

IEEE Central Texas Section

# ANALOG NEWSLETTER

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Newsletter of the [Central Texas Section](#) of the Institute of Electrical and Electronics Engineers, Inc.

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## The Chairman's Column

### AS ALWAYS

We continue to work to get you more involved in your professional association. We always welcome your feedback ([John.Purvis@ieee.org](mailto:John.Purvis@ieee.org)). Please let all our leaders know how we are doing and please feel free to make any suggestions or recommendations.

**John R. Purvis, PE**  
**Chairman**

### Central Texas Section:

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As members of the Central Texas Chapter of the IEEE, we have been invited to submit proposals to organize sessions for the IEEE Communications Society 3rd Annual Design & Developers Forum to be held as part of IEEE Globecom 2005 in St. Louis, MO, Nov 28 to Dec 2, 2005.

The success of the D&D Forum depends mostly on sessions organized by key presenters identified and invited by us. Please also consider if you or someone else in your company would like to organize a session.

The deadline for proposal submissions for the D&D 2005 Forum is May 15, 2005. A call for proposals can be found at the following URL:

<http://www.ieee-globecom.org/2005/developers.html>.

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## Chapter Activities: Central Texas Section

### Multi-Chapter Activities

**Event:** 75<sup>th</sup> Anniversary of CTS and Joint Chapters Program in Austin

**Place:** Avaya Auditorium in ACES Building, UT Austin

**Time:** Thursday, May 12, 2005, 6-9 pm

**Program:** **Rodger E. Ziemer** received the B.S., M.S., and Ph.D. degrees from the University of Minnesota in 1960, 1961, and 1965, respectively. After serving in the U. S. Air Force from 1965 – 1968, he joined the University of Missouri – Rolla until 1983, having been promoted through the ranks to Professor. He joined the University of Colorado at Colorado Springs (UCCS) in Jan. 1984 as Professor and Chairman of the Electrical and Computer Engineering Department. In August 1998, he went on leave to the National Science Foundation where he was Program Director for Communications Research until August 2001; he then returned to being a full-time faculty member at UCCS. He has spent intermittent periods on leave or sabbatical to various universities and industrial concerns, including Motorola Government Electronics Group, Motorola Corporate Research Laboratories, Motorola Cellular Infrastructure Group Applied Research Laboratories, University of California at San Diego, and Virginia Technical and State University. He was also Visiting Professor at the Iasi Polytechnic Institute, Iasi, Romania, in May-June, 1993 and 1995. He has published several papers in his areas of research interest, principally in digital communications, and has authored or co-authored several books. He is a Fellow of the IEEE and has served the IEEE in various capacities locally, regionally, and nationally. At

the national level, he was a distinguished lecturer for the Communications Society from 2001 to 2004.

**Abstract:** How do engineers stay current in today's rapidly changing technological world? The answer is to continue their education beyond the formal award of their bachelor's degree. As engineers, our technical knowledge becomes obsolete, it is said, within five years of graduation if nothing is done to renew it. The first part of this presentation focuses on this challenge to us as engineers and discusses ways to meet it. The second part discusses how the IEEE, at the local and national levels, can help in maintaining currency of technical knowledge. Options nationally include conferences and tutorials. At the section level, the options include sponsorship of distinguished lecturers and short course series. IEEE Sections that have sponsored short course series as a continuing education means will be used to provide examples of the types of courses offered. A strategy for determining topics and offering short courses in your section will be presented. The demand for continuing education opportunities will increase as more and more states are imposing continuing education requirements for the renewing of professional engineering licenses. In view of this, the procedure for offering continuing education units (CEUs) through the IEEE is described.

An Abstract of the presentation, Biography of the Speaker and Directions to Avaya Auditorium are available on the following link [http://ewh.ieee.org/r5/central\\_texas/wie/meetings/meeting-centex-wie-050512.htm](http://ewh.ieee.org/r5/central_texas/wie/meetings/meeting-centex-wie-050512.htm).

We look forward to seeing you there!

### **BEST ROBOTICS PLANS FOR 13th ANNUAL GAME, "MISSION TO HUBBLE"**

IEEE partner organization BEST Robotics (Boosting Engineering, Science and Technology) is a non-profit, volunteer organization, whose mission is to inspire students to pursue careers in engineering, science, and technology through participation in an annual sports-like, science and engineering based robotics competition.

The first competition was held in 1993 in Sherman, TX with 14 schools and 221 students. In 2005, over 750 middle and high schools and over 8,500 students will be participating at 30-plus competition sites (called "hubs") in 15 states.

Hubs are run by either college/university engineering programs, corporations, or local organizations or groups that understand the critical need the U.S. has in feeding the pipeline of future engineers. Each sponsoring hub must raise its own funding; it costs \$25,000-\$30,000 to host 24 teams so that schools can participate at no cost.

BEST is seeking participation in the program from IEEE chapters in Region 5 in three ways: (1) serve as mentors for student teams in their area; (2) provide funding support for existing hubs; (3) start a BEST hub in their local community.

For more information, go on-line at [www.bestinc.org](http://www.bestinc.org) or contact BEST at [gettinginvolved@bestinc.org](mailto:gettinginvolved@bestinc.org)

**2006 Region 5 Technical, Professional & Student Conference - Call for Papers:**  
<http://www.2006ieeer5conference.com> - to be held in San Antonio.

**(Joint) Circuits and Systems / Solid-State Circuits Societies**

**Topic:**  
**Meeting:**  
**Cost:**  
**Reservations:**  
**Speaker:**  
**Directions**

For further information, contact Gerald Garcia at [gerald.garcia@ieee.org](mailto:gerald.garcia@ieee.org)

**(Joint) Signal Processing / Communications Societies** [[for more information](#)]

**Topic:**  
**Meeting:**  
**Cost:**  
**Reservations:**  
**Speaker:**  
**Directions:**

**Note that our dinner is now catered, so we will need to be paying for it.**

Cost for Dinner:

- Members with reservation - \$5.00
- Members at door - \$7.00
- Non-members with reservation - \$7.00
- Non-members with at door - \$8.00
- Students – Free! Free! Free!

Please RSVP to Howard Headrick at

The IEEE Communications Society/Signal Processing Society of the Central Texas Section holds technical meetings monthly and various special meetings and conferences throughout the year. Meetings are generally held from 6:30 to 9:00 pm on the third Thursday of each month at the Avaya Auditorium on the University of Texas campus in Austin, TX. More information on our chapter activities can be found by visiting our web site at: <http://www.cts-comsoc-sp.org>

**Computer Society - Austin** [[for more information](#)]

**Topic:**  
**Meeting:**  
**Cost:** Free  
**Reservations:** N/A  
**Speaker:**

**Directions:** [National Instruments, 11500 North MoPac, Building C, room 1S15, Austin, TX 78759](#)

See <http://austin-cs.org/> for detailed directions and for last minute information. This presentation is open to the public.

For more details, see our Society website.

**Computer Society - San Antonio** [[for more information](#)]

**Topic:** May - August - Summer Break  
**Next Meeting:** Thursday, September 15, 2005  
**Cost:**  
**Reservations:**  
**Speaker:**  
**Directions:**

Our Web site <http://www.ieee-cs-cts.org> will be updated during the break.

**Consultant's Network** [[for more information](#)]

**Topic:** Joint Meeting with participating sections of the IEEE

**Speaker:**

**Date:** Thursday May 12, 2005

**Time:** 6 pm

**Location:** Avaya Auditorium, first floor, UT Austin ACE Building

The consultants' web directory has been updated. The directory is to be found at

<http://www.alesu.com/xltrap/ieecons/listzero.htm>

**Electromagnetic Compatibility Society** [[for more information](#)]

**Speaker:**

**Topic:**

**Meeting:**

**Cost:**

**Reservations:**

**Directions**

For more information, see the EMC website (above).

**IEEE EMC Symposium Coming Back to Austin!**

For the first time since 1997, the IEEE EMC Symposium will be returning to the Central Texas area.

The Central Texas EMC Society was recently awarded the 2009 Symposium and the society looks forward to putting on another great event. If you are interested in assisting with this event, please see the website for contact information.

**Electron Devices Society** ([for more information: www.ieee.org/texedc](#))

**Topic:** Noise and Reliability of High-k Gate Stacks

**Speaker:** Zeynep Celik-Butler

**Meeting:** Thursday, May 26, 2005

6:00-6:30pm - Refreshments

6:30-7:30pm - Presentation

**Cost:**

**Reservations:** RSVP to Andy Lin [andrew.lin@freescale.com](mailto:andrew.lin@freescale.com) - Accurate count needed to purchase refreshments.

**Directions:** MER160, Room 2.114 [J.J. Pickle Research Campus](#)

10100 Burnet Road, Building 160, Austin, TX 78758 ([view map](#))

**Best Buy Gift card Drawing at the end of the meeting.**

For information, contact Thuy Dao, [thuybdao@ieee.org](mailto:thuybdao@ieee.org).

**Engineering Management Society** [[for more information](#)]

**Topic:** Joint Meeting with participating sections of the IEEE

**Speaker:**

**Date:** Thursday May 12, 2005

**Time:** 6 pm

**Location:** Avaya Auditorium, first floor, UT Austin ACE Building

For more information on Chapter Activities, please contact Leslie Martinich at 512-423-5121.

**Other Upcoming Engineering Management Events:**

**2005:**

**July 10-13, 2005:** International Professional Communications Conference (IPCC),  
www.ieeepcs.org/conference/limerick, Limerick, Ireland

**July 27-29, 2005:** [6<sup>th</sup> Annual IEEE/UT Engineering Management Conference](#) (Note new dates!)  
Managing in Uncertain Times

CALL FOR PAPERS (IEEE Program Chair, [sprough@austin.rr.com](mailto:sprough@austin.rr.com))

Deadline for papers: March 1, 2005

Notification of acceptance: April 1, 2005

Deadline for final paper version: May 1, 2005

More info: <http://lifelong.engr.utexas.edu/emc/2005/index.cfm>

**Sept 8-10, 2005:** International Engineering Management Society Conference, St. Johns,  
Newfoundland

For information regarding chapter activities (and those wanting to volunteer), contact **Leslie Martinich** ([leslie@competitivefocus.com](mailto:leslie@competitivefocus.com)) (512-423-5121). .

### **Engineering in Medicine and Biology Society**

**Topic:** May - August - Summer Break

**Meeting:** Sometime in September

**Cost:**

**Reservations.**

**Speaker:**

**Directions:**

Our webpage will be updated over the summer.

For further information, please contact Dawn Roberson, 210-458-5520, [robersondj@ieee.org](mailto:robersondj@ieee.org).

### **Graduates of the Last Decade (GOLD)**

**Topic:**

**Meeting:**

**Speaker:**

**Cost:**

**Reservations:**

**Directions:**

For details, contact Julian Anugom <[Julian.Anugom@conexant.com](mailto:Julian.Anugom@conexant.com)> or Kristi Hummel <[khummel@ieee.org](mailto:khummel@ieee.org)>.

For more information, please contact Julian Anugom at [julian.anugom@conexant.com](mailto:julian.anugom@conexant.com).

### **Laser and Electro-Optics Society**

**Topic:** Photonic Crystal Surface Emitting Light Sources for Optical Interconnect

**Speaker:** Dr Weidong Zhou

**Date:** 6 May 2005, 2-3pm

**Location:** Building 160, Microelectronics Research Center  
Room 2.114

J. J. Pickle Research Campus, UT Austin

10100 Burnet Rd., Austin, TX 78758

**Abstract:** As the physical scaling of transistors approaches a few nanometers, new approaches are needed to

ensure continued enhancement in system performance. Photonics is uniquely positioned to enable innovative distributed architectures of otherwise all electronic systems. Optical interconnect technology is capable of removing the electronic interconnect bandwidth bottleneck. However, current photonic technology in the market is not suitable for short distance interconnect applications, where a disruptive technology is needed to build silicon compatible photonic devices with ultra-high density, very low power dissipation, and extremely low cost.

Photonic crystals, as a disruptive nanophotonic platform, hold great promises for revolutionizing the photonic industry with new and innovative micro- and nano-photonic devices, doing for light what silicon did for electrons. In this talk, we will review the recent advances made in the area of photonic crystal surface emitting light sources. We will discuss the design, fabrication and characterization of an electrically injected photonic crystal light emitting device. The future prospects will be discussed in the end with focus on the paths towards high performance silicon compatible light sources.

**Bio:** Dr Weidong Zhou received his BS and ME degrees from Tsinghua University, China, and his PhD from University of Michigan, Ann Arbor in 1993, 1996, and 2001, respectively in Electrical Engineering. As a lead engineer, he worked at CIENA Corporation from 2001 to 2004, working on active photonic components and subsystems from WDM telecommunication systems. Currently Dr Zhou is an assistant professor of Electrical Engineering at University of Texas at Arlington. Dr Zhou's research experience includes areas of semiconductor lasers, detectors and transceivers, with focus on novel transmitter research involving microcavity, quantum dot, and photonic crystals, which lead to ~40 peer reviewed journal publications, conference presentations, and invited/plenary talks.

For information contact Ray Chen [raychen@uts.cc.utexas.edu](mailto:raychen@uts.cc.utexas.edu).

### **Power Engineering Society** [[for more information](#)]

**Topic:** Critical Power Distribution Systems

**Speaker:** Mike Filley of SQ-D

**Meeting:** Tuesday May 24, 2005 (3rd Tuesday)

6:00PM Social

6:30 to 7:00PM Dinner

7:00 to 7:30PM Business Meeting

7:30 to 8:30PM Program

**Cost:** Dinner is \$10.00 – IEEE Members

\$12.00 – Non-IEEE Members

Free for students.

**Reservations:** Please RSVP - if you plan to attend. For further information, please email or contact Stacy Smith at [stacy.smith@austin.utexas.edu](mailto:stacy.smith@austin.utexas.edu)

[\(512\) 232-6103](tel:512-232-6103) or go to our web site at <http://ewh.ieee.org/soc/pes/centraltexas/>

**Directions:** El Gallo Mexican Restaurant, 2910 S Congress, Austin, Texas

**Abstract:** Distribution systems for providing reliable electrical power at industrial facilities, data centers, and telecommunications centers have evolved considerably over the past few years. This presentation will discuss some of the latest distribution systems, their pros and cons, and the difficulties in achieving the “perfect” system – reliable, selective, safe, and cost-effective.

**Bio:** M.N. (Mike) Filley, P.E., is a consulting engineer specialist for Square D Company located in their Austin field office, a position he has held since joining the company in 1994. He provides application engineering assistance to consulting engineers and industrial clients in the Central Texas area. Prior to joining Square D, he was employed with Michelin Tire Corporation for 14 years in various positions, including engineering manager at their plant in Dothan, Alabama, engineering recruitment manager at their North American headquarters in Greenville, South Carolina, international project manager, maintenance manager, and utilities manager for their facilities at Sandy Springs, South Carolina, as well as project electrical engineer for facilities in the Carolinas, Colorado, and Texas. He spent two years in Clermont-Ferrand, France, in international management training, while performing engineering assignments for facilities in France, the

United States, and Nigeria.

For further information, please contact Susan Thompton or Roy Matthews at 512-442-8085 ext 25

### **Product Safety Engineering Society** [[for more information](#)]

**Topic:**

**Speaker:**

**Date:** 6:30 to 8:30pm (NEW: 3th Tuesday of the month)

**Location:** Dell, Inc. Parmer South #4, "Victoria" conference room (off lobby)

We encourage you, others in your organization, or other interested parties to participate in our meetings every month. The PSES meets at Crossroads Systems, 8300 N. MOPAC in Austin, on the third Tuesday of every month except in November/December. A combined monthly meeting is held in early December to allow members and guests to enjoy the Thanksgiving and Christmas holidays. For further information about the PSES, please contact Dale Ritzen at (512) 651-5338.

Chapter Chair: Daniece Carpenter ([daniece\\_carpenter@dell.com](mailto:daniece_carpenter@dell.com)).

### **Women in Engineering** [[for more information](#)]

**Next Meeting:** May 12, 2005

**Program:** Continuing Education Opportunities

**Place:** Avaya Auditorium, ACES Building on UT Campus

**Time:** 6-9pm

**Speaker:** Rodger Ziemer, IEEE Fellow and Chair, Continuing Education Chair for Region 5

Additional details and directions to the center are posted on the WIE website at [http://ewh.ieee.org/r5/central\\_texas/wie](http://ewh.ieee.org/r5/central_texas/wie).

### **IEEE Central Texas Section Student Branches**

The Central Texas Section student branches UT San Antonio (UTSA), St. Mary's and Trinity actively participated in the Region 5 Conference in Denver. These student branches sent ten, six and four students respectively. St. Mary's advisor Dr. Djaffer Ibaroudene also attended. In addition to looking after his students, he was an active participant in the workshop for student branch advisors.

UTSA and St. Mary's had robotic entries to this year's competition which was a warehouse scenario. Each team was asked to build a robot to accept a task over a wireless connection to move four coke cans from one side of the warehouse floor plan to assigned locations on the other side. If a robot successfully completed an assigned task to relocate four coke cans, it was to ask for another task. The challenge was to accrue the most points relocating the coke cans within a fixed period of time.

Because this was more challenging than prior robotics competitions, only 23 teams submitted entries, down from over 40 in past years. The wireless modem communication component presented great difficulty: half the teams were disqualified because they could not establish wireless communication with the dispatcher to receive and execute a task. The teams from St. Mary's and UTSA did not make it into the top five to advance to the second round, but St. Mary's was recognized for having the most innovative design and was given an award at the Saturday night banquet.

Trinity and St. Mary's University entered teams into the Design contest. Trinity placed third and was

recognized at the Saturday night awards banquet. All three branches, especially the large officer turnout from UTSA, participated in all day student leadership forum and workshops.

UT Austin did not send any teams to Region 5 because of the distance and participation in other competitions. However, they did enter their website into the Web Page Contest and placed third.

The resourcefulness of the student branches in arranging their transportation and selecting their lodging really made these funds go far which proved fortuitous. A major blizzard struck Saturday night and stranded everyone from departing on Sunday. There were sufficient funds left over in the budget line to cover the unexpected expenses of staying extra days.

The Region 5 Conference was a great success and benefit to the student branches. The travel funds by the Section made this possible and the student branches are most appreciative of that. And they are already looking forward to fully and actively participating in next year's Region 5 Conference which will be at UTSA in San Antonio. No blizzards are expected!

For information on events, click on the [for more information] links below:

**St. Mary's University – San Antonio** [[for more information](#)]

**Trinity University – San Antonio**

Contact Faculty Advisor: Farzan Aminian, Email: [farzan@engr.trinity.edu](mailto:farzan@engr.trinity.edu)

Branch President: Brandi House, Email: [Brandi.House@Trinity.edu](mailto:Brandi.House@Trinity.edu)

**University of Texas at Austin** [[for more information](#)]

**University of Texas at San Antonio** [[for more information](#)]

## Upcoming Local Conferences

**2005 IEEE Rural Electric Power Conference (REPC).** This conference will be held 08 May - 10 May 2005 at the La Mansion del Rio Hotel in San Antonio, TX. Conference website: <http://www.ieeerepc.org/>

**2005 IEEE International Electric Machines & Drives Conference – (IEMDC).** This conference will be held 15 May - 18 May 2005 at the Hilton Palacio Del Rio in San Antonio, TX. Check the IEEE conference website for more details.

**2005 IEEE Electrical Performance of Electronic Packaging (EPEP).** This conference will be held 24 Oct - 26 Oct 2005 at the Radisson Hotel & Suites in Austin, TX. Conference website: <http://www.epep.org/>

**2005 IEEE International Test Conference (ITC).** This conference will be held 08 Nov - 10 Nov 2005 at the Austin Convention Center in Austin, TX. Conference website: <http://www.itctestweek.org/>

**2006 World Congress on Information Technology Brings Legacy to Texas.** The World Congress on Information Technology (WCIT 2006) accepted the official crystal from WCIT 2004 symbolizing Austin, Texas, as the next official host of the 15th World Congress. The World Congress,

which will be held in Texas **May 1-5, 2006**, will attract an estimated 2,000 global leaders from business, government and education to discuss IT policy, direct the future of technology, and drive social and economic development.

<http://click.austinxl-mail.com/sp/t.pl?id=926096:371346593>

## Other Important Events and Notes of Interest

### Opportunities for the new CEU requirements for PEs

#### ENGINEERING ETHICS SHORT COURSES

*one-hour ethics courses are held in Austin, Texas*

CEUs: 0.1

<http://www.UTclee.org>

June 2, 2005

September 1, 2005

November 3, 2005

*Editor's Note:* There were more listed, but they were later in the year – check the website to get more details of those later in the year - dr

### ***More IEEE Information:***

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**THE INSTITUTE:** can be found at <http://www.ieee.org/theinstitute>

#### **IEEE Member Benefit:**

IEEE Members access the world of technology. Search more than 1,100,000 documents in IEEE Xplore. Subscribe to IEEE Society publications at low, member-only rates. Purchase papers online for just \$13 each -- or save even more when you subscribe to the IEEE Member Digital Library.

Get the most from your IEEE membership -- find out how today:

<http://boldfish.ieee.org/u/market8+/04196044>

**[IEEE-USA NEWS & VIEWS](http://www.ieee.org/news) : IEEE Career-Building Resources: \*BOOKMARK THIS SITE\*: For career-building resources, including articles and product and service notices, visit IEEE-USA's CAREER NAVIGATOR at: <http://ieeusa.org/careers/>.**

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## Central Texas Section Editor's Notes

The goal of this newsletter is to provide the more than 4700 members of the Section with up-to-date and meaningful information. We welcome contributions and suggestions that will improve the newsletter. Please contact the editor, Dawn Roberson at [robersondj@ieee.org](mailto:robersondj@ieee.org) if you have any thoughts or suggestions. The deadline for submission is the 25th of the month.

The purpose of this Email list is to send notices of general interest to our Section IEEE members.

If you chose to subscribe, please send an Email to: [Majordomo@majordomo.ieee.org](mailto:Majordomo@majordomo.ieee.org) with "Subscribe cts-section" in the body of the Email message.

If you chose not to receive these messages, please;

1. Address an e-mail message to [listserv@listserv.ieee.org](mailto:listserv@listserv.ieee.org)
2. Put the following in the body of the message: signoff cts-section
3. Do not include your name or e-mail address in the body of the signoff message. The message should be sent from the mail client you use to subscribe to the list