004. Between 1973 and 2004 Mittelstaedt served in numerous leadership positions with The Wharton School, University of Pennsylvania including 14 years as vice dean, executive education. During 1985-1990 he co-founded, developed and sold Intellego, Inc., a company engaged in practice management, systems development and service bureau billing operations in the medical industry. He has been actively involved in strategy, marketing, management, systems, and corporate governance consulting for some of the world's largest corporations and many smaller startup companies. His teaching over the last decade has been with executives in the areas of strategy, IT and corporate governance; and undergraduate courses in entrepreneurship. He is the author of "Will Your Next Mistake Be Fatal? Avoiding the Mistake Chain That Can Destroy Your Organization," (Wharton School Publishing, 2005) and co-author of "knowledge@wharton on Building Corporate Value," (Wiley 2002). He serves on the boards of directors of three public companies, Innovative Solutions & Support (NASDAQ: ISSC), Laboratory Corporation of America (NYSE: LH) and W. P. Carey & Co. LLC (NYSE: WPC). Mittelstaedt received his B.S. (Mechanical Engineering) from Tulane University, served five years as a U.S. naval officer in nuclear submarines, and received an MBA from the Wharton School of the University of Pennsylvania. He is a licensed commercial pilot with multi-engine and instrument ratings.

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## SECTION AWARDS PROGRAM

**Member**
Young Engineer of the Year, Engineer of the Year

**Advance Member Grade**
Fellows, Senior Members

**Chapter/Society**
Individuals, Teams, Organizations, Best Society Chapter

**Non-IEEE Member**
Contributions to the Engineering Profession

**Corporate**
Large Company of the Year, Small Company of the Year

**Education**
Outstanding IEEE Student Branch & Student Branch Leader
Outstanding Faculty & Pre-College Educator
Phoenix Section Student Scholarships

**Special Chair**
Chair Special Recognition, Phoenix Section 2006 Officers

**Future Cities Competition**
Phoenix Section Communication Award

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**For Further Information Please Contact Annual Banquet Organizing Committee Members:**

| | | | |
|---|---|---|---|
| Dr. Vasudeva P. Atluri | (480) 554-0360 | Dr. Rao Bonda | (480) 413-6121 |
| Mr. James E. Drye | (480) 413-5685 | Dr. Keith E. Holbert | (480) 965-8594 |
| Mr. Debendra Mallik | (480) 554-5328 | | |

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

**IEEE**

# IEEE PHOENIX SECTION
# ANNUAL BANQUET
## Saturday, February 9th, 2008

**At**

**IEEE**

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

# Registration Form

**Banquet Fees:**

| | |
|---|---|
| IEEE Members and Guests | $35.00 |
| IEEE Student Members | $25.00 |
| IEEE Student Member Guests | $35.00 |
| IEEE Chapter / Society Table | $350.00* |
| Corporate Sponsorship | $500.00** |

*Table sits 10 persons
**Sponsorship includes recognition at program, table of ten for dinner, and space for display
For additional information please access
www.ieee.org/phoenix

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

**Mr. Debendra Mallik**
**Treasurer, IEEE Phoenix Section**
**1210 N. Judd Place**
**Chandler, AZ 85226**
**Tel:    (480) 554-5328**
**Fax:    (480) 552-1291**
**Email:  dmallik@ieee.org (preferred)**

The deadline for receiving the registration fee is **Friday, February 1st, 2008**

**Banquet Timings:**

| | |
|---|---|
| Registration / Social Hour with Cash Bar: | 6:00 PM – 7:00 PM |
| Dinner / Keynote Presentation: | 7:00 PM – 8: 30 PM |
| Section Awards Program: | 8:30 PM – 9:30 PM |

**Social Hour Hors D'Oeuvres (Tentative – May Change):**
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 (Tentative – May Change):**
1) Petite Filet Mignon and Chicken Piccata Combo Dinner
2) Chilean Sea Bass Dinner
3) Vegetable Wellington with Roasted Red Pepper Sauce

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:**
New York Cheesecake with Strawberry Sauce
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 ANNUAL BANQUET – 2008 Registration
(Please complete all sections of the form by typing or printing 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) ____ Vegetable Wellington with Roasted Red Pepper Sauce

**IEEE**  (logo, left)     **IEEE**  (logo, right)

# IEEE PHOENIX SECTION
## ANNUAL BANQUET
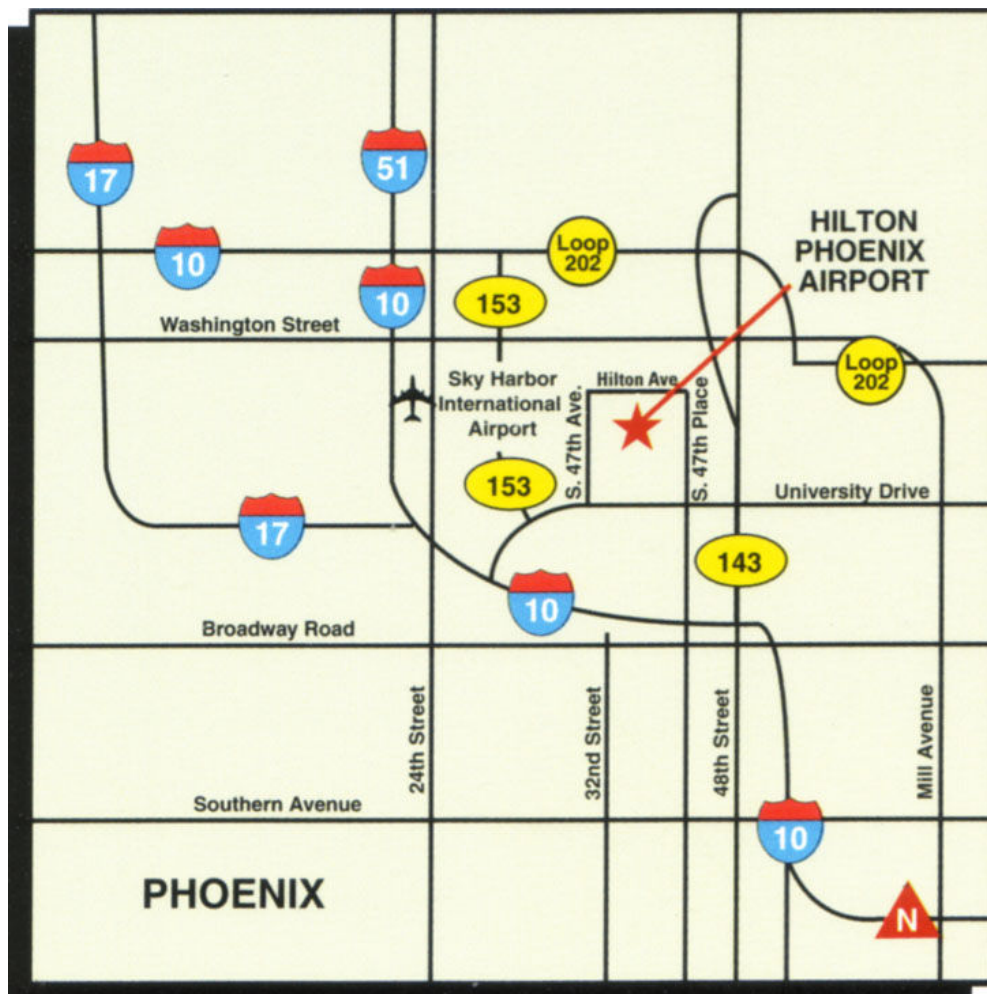### Saturday, February 9th, 2008

# Venue Directions and Map

**Hilton**
Phoenix Airport

**2435 South 47th Street**
**Phoenix, Arizona 85034**

**West of 143 Freeway and North of University Drive**

**For Further Assistance Call**
**(480) 894-1600**

# Call for Panel and Paper Proposals: IEEE International Professional Communication Conference 2008 (IPCC 2008)

## Conference Theme: Opening the Information Economy

Conference Location: Concordia University, Montréal, Canada
Conference Website: http://ewh.ieee.org/soc/pcs/?q=node/2

The information economy is based on the collection and the exchange of data and ideas. We all either contribute to or use materials from the information economy in most aspects of our everyday lives. Thus, the information economy exists as an environment in which we are all contributors and consumers. Within this system, effective communication is essential to success and means individuals can contribute ideas and information effectively and can make efficient use of the goods and services. Few of us, however, understand all of the nuances of the information economy or the communication factors that affect its operations.

This conference seeks to "open" this economic model by examining the connections between communication practices and the products, practices, and services that constitute the information economy. The objective of such an examination will be to help attendees better understand and participate in the information economy as both contributors and consumers.

The conference will take place on the campus of Concordia University in Montréal, Canada, and will consist of paper presentations and panel discussions that focus on various communication, design, social, and cultural aspects of the information economy.

**Possible Topic Areas**
Suggested topic areas include but are not limited to the following:
* Establishing and assessing the value of knowledge work and knowledge products
* Information design, usability, and accessibility
* Virtual teams, online collaboration, and distributed models of work
* Cross-cultural communication, globalization, outsourcing, translation, and localization
* Legal policies and social issues related to the information economy
* Media selection and multimodality
* The role of and perspectives on teaching and training within the information economy
* Content management, open source software, single sourcing, and XML

**Proposal Submission Process and Submission Dates**

1. Send 1-2 page (250-500 word) proposals to IPCC2008@gmail.com by 15 January 2008. In your proposal, please be sure to do the following:

* State the focus/main topic of the presentation
* Provide an overview of the main points or ideas that will be covered in the presentation
* Discuss how the presentation enhances attendees' understanding of the information economy

2. For each presenter, include a 50-100 word biosketch and a contact email address.

For conference- or proposal-related questions contact: IPCC2008@gmail.com

**IEEE** **GENSIPS'2008** *IEEE Signal Processing Society*

## IEEE International Workshop on Genomic Signal Processing and Statistics
Phoenix, Arizona
**June 8–10, 2008**
http://gsplab.tamu.edu/gensips2008

Recent advances in genomic studies have stimulated synergistic research in many cross-disciplinary areas. Genomic data, especially the recent large-scale microarray gene expression data, present enormous challenges for signal processing and statistics, which has led to the development of the new field of Genomic Signal Processing (GSP). This workshop is the sixth in a series of international scientific meetings devoted to the area of GSP and its applications in biology and medicine. The workshop addresses the emerging need for demonstrating to the signal processing community the potential for using signal-processing and statistical tools to uncover complex biological phenomena. The scientific program will include invited talks, tutorials, contributed papers and poster presentations. Participants will have the opportunity to be exposed to the most recent developments in the field and meet colleagues from all around the world.

**AREAS OF INTEREST**

Topics of interest to the conference include, but are not limited to:

- Signal processing and statistical approaches for functional genomics problems
- Statistical inference of biological networks from experimental data
- Pattern recognition methods for functional genomics
- Control theory and systems theory techniques for systems biology
- Models for cellular metabolism and intercellular signaling
- Modeling and simulation of biological regulatory networks
- Novel architectures and implementation methods for large-scale functional genomics
- High-throughput hardware and software approaches to genome-scale network modeling
- Integration of heterogeneous data
- Microarray image and data analysis
- Signal processing methods in sequence analysis
- Computational methods for modeling and simulation of biological regulatory networks

**VENUE**

GENSIPS'2008 will be held at the Embassy Suites Biltmore, in Phoenix, Arizona, which is located in the Biltmore area of Phoenix, home of fine dining, shopping, and other attractions, all within walking distance of the hotel.

**ORGANIZING COMMITTEE**

General Chair: **Aniruddha Datta**, Texas A&M University, College Station
Technical Program Chairs: **Paola Sebastiani**, Boston University
     **Gustavo Stolovitzky**, IBM T.J. Watson Center
     **Ciprian Doru Giurcaneanu**, Tampere University of Technology
Tutorial Chair: **Ilya Shmulevich**, Institute of Systems Biology
Plenary Speaker Chair: **Ioan Tabus**, Tampere University of Technology
Special Session Chair: **Tewfik Ahmed**, University of Minnesota
Finance Chair: **Ranadip Pal**, Texas Tech University
Publication Chair: **Yufei Huang**, University of Texas at San Antonio
Local Arrangement and Registration: **Jianping Hua**, Translational Genomics Research Institute
Publicity Chairs: **Ulisses Braga-Neto**, Texas A&M University
   **Seungchan Kim**, Translational Genomics Research Institute and Arizona State University

**PROGRAM COMMITTEE**

**Tatsuya Akutsu**, Kyoto University
**Gil Alterovitz**, Massachussetts Institute of Technology
**Junior Barrera**, University of São Paulo
**Michael Bittner**, Translational Genomics Research Institute
**Xiaodong Cai**, University of Miami
**Yidong Chen**, National Cancer Institute, NCI/NIH
**Paul Dan Cristea**, University of Bucharest, Romania
**Nevenka Dimitrova**, Philips Research
**Simon Godsill**, University of Cambridge, UK
**John Goutsias**, The Johns Hopkins University
**Arjang Hassibi**, University of Texas at Austin
**Robert S. H. Istepanian**, Kingston University, UK
**Ivan Ivanov**, Texas A&M University
**Stephen Marshall**, University of Strathclyde, UK
**Lijun Qian**, Prairie View A&M University
**Gail Rosen**, Drexel University
**Dan Schonfeld**, University of Chicago
**Chao Sima**, Translational Genomics Research Institute
**Anne Stomp**, North Carolina State University
**Qi Tian**, University of Texas at San Antonio
**Xiadong Wang**, Columbia University
**Z. Jane Wang**, University of British Columbia
**Stephen Wong**, The Methodist Hospital Research Institute
**Rui Yamaguchi**, University of Tokyo
**Byung-Jun Yoon**, Texas A&M University
**Xiaobo Zhou**, Harvard Medical School

# IEEE Phoenix Area Consultants Network January Meeting:

# Congress And The Profession: What The IEEE Is Doing For Us

**Date:** Thursday, January 10, 2008
**Time:** Feel free to come around 5:30 and socialize.
          We take dinner orders around 6:30 PM
          Program starts around 7:30 PM
**Place:** Denny's Restaurant
          3315 N. Scottsdale Rd.  (at Osborn)
          Scottsdale, Arizona 85251
**Abstract:**

Congress is half way through its 110th Legislative Session.   Congress ended 2007 with several major legislative initiatives left unfinished, including:

The 2007 budget, which could include $200 billion in programs that benefit technology engineers.
- The most significant change to intellectual property law in the last 50 years.
- High-skill immigration reform and temporary guest worker reform.

Join the Phoenix Consulting Network and IEEE-USA Senior Legislative Representative Russell Harrison to discuss these and other proposed laws.  Better yet, we will discuss effective ways that individual engineers can influence these proposals. Don't get taken by surprise.  Join us on January 10th to learn what's coming and what you can do about it.

**About the speaker:** Russell is the Senior Legislative Representative for Grassroots Activities for IEEE-USA.  He is responsible for helping IEEE members in the U.S. interact with, and ultimately influence, elected officials.  Prior to IEEE-USA, Russell served as a professional lobbyist for the Institute of Scrap Recycling Industries and the American Iron and Steel Institute.  Russell has a BA in Political Science, with minors in History and Communications, from Allegheny College, and a Masters in Public Policy from the University of Maryland.

**For more information, contact Vaughn Treude, [vaughn@nakota-software.com](mailto:vaughn@nakota-software.com), or see the IEEE PACN website, ieeepacn.com.**

# IEEE Computer Society - Phoenix Chapter

*Picnic is Saturday, March 1 at Desert Breeze Park in Chandler, AZ. More details will be available on the IEEE Computer Society website soon.*

**Speaker:  Clark Jones**
**Date:  6:00 P.M., Wednesday, February 6, 2008**
Location: DeVry University,
**2149 West Dunlap Ave, Phoenix, AZ  85021 (1 mile east of I-17 on Dunlap, SE corner of 22nd Ave and Dunlap). Networking will be in the Courtyard (6-7PM with light meal), presentation at 7PM. Free, everyone is welcome. Please tell others about this meeting.**

## Clark's Solar Energy System: A Report on a Real System

All computers newer than the Babbage Difference Engine have at least one common requirement – a power source. Come hear how Clark Jones has approached filling this need in an "environmentally friendly" fashion! The presentation will include:

- an evaluation of the economics, based upon his real-world experience with owning a utility-intertie photovoltaic (PV) system,

- a brief overview of the system,

- actual data gathered from the system and

- a comparison with some other options.

**About the Speaker**

Clark earned a B.S. in Computing and Information Sciences from the University of New Mexico in 1980. He worked for 23 years as an engineer in the semiconductor industry, mostly designing and writing highly-specialized compilers. He has also worked as a factory electronics technician and a broadcast engineer. He "retired" in 2003, and now spends his time on managing his investments in the oil and gas industry, and on his position in Mensa (the "high-IQ society") of Regional Vice Chairman for the Far West Region (meaning he's on the national board of directors of American Mensa).

Clark holds both commercial and Amateur Extra Class licenses from the FCC. He serves on the Board of Directors for a 501(c)(3) organization that, amongst other things, assists other charities with "behind the scenes" work for their fundraising events, helping to raise over $2 million annually.


**************************************************************************

Would you like to be a speaker at this or future meetings? We are always looking for interesting speakers to cover computer related topics. Contact C.Vasquez-Carrera@computer.org  for more information on becoming a speaker today.

For more information about this meeting, contact joy.shetler@computer.org
For more information about Past Meetings, see http://www.ewh.ieee.org/r6/phoenix/compsociety

# Engineering and the Environment Conference and Exhibition

For additional information, contact Michael Andrews, [m.andrews@ieee.org](mailto:m.andrews@ieee.org) , (602) 368-6013

Volunteers are needed to serve on the Organizing and Technical Committees for the first Engineering and the Environment Conference and Exhibition planned for March 2009.

The **ENGINEERING AND THE ENVIRONMENT CONFERENCE AND EXHIBITION** offers engineers and technical professionals the opportunity to:
- Share experience, concepts, innovations and technologies that address various environmental issues
- Demonstrate constructive concern from a global technical community
- Promote public awareness of engineering solutions to environmental issues
- Involve and inspire students, both university level and K-12, by including them in discussions, demonstrations and exposure to emerging technologies
- Provide a public event that will enhance the public image of the engineer and technical professional
- The event that is politically supportive/neutral and represents an untapped, unbiased knowledge base

The **ENGINEERING AND THE ENVIRONMENT CONFERENCE AND EXHIBITION** is designed to provide an opportunity for the engineering and technical community to address environmental issues of concern by the engineering community and design considerations that address sustainability.  The Exhibition will provide an opportunity for organizations to spotlight emerging technologies and create innovative solutions for a number of environmental concerns.

Presentations can be a combination of technical track presentations, forums and tutorials.  The **technical program** would be organized and managed similarly to other IEEE technical conferences with Track/Program Chairs, formal call for papers and refereed papers.  The **forum** will be hosted by the conference with speakers invited based on a specific area of expertise or field of interest.  **Tutorials** would be classroom-based presentations that provide conference attendees and the general public with implementable solutions to specific problems.

## Technical Tracks

- **Energy**
  - Energy conservation, building materials, lighting systems and controls, low voltage, starters, thin film, etc.
  - Renewable power generation, biomass, building materials, fuel cells, geothermal, hydrogen, nanomaterials and nanocells, nuclear, solar, wind, etc.
- **Green Materials**
  - Standards
  - Consumer and Industrial Electronics
  - Building and construction materials
  - Integrated elements
  - Infrastructure elements

- **Impact of Emerging Nations**
  - Use of natural resources
  - Design of new manufacturing and distribution facilities
  - Pollution control systems
  - Regulations and self-regulated development
- **Nanotechnology**
  - Nanotoxicology
  - Nanopollution
  - Nanosensors and control systems
- **Manufacturing**
  - Consumer electronics
  - Emerging economies
  - New manufacturing and distribution facilities, processes and systems
- **Sustainability**
  - Green engineering (process, building and infrastructure improvements)
  - Industrial Ecology (improved operating efficiency and waste reduction)
  - Ecological Engineering (systematic resource restoration)
  - Earth Systems Engineering (mitigation systems)
  - Energy systems
  - Water use, reclamation and reuse
  - Buildings
  - Transportation systems

**<u>Forum:</u>**

In addition to the technical tracks identified, the conference could host a forum(s) that specifically address:

- A specific environmental issue
- National initiatives
- Funded research initiatives
- Transferable or repeatable approaches in manufacturing that positively impact the environment
- Award winning systems

## Attention IEEE Students and Advisors;

It is time to consider the "2008 IEEE Student Paper Contest," and the 2008 IEEE Scholarships Applications.

Paper Contest:
At the Phoenix Executive Committee Meeting on October 2, 2007, we voted to raise the awards for the student paper contest.
The cash awards were raised as shown in the forms to:
1st place: $500
2nd place: $300
3rd place: $100

The due dates established for "The Student  Paper Contest" are:
Written Papers due: March 1, 2008
Oral Presentations: March 15, 2008


Scholarships:
There are two $1000 scholarships available.
The due dates for the IEEE Phoenix Section Scholarships are:
Applications due: December 22, 2007
Selection and announcement: January 2008


Regards;
Jim Drye
IEEE Phoenix Section
Student Activities Coordinator

# IEEE PHOENIX SECTION SCHOLARSHIPS

### Applications Due: December 22, 2007
### Awardees Announced: January 2008

Institute of Electrical & Electronics Engineers

**IEEE Student Member Scholarships**

- For full-time undergraduates who are members of IEEE: approved majors are Electrical/Electronic Engineering, Computer Systems Engineering, Electrical Engineering Technology, Computer Engineering Technology, or Computer Science
- Must attend a university in the Phoenix Section during 2006-07 (*i.e.*, ASU, ASU Polytechnic, DeVry, Embry-Riddle, or NAU)

**Scholarship Application Requirement**

- Application form (attached) with general information and qualifications including:
  - financial aid statement, and
  - one-page personal statement of attainments, interests and goals
- Official transcripts of all college work
- Recommendation letters (optional, but helpful to the selection committee)

For any further Information Please Contact:
   Jim Drye
   jdrye@ieee.org
   (480) 650-8826

Send Completed Application Materials to:
   Jim Drye
   Student Activities Chair
   705 E. Bates St.
   Mesa, AZ 85203

# IEEE PHOENIX SECTION
# SCHOLARSHIP APPLICATION
## (Due: December 22, 2006)

**Applicant IEEE Member No.** _____

**Name** _____ , _____ , _____
                **Last/Family**            **First**            **Middle**

**Home Address** _____
             **Number**       **Street**                   **Apt**

             **City**                        **State**      **Zip Code**

**Telephone No.** ( ) _____    **E-mail** _____

**Social Security No.** _____    **Date of Birth** _____
                                                 **Month/Day/Year**

**Are you an Arizona resident?** ☐ ☐
                                    **Yes**    **No**

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Present School** _____    **GPA (and scale)** _____

**Class (Fr/So/Jr/Sr)** _____    **Academic Probation/ Suspension** ☐ ☐
                                                **Yes**    **No**

**Name of Instructor familiar with your qualifications** _____

                                          **Her/His Telephone** _____

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**College Attending Next Year** _____    **Expected Graduation Date** _____

**College Major** _____    **Specialty within Major, if any** _____

*Please complete pages 2 and 3 (Financial Aid Statement and Personal Statement), <u>And</u> Attach Official Transcripts from Present School/College.*

## 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 2006-2007 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)   $ _____

                **Total Expenses:**    $ _____

Projected Financial Resources

      Education Loans                     $ _____

      Government Grants                $ _____

      Federal Benefits (GI Bill/Social Security/etc)  $ _____

      Scholarships                       $ _____

      Parent and/or Spouse Support      $ _____

      Employment (your job income)      $ _____

                **Total Resources:**    $ _____

I certify that the information in this scholarship application is true to the best of my knowledge.

_____          _____
Signature                                                                          Date

# IEEE ANNOUNCEMENTS

**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).

## IEEE Phoenix Section Student Paper Contest 2008

The IEEE Student Prize Paper Contest offers the undergraduate IEEE Student member opportunities to exercise and improve both written and verbal communication skills. Throughout an engineer's career, (s)he will be constantly called upon to communicate ideas to others. Researching, writing, and presenting a paper provides a student with invaluable early experience in expressing ideas related to engineering. Since the paper contest primary function is to improve the engineering student's communicative skills, no student should be discouraged from entering the contest due to a false requirement of technical sophistication.

This undergraduate student paper contest consists of a written paper and an oral presentation. The written paper should be in the IEEE region 6 standard, which is available at http://www.ewh.ieee.org/reg/6/MemberStudentActivities/IEEERegionalStudentPaperContestGuidelines.doc . (note: I have downloaded a copy and it is attached). Briefly, the type-written papers are 15 pages maximum, double-spaced with 12 pt font. The written paper, as either an MS Word or an Acrobat pdf file, should be emailed to jdrye@ieee.org by 6 p.m. on **March 01, 2008**.

The oral presentations are 15 minutes plus a 5-minute question & answer period. The oral portion of the contest to be held the morning of Saturday **March 15, 2008**, at the ASU Tempe campus in the ASU Memorial starting at 8 a.m. A computer with projector will be provided for the contestants to use, since PowerPoint slides are the recommended approach. The best place to park that day should be the visitor section of Parking Structure 1 which is located near the intersection of Apache Blvd. and Normal St., and which is a short walk to the south of the Memorial Union (see http://www.asu.edu/map/).

The local cash awards for the paper contest winners are (1) First Place – **$500**, (2) Second Place – **$300**, and (3) Third Place – $100. The five judges are IEEE members from local industries.

The top entrant from each Local Student Branch (ASU Main, ASU Polytechnic, DeVry, Embry-Riddle, and NAU) is eligible to present their paper to the IEEE Region 6 Southwest Area contest to be held April 2008 in "Tucson. AZ".

If you have any questions, please contact:

Jim Drye
Student Activities Chair
Phoenix Section

Voice: (480) 650-8826
Email: jdrye@ieee.org

# IEEE Regional Student Paper Contest Guidelines

## Purpose

The IEEE Student Prize Paper Contest offers the undergraduate IEEE Student member opportunities to exercise and improve both written and verbal communication skills. Throughout an engineer's career, he will be constantly called upon to communicate ideas to others. Researching, writing, and presenting a paper provides a Student with invaluable early experience in expressing ideas related to engineering. Since the paper contest <u>primary function</u> is to improve the engineering student's communicative skills, no Student should be discouraged from entering the contest due to a false requirement of technical sophistication.

A. <u>Eligibility</u>

1. The entrant must be an undergraduate student at a school in the Region at which
there is an IEEE Student Branch at the time of entry and presentation at the Branch contest.
2. A Student must complete and submit an application for membership in IEEE prior to entry in the Branch Contest.
3. An entrant may collaborate writing a paper with additional students, all whom meet the above criteria.

B. <u>Number of Entries</u>

1. There shall be no limit of entries in the local Branch contest. If there is only one entry, the Counselor may declare the author submitting the paper the Branch winner.
2. Each Branch normally enters the first place winning paper in the next level contest.
3. No paper may be entered in the Area or Regional contest without the prior approval and certification of the Branch Counselor.

C. <u>Prizes and Travel Expenses</u>

1. The Institute Life Member Fund will provide the funds for the prize money.
2. Additional prize money may be made available at the option of the Chairman of each contest.
3. The schools represented by the winning Regional papers may receive appropriate recognition from their Region.
4. Co-authors shall share equally in the allocation of cash awards.
5. Regional Student Activities Committee budget shall support the Area and Regional contest expenses, including travel, unless other funds are available.

D. <u>Subject Matter</u>

1. Papers should cover technical, engineering, management, or societal aspects of subjects reasonably within or related to the areas with which the author is familiar, either from courses, hobbies, summer work, or other similar experiences.
2. The work need not be original in content since the primary function of the Student prize paper contest is to improve the student=s communication skills. The work should, however, be original in treatment and concise in coverage of the author's contribution to the subject.

E. <u>Written Preparation</u>

1. All papers must be typewritten, double spaced on one side only of eight and one- half by eleven inch paper. An equation or symbol that cannot be typed may be written in.
2. The pages of the paper must be numbered consecutively. The Introduction, Body, Conclusion, Tables, and Diagrams may not exceed 15 pages while the above sections with the Appendices may not exceed 20 pages.
3. In general, the contents of a Student prize paper shall be organized as follows:

# IEEE ANNOUNCEMENTS

(1) <u>Removable fly-leaf page</u>: Since the judges must handle the papers without knowledge of the identity of the author or his school, it is required that the paper itself show no identification other than the title. The <u>title, name of the author</u>, <u>school and Branch Counselor's name</u>, <u>author's IEEE member number</u>, <u>and his current address</u> must be shown on a fly-leaf which can be removed.

(2) <u>Title page</u>: On the title page, only the title of the paper should appear. The title should consist of the minimum number of key words necessary to portray accurately the contents of the paper. Reader interest is stimulated by a well-chosen title. The author's name should **<u>NOT</u>** appear on the title page, nor should any other persons or schools.

(3) <u>Table of Contents</u>: The table of contents should consist of a list of the parts of the paper and the page numbers, in order in which they occur.

(4) <u>Abstract</u>: The abstract should not describe the paper, but should give, in brief, the essential facts of its contents; for example, a brief of the problem or objective and a concise summary of the results or conclusion, touching upon methods or other details only if they are unique or if they are of some particular significance. The abstract should be no longer than 100 words.

(5) <u>Introduction</u>: The introductions should lead to the development of the subject so that the reader may obtain a clear understanding of the significance of the paper or article prepared. This can often be done by briefly giving the state of the art as background and then by bringing out the added advantages of the method of approach and emphasizing the importance of the results or conclusions.

(6) <u>Body</u>: To assist the judges in maintaining objectivity, all mention of the author's name and school should be restricted to a single introductory page. Thus , no mention of the author's name or school should be made in the article. Any references to the author's school should read "the university" without giving the actual name. The main argument of the subject is carried out in the body of the paper, complete with supporting data. The argument should proceed in a logical sequence according to a prepared outline. The writing should be in the third person. Support data and results can be presented most effectively as curves, charts, or tables.

Standard graphical symbols and abbreviations should be used on all drawings. (Ref. Graphic Symbols for Electrical and Electronic Diagrams,  IEEE STD 315.) Well known abbreviations may be used in the text but should be defined where used the first time followed by the abbreviation in parentheses. Generally the use of abbreviations should be confined to tables and illustrations. Illustrations and tables should supplement, not duplicate, text materials; likewise, they should complement, not duplicate each other.

(7) <u>Conclusion</u>: The conclusion are often considered the most important part of a paper. They should be stated concisely in a separate section at the end of the paper. If there are three or more conclusions, better emphasis can be obtained by numbering each conclusion and setting it off in a separate paragraph.

(8) <u>Tables</u>: Generally, each table should be typed on a separate sheet and numbered consecutively using Roman numerals: Table I, Table II. Small tabulations or listings may be made in the text where necessary for continuity. Each table should be titled by giving the brief description as a heading following the table number at the top. Ditto marks should not be used in tabled, but brackets may be used to group information on several lines.

(9) <u>Figures</u>: Figures should be numbered consecutively using Arabic numerals: Figure 1; Figure 2, etc. Three types of figures may be used: photographs, oscillogram, and line drawings. The reading material on illustrations should be kept to a minimum. In short, the reading material should be included in the captions. Portions of the illustrations may be identified by letters and explained in the captions. Whenever feasible, several curves should be combined on the same coordinates. Their identifying letters or numbers should be in clear spaces between cross section lines. Readers generally prefer having the figures distributed through the article, although it is also permissible to bind them together at the end.

(10) <u>Appendices</u>: Detailed mathematical proofs, development of equations and examples which are subordinate to the main argument in the body of the paper, but not essential to following the argument, should be treated in the appendices. Main equations as they are developed should be numbered consecutively, with the number in the right margin. The equations, figures, and tables in the Appendices should be numbered consecutively following the numbers used for the equations, figures, and tables in the text (such as, if table IV were last in the text, table V would be first in the Appendices.)

(11) <u>References</u>: To enable the reader to consult important works used by the author incidental to the preparation of his manuscript and other related literature which might be helpful, a suitable reference list should be appended. References should be numbered consecutively and should follow the form shown below:

For a periodical: R.N. Hall,  Power Rectifiers and transformers, Proc. IRE, Vol. 40, pp. 1515-1518, November 1952.

For a book: W.A. Edison,  Vacuum Tube Oscillators,  John Wiley and Sons, Inc., New York, New York, pp. 170-171, 1948.

For an article: B. Lawrence, B.H. Weil, and M.H. Graham, Making online search available in a industrial research environment, Journal of the American Society for Information Science, pp. 364-369, Nov-Dec. 1974.

4. The Contest Chairman of each contest shall determine the number of copies of each paper that shall be submitted for entry in the contest.

5. Regional winners will receive further information form the Manager, Student Services at IEEE Headquarters concerning the required format of papers for publication in IEEE STUDENT PAPERS.

F. <u>Oral Presentation</u>

1. Fifteen (15) minutes shall be allotted for the oral presentation and five (5) minutes for questions from the audience.

2. The paper contest chairman shall arrange a timing system, with the following characteristics:

(1) A Signal will be given at the beginning of the oral presentation.

(2) A warning signal will be given at the end of thirteen (13) minutes.

(3) A stop signal will be given at the end of fifteen (15) minutes.

(4) The contest should cease talking when the stop signal is given. The contest judges will assess penalties for running overtime.

(5) The contestant will be stopped by the judges at the end of twenty (20) minutes if he continues past the stop signal.

(6) In addition to the fifteen and five minutes periods, the judges shall be given up to ten (10) minutes to complete their evaluations between presentations.

3. Individuals asking questions during the discussion period <u>shall state their name and affiliation</u>. If the audience does not present any questions, the judges should do so. Questions will be stopped at the end of five (5) minutes.

4. Demonstration or display apparatus may **<u>not</u>** be employed as a part of the contest presentation. Visual aids such as slides, placards, charts, view graph pictures and motion picture films may be used.

5. Each contestant is responsible for making arrangements with the paper contest chairman for audio-visual equipment if needed.

G. <u>Judging</u>

1. Papers will be evaluated and judged on the basis of twenty equally weighted judging criteria. Evaluation and judging is based on 55 percent given to the written presentation and 45 percent weight given to the oral presentation. (Note that 65 percent of the judging criteria is related to the

student=s written and verbal skills, emphasizing that the paper contest=s <u>primary function</u> is to improve an engineering student=s communication abilities.)

**Judging Criteria**
**Written Presentation Evaluation**

<u>Form</u> - 35%

| | |
|---|---|
| 1) Concise, informative abstract. | 1 2 3 4 5 6 7 8 9 10 |
| 2) Adequacy of introduction. | 1 2 3 4 5 6 7 8 9 10 |
| 3) Logical development and analytical treatment in the body. | 1 2 3 4 5 6 7 8 9 10 |
| 4) Adequacy of conclusion. | 1 2 3 4 5 6 7 8 9 10 |
| 5) Compliance with paper contest guidelines on format. | 1 2 3 4 5 6 7 8 9 10 |
| 6) Clarity and direction in exposition. | 1 2 3 4 5 6 7 8 9 10 |
| 7) Grammar, spelling, style, and choice of words. | 1 2 3 4 5 6 7 8 9 10 |

Score _____

<u>Subject Matter</u> - 20%

8) Originality of ideas, experimental procedures, processes, results, or conclusions due primarily to this author.  1 2 3 4 5 6 7 8 9 10

9) Originality of analysis, interpretation, restatement of inference based upon the work of others. (If the paper and its contents are entirely the work of the author, enter #8 score into #9.)

1 2 3 4 5 6 7 8 9 10

10) Quality and level of technical,  social, or management content.  1 2 3 4 5 6 7 8 9 10

11) Factual and technical accuracy.  1 2 3 4 5 6 7 8 9 10

Written Score_____

**Judging Criteria**
**Oral Presentation Evaluation**

<u>Form</u> - 30%

12) Organization--has introduction body and conclusions with transitions between each.

1 2 3 4 5 6 7 8 9 10

| | |
|---|---|
| 13) Logical development. | 1 2 3 4 5 6 7 8 9 10 |
| 14) Poise, eye contact, and platform manners. | 1 2 3 4 5 6 7 8 9 10 |
| 15) Grammar, fluency, and choice of words. | 1 2 3 4 5 6 7 8 9 10 |
| 16) Clarity and directness in exposition. | 1 2 3 4 5 6 7 8 9 10 |
| 17) Use of graphic aids. | 1 2 3 4 5 6 7 8 9 10 |

Score_____

<u>Subject Matter</u> - 15%

18) Apparent technical and factual accuracy and grasp of the subject. 1 2 3 4 5 6 7 8 9 10

19) Use of examples and analogies.                                         1 2 3 4 5 6 7 8 9 10

20) Discussion--judges should be prepared to stimulate discussion. 1 2 3 4 5 6 7 8 9 10

Score_____

Written Score_____

Total Oral and Written Score_____

3. Each of the twenty categories will be scored between 1 and 10. Accordingly the following guidelines should be helpful:
      1) Maybe some one should suggest that he change his major.
      2) Did he even think about his point?
      3) Two more tries might have helped.
      4) Needs some polish to smooth the rough spots.
      5) Not bad.
      6) What is expected of someone at this level.
      7) Very Smooth.
      8) The individual must have put special emphasis on the area.
      9) So logical and correct that the words seemed to form in your mind as the contestant spoke or wrote them.
      10) What Moses felt on Mt. Sinai.

4. There shall be five (5) to seven (7) judges. The use of the same judges for both the Written and Oral presentations is optional but encouraged.

5. The judges shall be selected to represent a cross section of various disciplines in electrical, electronics and related fields of engineering. The Section and Regional SAC should be called on to assist in the selection of judges at all levels of the paper contest.

6. The judges should have a record of experience in written and oral communication of ideas

## IEEE Mentoring Connection

IEEE is offering its members the opportunity to participate in an online program which will facilitate the matching of IEEE members for the purpose of establishing a mentoring partnership.  By volunteering as a mentor, individuals use their career and life experiences to help other IEEE members in their professional development.   I believe this program can be a great tool to provide our newest members of our profession guidance in their careers and provide experienced members a chance to hear first hand from the newly graduated about the latest training the next generation is receiving.  This is a program for higher level members and is provided to help ease the transition out of school and into a career.

As a mentee, you lead your partnership by selecting your mentoring partner from among those who have volunteered to serve in this capacity.  I ask that you review the time and effort commitment to the program to ensure a successful mentoring partnership.  Participation in the program is voluntary and open to all IEEE members above the grade of Student Member.

If you are interested, please go to http://www.ieee.org/mentoring for information on the roles and responsibilities of each mentoring partner.  I encourage you to take advantage of the IEEE network of technical professionals or offer your expertise and sign up for the online mentoring program today.

**Who can be an IEEE Mentor?**

IEEE higher-grade members (above Student Member grade) who are, but not limited to:

- Willing to give time and effort to the mentoring partnership (we suggest minimum of two hours per month)
- Able to communicate effectively with others
- Willing to share some career successes and failures
- Individuals who may be or have been executives, consultants, or in middle or upper management, or in research
- Individuals who may be or have been educators, entrepreneurs, or self-employed
- Individuals who may be or have been proven leaders offering inspiration and insight
- Individuals who may be or have been IEEE officers or volunteers
- Willing to review an orientation session to learn guidelines, tools of program and the mentee and mentor's role and responsibilities

**Who can be an IEEE Mentee?**

IEEE higher-grade members (above Student Member grade) who are, but not limited to:

- New professionals in their first or second job, or considering entering graduate programs
- Recent graduates entering the professional workforce for the first time
- Professional making a career move or career change
- Passionate for learning
- Willing to give time and effort to the mentoring partnership (we suggest minimum of two hours per month)
- Willing to identify and clarify their developmental goals
- Interested in learning from another professional "who has been there"
- Willing to participate in mentee orientation session to learn guidelines, and tools of program and their role and responsibilities as a mentee

This program deserves your consideration and doesn't require a large amount of time on your part.  It can provide of great assistance to the next generation of engineers.

Russ Kinner
Membership Chair, Phoenix Section

# RE-SEED
## Retirees Enhancing Science Education through Experiments & Demonstrations

### Overview

RE-SEED (Retirees Enhancing Science Education through Experiments and Demonstrations) is a Northeastern University program that prepares engineers, scientists, and other individuals with science backgrounds to work as volunteers, providing in-classroom support to upper elementary and middle school science teachers with teaching the physical sciences.

After completing a comprehensive free training program, participants volunteer in middle school classrooms on the average once a week for at least one year. RE-SEED began in 1991 with six volunteers. To date close to 500 RE-SEED volunteers have worked in schools in about 100 communities throughout the country offering about 500,000 hours of their time.

Nationally, 75 percent of 7th and 8th grade students are taught physical science by teachers who do not have a major or a minor in the subject (The National Science Board, Science and Engineering Indicators 2000). RE-SEED volunteers possess talent and expertise that complement those of science teachers. They bring with them a wealth of knowledge and experience that allows them to make science interesting and relevant to everyday situations.

RE-SEED volunteers work closely with the host science teachers to help them enrich and implement their school curriculum. Overall the volunteers become involved members of their schools' and even their districts' teaching team, sometimes taking part in curriculum adoption decisions.

Please contact us by email at reseed@neu.edu or phone 888-742-2424; Shelia Kirsch at Sheila.Kirsch@asu.edu and / or Deirdre Weedon, d.weedon@neu.edu. if you are interested in learning more about these training programs.