# **IEEE Central Texas Section**

# ANALOG NEWSLETTER

Volume 49-12	De	cember 2005	
Newsletter of the <u>Central Texas Section of</u> the Institute of Electrical and Electronic			
Engineers, Inc.	<ul> <li><u>Section Activities</u></li> <li><u>The Chairman's Column</u></li> <li>Chapter Activities: Central Texas Section</li> </ul>		
Published monthly (Deadline for inclusion	<ul> <li><u>Chapter News</u></li> <li>E week</li> </ul>		
is the 25th day of the previous month). Dawn Roberson, Editor, (robersondj@ieee.	Important Events		
org). Have a question or comment? <u>Contact</u> us.	<ul> <li><u>Continuing Education</u></li> <li>PE Exam Review</li> <li><u>Student Branches</u></li> </ul>		
4. Local Conferences	2. Chapter Activities		
Call for Papers: 7th Annual IEEE-UT EMC 2006: The Role of Technology in our Economy. Conference will be Aug 10-11, but abstracts are due 15 Jan 2006. Conference website: <u>www.ieeeUTemc.org</u> for more details.	<ul> <li>Multiple Chapters</li> <li>Joint Signal Processing/Communications Society</li> <li>Joint Circuits and Systems/Solid-State Circuits</li> <li>Computer Society - Austin</li> <li>Computer Society - San Antonio</li> <li>Consultants Network</li> <li>Electromagnetic Compatibility Society</li> </ul>		
2006 Region 5 Technical, Professional & Student Conference - Call for Papers: <u>http://</u> www.2006ieeer5conference.com to be held in San Antonio.	<ul> <li><u>Electron Devices Society</u></li> <li><u>Engineering in Medicine and Biology</u></li> <li><u>Engineering Management</u></li> <li><u>Graduates of the Last Decade</u></li> </ul>		
estimated 2,000 global leaders from business,	<ul> <li>Laser and Electro Optics Society</li> <li>Power Engineering Society</li> <li>Product Safety Engineering Society</li> <li>Women in Engineering</li> <li>Editor's Notes</li> </ul> 3. IEEE Info <ul> <li>Virtual Museum</li> </ul>		
government and education to discuss IT policy, direct the future of technology, and	<ul> <li>Database offers examples of Pre-University Education Activities</li> </ul>		

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drive social and economic development. <u>http://</u> <u>click.austinxl-mail.com/sp/</u> t.pl?id=926096:371346593

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Conferences affected by the Hurricanes of 2005

## IEEE PES Transmission & Distribution

**Conference & Exposition.** The IEEE Power Engineering Society Governing Board has come to the conclusion that the most reasonable course of action is to postpone the meeting until Spring 2006. Check the conference website for details.

5. Presentations of Interest

#### UTSA Invited Talk Series: Computer Information Assurance and Security

Title: On the Establishment of Distinct Identities in Overlay Networks Speaker: Rida Bazzi, Associate Professor Affiliation: Arizona State University When: Dec. 8, 2:00-3:30PM Where: SB 4.01.28 (CS Conference Room) \*\*special arrangement\*\* RSVP: none required (open to public) For more info: <u>http://www.cs.utsa.edu/research/</u> seminars.shtml

Title: Language-based Information Security
Speaker: Steve Zdancewic, Assistant Professor
Affiliation: University of Pennsylvania
When: Dec. 15, 2:00-3:30PM
Where: BSB 3.03.02
RSVP: none required (open to public)
For more info: <u>http://www.cs.utsa.edu/research/</u>
seminars.shtml

#### Should you become a Licensed Engineer

I have been approached numerous times about becoming licensed, and have always wondered why I should. I asked John Brogan, a local City Public Service PE why, and he forwarded this article to me, and I thought I would share it. Nex month I will include HOW to become one - the editor.

,	US.	Energy	Dept.	Seeks	Nominations	for E.O.	Lawrence Awards

• <u>Member Portal</u>

## 4. Local Conferences

• Conferences affected by hurricanes Katrina and Rita

2006:

- IEEE Region 5 Technical, Professional and Student Conference
- World Congress on Information Technology

## 5. Presentations of Interest

## 1. Section Activities

#### Chairman's Column

### Thanks to you all!

My two year term as Chair of the Central Texas Section is rapidly drawing to a close. I want to thank all of the volunteers that have aided me with the many administration tasks for the Section. Without the willingness of many to donate their valuable time, the operation of your Section and Society Chapters would not be possible.

## Election of Officers

A new term for Section officers begins on January 1, 2006. Please cut and paste the following ballot and indicate your vote for our Section officers. You may either send it to me in email (John.Purvis@ieee.org) or to my home via snailmail (1405 Lime Rock, Round Rock, TX 78681). Please include your IEEE member number on any ballots sent in by snailmail.

A full slate of officers has been nominated for the Section, but you are free to include write-in candidates as well. Short bios of the nominees are in the left hand column of this newsletter, farther down.

r	Voter Data		
	IEEE member #	Name	
<u>1/</u>	Section Chair Clif Denny (Write in) Section Vice-Chair Austin Sherry Gillespie (Write in)		
er?	Section Vice-Chair San Antonio Garrott Polhamus (Write in)		
l ty	Section Secretary Oscar Moreira-Tamayo (Write in)		-
lext e	Section TreasurerScott Atkinson (Write in)		
	Ballot		

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"An engineering license allows Texas Professional Engineers to legally represent themselves to the general public as an engineer, offer consulting engineering services to private and public entities, and perform engineering design or construction on public works. Licensed engineers must also adhere to the code of ethics and professionalism established by the board."

Most engineers look at the above statement put out by the Texas Board of Professional Engineers and say "That is just for civil engineers and I do not need a license for the field that I am in."

In this time of economic downsizing, companies begin looking at the credentials of each of their employees. To be a licensed "Engineer" would be a plus on your resume and could help you retain your job.

In the future, you might choose to go into private practice in your profession. If so, one of the biggest sources of income could be from public works contracts. Again having a PE license would be a requirement.

The best way to get licensed is to take the exams in the first few years following college graduation. If you take the exam route you can easily become licensed in other states. However, if you wait until later in your career, Texas still allows a non-exam route for licensure, but you will be prevented from obtaining licenses and practicing in other states.

By becoming licensed, you answer the question of being a "Professional" in your field and the State of Texas recognizes you as such!

IEEE Activities and Links Your IEEE Calls for Papers IEEE Xplore What's New at IEEE IEEE Standards Association

## Top Jobs for 2005-2009 - High Tech not Dead!

Fast Company magazine recently published an article (http://www.fastcompany.com/articles/2005/01/top-jobs-main.html) projecting their view of the top jobs for 2005 thru 2009. In spite of the recent trends in the engineering/computer industries, Fast Company has identified the following jobs as "top jobs" over the next four years: Computer Software Engineer, Environmental Engineer, Biochemist and Biophysicist, and Computer System Analyst.

#### Holiday Wishes

Last, I want to extend to you all my wishes for a happy holiday season!

As always, we look to you, the members, for feedback. If you have any questions or comments, please contact me at John.Purvis@ieee.org.

John Purvis III, P.E. Central Texas Section Chair

#### Spring Planning Meeting - Mark your Calendar!

All Section and Chapter Officers are invited to attend the Spring Planning Meeting to be held January 28 at the Quality Inn in San Marcos from 9-3. For more details contact your Vice-Chair.

### Chapter News

#### Congrats!

Congratulations to the new IEEE USA President-Elect, John Meredith. His name might sound familiar as he is our past R5 Director. He takes office on January 1, 2007. The new R5 Director Elect is David J. Pierce, who also takes office on January 1, 2007.

## Sad news

Howard F. Headrick, Jr., age 58, of Austin, Tex., born April 15, 1947, at Poplar Buff, Missouri died a tragic death November 6, 2005. Howard impacted many lives, and we are deeply saddened by his loss. Howard served as chairman of the IEEE Charter in Austin, Tex., for many years and was CEO of his own company Austeltec, Inc., located in Austin, Tex. Mr. Headrick had 30 years of technical engineering experience and worked throughout the U.S. as well as internationally. He was well known by many influential people, investment banking firms and Wall Street. Prior to CEO of his own company, Mr. Headrick worked with and for large telecommunications corporations- SBC, and Lucent. Howard was a powerful successful business man who loved children and little animals and donated his own funds numerous times to fund young upcoming engineers throughout his business career and life. Funeral services were held at St. Martin De Porres Catholic Church in Dripping Springs, Tex. Our condolences go out to his mother.

## Senior Members

The Central Texas Section has, over the past several years, hosted programs to support members in upgrading their membership to Senior Member. The IEEE Senior Member Grade is a professional recognition for technical and professional excellence. The CTS wishes to acknowledge the following members who have been upgraded to Senior Member during 2005. For more information regarding IEEE membership upgrades please see, <u>http://www.ieee.org/</u>organizations/rab/md/smprogram.html. Watch the Analog for notice of the next CTS Senior Member Event.

Melba M. Crawford, Dimitrie C. Popescu, Charles L. Ramiller, Teresa L. McLaurin, Michael G. Khazhinsky, Jie Su, Rino Choi, Seung-Chul Song, Jun Yu, George Gao, Carlos Gonzalez-Perez, Steven Guccione, Carl Kessler, Rias Muhamed, Zhibo Zhang, Jun Cheng, Derek Chiou, Byoung Hun Lee, Robert J. Wenzel, Kisik Choi, Thuy B. Dao, Turker Kuyel, Michael J. Shapiro, Leslie Martinich, Lorenzo Alvisi, Jerry Dykstra, Edward Comer, Li-Da Huang, Scott Brookhart, Jason A. Beens, Ravi Srinivasan, Michael K Smith, Luther Hendrix, Mohana R Mullapudi, Daniel Kadosh, Mark Maynard, Gregory A. Hall, Chen He, Jim Chan, Nur A. Touba, Charlie Wiemann, Flora Ip, Wesley Mokry, Feiyi Wang, Mike Noth, Reza Alaghehband, James Da, Steve Crowl, Matt Felder, Kevin G. Smith, Larry Brown, Mootaz Elnozahy, Leo M. Higgins III, George Lattimore, Rick Talbot, Mark Wuthnow ,John O'Brien, David C. Aldrich, Wayland Lou, Steven L Watkins, Joe Gallio, Jeff Eversmann, Steve Kanetzky, Larry Gilbert, M. J. Callahan, John Dedes, John Krause, Kurt Feiste, Robert Wu, Harry Fair, William Flannery, Bapi Surampudi, David Costello, Robert Martin.

(editor's note: These names are listed in order of promotion to Senior Member, not alphabetically.)

E week

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About the IEEE The Spectrum IEEE-USA	E Week for 2006 is late February. These local activities are planned. Wednesday Feb 22 Student Breakfast Thursday Feb 23 Past Presidents Luncheon Friday Feb 24 Golf Tournament
To contribute information to this	Saturday Feb 25 Skeet Tournament
electronic newsletter, please send it by	Saturday Feb 25 Engineers Week Banquet in the evening.
e-mail to robersondj@ieee.org.	If you would like to participate, contact Ed Pruske at ed.pruske@psiusa.com.
	Continuing Education
Bios for CTS Board nominees	Software Project Management Certificate Program (online or onsite) • ongoing
Chair: Clif Denny	PE Exam Review
Clif Denny manages WAN and LAN	Test Masters' review course and workshops in San Antonio, TX for the April 2006 Electrical Principles and Practice Exam
Infrastructure Operations for USAA, a Fortune	Texas engineers that have inquired about the Test Masters' Electrical PE prep course have come to the realization traveling to Houston is inevitable. That is
250 contact center intensive financial services	until now. The course has been offered in other cities in the past. I am currently in the process of trying to recruit electrical engineers willing to commit to
organization. Clif is an IEEE Senior Member	taking the course and workshops in San Antonio for the April 2006 Principles and Practice exam. Anyone willing to commit to both the course and
and a member of Communications Society	workshops, please contact me (Dana Cutter) at <u>DCutter@CPSEnergy.com</u>
since 1981. He is currently the San Antonio	
Vice-Chairman of the Central Texas Section.	
He has served as Section Treasurer, Chairman	Student Branches
for the Communications/ Signal Processing	
Society Chapter and served as the Tutorial	St Mary's University - San Antonio (for more information)
Chairman for the 2001 IEEE GlobeCom	Faculty Advisor: Djaffer Ibaroudene, Email: dibaroudene@stmarytx.edu
Organizing Committee. Clif graduated with a	
BSEE from The University of Texas in 1983.	Trinity University - San Antonio
Vice-Chair – Austin: Sherry Gillespie	Faculty Advisor: Farzan Aminian, Email: farzan@engr.trinity.edu
Sherry Gillespie is currently a Technology	Branch President: Brandi House, email: <u>brandi.house@trinity.edu</u>
Management Consultant. Her career in the	
semiconductor industry has included positions	University of Texas at Austin (for more information)
as director of External Research at Motorola in	
Austin and manager of Advanced Technology	University of Texas at San Antonio (for more information)
at IBM in New York and Vermont. She served	Faculty Advisor: Yufang Jin, Email: Yufang.Jin@utsa.edu
on the Board of Directors of the Semiconductor	r dearly ridvisor. Turang sin, Emain. <u>Turang sin e districtuu</u>
Research Corporation for 5 years and on the	Bask to Oswtowto
Technology Strategy Committee of the	Back to Contents
Semiconductor Industry Association. She has	
provided consultations for the U.S. Dept. of	
Defense and for an NSF Research Center at the	
University of Texas. She also served as a	2. Chapter Activities
review panelist for the Texas Higher Education	
Coordinating Board in the areas of	Multiple Chapters
microelectronics and telecommunications. She	
holds a Ph.D. in solid state physics and has a U.	Joint Technical Meeting with the Computer Society - San Antonio, and Systems, Man and Cybernetics Society
S. patent and over 40 publications. She is	
currently Vice-Chair, Austin for the Central	Topic or Presentation Title: Distributed Intelligent Systems: Technologies and Applications
Texas Section and Chair of the Women in Engineering chapter Sherry is a Senior	Speaker: Prof. William A. Gruver, Simon Fraser University Burnaby, BC, Canada
Engineering chapter. Sherry is a Senior Member of the IEEE.	(Editor's Note: Prof Gruver is the current President of the Systems, Man and Cybernetics Society)
MEMORI OI UIE IEEE.	Date and Time: Thursday, Dec 9, 2005
Vice-Chair – San Antonio: Garrett	6:30 p.m Networking; 7:00 p.m Dinner; 8:00 p.m Program
	<b>Cost:</b> \$10 members/ \$2 students/\$13 non-members
Polhamus	1

Garrett Polhamus is the Chief, Directed Energy Bioeffects Division, Air Force Research Laboratory, Brooks City-Base, Texas. He directs, manages, and administers basic and applied research, and advanced technology development programs in optical and radio frequency radiation bioeffects. During his career he has served as an officer in the US Air Force and was with the Northrop Grumman Corporation as a Program Manager and Technical Fellow. He has served as a review panelist for the Texas Higher Education Coordinating Board, and is currently on the External Advisory Committee for the Biomedical Engineering Department of the University of Texas at Austin. He holds a Ph. D. in Biomedical Engineering and is a licensed P.E. in the great state of Texas. Garrett is a senior member of the IEEE, and is currently the Treasurer for the Central Texas Section, and an Executive Committee member for the Engineering in Medicine and Biology Chapter.

#### Secretary – Oscar Moreira-Tamayo

Oscar Moreira-Tamayo is an Assistant Professor in the Electrical and Computer Engineering Department at the University of Texas at San Antonio. A recent transfer to the Central Texas Region, he moved here from Dallas, where he was a Design Engineer of analog and mixed signal ASICs for Texas Instruments. He has published in professional journals and refereed conferences. He received his PhD at Texas A&M University. In Dallas, he was a committee member for the IEEE Circuits and Systems Society, and Vice Chair in 2000 and 2001, and Treasurer during 2002 and 2003.

#### Treasurer: T. Scott Atkinson

Mr. T. Scott Atkinson has 35+ years of experience in telecommunications and information technology. Positions held include engineer, consultant, consulting engineer, department manger, corporate officer and executive management. As a consultant his clients span the entire range of Fortune 500 companies as well as telephone companies. His work experience includes systems design, engineering, capacity planning, computer programming, disaster recovery planning and network planning for government, private enterprise and the telephone industry. He has

Reservations: Required by Monday, Dec 7, 2005, to Yu Zhang, yzhang@cs.trinity.edu or (210) 999-7399. Meeting Location: Skyline Room, Coates Center, Trinity University, San Antonio, TX. Directions: Please note that we have parking instructions on the Web site. The Alamo Stadium parking is reserved for Alamo Stadium Event parking. Please check out the instructions at http://www.ieee-cs-cts.org/meeting\_details.htm for the parking by Laurie Auditorium. More information on the program is available at our Web site http://www.ieee-cs-cts.org. The meeting is open to the public. Joint Signal Processing/Communications Society [for more information] Topic or Presentation Title: Speaker: Date and Time: Cost: Reservations: Meeting Location: Directions: Joint Circuits and Systems/Solid-State Circuits (New Organizational Meeting!) **Topic or Presentation Title:** First Organizational Meeting Speaker: Date and Time: December 13 at 6:30pm Cost: Reservations: Meeting Location: Pok-e-Jos on 5th Street in Austin. Directions: Subsequent meetings will be held the 2nd Tuesday of every month at 6:30pm at Pok-e-Jos. For further information, contact Mike Seningen at seningen@ieee.com Computer Society - Austin [for more information] Topic or Presentation Title: Beyond the System Shall - A Journey from Good to Great Requirements **Speakers:** Jerry Aubin and Joe Shideler Date and Time: December 7, 2005, 6:30 pm Cost: Free

Reservations: None required Meeting Location/Directions:National Instruments, 11500 North MoPac, Building C, room 1S15, Austin, TX 78759

**Summary**: Today, only a small percent of IT projects succeed while the rest significantly under perform or fail outright. Seilevel will begin the presentation by delving into the statistics behind this statement and then move on to discuss how poor software requirements are a primary reason. The presenters will explore the root causes behind the problem and then provide suggestions as to how companies can improve the situation.

A key insight is the notion that requirements engineering will never be a one-size-fits-all discipline. Success requires that companies not only find the right people and give them the appropriate resources, but also allow them to develop and apply a varied set of tools for meeting disparate software requirements challenges. Of these tools, perhaps none are more important than the set of models that can drive completeness and clarity into software requirements specifications. The presentation will close with an overview of these models including examples of use cases, state diagrams, decision trees, and others.

Speakers Bios: The presenters for this event are Jerry Aubin and Joe Shideler - product managers at Seilevel who are working hard to push the envelope of

and networks for large multi-billion organizations. Mr. Atkinson is a Life Sr. Member of the Institute of Electrical and Electronic Engineers (IEEE), and has held the Certified Business Recovery Planner (CBRP) from the Disaster Recovery Institute (DRII). Mr. Atkinson holds a B. S. Degree in Physics from Texas A&M University Kingsville and a Masters of Business Administration Degree from Pepperdine University. He has held many positions in the IEEE including chapter officer, Section Officer, Region Membership Chair, and Society Board of Governors over his 40+ years as an IEEE member.

developed business and technology applications requirements definition. As practitioners who have worked on some of Seilevel's clients' most mission critical applications, Jerry and Joe bring a practical and networks for large multi-billion organizations. Mr. Atkinson is a Life Sr. Austin, Texas, with a simple mission – to redefine the way companies create software requirements.

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

Computer Society - San Antonio [for more information]

Joint Technical Meeting with the Systems, Man and Cybernetics Society

Topic or Presentation Title: Distributed Intelligent Systems: Technologies and Applications
Speaker: Prof. William A. Gruver, Simon Fraser University Burnaby, BC, Canada
Date and Time: Thursday, Dec 9, 2005

6:30 p.m. - Networking; 7:00 p.m. - Dinner; 8:00 p.m. - Program

Cost: \$10 members/ \$2 students/\$13 non-members
Reservations: Required by Monday, Dec 7, 2005, to Yu Zhang, yzhang@cs.trinity.edu or (210) 999-7399.
Meeting Location: Skyline Room, Coates Center, Trinity University, San Antonio, TX.
Directions: Please note that we have parking instructions on the Web site. The Alamo Stadium parking is reserved for Alamo Stadium Event parking. Please check out the instructions at <a href="http://www.ieee-cs-cts.org/meeting\_details.htm">http://www.ieee-cs-cts.org/meeting\_details.htm</a> for the parking by Laurie Auditorium.

The meeting is open to the public.

Consultants Network [for more information]

Topic or Presentation Title: Plug-In Hybrid Electric Vehicles, the near term solution
Speaker: Fred Blood
Date and Time: December 8, 2005, networking at 6:00 pm
business and program from 7:00 pm to 8:30 pm
Cost:
Reservations:
Meeting Location: China Star Restaurant, 6134 Hwy 290 E, Austin TX
(North side of 290E, east of IH 35)

Directions:

Abstract: ● PHEVs use the same technology as the popular hybrids on the road today, but have a larger battery that can be recharged by plugging into a standard home outlet. ● A hybrid gets about twice the fuel economy of a conventional car. A plug-in hybrid gets about twice the fuel economy of a hybrid. ● An "electric" gallon of gas will cost 70-80 cents at prevailing electric rates versus the \$3.00 national average gasoline price.

PHEVs outfitted with a battery pack providing a 40-mile electric range could power, using the all-electric mode, more than 60% of the total annual miles

traveled by the average U.S. driver.

• The electric infrastructure is in place and available. Over 40% of the generating capacity in the U.S. sits idle or operates at reduced load overnight, when most PHEVs would be recharged. Our power system could charge tens of millions of PHEVs without requiring new plants.

• Wind generated electricity is produced most readily overnight, providing a perfect fit between PHEVs and pollution-free generation.

• Prototype PHEV sedans and SUVs exist today. Among others, Daimler Chrysler has developed a prototype PHEV commercial van, with testing planned by the end of 2006

**Speakers bio:** Mr. Blood is an environmental scientist with special expertise in hazardous materials. He has managed large multi-disciplinary studies ranging from environmental impact statements for coal mines and synfuel plants to assessments of *Superfund* hazardous waste sites. He founded and managed a consulting company, which provided environmental services to private, public and industrial clients. As an Environmental Toxicologist, Mr. Blood

specialized in toxic materials in buildings, including indoor air quality, lead, asbestos and environmental site assessments.

He is the City of Austin's *Sustainability Officer*, working at Austin Energy. His citywide environmental responsibilities include reducing ground-level ozone, high-performance building initiatives, resource conservation, and the Urban Heat Island Mitigation Initiative.

Since 2001 he has participated heavily in the Austin/Round Rock Early Action Compact, a local voluntary approach to the 8-hour ozone standard. He earned his baccalaureate in General Science in 1969 from Virginia Tech; his 1974 Master of Science in Biology from Virginia Commonwealth.

The consultants' web directory has been updated. The directory is to be found at http://www.alesu.com/xltrp/ieeecons/listzero.htm

Electromagnetic Compatibility Society [for more information]

Topic or Presentation Title: Speaker: Date and Time: Cost: Reservations: Meeting Location: 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]

Notice new meeting location! Topic or Presentation Title: Speaker: Date and Time: Cost: Reservations: Meeting Location: Room 3-D SEMATECH 2706 Montopolis Dr., Austin, TX 78741

Directions: <u>http://www.sematech.org/corporate/map.htm</u>

Entry Directions: The visitor lobby is open until 6pm. Anyone arriving before 6 can go there to sign in. Park in the second parking lot on the right and enter near the flag pole, north side of building in the middle. After 6pm, everyone needs to enter through the east lobby. Park in the first parking lot on the right and enter through the door with the ATDF sign over it. **Refreshments: 6pm - 6:30pm** 

Engineering in Medicine and Biology {for more information]

Topic or Presentation Title: Modeling of Biological Systems on Different Levels of Scale: The Relative Benefits of Lateral vs. Vertical Integration of Models
Speaker: John W Clark, Jr., Rice University
Date and Time: Wed, December 14, 6:30 networking, 7:00 dinner, 8:00 presentation
Cost: \$10 members/ free students/\$15 non-members
Reservations: RSVP to Garrett Polhamus

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Meeting Location: Conference Room at the University of Texas Health Science Center Research Imaging Center (RIC), 7703 Floyd Curl Drive, San Antonio. Directions: <u>http://ric.uthscsa.edu/maps/body.html</u>

**Abstract:** This talk will be restricted to differential equation models of biological systems. Examples will be given of modeling at the cellular and tissue level of scale, as well as at the organ level. These examples will be taken primarily from the cardiac, cardiovascular and pulmonary areas of research, and will hopefully serve to represent the general thrust of modeling interests today. We propose that quantitative modeling has potential importance for the interpretation of complex biological data, and can often provide biophysically based explanations of observed phenomena encountered in clinical medicine.

**Speakers Bio:** Professor John Clark has been involved in bioengineering for more than 30 years. His work has spanned many topics, all with the use of modelling as a means to develop understanding of the systems involved, in order to advance therapeutic and monitoring technologies. He and his colleagues have devloped systems models for whole-body cardiovascular physiology while his current research has dropped down to the cellular scale with modeling of cardiac and neuron processes. Professor Clark is one of the leaders in bioengineering, a past president of IEEE-EMBS, and plays an active leadership role in professional bioengineering.

We have an exciting Spring planned.

Jan 11: C. Mauli Agrawal - Interim Dean, College of Engineering and Biomedical Engineer Feb 16: Mary Lou Fink - Joint Meeting with CS-SA, WIE and EMBS at Trinity

For further information, please contact Dawn Roberson, 210-458-5520, robersondj@ieee.org.

#### Engineering Management [for more information]

Topic or Presentation Title: No meeting in December. Speaker: Date and Time: Cost: \$15 includes your choice of 7 dinner entrees, coffee or tea Reservations: RSVP to: lmartinich@ieee.org

Meeting Location: El Gallo Restaurant, 2910 S. Congress, Austin

#### **Other Upcoming Engineering Management Events:**

In January, we'll begin our three-part series on <u>New Product Development: From Concept to Cash</u>. This series, offered in conjunction with <u>PDMA</u> and <u>PMI</u>, will provide you with a both insights and the process for delivering new products. One of the most important tasks facing engineering managers is leading the efforts to deliver new products or services. To help our Central Texas members, we plan a three-part series, offered in collaboration with other organizations, on *the process of delivering new products*.

For the purpose of illustration, we will focus on the hardware industry, although the process extends to other domains as well.

January 24, 2006 *Scanning the horizons*: what industry and technology changes are affecting the future? The important first step is to look outward and *assess TRENDS* that will impact your future business.

February 28, 2006 *Charting your course: selecting the right products* for your team. The critical next step involves assessing your team's strengths and resources, and choosing the one or two product areas in which you can build a successful business. We will consider a fascinating case study of how a group of leaders chose the right direction for their team.

March 28, 2006 *Delivering*. Now that you've selected your product, what is the *process for successfully delivering that product* to the market? This is where you finally turn your ideas into cash.

Where: Thompson Conference Center

For other information about the Engineering Management Society activities, see the the web site: http://www.ewh.ieee.org/r5/central\_texas/ems/

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

Graduates of the Last Decade (GOLD)

Topic or Presentation Title: Speaker: Date and Time: Cost: Reservations: Kristi Hummel, <u>khummel@ieee.org</u> Meeting Location: Directions: Please send an email to Kristi Hummel <u>khummel@ieee.org</u> if you plan to attend. We'll see you then!"

Laser and Electro Optics Society

Topic or Presentation Title: Speaker: Date and Time: Cost: Reservations: Meeting Location: Directions: For more information, contact Ray Chen raychen@uts.cc.utexas.edu.

Power Engineering Society [for more information]

**Topic or Presentation Title:** No meeting in December Speaker: Date and Time: 6:00pm Social 6:30-7:00 Dinner 7:00-7:30 Business Meeting 7:30-8:30 Program **Cost:** Dinner is \$10.00 – IEEE Members \$12.00 – Non-IEEE Members Free for students. Reservations: RSVP to Stacy L Smith [stacy.smith@austin.utexas.edu] or go to our web site at http://www.ewh.ieee.org/soc/pes/centraltexas/index.htm. Meeting Location: New location Directions: Exciting 2006 Schedule: January 24: Generator Power Systems - Kato Light, Cliffort Power February 28: Lighting March 28: Tour of the Austin District Chilled Water Plant - Austin Energy April 25: Switch Gear May 23: *Fire Stopping*, Mario Hernandez, 3M June 27: Reactive Power: Billing and Costs July 25: Ethics Class - CW Clark, Texas PE Board

August 22: LCRA River Monitoring System	
Sept 26: Anatomy of an Accident: How Lack of Documentation Will Cause Problems - James Mercer, PE, TXDOT	
October 24: Black Start: Recovery of Grid After Emergency Operations November: Alcoa Plant Tour	
For further information, please contact Susan Thompton or Roy Matthews at 512-442-8085 ext 25	
or randor mornation, prease contact busan rhompton or Koy that news at 512 +12 0005 ext 25	_
Product Safety Engineering Society [for more information]	
opic or Presentation Title: . Choosing a Nationally Recognized Testing Laboratory	
Speaker: Jim Dolphin, Director of Product Safety Certifications, Professional Testing Inc.	
Date and Time: Tuesday, December 6, 6:30 to 8:30pm	
Cost: Reservations:	
<b>Meeting Location:</b> Dell, Parmer Campus, Parmer South Building 4, Victoria Conference Room.	
Directions: Call Dale Ritzen (512) 651-5338 for details and directions.	
We encourage you, others in your organization, or other interested parties to participate in our meetings every month. hird Tuesday of every month at 6:30, with the program starting at 7pm, except in November/December. A combined December to allow members and guests to enjoy the Thanksgiving and Christmas holidays. For further information at Ritzen at (512) 651-5338.	monthly meeting is held in early
Jpcoming Meetings:	
an 17: "National Sanitation Foundation Overview", Dale Ritzen, Quality Manager, Austin Manufacturing Services.	
February 21: "EMC for Product Safety Professionals", Rich Worley, EMC Engineer, Dell Inc.	
Chapter Chair: Daniece Carpenter (daniece_carpenter@dell.com).	
Women in Engineering [for more information]	
Fopic or Presentation Title: Speaker:	
Date and Time:	
Cost:	
Reservations:	
Meeting Location:	
Directions:	
Women in Engineering has been an Affinity Group of the Central Texas Section since the Fall of 2002. Activities hav programs, events and membership primarily from the Austin area. We are delighted to announce that WIE is now exp	banding activities to the San Antonio
rea. Mercy Luhanga, Yu Zhang and Dawnlee Roberson are leading the effort to initiate WIE activities in San Anton	
hat area this November. We look forward to establishing a WIE membership base in San Antonio and evolving to tw group has a Joint Meeting planned on February 16 with the Computer Society-SA and Engineering in Medicine and B	
Skyline Room, and more fun meetings planned for the Spring.	lology Society at Trinity Oniversity's
Additional details are posted on the WIE website at <u>http://ewh.ieee.org/r5/central_texas/wie</u> .	

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 if you have any thoughts or suggestions. The deadline for submission is the 25th of the month.

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#### 3. IEEE Info

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

#### IEEE Member Benefit:

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IEEE-USA NEWS & VIEWS : 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: <u>http://ieeeusa.org/careers/</u>. IEEE XELL [a.k.a. Expert Now IEEE] GAINS SOCIETIES' SUPPORT

## Database Offers Examples of Pre-University Education Activities

A new section of the IEEE Web site has been developed to help IEEE members and volunteers identify various activities being conducted in IEEE sections related to pre-university science, engineering and technology education. Created by IEEE Educational Activities with support from the IEEE Foundation, the IEEE Pre-university Activity Network consists of two parts:

\*a public area that details current and upcoming activities worldwide

\*a password-protected database for IEEE members and volunteers to submit their own experiences, ideas and best practices for display on the site There are currently about 70 examples of IEEE pre-university activities included in the database. To access the IEEE Pre-university Network, visit <u>http://</u> <u>www.ieee.org/eab/preudatabase</u>. For more information, contact Doug Gorham, IEEE Educational Activities; telephone +1 732 562 5483; "<u>d.g.gorham@ieee.</u> <u>org</u>" or Allison Ickowicz, IEEE Educational Activities; telephone +1 732 562 5496; "<u>a.m.ickowicz@ieee.org</u>".

# U.S. Energy Dept. Seeks Nominations for E.O. Lawrence Awards

The U.S. Department of Energy invites nominations for the Ernest Orlando Lawrence Awards, among the oldest and most prestigious science and technology awards given by the U.S. Government. The Lawrence Awards honor U.S. scientists and engineers, at mid-career, for exceptional contributions in research and development supporting the Department of Energy and its mission to advance the national, economic and energy security of the United States.

Nominees must be U.S. citizens in mid-career and show promise for continued exceptional achievements. DOE encourages the nomination of women and minority candidates, and welcomes nominees from the nation's research universities and national laboratories.

The Award consists of a citation signed by the Secretary of Energy, a gold medal and a \$50,000 honorarium. An award is given in each of the following fields: Chemistry, Materials Research, Environmental Science and Technology, Life Sciences (including Medicine), Nuclear Technologies (Fission and Fusion), National Security and Non-Proliferation and High Energy and Nuclear Physics.

Nominations for the award should be sent no later than 31 January 2006. DOE's Invitation to Nominate brochure and background information about the Ernest Orlando Lawrence Award are available online at: <u>http://www.sc.doe.gov/lawrence/</u>.

# IEEE membership portal

We hope all Section members are taking advantage of the new IEEE Membership Portal. The IEEE History Center is supplying interesting content which will be featured on the main page. Visit it at <u>http://www.ieee.org/myieee</u> .
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