



# The Texas Norther

Monthly Newsletter of the Dallas Chapter, Region VIII

Volume 62, No. 3

[www.dallas-ashrae.org](http://www.dallas-ashrae.org)

December 2012

## Chapter Meeting

**January 9, 2013**

11:00 a.m. Registration  
11:30 a.m. -1:00 p.m. Luncheon Meeting

**Where:**

Maggiano's North Park Dallas  
8687 N Central Expressway  
Dallas, TX 75225

**Lunch Session Topic:**

Ethics and Corporate Citizenship

**Presenter:**

David Reid, TI, Vice President and Director of Ethics

**Reservations:**

[www.dallas-ashrae.org](http://www.dallas-ashrae.org)

Letters to the Editor should be sent via e-mail to [aprile@ccrd.com](mailto:aprile@ccrd.com)

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800/5ASHRAE

## Message From the 2012-2013 Dallas ASHRAE President



Dear Fellow Dallas ASHRAE Members,

Welcome to the Holiday edition of the Dallas Chapter Newsletter! It's hard to believe how fast 2012 has come and gone. It's the time of the year that we reflect on the past and look forward to the future. While making our New Year's Resolutions, let's add

one item to the list – help Dallas ASHRAE!!! I have my idea, and I am going to reveal it later in my message, to allow some time for you to come up with yours.

The December meeting was another success with 99 attendees at the lunch presentation and 14 at the tech session. There was not a dull moment during Mr. Dan Int-Hout's presentation, and I hope you enjoyed it as much as I did. January's meeting topic is "Ethics". Historically, this has been the most attended meeting and seats will sell out quickly. Our venue can only accommodate 180 people, so be sure to sign up and arrive early.

Just a heads-up, in February, we will have another Membership Promotion event. To encourage members to recruit more newcomers, Shelby Felix will add an extra incentive for those who participate. Please be on the lookout for the meeting flyer for more detailed information.

Now, my idea of a New Year's Resolution – encourage engineers in Dallas to participate in Technology Awards Program. This has been an under-explored territory for region VIII, but I see projects being designed on a regular basis that meet the criteria for this award. I am confident that each consulting firm in Dallas has a project that is designed with innovation in occupant comfort, indoor air quality, and energy conservation. First-place awards in each one of the seven categories are automatically eligible for consideration for the "ASHRAE Award of Engineering Excellence". The deadline for project submission is April 15th, 2013. Please contact Charles Crawford if you have a project that you think qualifies. A complete list of requirements, award application forms, and sample award applications can be found at [www.ashrae.org/technologyawards](http://www.ashrae.org/technologyawards).

Merry Christmas and wish everyone a prosperous new year ahead!

Until Next Month's Newsletter,  
Shelley Zhao  
Dallas Chapter President, 2012-2013



## ASHRAE Dallas Chapter - Program Organizer Year 2012-2013

Date	Session	Program / Technical Session		
		Speaker	Company	Topic
9/12	Main Program	Nick Searle	Danaco	Chilled Beam Systems in Southern Climates
10/10	Main Program	Trevor Wende	Advantix Systems	Liquid Desiccant Technology
	Tech Session	Trevor Wende	Advantix Systems	Outdoor Air Systems
11/14	Main Program	Hooman Daneshmand	Tour Andersson	Differential Pressure Control for Hydronic Balancing
	Tech Session	Hooman Daneshmand	Tour Andersson	Fundamentals of a Hydronic Heating/Cooling System
12/12	Main Program	Dr. Dan Int-Hout III, ASHRAE Fellow & DL	Krueger & ASHRAE Distinguished Lecturer	(DL) Methods of Effective Room Air Distribution
	Tech Session	Dr. Dan Int-Hout III, ASHRAE Fellow & DL	Krueger & ASHRAE Distinguished Lecturer	Basics of Air Distribution
1/9	Main Program	David Reid, Vice President of Ethics	Texas Instruments	Professional Ethics
2/13	Main Program	Ben Westcott, Attorney	Andrews Myers, PC	Texas Legislative Updates for Construction
3/13	Main Program	Mike Thompson	Ingersoll Rand	The Future of Refrigerants: Where do we go from here?
4/10	Main Program	Doug Hass	TexasAirSystems	Health and Safety Utilizing Energy Recovery in a Critical Environment
5/8	Main Program	Dr. Dru Cawley, DL	ASHRAE Distinguished Lecturer	(DL) AEDGs to ZEBs
	Tech Session	Dr. Dru Cawley, DL	ASHRAE Distinguished Lecturer	(DL) TBD



## Membership Promotion Update

**By: Shelby Felix, Membership Promotion, 2012-2013**

Howdy everyone!

The year is half way over, so I hope everyone's ready for all the events we have going on in the spring! I know y'all are excited about our **membership promotion month in February**. Keep an eye out for details as to what's going down – we're changing things up a bit and I think everyone will enjoy it!



As of December 14<sup>th</sup>, we only have 35 unpaid members in this chapter. That's pretty awesome, considering the size of our chapter. However, 8 people are at risk of having their membership canceled at the end of this month! If you're delinquent and need help renewing your membership, feel free to contact me ([Shelby.felix@trane.com](mailto:Shelby.felix@trane.com)) and I'll help you in whatever way needed.

Next month (January) we will be having a YEA happy hour! This will be sponsored by Trane and will be at The Loon in Uptown (3531 McKinney Ave). Join us after work for a drink and snacks, as well as some social networking with people in the industry. Again, while the YEA happy hour is titled for young engineers, everyone is invited to come relax and socialize. We're looking for sponsors for happy hours in the spring, so if you're interested contact a member of the board and let them know which month you'd like! Sponsoring YEA HH is easy – the most important part is that you're there to greet everyone!

Until next month. Have a safe and merry Christmas and a happy New Year!

## CALLING ALL VOLUNTERS! ASHRAE WINTER MEETING

**By: Jay Martin, Sessions Subcommittee Chairmain - 2013 Winter Meeting**

ASHRAE's winter meeting is coming to Dallas this January (26-30). If you are willing/able to serve as a monitor for the educational sessions you will receive complimentary registration for the conference (you would still have to pay for individual extras like lunches). This is a serious commitment since you will be getting a \$300+ value, so we need for you to be prompt and diligent on your day of service.

- A monitor serves during the technical sessions to scan badges, take attendance, and to alert others if something is going wrong. We will provide training.
- The time commitment is from approximately 7:30 am to 12:30 pm on a single day (Sunday through Wednesday) or from 1 pm to 5 pm on Sunday or Monday.

Please contact me [jay.martin@mail.ashrae.org](mailto:jay.martin@mail.ashrae.org) if you are interested in serving. Monitor roles will be awarded on a first-come, first-serve basis – you will know for sure if you have been selected by early October.

Thank you for your interest and service to ASHRAE.



## Student Activities Update

**By: Brandon Scharn, Student Activities, 2012-2013**

Hello All! My name is Brandon Scharn and starting this month of December, I am taking over as the new Student Activities chair. I'm really looking forward to getting involved and getting to know more of you. If anyone would like to host, or has any ideas as to where they would like to see the YEA Happy Hour hosted in the future, please let me know as we are open to suggestions.

Coming up, we are hoping to get the updated information out about this year's Dallas Chapter of ASHRAE scholarship along with the PN Vinther Scholarship. If you know of any local engineering students that may be interested, please direct them to our Dallas Chapter website, <http://www.dallas-ashrae.org/html/scholarships.php>, where the most up to date information and applications will soon be available.

Looking forward, the annual Future City Competition for the North Texas Region at UT Arlington is just right around the corner with judging starting in late January. This program is a fun way for students to get introduced to different forms of engineering through real-world problems associated with creating a habitable city of the future. Students work in teams with a volunteer/mentor generating a computerized design of a city that is 150 years into the future and then build a scale model, write an essay on the assigned technical topic, and finally present their projects publicly to a panel of judges. The Dallas Chapter of ASHRAE, along with the Fort Worth Chapter, will be donating \$100 towards the event.



## Standard for High Performance Green Health Care Facilities Open for Public Review

ATLANTA – A prescription for the design, construction and operation of high performance health care facilities would be provided through a proposed standard from ASHRAE and the American Society for Healthcare Engineering (ASHE).

ASHRAE/ASHE Standard 189.3P, Standard for the Design, Construction and Operation of Sustainable High-Performance Health Care Facilities is open for public comment from Dec. 7, 2012-Jan. 21, 2013. Visit [www.ashrae.org/publicreviews](http://www.ashrae.org/publicreviews) for more information.

“Healthcare facilities are often the largest and most energy intensive buildings in a community,” Standard 189.3 committee chair Michael Sheerin said. “In today’s competitive and regulated market, these facilities are challenged to provide capital for increasingly complex new buildings that meet sustainability objectives as they experience decreasing finances for life-sustaining services. In addition, health care facilities are home to services that require energy use for patient safety.”

Proposed Standard 189.3 would help facilities in meeting those multiple needs by providing the procedures, methods and documentation requirements for the design, construction and operation of high performance sustainable health care buildings. It would apply to patient care areas and related support areas within health care facilities, including hospitals, nursing homes and licensed outpatient facilities.

The standard covers key topical areas of site sustainability, water use efficiency, energy efficiency, indoor environmental quality and the building’s impact on the atmosphere, materials and resources. Additionally the standard has a special section to address the emissions, effluents and pollution that is commonly discharged from these facilities.

Proposed Standard 189.3 provides guidance to achieve improved energy efficiency for the selection of materials and furnishings and for utilizing green facility operating processes.

The standard builds upon the guidance for creating high performance buildings addressed in a parallel standard, ANSI/ASHRAE/USGBC/IES Standard 189.1, Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings, while accommodating the unique factors that impact health care facilities.



## Chiller Efficiency Improvements Proposed for Standard 90.1

ATLANTA – Chiller efficiencies for air and water cooled chillers would be boosted to more than 20 percent under a proposed addendum to the ASHRAE/IES energy standard.

Proposed addendum ch to ANSI/ASHRAE/IES Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings, changes the requirements for air and water cooled chillers as defined in section 6.4.2.1 and the efficiency requirements listed in table 6.8.1C. This change is a continuation of the efficiency improvements that were implemented in 2010 by further improving the efficiency requirements, according to Dick Lord, a member of the committee who developed the proposal through a working team of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) chiller section.

Addendum ch is open for public review from Nov. 30, 2012-Jan. 14, 2013. For more information, visit [www.ashrae.org/publicreviews](http://www.ashrae.org/publicreviews).

In 2010, a Path B was added to the standard for part load intensive water cooled chillers. Proposed addendum ch would expand Path B by adding requirements to include air cooled chillers. Also as part of this change, efforts were made to bring the efficiency requirements for water cooled positive displacement and centrifugal chillers together while considering the available technology, and to chillers to be applied at other application conditions where one technology may better suited than the other. If approved, the new efficiency requirements would go into effect on Jan. 1, 2015.

The proposed efficiency requirements in addendum ch increase annual energy savings to 23.1 percent vs. Standard 90.1-2004 and 8.3 percent vs. Standard 90.1-2010. In 2010, the overall weighted average savings resulted in a 16.2 percent improvement in chiller annualized energy use vs. Standard 90.1-2004.

Lord noted the average payback was calculated at 6.3 years, given some units that exceed the scalar limits. Chiller manufacturers are aware of this and know that redesign and cost reduction will be required, but do support the proposal, he said. Lord also noted that we are reaching maximum technological limits at a component level and that in the future the industry will have to look at the full HVAC system for further improvements. AHRI is in the process of forming a new working group to address systems approaches for efficiency improvements and will work closely with Standard 90.1.

In addition, improvements also were made to the requirements to clarify their use. AHRI has recently updated the AHRI 550/590 rating standard that is used for the rating of chillers and its certification program. As part of this effort, AHRI developed a hard metric standard with slightly different rating conditions than the inch pound (I-P) ratings and have released it as AHRI 551/591. For the International System of Units (SI) rating, the change was reflected in the ratings as well as revising the reference to the AHRI rating standard to include AHRI 551/591.

The Standard 90.1 committee also opted to exclude chillers when the leaving condensing temperatures are greater than 115F from the equipment efficiency requirements of Table 6.8.1C. This proposed clarification stems from the fact that high-lift, heat reclaim chiller applications often use a different compressor and sometimes a different refrigerant. The intention of using heat reclaim chillers is to increase system efficiency, but the effect on overall system efficiency cannot be assessed at standard cooling design conditions, Lord said. AHRI is developing rating requirements, test procedures and certification for heat reclaim chillers as well as heat pump chillers.

Also open for public comment from Nov. 30-Jan. 14 is addendum aq that makes minor changes to improve clarity and to address issues identified in sections 6.5.1.3.a and 6.5.3.2.1.



## TEGA Update

By: Matt Short, TEGA Officer, 2012-2013



### ASHRAE Joins Education Coalition

The United States produces approximately 74,000 engineers a year, a number that has remained essentially flat for the past two decades. With the impending retirement of the Baby Boom generation, an anticipated shortage of engineers will affect virtually every aspect of our environment, society and lifestyle. ASHRAE is stepping up its efforts in promoting the importance of science, technology, engineering and math (STEM) education – most notably, in the public policy arena.

To that end, ASHRAE has joined the STEM Education Coalition. The Coalition works to inform federal, state and local policymakers on the critical role that STEM education plays in keeping the U.S. competitive in the global marketplace, as well as in guaranteeing future economic prosperity. The Coalition advocates for policies that will improve STEM education and provide greater access to STEM programs. As members of the Coalition’s Leadership Council, ASHRAE will partner work with other member organizations to advance the Coalition’s policy aims through direct advocacy and grassroots education efforts.

“I know I took an interest in engineering when I was just a boy, and my science and math classes in school only fueled that curiosity.” Tom Watson, ASHRAE president, said. “Working with the STEM Education Coalition demonstrates ASHRAE’s commitment to education, and we are eager to be a part of high-level discussions and collaboration to promote such important educational topics.”

To view ASHRAE’s press release on joining the Coalition, visit <http://ow.ly/flArA>.

### Net-Zero Energy Schools Spotlighted in Congressional Briefing

Earlier this week, the High-Performance Building Congressional Caucus Coalition (HPBCCC) held a Congressional briefing on net-zero energy schools. The briefing was sponsored by ASHRAE and the National Association of State Energy Officials (NASEO), and cosponsored by eight other technical societies and stakeholder organizations.

This briefing spotlighted ASHRAE’s Advanced Energy Design Guides (AEDGs) for K-12 School Buildings, and provided several examples of net-zero energy and net-zero-energy-capable schools in Kentucky – several of which were designed by ASHRAE member Ken Seibert’s firm, CMTA Consulting Engineers. Greg Guess, Kentucky’s director of Energy and Conservation for Kentucky’s Department of Energy Development and Independence, echoed Seibert’s comments regarding the value of energy efficient schools within the Commonwealth and emphasized how these schools benefit students, teachers, and administrators alike.

David Terry, NASEO’s executive director, highlighted the impact and importance of net-zero and near-zero energy schools on a national scale and how they fit into a wider low-energy-use strategy across the United States.

“State Energy Offices will continue to play a key leadership role in facilitating high-performance and zero-net energy capable buildings projects across the country to reduce and stabilize energy and facility operating costs, improve stewardship of public resources, and enhance facility resiliency,” said David Terry.

The briefing also represented the last event at which Representatives Russ Carnahan (D-MO) and Judy Biggert (R-IL) served as Co-Chairs of the High-Performance Buildings Caucus of the U.S. Congress, as both Members of Congress lost their reelection bids.



## DALLAS ASHRAE 2012-2013

### BOARD OF GOVERNORS MEETING NOTES

**Date: December 12, 2012**

**Time: 1:00 PM (meeting started at 1:14 PM)**

**Location: Maggiano's  
Dallas, TX**

#### IN ATTENDANCE:

Shelley Zhao; Charles Crawford; Gene Lowery; Shelby Felix; Kevin Chow; Brandon Damas;  
Brandon Scharn; April Eisenhauer

#### COMMITTEE CHAIRS AND OFFICERS:

1. President – Shelley Zhao
    - A. BOG members should register for the national ASHRAE meeting as a regular member and not as a volunteer.
    - B. Leo does not need the local BOG to man the hospitality suit but we will stay sponsor the suite for \$1,500.
    - C. 99 attended today's ASHRAE luncheon.
    - D. 14 attended the tech session.
    - E. The next tech session we will have will be in January and the session will be on Revit standardization.
  2. President Elect/CTTC – Charles Crawford
    - A. Nametags were \$362 and Brandon wrote Charles a check for that amount.
    - B. Charles is working on a combined event with the USGBC. This event is still targeted to be a tour of the SMU George W. Bush Library. The target date has moved out till early 2013 pending some issues Charles is working through with the USGBC.
    - C. The ASHRAE skeet shoot is still set for March 15<sup>th</sup>, 2012.
  3. Secretary – Gene Lowery
    - A. No new news.
    - B. Gene will check up on PAOE points and update at the next BOG meeting that Gene is able to attend (February).
  4. Treasurer – Brandon Damas
    - A. Brandon wrote a check to Gene to secure our April 29<sup>th</sup> ASHRAE golf tournament date with Lantana Golf Club.
    - B. Brandon filed an extension with our tax accountant as we did not have our information into her in time to file on November 15<sup>th</sup>, 2012. Gene gave Brandon all the pertinent information to file the taxes for this past year.
  5. Research Promotion – Preston Dickson
    - A. Was not in attendance.
  6. Membership Promotion – Shelby Felix
    - A. February is membership month and guess will get a free lunch with the expectation that they sign up for membership in the local chapter.
    - B. Shelby is planning on drawing for a \$50 gift certificate to Maggiano's at February or March's meeting. Names of member who bring a guest will be entered into the drawing.
    - C. Shelby requested that Shelley email her the constant contact login so she can better track attendance and new membership.
    - D. Shelby update the board with members who are delinquent in their ASHRAE dues.
- (cont'd on next page)



7. Webmaster/Honors and Awards – Kevin Chow
  - A. Kevin updated the website with the above pertinent information (golf tourney, etc.) during the BOG meeting.
8. Newsletter – April Eisenhauer
  - A. Newsletter is due to April 12/14/12.
9. Historian – Marc Tompkins
  - A. Not in attendance.
10. Student Activity – Brandon Scharn
  - A. Received a check for \$100 for the Future City competition.
  - B. Trane will sponsor the January YEA happy hour and it will be at The Loon.
11. Refrigeration – Stuart Devaney
  - A. Not in attendance.

The meeting was adjourned at 1:58 PM.

**Next BOG Meeting: Immediately following the next monthly meeting on Wednesday January 9<sup>th</sup>.**



## DECEMBER 2012 MEETING





## Dallas Chapter - ASHRAE Income/Expense Statement

Official Starting Balance

Approximately \$15,000\*  
\*per Gene

2011-2012 Annual Budget	Budget for '12-'13	Actual YTD	Percentage of Budget
<b>Income</b>			
(1) - Chapter dues	\$ 13,000.00	\$ -	
(2a) - Money Market interest	\$ 100.00	\$ -	
(2b) - Regular Share Interest	\$ 1.00	\$ -	
(3) - Meeting - meals, bar	\$ 18,500.00	\$ 4,754.78	26%
(4) - Roster sponsors	\$ 1,500.00	\$ -	
(5) - Golf tournament	\$ 25,000.00	\$ -	
(6) - RP Events	\$ 500.00	\$ -	
PN Vinther	\$ 1,700.00	\$ -	
Miscellaneous	\$ 100.00	\$ -	
<b>Total Income</b>	<b>\$ 60,401.00</b>	<b>\$ 4,754.78</b>	<b>8%</b>
<b>Expense</b>			
(7) - CRC representation	\$ 500.00	\$ -	
(8) - Student Activities	\$ 500.00	\$ -	
(9a) - Meetings-meals,bar,room	\$ 18,500.00	\$ 6,440.33	35%
(9b) - Meetings - audio/visual	\$ 2,700.00	\$ -	
(10) - Research Promotion - Matching Fund	\$ 6,000.00	\$ 300.00	5%
(11) - RP Events - Webcast	\$ 300.00	\$ -	
(12a) - Seminar - Fall	\$ 500.00	\$ -	
(13b) - Seminar - Spring	\$ 500.00	\$ -	
(14) - Website Charges	\$ 500.00	\$ 73.90	15%
(15) - Miscellaneous	\$ 1,000.00	\$ -	
(16) - Golf tournament	\$ 20,000.00	\$ -	
(17) - Winter Meeting Fund	\$ 3,000.00	\$ -	
(18) - P.N Vinther Scholarship Fund	\$ 1,700.00	\$ -	
(19) - Printing - Roster	\$ 650.00	\$ -	
(20) - Regional Dues/Award	\$ 1,800.00	\$ -	
(21) - CPA Fees	\$ 125.00	\$ -	
(22) - USPS P.O. Box	\$ 204.00	\$ -	
(23) - Membership promotion	\$ 50.00	\$ -	
(24) - Bank service charges/check printing	\$ 50.00	\$ -	
(25) - Awards	\$ 400.00	\$ -	
(26) - Scholarships	\$ 500.00	\$ -	
<b>Total Expense</b>	<b>\$ 59,479.00</b>	<b>\$ 6,814.23</b>	<b>11%</b>



**DALLAS CHAPTER  
2012-2013 Board of Governors**

President	President Elect / Programs Chair (CTTC)	Secretary
Shelley Zhao McMillan James Equipment Co. Phone: 817.912.0800 <a href="mailto:shelleyz@miec.com">shelleyz@miec.com</a>	Charles Crawford Victaulic Phone: 214.676.4134 <a href="mailto:ccrawford@victaulic.com">ccrawford@victaulic.com</a>	Gene Lowery Texas Air Systems Phone: 972.570.4700 <a href="mailto:glowery@texasairsystems.com">glowery@texasairsystems.com</a>
Treasurer	Membership Promotion	Historian
Brandon Damas, PE, LEED AP HTS Phone: 469.263.1000 <a href="mailto:brandond@htseng.com">brandond@htseng.com</a>	Shelby Felix Trane Phone: 972.919.2302 <a href="mailto:shelby.felix@trane.com">shelby.felix@trane.com</a>	Marc Tompkins HTS Phone: 469.263.1000 <a href="mailto:marct@htseng.com">marct@htseng.com</a>
Research Promotion	Tech Energy & Govt Activities	Student Activities
W. Preston Dickson Timberlake & Dickson Inc. Phone: 214.349.2320 <a href="mailto:wdickson@timberlakedickson.com">wdickson@timberlakedickson.com</a>	Matt Short, PE, LEED AP, CSI, HFDP Acts 29 Consulting Phone: 469.222.8489 <a href="mailto:matt.short@acts29consulting.com">matt.short@acts29consulting.com</a>	Brandon Scharn ccrd Phone: 214.521.1661 <a href="mailto:brandons@ccrd.com">brandons@ccrd.com</a>
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Horners and Awards		Publicity
Chris Carr, PE, LEED AP, CEM, DBIA Brandt Engineering Phone: 972.395.6162 <a href="mailto:ccarr@brandteng.com">ccarr@brandteng.com</a>		Leo Stambaugh Retired Phone: 214.369.3500 <a href="mailto:leostambaugh@cs.com">leostambaugh@cs.com</a>

Date:  
Wednesday, January 9, 2013

Time:  
11:00 AM Registration Begins  
11:30-1:00 PM Lunch Meeting

Location:  
Maggiano's North Park Dallas  
8687 N. Central Expressway  
Dallas, Texas 75225  
Click the link below for directions  
<http://goo.gl/maps/YOcBK>

On-line Reservations:  
[www.dallas-ashrae.org](http://www.dallas-ashrae.org)

Making reservations helps the chapter keep expenses to a minimum and ensures everyone has a seat.

#### Upcoming Calendar of Events:

01/09/13  
Lunch Program: Ethics and Corporate Citizenship

01/26/13 –01/30/13  
ASHRAE 2013 Winter Conference in Dallas, Texas

02/13/13  
Technical Session: Revit Standardization for MEP Firms  
Lunch Program: Texas Legislative Updates for Construction

03/13/13  
Lunch Program: The Future of Refrigerants: Where do we go from here?

03/15/13  
ASHRAE Sporting Clay Shoot

04/10/13  
Health and Safety Utilizing Energy Recovery in a Critical Environment

Send suggestions for presentation topics to Charles Crawford  
[ccrawford@victaulic.com](mailto:ccrawford@victaulic.com)  
President-Elect / Programs Chair



## Lunch Presentation

### Ethics and Corporate Citizenship

Ethical leadership and good corporate citizenship support a stronger and more solid business overall. Additionally, good corporate citizenship raises the bar for ethics and integrity within the industry and our community. This presentation covers how Texas Instruments has developed a culture of ethics and how TI's expectations are communicated through their supply chain.

David Reid is TI's Vice President and Director of Ethics - Emeritus. Texas Instruments Incorporated is the world leader in embedded processing and analog technologies. In addition to semiconductor, the company includes the Education Technology business. TI is headquartered in Dallas, Texas, and has manufacturing or sales operations in more than 25 countries. David, after 25 years at TI, recently announced plans to retire in 2013. David received his bachelor's degree in accounting from the University of Texas at Austin and a master's degree in behavioral management from the University of Texas at Dallas. He is a CPA and has experience in management information systems, banking and public accounting. He is a member of the American Institute of Certified Public Accountants, the Ethics and Compliance Officer Association and is the immediate past chair of The Conference Board's Global Council on Business Conduct.

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Lunch Program with Online Reservations - \$25  
Lunch Program without Online Reservations - \$30  
Lunch Program Only (No Food) - \$10  
Student Member Program - \$10  
Technical Session & Lunch Program - \$35  
Technical Session Only - \$10

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