

# The South Texan



Monthly Meeting November 5, 2015

Central Location: Brady's Landing (8505 Cypress St., Houston, TX 77012). Water Forum starts at 3:30 PM, Social Hour at 6PM, Dinner at 7:00 PM; pre-register at <http://sts.aiche.org/>

Meeting webcast: We plan to webcast the meeting live on our new [YouTube channel](#). More information at <http://sts.aiche.org/>.

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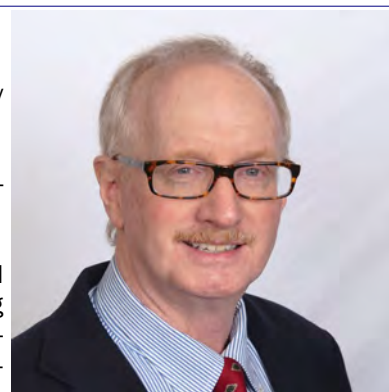
## November Monthly Meeting

**Topic:** Chemical Engineering Challenges in Future Energy and Chemicals

**Dinner Speakers:** Joseph B. Powell, Ph.D., Chell Chief Scientist-Chemical Engineering

**Abstract:** Despite the current downturn, global demand for energy will likely double by 2050, driven by increasing population and affluence especially in emerging economies. While fossil fuels will continue to underpin the energy supply for the near future, concern over impact on climate change continues to grow, driving interest in expanded use of renewables and development of carbon capture and sequestration or re-use solutions. "Fracking" is providing new opportunities for use of natural gas for electrical power and for conversion to chemicals and liquid fuels, while Water-Food-Energy form a Nexus among available resources. Emissions beyond CO<sub>2</sub> are impacting global and local choices in transportation, while expectations for responsible product stewardship and process operations have never been higher. It's a time of great opportunity for our profession in providing the chemistry and engineering solutions sought by our stakeholders in meeting this diverse array of challenges.

**Bio:** Joe Powell, Ph.D. is a fellow of the American Institute of Chemical Engineers, and has been Shell's Chief Scientist-Chemical Engineering since 2006. In 1988, he joined the Process Development Department at Shell Technology Center Houston, where he has led major R&D programs in new chemical processes, biofuels, and enhanced oil recovery, in addition to a Hunters innovation group. Dr. Powell has been granted more than 60 U.S. patents and several industry awards, including the A.D. Little Award for Chemical Engineering Innovation (AIChE 1998), R&D100 Award (R&D Magazine) and American Chemical Society Team Innovation Award (2000), U. Wisconsin College of Engineering Distinguished Achievement Award (2009), AIChE Process Development Division Service Award (2012). He is co-editor and chapter author for the book **Sustainable Development in the Process Industries: Cases and Impact**, John Wiley & Sons, New York (2010), and has served AIChE in various roles including Process Development Division Programming chair, Spring Meeting Program Chair (2015) and Co-Chair (2012), Chemical Technology Operating Council, Executive Board Programming Committee, Pilot Plans 12B Area Chair, Shale Gas and Sustainability Topical Chairs. He currently serves on the U.S. National Academy Board on Chemical Sciences and Technology, editorial committee of Annual Review of Chemical and Biological Engineering, and is currently a nominee for Board of Directors for AIChE. Dr. Powell obtained a Ph.D. in Chemical Engineering from the U. of Wisconsin-Madison (1984), following a B.S. in Chemical Engineering from the U. of Virginia (1978).





*Texas Industries of the Future*

## **Texas Industrial Water Management Forum**

### **"Water Efficiency in the Process Industries: Trends, Drivers and Current Practice"**

Thursday, November 5, 2015

Brady's Landing

8505 Cypress St., Houston, Texas 77012

To register, go to <http://texasiof.ceer.utexas.edu/tiof/waterforum2015.asp>

3:30 to 4:00 pm	Forum Registration and Visit with Exhibitors
4:00 to 6:00 pm	Water Management Forum (See program below)
6:00 to 7:00 pm	Networking and Exhibition (sponsored by AIChE-STS – information below)
7:00 to 8:45 pm	AIChE-STS Dinner

This Forum will explore the interaction between water and energy use in the process industries from a number of perspectives. Speakers will address trends in water management in the process industries, drivers for adoption of new technology and strategy, and operating practices to improve water and energy efficiency.

Speakers will present for 20 minutes each, followed by a panel discussion and questions from the audience.

**Forum Moderator:** Frank Roberto, ExxonMobil, Chair, Chemical and Refining Advisory Committee, Texas IOF

#### ***Presentations***

#### **Water Challenges in Refining and Petrochemicals and Industry Response**

David A. Cody, NALCO Champion

The refining and petrochemical industries represent a sizable portion of the local economy as well as one of the regions largest employers. In addition, they are one of the region's largest consumers of fresh water. Global trends of tightening environmental regulations coupled with increasing regional drought conditions are driving these industries to rethink their approach on the management of their water system. While these sites are looking to reduce their total water footprint, many are in the process of expanding their production capabilities in existing locations. The stress of using less water to produce more product is increasing. Another stress by these sites is to further extend their time between planned outages, requiring more robust performance from the traditional water treatment programs. The customer's need to "do more with less" is driving innovation across the industry. These drivers are requiring the sites to use a larger amount of distressed water streams that have a much greater level of contamination. To meet these ever-increasing water challenges will require innovative technologies on multiple fronts. These innovations include chemical, mechanical and operational improvements, producing improved performance with a lower total water usage.

#### **Evaluation of Impacts on Energy and Plant Profitability of Responses to Water Curtailment**

Kathey Ferland, University of Texas and Peter Phelps, Phelps Engineering

The "Technology Forum: Sustaining Industrial Energy Efficiency in Process Cooling in a Potentially Water-Short Future", was convened on June 19, 2013 in Houston, TX to bring together end-users in chemical plants and refineries with the developers of technologies that provide process cooling. The focus of the Forum was on the energy impacts of cooling applications that use less water. A common concern across the board was that "water is cheap until it's gone", which makes it challenging to engage management and secure capital for technology investment before there is a crisis. One of the challenges is that there are no "apples to apples" comparisons of what is at stake when curtailment occurs. Attendees identified the need to be able to compare the performance of different cooling technologies based on capital and operating costs, water, and energy impacts. This presentation reports on the results of this analysis.



*Texas Industries of the Future*

## **Texas Industrial Water Management Forum "Water Efficiency in the Process Industries: Trends, Drivers and Current Practice"**

Thursday, November 5, 2015

Brady's Landing

8505 Cypress St., Houston, Texas 77012

To register, go to <http://texasiof.ceer.utexas.edu/tiof/waterforum2015.asp>

### **Are You Draining Energy with Your Water?**

Pramod Bengani, Business Unit Leader, Ascend Performance Materials

Integrated petrochemical and refinery complexes use a large amount of water. Some energy losses with water are obvious – steam leaks, leaking traps, and cooling tower vapors. However there are many not so conspicuous losses, especially for sites that purify their own water. Many sites have clarifiers, filters, zeolite units, RO units, and demin units; and pump (energy) large volumes of water around systems. Additionally there are constant water blowdowns from boilers and cooling towers. A good understanding of these unit operations and associated drivers could save significant amounts of water and, in turn, energy. Significant savings from performance monitoring and closer oversight could be accomplished with little capital investments.

### **Water Sustainability – Driver to Reduce Cooling Water Consumption in Industrial Facilities**

Eberhard Lucke, CH2M Hill OG&C

Water saving strategies are a key factor in the design and operation of industrial facilities, especially as raw water is becoming one of the most critical resources available. Oil refining and chemical production processes are not the exception, especially when revamping existing units or increasing the capacity of existing units. One of the most demanding uses of water in a typical refining or chemical production process is cooling. Cooling water normally runs in a closed loop, however there are significant losses when it flows through the cooling tower. Evaporation, drift, blowdown and leaks are the most important issues to consider. Opportunities to optimize the cooling water system can be found in reduction of cooling water requirements, in improving the efficiency of the cooling water treatment, and in improving the cooling tower design. The objective of this presentation is to highlight the advantages and disadvantages of different methodologies for analyzing these systems and to present some simple case studies.

### **Pre-Registration and Exhibition**

There is no cost for attending the forum; however, pre-registration is requested so that we can provide adequate facilities. To register, go to <http://texasiof.ceer.utexas.edu/tiof/waterforum2015.asp>. You can reserve an exhibit space by contacting Kelly Richardson at [sts-chair@aiiche.org](mailto:sts-chair@aiiche.org) or at 832-954-6055.

Funding for the Water Management Forum is provided by the Texas State Energy Conservation Office of the Texas Comptroller of Public Accounts.

### **STS AIChE Dinner and Speaker**

Register and pay for this dinner separately on the STS-AIChE website at <http://www.sts-aiiche.org/event/texas-industrial-water-management-forum-november-2015-dinner-program>. There is a charge for dinner and can be paid for with a credit card on the website at a discount or at the meeting in cash or check.

### **Networking and Exhibition 6 – 6:45 pm**

A number of companies who bring value to water management in the process industries will have tabletop exhibits set-up as a focal point for a networking session. A cash bar will also be available.

### **STS AIChE Dinner with Speaker 6:45 – 8:45 pm**

Following the Networking event, you are invited to attend the South Texas Section of AIChE's dinner meeting and speaker at Brady's Landing. The dinner speaker is Joe Powell, Shell Chief Scientist, on the topic of "Chemical Engineering Challenges in

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## Exhibitors



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## Meeting Registration Information

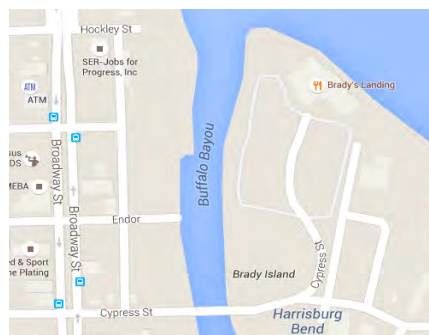
Membership in STS-AIChE is a bargain at \$20/year. If you wish to become a member, you may join at the registration desk at the meeting.

	Pre-Registration Members	Pre-Registration Non-Members	At the door Members	At the door Non-Members
Regular/Retired	\$15	\$20	\$25	\$30
Student/unemployed	\$10	\$15	\$20	\$25

**NOTE:** Please bring your receipt. You have until 4 PM CST on November 4th to pre-register online. After that, you will be required to pay the higher cost at the door.

Pre-registration for the main meeting is now open through our [website](#).

## Meeting Location— Brady's Landing Restaurant



This month's meeting will be held at Brady's Landing Restaurant (8505 Cypress St., Houston, TX 77012). Double click on the map to the left for directions from your location. We plan to webcast the announcements and meeting live on our new [YouTube channel](#). For More details information, please check our [website](#).

## STS-AIChE November 2015 Monthly Meeting Online Webcast

There will be no satellite dinner meeting this month. Instead there will be a LIVE webcast of the main meeting via our [YouTube channel](#). The webcast will start with announcements and awards at 7:15PM with the main presentation at 8:00 PM.

You can view the webcast on our YouTube channel [here](#).



## November 2015 STS-AIChE Chair's Letter – Kelly Richardson

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Dear Members of the South Texas Section- American Institute of Chemical Engineers:

The 7th Annual Southwest Process Technology Conference (SPTC) was held on October 1<sup>st</sup> and 2<sup>nd</sup>. Eric Berger's dinner presentation "Adrift: Does America have a Future in Space?" is available for viewing on our YouTube page. On behalf of the section, I would like to thank the speakers, sponsors, exhibitors, managers, professors and all the many other volunteers that helped make the 2015 SPTC and October Monthly dinner meeting a success. Thank you 2015 SPTC Conference organizers - Jayce Mathews, Alan Rossiter, Ian Glasgow, Bill Epling, and Kelsey Kettelhut.



Join us this month on Thursday, November 5, 2015 at Brady's Landing for the annual Water Forum organized by Kathey Ferland. Speakers will address trends in water management in the process industries, drivers for adoption of new technology and strategy, and operating practices to improve water and energy efficiency. Please visit the Texas Industries of the Future website (<http://texasiof.ceer.utexas.edu>) to learn more about the programming and to pre-register for the Water Forum. There is no cost for attending the Water Forum; however, pre-registration is requested so that adequate facilities may be provided.

The Water Forum will be followed by an opportunity for networking, dinner, and a technical presentation. Joe Powell a Fellow of the American Institute of Chemical Engineers, and Shell's Chief Scientist will discuss *Challenges in Future Energy and Chemicals*. Please register on the STS-AIChE website (<http://sts.aiche.org/>) if you would like to attend the dinner.

Elections for the 2016/2017 Executive Committee Board are upcoming. STS-AIChE members will be able to vote beginning November 5, 2015. Ballots will be distributed by e-mail and at the upcoming meeting.

STS-AIChE members can also begin to sign-up for the 2016 Season Pass as early as November 5, 2015. The Season Pass offers the convenience of a single sign-up and single payment for all eight technical Monthly Dinner meetings in the 2016 season. Details will be made available on the STS-AIChE website.

I encourage you to get involved, please check out the section entitled, "Call for Volunteers", in the newsletter. Our next executive board meeting is scheduled for Thursday, November 12, 2015. For additional details and to RSVP to attend send an e-mail to [sts-chair@aiche.org](mailto:sts-chair@aiche.org). With the help of volunteers STS-AIChE has been able to accomplish so much this year and to those volunteers, of whom are many, my sincerest thank you!

Sincerely,

A handwritten signature in blue ink that reads "K. Richardson".

Kelly Richardson  
Chair, STS-AIChE

## 2015 AIChE Southwest Process Technology Conference Recap

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### Southwest Process Technology Conference

The AIChE Southwest Process Technology Conference (SPTC) has become an annual highlight for STS, providing a unique mix of networking, education, outreach, food and fun at Moody Gardens in Galveston. Around 450 people, including about 70 students, attended this year's event (October 1-2).

The technical program was packed with topical presentations tailored to the needs of chemical engineers on the Gulf Coast. There were also special sessions for students and young professionals. The keynote address, **"The Coming U.S. Petrochemical Capacity Wave and Global Outlook,"** presented by Joseph Chang (Global Editor of ICIS Chemical Business) provided an insightful analysis of current trends in the industry.

Our dinner meeting was an out of this world experience as Eric Berger, science writer for the Houston Chronicle, pondered the prospect of a manned mission to Mars in his talk **"Adrift: Does America Have a Future in Space?"**



*Executive Panelists (left to right): Phaneendra Kondapi, Wesley Hamilton, Greg Yeo and Rui Cruz, with Moderator Ken Cox.*

Our Executive Panel Discussion was a very popular addition to the program this year. The topic, **"Leadership, Management & Engineering for Career Growth,"** struck a chord with attendees at all career stages, from students to the most seasoned.

We'd like to congratulate Tracy Benson of Lamar University, the winner of this year's Best Presentation Award. His presentation was **"Carbon Dioxide Conversion Through Tri-Reforming: Reactor/Process Design and Optimization."** We would also like to thank all the Session Chairs and Co-Chairs for securing the excellent technical presentations that provided such great value to all attendees.

The exhibition hall hosted many great booths with a wealth of technical information, and wonderful networking

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## 2015 AIChE Southwest Process Technology Conference Recap

opportunities. Our daily prize draw added some excitement to the atmosphere, and the career fair provided yet another dimension to the conference.



*Joe Chang of ICIS was our Keynote Speaker*



*AIChE Project Associate Kelsey "Vanna White" Kettelhut and Conference Chair Alan Rossiter oversee the daily prize draw*

The conference would not have been possible financially without the generous financial support of our many sponsors and the tireless efforts of the conference leadership team, including Program Chair Jayce Mathews, Conference Co-Chair Ian Glasgow and Conference Chair Alan Rossiter. In addition, James Turner and Bill Epling organized the Student Program, and Dave Silarski and John Middleton managed our volunteers and on-site arrangements. Kelsey Kettelhut, our Project Associate at AIChE HQ, was an ever-present helper in all phases of the conference.

Next year's SPTC is scheduled for Thursday and Friday October 6-7, 2016. Save the date, and don't miss it!



## 2015 AIChE Southwest Process Technology Conference Recap

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Thank you to our Sponsors!

**GOLD**  
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 **Tracerco**  
**USA Inc.**  Providing Insight Onsite

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**BRONZE**  
**DOW**

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## STS-AIChE 2015 Annual Awards

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### STS 2014 Annual Awards Presented At STS' October Dinner Meeting

The October 1, 2015 STS Dinner Meeting served as the venue for the presentation of the South Texas Section's Annual Awards. South Texas Section Awards presented were the Best Applied Paper, Best Fundamental Paper, and Distinguished Service. The Outstanding Young Professional Award will be presented at a later date due to a scheduling problem.

Before the Awards were presented, the STS Best Papers Judging Committee was recognized and the STS' appreciation was extended.

#### Thanks to the STS Best Papers Judging Committee

As usual, the South Texas Section Best Papers Judging Committee chaired by Dr. Ryan Stephens did an outstanding job of selecting the Best Papers for 2014. The South Texas Section – AIChE extends its gratitude to the members of the Best Papers Judging Committee who are:

Ryan Stephens, Chair  
Smita Edulji  
Ray French  
Mike Reynolds

Flavia Cassiola  
Erik Engwall  
Himanshu Joshi  
Sumedh Warudkar

Matt Christiansen  
Luis Filobelo  
Anand Nilekar

Thank you for a great job!

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## STS-AIChE 2015 Annual Awards

### Francisco Vargas Receives 2014 STS Best Applied Paper Award

The STS 2014 Best Applied Paper is "Simple Method To Calculate the Temperature Dependence of the Gibbs Energy and Chemical Equilibrium Constants" published in *Journal Chemical Education (ACS)*, 2014, 91 (3), pp. 396-401 by Francisco M. Vargas. There were two (2) entries for the Best Applied Paper Award.



Dr. Francisco M. Vargas (*center right*) accepts his 2014 STS Best Applied Paper Award from 2015 STS Chair Kelly Richardson (*center left*). Mrs. Vargas (*R*) and 2012 AIChE President David Rosenthal (*L*) are also in the photo.

### Hieu Doan, Lars Grabow, & Bert Chandler Receive 2014 STS Best Fundamental Paper Award

The STS 2014 Best Fundamental Paper is "The critical role of water at the gold-titania interface in catalytic CO oxidation" published in *Science*, Vol. 345, No. 6204, 26 September 2014, pp. 1599-1602 by Johnny Saavedra, Hieu A. Doan, Christopher J. Pursell, Lars C. Grabow, and Bert D. Chandler. The 2014 Best Applied Paper competition had four (4) entries.



Lars Grabow (*center left*) and Hieu Doan (*center right*) receive their 2014 STS Best Fundamental Paper Awards from 2015 STS Chair Kelly Richards (*L*) and 2012 AIChE President David Rosenthal (*R*).

## STS-AIChE 2015 Annual Awards

### Gary Gildert Receives 2014 STS Distinguished Service Award

The recipient of the 2014 South Texas Section – AIChE Distinguished Service Award was Gary Gildert.

Gary received his Bachelor of Applied Science (Ch.E.) from the University of Waterloo in 1981 and his MBA from Rice University in 2005. He is a registered professional engineer in the Canadian Provinces of Ontario (1987) and Alberta (1991), a member of American Institute of Chemical Engineering (1997), American Chemical Society (2005), and South West Catalysis Society (2005). Gary is an internationally recognized expert in hydro treating with 24 patents, over 40 publications, and numerous international presentations.

Gary started his career with Petrosar (Polysar, Novacor Chemicals) in operations support and process design for 11 years with assignments in Ontario and Alberta, Canada. He continued his work in distillation and hydrogenation technology at Chemical Research and Licensing (CDTECH) in Houston, TX as the process development manager for their emerging hydrogenation technology. After eight years of R&D, Gary joined a major global catalyst company as Regional Sales Manager with sales in the US Gulf Coast and technical support globally for olefins purification catalysts. Shortly after earning his MBA from Rice, he co-founded Custom Catalytic Solutions, where he was responsible for marketing, sales, technical service, and finance.

Gary joined Johnson Matthey Inc. in 2008 and is the Senior Principal Process Engineer with the Process Technologies Chemicals group in where he provides application support for customers and assists in new product development.

Gary has been active in AIChE for most of his career and served the South Texas Section in the following positions:

- Workshop Chair 2008 – 2009
- Workshop speaker (January 2008 and September 2009)
- STS Monthly Dinner Meeting Speaker (January 2008, May 2011, and September 2015)
- STS Executive Committee Education (Position 1) 2010
- Webcast Co-producer 2010 to present
- 2012 STS Chair Elect
- 2013 STS Chair
- 2013 STS Chair Appreciation Award Recipient
- 2014 STS Past Chair
- SEFH – STS Special Awards judge 2012 – 2014

Gary and his wife are the proud parents of a daughter who is a college student.



Gary Gildert (C) displays his 2014 STS Distinguished Service Award having been congratulated by 2015 STS Chair Kelly Richards (L) and 2012 AIChE President David Rosenthal (R).

## Young Professionals

### STS-AIChE December Social Organized by the YPs: Top Golf Houston

It's that time of the year again and Young Professionals (YPs) at STS are excited to organize the STS-AIChE annual December Social from 6pm to 9 pm on December 3rd, 2015 at Top Golf Houston-Katy (1030 Memorial Brook Blvd, Houston, TX 77084). Let's showcase our "tee-ing talent" and have fun!!



Event package includes 3 hours of Topgolf, free clubs, dinner, one token for beer or wine, bottomless soda, iced tea and water.

The cost for attending is **\$40 per person** for a "\$75 regular-priced ticket". STS and YP's will cover the remaining amount, woohoo! We have a limited number of seats and are on a first-come-first-serve basis. You are more than welcome to bring friends/family to the event. We hope to see you there!

**Registration** will be handled on the STS-AIChE website at <http://sts.aiche.org> via PayPal starting November 10<sup>th</sup> and **ends November 27<sup>th</sup>**. Confirmation email with details will be sent to your "Paypal email" on November 30.

For questions contact Chaitanya Gottimukkala by email at [sts-yp@aiche.org](mailto:sts-yp@aiche.org).





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9:25AM

**PIONEERING ADVANCES IN RESEARCH  
TO SHAPE THE FUTURE OF ENERGY**

5:25PM

**PIONEERING UNCHARTED  
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#### RESEARCH & DEVELOPMENT PROFESSIONALS

Join a multidisciplinary team of R&D professionals providing research and consulting services at Saudi Aramco. Work on a wide range of R&D pursuits. Utilize state-of-the-art facilities to develop groundbreaking technologies in petrochemical areas using hydrocarbon as feedstock. Investigate advanced petroleum fuel formulations for next-generation combustion engines. Analyze properties of reservoirs using nano-scale robots, (Resbots™). Collaborate with leading scientists at the Saudi Aramco Research & Development Center and around the world through its global R&D network. Beyond work, enjoy a flexible schedule that offers a chance to explore the wealth of activities in Saudi Arabia. Saudi Aramco provides a work-life balance and a chance to do it all.

Visit us at the AIChE Annual Meeting.

**DREAM BIG** at [www.Aramco.Jobs/AIChE](http://www.Aramco.Jobs/AIChE)



## STS-AIChE 2015 Monthly Dinner Meeting Schedule

Date	Location	Meeting Details (Speaker/Company/Topic)
November 5, 2015	Brady's Landing 8505 Cypress Street Houston, Texas 77012	Water Forum
December 3, 2015	Top Golf Houston-Katy 1030 Memorial Brook Blvd., Houston, Texas 77012	December Social

\*Meeting details are subject to change.



## LEARN TO **RESOLVE** COMMON **HEAT EXCHANGER PROBLEMS**

HTRI, a leading source of process heat transfer technology and the premier provider of heat exchanger training, is offering a two-day course on February 1 and 2, 2016 for engineering students and engineers new to the workforce. Located at our headquarters near Houston, Texas, the course discusses selection criteria for common applications, guidelines for thermal design, and checklists for solving thermal design and operational problems.

- **Process Heat Exchangers: Applications, and Rules-of-thumb Short Course**
- **February 1 – 2, 2016 at HTRI headquarters located in Navasota, TX, USA**
- **Register at [www.htri.net](http://www.htri.net) by January 20**

Students will tour HTRI's multimillion dollar testing facility and receive a copy of the course reference book, *Process Heat Transfer: Principles, Applications, and Rules of Thumb*, by Robert Serth and Thomas Lestina, HTRI Vice President, Engineering Services.

**HTRI**  
[www.htri.net](http://www.htri.net)

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## Awards

### *It's Awards Time!*

It is once again time to nominate an STS member for the 2015 South Texan Section Annual Awards:

- Outstanding Young Professional Award
- Distinguished Service Award
- Best Fundamental Paper
- Best Applied Paper Award

For requirements of each award, visit the web page: <http://sts.aiche.org/content/awards>

The page provides a summary of the awards, and contains links to more detailed descriptions of each award.

To nominate a member for an award, complete the online form at the web page:

<http://sts.aiche.org/content/award-nominations>

If you prefer the printed form, print out the forms from the next two pages.

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## South Texas Section – AIChE 2015 Annual Awards Nomination Form (page 1 of 2)

THIS NOMINATION FORM MUST BE RECEIVED BY MAY 1, 2016 TO BE ACCEPTED!

Mail the completed form to:

Thomas E. Menn  
Awards Chair  
P. O. Box 458  
Pearland, Texas 77588-0548

Or

Ryan Stephens, PhD  
Best Papers Judging Chair  
Shell Global Solutions (US) Inc.  
Technology Center  
3333 Highway 6 South  
Houston, Texas 77082

Or

Matt Christiansen, PhD  
Best Papers Judging Co-Chair  
Shell Projects and Technology

Tel.: 281-485-3719

[ThomasMenn@SBCGlobal.net](mailto:ThomasMenn@SBCGlobal.net)

Tel.: 281-544-8447

[Ryan.Stephens@shell.com](mailto:Ryan.Stephens@shell.com)

Tel: 281-544-6476

[Matthew.Christiansen@shell.com](mailto:Matthew.Christiansen@shell.com)

Following receipt of the submitted nomination, you will receive an e-mail from the STS Awards Committee confirming receipt of the nomination after AIChE & STS Membership is verified. All Best Paper Nominees not Members of AIChE or STS will be allowed to join either or both until May 31, 2016 in order to be eligible for the recognition due a STS – AIChE Member Best Paper Award Recipient.

**NOTE: ONLY ONE PERSON OR PAPER MAY BE NOMINATED PER FORM!**

NOMINATOR'S NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
STREET: \_\_\_\_\_  
CITY: \_\_\_\_\_ STATE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_  
TELEPHONE NUMBER: AC: \_\_\_\_\_ NO: \_\_\_\_\_  
E-MAIL ADDRESS: \_\_\_\_\_

I wish to nominate \_\_\_\_\_  
(Enter Name of Nominee or Title of Paper on the above line.)

ENTER CONTACT INFORMATION FOR NOMINEE OR AUTHOR:

NOMINEE or AUTHOR'S NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
STREET: \_\_\_\_\_  
CITY: \_\_\_\_\_ STATE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_  
TELEPHONE NUMBER: AC: \_\_\_\_\_ NO: \_\_\_\_\_  
E-MAIL ADDRESS: \_\_\_\_\_

TYPE OF NOMINATION: (PLEASE CHECK ONLY ONE SPACE BELOW.)

2015 STS Outstanding Young Professional Award (*Under age 35*) \_\_\_\_\_  
2015 STS Distinguished Service Award (*Over age 35*) \_\_\_\_\_  
2015 STS Best Fundamental Paper Award \_\_\_\_\_  
2015 STS Best Applied Paper Award \_\_\_\_\_

For STS Outstanding Young Member or Distinguished Service Awards, please state the reason you feel that this person is deserving of this award back of this form and ignore the rest of the form. You may attach any supporting documentation to this form.

For Best Paper Nominations, continue and complete page 2 of this form.

## South Texas Section – AIChE 2015 Annual Awards Nomination Form (page 2 of 2)

Please enter the name of the 2015 Best Paper again:

\_\_\_\_\_  
(Sorry to trouble you but this is in case the sheets get separated.)

Enter the contact Author's name again:

\_\_\_\_\_  
(Sorry to trouble you but this is in case the sheets get separated.)

FOR BEST PAPER NOMINATIONS, LIST THE NAMES OF THE AUTHORS AND CHECK ALL BLANKS THAT APPLY:

	<u>MEMBERSHIP</u>	
	<u>AIChE</u>	<u>STS</u>
<i>Note: Only one author must be an STS Member.</i>		
Co-Author #1: _____	_____	_____
Co-Author #2: _____	_____	_____
Co-Author #3: _____	_____	_____
Co-Author #4: _____	_____	_____
Co-Author #5: _____	_____	_____
Co-Author #6: _____	_____	_____
Co-Author #7: _____	_____	_____
Co-Author #8: _____	_____	_____

[Add addition Authors on an attached sheet as necessary.]

For Best Paper Nominations, please provide following information:

NAME OF PUBLICATION: \_\_\_\_\_

DATE OF PUBLICATION: \_\_\_\_\_

VOLUME NO. ( if known): \_\_\_\_\_ PAGES: \_\_\_\_\_ to \_\_\_\_\_

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*Following receipt of the submitted nomination, you will receive an e-mail from the STS Awards Committee confirming receipt of the nomination after AIChE & STS Membership is verified. All Best Paper Nominees not Members of AIChE or STS will be allowed to join either or both until May 31, 2016 in order to be eligible for the recognition due a STS – AIChE Member Best Paper Award Recipient.*

## Candidates for the 2016-17 STS-AIChE Executive Board

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To enable members to make informed selections for the STS-AIChE, the candidates have provided an overview of their experience. Members will receive an e-mail on or before Thursday, November 5, 2015 containing instructions on how to vote electronically or by mail. Members will also be able to vote by paper ballot at the Thursday, November 5, 2015 Monthly Dinner Meeting. To be valid your ballot must be received by Friday, December 4, 2015.

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### **Nominated as Chair-Elect for 2016 (and to Succeed to the Chair for 2017 and to the Past Chair for 2018)**

#### **DAVID ROSENTHAL, P.E.,**

Reliability Delivery and Asset Management Manager  
Jacobs Engineering Group

David Rosenthal, PE, CMRP is a Reliability Consultant, Owner of Reliability Strategy and Implementation Consultancy, LLC. His practice designs asset management strategies and asset care plans for process manufacturers. He has led the delivery of Reliability and Asset Management practices for Jacobs Houston Asset Management Services clients in the US. He has been involved in Reliability and Maintenance for over 30 years with previous roles as a Reliability Manager for Coker units with Marsulex, Maintenance Director in Polysilicon manufacturing, Reliability consultant assisting Lanxess producing Butyl Rubber and Kellogg's in their Snack Foods Division in the development of their reliability programs. The majority of his career was with the Rohm and Haas Company, a specialty chemical manufacturer. His most recent positions were a Maintenance leader, site Reliability leader for their Deer Park, TX Acrylic Acid facility and a Manufacturing Excellence Manager in their corporate Asset Management group.

Dave was the 2012 President of the American Institute of Chemical Engineers. Dave graduated from Drexel University with a B.S. in Chemical Engineering and from the University of Texas with a M.S. in Chemical Engineering. Dave is registered professional engineer in Pennsylvania. He is a member of SMRP and a Certified Maintenance and Reliability Professional. He currently leads the Board of Advisors to SMRP and is a Board of Advisor to the University of Tennessee Reliability Maintainability Center.

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### **Nominated as Secretary for 2016-2017**

#### **CHAITANYA GOTTIMUKKALA**

I am the current Young Professionals (YP) Chair at STS-AIChE.

I have been working as a Senior Risk Engineer with RISKbytes Inc since June 2013, where I support Oil & Gas Companies manage their Health, Safety and Environment (HSE) risks. Prior to that I worked as a Process Engineer (Process Safety and Fire Protection) with CB&I, where I have had the opportunity to work on challenging projects across a variety of oil and gas industries providing process engineering design, process safety and fire protection design and support. The exposure and knowledge gained after earning my Bachelor of Technology degree in Chemical Engineering from J.N.T University in India, I decided to explore the opportunities offered by the Chemical Engineering world. That led to a M.E.S degree in Chemical Engineering from Lamar University, TX. My thesis involved the use of computational fluid dynamic (CFD) techniques to estimate industrial flare emissions, and to predict the dispersion of pollutants from vehicular exhaust pipes.

#### **Service to STS AIChE as Secretary Officer**

I have been involved with the YP group of STS-AIChE since 2010. I started my active involvement in the role of Secretary (2012), then Treasurer (2013), Vice Chair (2014) and now the





## Candidates for the 2016-17 STS-AIChE Executive Board

Chair (2015). Now, it is time for me to start serving the parent body, STS. I would like to run for the Secretary position and am confident that my listening skills, MS-Office skills as well as my previous experience as YP Secretary would be a huge advantage for this position. This is just the beginning for my future involvement within the STS Executive Committee. I look forward to serving you.

### **Nominated as Position 2 (Outreach) for 2016-2017**

#### **Bill Epling, Ph.D.**

Bill Epling is a Professor in the Department of Chemical and Biomolecular Engineering at the University of Houston, and currently the Associate Chair and Undergraduate Program Director for the department. He is also the current President of the Natural Gas Vehicle Alliance of the Greater Houston Area. Bill Epling received his PhD from the University of Florida in 1997 and his BS from Virginia Tech in 1992, both in Chemical Engineering. Prior to joining UH in 2011, he worked at Pacific Northwest National Lab, a catalyst manufacturing company (EmeraChem) and at Cummins Inc. He is a Director of the Catalysis Division of the AIChE and has served in the STS-AIChE Position 2 – Outreach – for the last 2 years, with strong support from Matt Kolodney. He has also supported the James Turner, the Chair of the Student Session at the last two SPTC events, in organizing the student sessions.

### **Nominated as Position 4 (Human Resources) for 2016-2017**

#### **Thomas E. (Tom) Rehm, PhD ChE, PE, CSP, CPSA**



I am a retired chemical engineer, my last stint being with Saudi Aramco from 1997 to 2009. As a Senior Loss Prevention Engineer, I was instrumental in development and launch of Saudi Aramco's Safety Management System, their version of Process Safety Management. Previous lives included design engineering with UOP in Des Plaines, Illinois (1972-1981); research engineering with Amoco Chemical in Naperville, Illinois (1985-1992); and incident investigation/expert witness litigation support with CH&A, a small engineering firm in Kingwood (1993-1997). I received a Ph.D. in chemical engineering from Northwestern University during a work interlude (1981-1985). Since the mid-90s I have been involved in Process Safety Management (PSM). During my retirement, I have done consulting work part-time, with my services including facilitation of process hazard analyses, process safety auditing, PSM consulting, incident investigation, and training. I am the Team Leader of the AIChE Academy PSM Development Team. I am married, have five children, and ten grandchildren.

#### **Service to STS AIChE as Human Resources Officer**

As the STS Human Resources Officer, I will lead membership activities, including recruitment of engineers by meeting with local companies, reaching out to university graduates and new hires in the area, working with the Young Professional Group chair to actively involve young chemical engineers in the Section, reaching out to members who have become inactive, organizing membership drives, maintaining ties with AIChE National to receive updated lists of chemical engineers in the area, and working to involve new members to make them feel welcome in the Section. I will liaise with local company executives to ensure their engineers are aware of upcoming STS events, get their input on what STS could do in the area of continuing education, and determine employment opportunities at their companies for dissemination to STS membership.

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## K12 Volunteer Opportunities

AICHE and STS are working to start up K12 outreach programs. We are encouraging STS members to attend various local outreach events and report back to STS and AIChE on their experience. We are encouraging STS members to report back to Matt Kolodney ([mkolodne@tceq.state.tx.us](mailto:mkolodne@tceq.state.tx.us)) with one-page descriptions of their K12 outreach experiences, what worked well and what didn't. These will be reviewed locally and passed on to the AIChE National K12 program. Some local K12 opportunities are listed below.

HUNSTEM web site: <http://hunstem.uhd.edu/> Already has a wide range of educational resources for use by interested teachers and volunteers. AIChE (national) is encouraging cooperation with organizations such as HUNSTEM.

IEEE [http://www.ieee-houston.org/Committees/SAC/Brochure\\_IEEE%20Houston\\_7\\_Oct\\_2007.pdf](http://www.ieee-houston.org/Committees/SAC/Brochure_IEEE%20Houston_7_Oct_2007.pdf) This ongoing Houston Area program assists local schools with teacher training demonstrations.

SEFH <http://hunstem.uhd.edu/SEFH/> Science and Engineering Fair of Houston

Houston Museum of Natural Science (<http://www.hmns.org>) has ongoing outreach programs and could use more volunteers.

The Houston Children's Museum (<http://www.cmhouston.org>) also has outreach programs.

For more information, contact Matt Kolodney (713-471-8956) or [mkolodne@tceq.state.tx.us](mailto:mkolodne@tceq.state.tx.us).

### **PE PHD Hours Qualified!!**

*The Texas Board of Professional Engineers (TBPE) will allow up to 3 continuing education hours per year for K-12 outreach activities, but only under certain circumstances. The STS K-12 coordinator checked this with the TBPE staff in Austin. STS-AIChE sponsors K-12 outreach presentations to high school classes (career day for example), science fair judging, explaining engineering careers to teachers (who will pass the information on to students), sponsored tours for students and teachers at OTC, and one-on-one counseling of students. TBPE prefers a certificate from the sponsoring organization (such as STS) explaining what was done, stating the number of PDH hours, and certifying that the engineer actually participated. If you participate in an STS-AIChE K-12 outreach event and want PE PDH credit, the STS will provide the certificate.*

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## Call for Volunteers Official Greeters

The STS is looking for two volunteer official greeters, one a young professional and one chronologically mature. Their goal is to greet first-time attendees (or members who haven't attended for a while) of monthly meetings, to help them feel comfortable and welcome, tell them a little about the STS and the meeting, and to introduce them, as needed, to our regular attendees. We are looking for volunteers who:

- Frequently attend monthly meetings (arriving by would help)
- Get along with most people
- Are reasonably acquainted with the STS-AIChE and its members, though we can help with that will briefly point out a potential benefit or two of active involvement in STS-AIChE

Our monthly meetings occur on a Thursday after work, and may already have put in a 40+-hour week. An ideal volunteer would enjoy dealing with new attendees and would become energized rather than tired out by dealing with people they don't already know well.

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## More Volunteer Opportunities

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In STS-AIChE, we have an opening for a K-12 volunteer. Instead of you having to reinvent the wheel, we can help you with any of the following:

- Advice on how to get started productively;
- The opportunity to attend K-12 events of other organizations, in order to learn how to conduct an AIChE K-12 outreach event;
- Networking opportunities to get contacts in local school systems;
- Assistance in recruiting STS volunteers;
- Conducting intersociety activities to help your programs reach critical mass;.
- Help in conceiving and developing a K-12 outreach program suitable for STS-AIChE to lead.
- Opportunities to develop and practice your interpersonal skills and to learn and practice leadership

**STS Membership Committee Members seeking members who would be interested in some or all of the following:**

- Identify the varied opportunities for STS volunteers
- Greet first-time attendees—help them feel welcome introduce them to other STS members
- Contact them periodically—encourage them to come back
- Encourage them to gradually get involved in STS
- Gradually get to know the new members first-timers and their interests
- Suggest STS volunteer activities that interest them & help them grow
- Encourage them to practice their leadership and their project management skills in service to the STS
- A great opportunity to develop your people skills & leadership skills by helping develop those capabilities in the STS and its members

**Volunteer opportunity helping represent STS-AIChE at ECH (Engineering, Science, and Technology Council of Houston): Seeking a volunteer who would like to network with and learn from members of other professional societies, develop leadership skills, and help provide broader volunteer opportunities for STS members. Options include:**

- Work with ECH councilors from other local engineering and science, societies, as well as officers of the other member societies;
- Learn how they run their organizations, and bring some of their ideas back to STS-AIChE
- Participate in intersociety workshops on technical issues that affect the Greater Houston Area
- Get involved in the organization of the regional science fair;
- If you are interested in a particular type of volunteer activity, we'll help you organize intersociety activities in that area
- If you're a YP, we can help you organize intersociety YP events that STS-AIChE doesn't have the critical mass to conduct on our own;
- Your learnings from ECH could be very helpful to you as a future manager at work or as a future leader in STS and AIChE

If you are interested, or would like further information, contact: Matt Kolodney, STS Volunteer Recruiter at (713-471-8956) or [matthew.kolodney@tceq.state.tx.us](mailto:matthew.kolodney@tceq.state.tx.us)

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## South Texas Section to Initiate Company Liaison Program

The South Texas Section (STS) of AIChE is implementing a Company Liaison Program. Carol Schmidt (STS Past Chair) is heading up the initiative.

The intent of the program is to have a liaison contact at companies in the region that employ a large group of Chemical Engineers, so that the liaison can pass on information on upcoming events, and encourage attendance at STS-AIChE Events.

This program will make it easier for Chemical Engineers to learn about meetings and events that may interest them, and by providing a “personal touch” and intra-company networking opportunity, overcome potential fears or objections to participating. The program will also provide a potential opportunity for employees to be recognized as leaders within their company.

Responsibilities and benefits are listed in the table below.

STS-AIChE	Liaison	Company
<b>Responsibilities</b>		
<ul style="list-style-type: none"> <li>✦ Provide meetings and events</li> <li>✦ Maintain list of liaisons</li> <li>✦ Send out special emails to liaisons</li> <li>✦ Advertise program and recognize liaisons and companies</li> </ul>	<ul style="list-style-type: none"> <li>✦ Forward STS-prepared emails to department/group</li> <li>✦ Create meeting invitations for coworkers</li> <li>✦ Try to set up carpools where able</li> <li>✦ Attend meetings where possible</li> <li>✦ Interface with Company Management on STS activities and sponsorship opportunities (as applicable)</li> <li>✦ Provide feedback to STS Officers on company interests and comments</li> </ul>	<ul style="list-style-type: none"> <li>✦ Support the liaison</li> <li>✦ Advertise where applicable</li> </ul>
<b>Benefits</b>		
<ul style="list-style-type: none"> <li>✦ Higher attendance</li> <li>✦ Better corporate relations</li> </ul>	<ul style="list-style-type: none"> <li>✦ Personalized Nametag for meetings</li> <li>✦ Demonstrated leadership within company</li> <li>✦ Increased networking ability within corporation</li> <li>✦ PDH credits/technical education</li> </ul>	<ul style="list-style-type: none"> <li>✦ Recognition at meetings</li> <li>✦ PDHs / education for employees</li> <li>✦ Networking/team building opportunities</li> </ul>

There is no cost for liaisons or companies to participate. Participation as a liaison is completely voluntary, and companies can transition to a new liaison or end their participation at any time.

The intent is for the Past Chair to maintain the program on an ongoing basis.

For more information, or to sign up as your company's STS-AIChE liaison, contact **Carol Schmidt** at

[sts-pastchair@aiche.org](mailto:sts-pastchair@aiche.org).



## South Texas Section AIChE

STS AIChE  
P.O. Box 421373  
Houston, TX 77242

### 2015 Officers and Contact Information

#### Officers

**Chair** Kelly Richardson  
[sts-chair@aiche.org](mailto:sts-chair@aiche.org)

**Chair Elect** Syamal Poddar  
[sts-chairelect@aiche.org](mailto:sts-chairelect@aiche.org)

**Past Chair** Carol Schmidt  
[sts-pastchair@aiche.org](mailto:sts-pastchair@aiche.org)

**Secretary** Katherine Leskin  
[sts-secretary@aiche.org](mailto:sts-secretary@aiche.org)

**Treasurer** Carlos Salamanca  
[sts-treasurer@aiche.org](mailto:sts-treasurer@aiche.org)

#### Executive Committee

**Position 1: Education**  
Shane Tierling  
[sts-position1@aiche.org](mailto:sts-position1@aiche.org)

**Position 2: Outreach**  
Bill Epling  
[sts-position2@aiche.org](mailto:sts-position2@aiche.org)

**Position 3: Communications**  
Linton Wong  
[sts-position3@aiche.org](mailto:sts-position3@aiche.org)

**Position 4: Human Resources**  
Dale Embry  
[sts-position4@aiche.org](mailto:sts-position4@aiche.org)

#### Volunteers

**Arrangements:** John Middleton  
Bob Andrew

**Awards:** Tom Menn

**Membership:** David Silarski

**Young Professionals:** Chaitanya Gottimukkala  
[sts-yp@aiche.org](mailto:sts-yp@aiche.org)

### SOUTH TEXAS SECTION MISSION STATEMENT

As a section of AIChE, we serve chemical engineering professionals in the South Texas region through education, professional development, and networking.

### Vision 2015

We will become an organization with strong and active membership. We will accomplish this through:

1. Increasing awareness
2. Improving relevancy of our programs
3. Improving our governance
4. Hospitality/Welcome/Social

### — SUBSCRIBE/UNSUBSCRIBE INFORMATION —

Our newsletter subscription list is by invitation only.

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### — MAINTAIN YOUR CONTACT INFORMATION WITH STS —


Maintain your contact information with the South Texas Section using the online community:


<http://www3.aiche.org/MemberMail/redirect.aspx>


To update your information, log in, then select [Member Directory](#).

Select the link to [View/Update Your Online Directory Listing](#).

Contact the New York office for PERMANENT ADDRESS CORRECTIONS:

 [xpress@aiche.org](mailto:xpress@aiche.org)

 1-800-AIChemE (1-800-242-4363)

 AIChExpress Service Center  
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New York, New York 10016-5991

## The South Texan Newsletter Crew

WHAT DO YOU THINK OF THE NEWSLETTER? We want to know!

Contact us at [sts-newsletter@aiche.org](mailto:sts-newsletter@aiche.org) with comments, questions, suggestions, and ideas for next month.

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