



Monthly Meeting November 6th, 2014

Central Location: Brady's Landing 8505 Cypress St. Houston (Water Forum 4 to 6 PM-register at <http://texasiof.ceer.utexas.edu/tiof/watermngmt110614.asp>, Social Hour at 6PM, Dinner at 7 PM; pre-register at <http://sts.aiche.org/>)

Satellite Location: There is no satellite in November. 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 and Industrial Water Management Forum

Topic: Technology Selection for Tertiary Water Treatment and Wash Water Reduction through Innovative Mixing Design

Dinner Speaker: John B. Sabey

Abstract: With the demand for and consumption of water increasing rapidly over the next 20 years around the globe, the oil and gas industry will be hard pressed to gain access to potable water sources for use in oilfield applications. Therefore, the industry will be forced to use both non-conventional water and produced water to meet their needs. Not only will these water sources become a focus for re-use within the industry, but also the conservation of what little water the industry has access to will become a primary concern. ProSep has developed an array of technologies that deal both with the treatment of oil and gas water streams related to production, as well as proven the efficiency of our mixing technology to aid in the reduction in wash water consumption for oil desalting applications. This presentation will demonstrate how ProSep chooses the technology to meet a customer's needs, based on the characteristics of the production, while also showing our innovative solutions for reducing the total amount of water needed for standard oil and gas industry processes. Case studies will be presented that prove the efficacy of these technologies, along with improvements and the current status of the offerings in our portfolio.

Bio: John currently serves as the Director of Process Separation Solutions for ProSep (USA) Inc. He earned his B.S. and M.S. in Mining & Minerals Engineering from Virginia Tech. He has held positions as a process engineer, R&D project engineer, produced water product manager and sales and marketing manager. He has previously worked for WEMCO, Baker Hughes, Kvaerner Process Systems, ProSep Technologies, Inc., where he was one of the founders, FLSmidth gMAX Systems and VME Process. ProSep is a provider of conventional and proprietary process solutions including primary separation, gas treatment, crude dehydration and desalting, produced water treatment and seawater systems for the Upstream Oil & Gas industry. He has also served on the Board of the Houston Produced Water Society.





"Industrial Water Reuse and Desalination" Texas Industrial Water Management Forum

Thursday, Nov. 6, 2014
Brady's Landing
8505 Cypress St.
Houston, Texas 77012
4 to 6 pm

To register, go to at <http://texasiof.ceer.utexas.edu/tiof/watermgmt110614.asp>

3:30 to 4:00 pm	Forum Registration and Visit with Exhibitors
4:00 to 6:00 pm	Industrial Water Management Forum See program below.
6:00 to 7:00 pm	Networking and Exhibition (sponsored by AIChE-STS – information below)
7:00 to 9:00 pm	Optional AIChE-STS Dinner and Speaker (non-members are welcome – information below)

This Forum will explore the interaction between water and energy use in the process industries and the potential offered by new water management strategies and treatment technologies.

Forum Moderator

Frank Roberto, ExxonMobil Chemical
Chair, Texas IOF Chemicals and Refining Advisory Committee *Presentations*

Future Water Demand and the Role of Alternative Sources and Water Reuse

*Erika Mancha, Team Lead, Innovative Water Technologies
Texas Water Development Board*

What do the regional water planning bodies expect will be the role of alternative sources and water reuse in the future? The speaker will address the capabilities of today's technology to meet these needs, the direction of research at the state and national level, and how industry can be part of the solution.

Evaluation and Optimization of Emerging and Existing Energy Recovery Devices for Desalination and Wastewater Membrane Treatment Plants

Steve Alt, Senior Water Membrane and Desalination Engineer, CH2M Hill

Reverse osmosis (RO) is widely used to desalt brackish water and seawater for drinking and industrial water production and to reclaim wastewater effluent for potable reuse and industrial use. A major impediment to additional implementation of desalination technologies is the lack of an independent tool to evaluate energy consumption and minimization of energy use. The speaker will present the results of this analysis, based on a tool developed for the Water Reuse Research Foundation. This tool assesses currently available and emerging Energy Recovery Devices (ERDs) for desalination systems, and evaluates commercially available ERDs for the treatment of brackish water, seawater, and wastewater effluent.

The presenter will provide an overview of the treatment and ERD technologies incorporated into the tool and present results from case studies using this evaluation approach. Performance metrics include energy consumption, operating costs, and life-cycle costs of these devices, and as well as the overall energy consumption, operating costs, and capital costs associated with the system.

Advanced Water Reuse in Petrochemical and Oil Refining Facilities: Global Perspective And Case Studies

Joseph Wong, Brown and Caldwell

Petrochemical and oil refining facilities use large quantities of water for cooling, process, boiler feed and other miscellaneous plant uses. Traditionally membrane processes such as reverse osmosis (RO) has been used only in boiler feed water treatment systems as pretreatment for deionization (DI) to reduce regeneration chemical costs for water supplies with relatively high total dissolved solids. Due to widespread water shortage in recent years and forecasted water supply effects due to climate change and population growth, water Conservation and water reuse are becoming a necessity for these facilities throughout many parts of the world. The advent in membrane technologies, especially microfiltration (MF), ultrafiltration (UF) and RO, has made water reuse more technically and economically feasible over the last 15 years. Since the installation and commissioning of the first major UF/RO advanced water reuse treatment system at the China American Petrochemical Company (CAPCO) petrochemical plant near Kaohsiung, Taiwan, in 2000, approximately 30 advanced membrane treatment systems have been installed in petroleum processing facilities throughout the world. Most of the advanced treatment systems are retrofitted into existing facilities, but some new processing plants are incorporating water reuse in the overall wastewater treatment systems.



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To register, go to at <http://texasiof.ceer.utexas.edu/tiof/watermngmt110614.asp>

This presentation offers an overview of membrane applications in petroleum processing facilities and updates the list of reported worldwide membrane installations in these facilities for effluent treatment and reuse as of late 2014. These installations include membrane bioreactors (MBR), tertiary MF/UF, with or without RO. Some of the MF/UF systems are of the pressure type and some are of the submerged type. Several representative case studies will be described and discussed with respect to impetus for reuse, water quality evaluation, treatment performance, and lessons learned. In addition, problems encountered in using membranes for the petro industries and process flow sheets (pretreatment) to deal with specific fouling contaminants will be discussed. Specific fouling concerns include oil and grease, organics, and potentially metals. To date, the use of membranes for water reuse in petroleum processing facilities in the United State is limited to treating municipal wastewater effluent for reuse in cooling tower makeup and boiler feed. However, out of necessity, it is expected that more and more petroleum processing facilities will install membrane-based advanced treatment systems to reclaim their own effluent in the near future. Some feasibility studies for refinery effluent reuse are being conducted in California and other states.

Treated Effluent Reuse for Cooling Water Make-up in a Chemical Processing Plant

Tamim Popalzai, Technical Consultant, WorleyParsons

A new multi-billion dollar Chemical Facilities plant located in Lake Charles, Louisiana is designed to use MBR wastewater technology to treat its oily waste water and re-use the treated effluent combined with clean stormwater for cooling water make-up to reduce plant lifecycle costs.

The wastewater treatment plant (WWTP) at the Chemical Facilities Plant treats various wastewater streams from the plant such as oily process wastewater, non-oily process wastewater, potentially contaminated wastewater and contaminated condensate. All these streams are collected and mixed in an equalization tank. A MBR pilot test was conducted using a “similar” feed composition from existing plants in order to determine the treatment efficiency and effluent quality for re-use.

The treated MBR effluent is planned to be re-used for cooling water make-up in order to reduce plant lifecycle costs. Some of the important criteria for the cooling water make-up quality are TDS (total dissolved solids), hardness, TSS (total suspended solids), TOC (total organic carbon), COD (chemical oxygen demand), and biological activity. As a potential risk, adverse effects of these parameters are to be evaluated (by modelling) to ensure that the treated MBR effluent does not cause any fouling or scaling to the cooling towers as well as not negatively impact the cycles of concentrations. A high level cost evaluation was also conducted to determine the cost reductions in capital and operating expenditures for the cooling towers as a result of using treated effluent as a part of the make-up.

Questions & Answers

Logistics and Registration

There is no cost for attending the Water Forum; however, pre-registration is requested so that we can provide adequate facilities. Registration is open at <http://texasiof.ceer.utexas.edu/tiof/watermngmt110614.asp>

If you are interested in exhibiting at the event, contact Kelly Richardson with STS-AIChE at kelly_s_richardson@hotmail.com or 832-954-6055.

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

Networking and Exhibition Session, 6 – 7 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—7 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. Register and pay for the dinner separately at <http://sts.aiche.org/>

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: You have until 4 PM CST on November 5th 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 at:
<http://sts.aiche.org/>

Meeting Location— Brady’s Landing



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. There is no Satellite Meeting this month. We plan to webcast the announcements and meeting live on our new [YouTube channel](#). For More details information, please check our website <http://sts.aiche.org/>.

STS AIChE November 2014 North Satellite Monthly 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 7:30 pm with the main presentation at 8:15 pm.

You can view the webcast here on our website (below) or via our Youtube channel [here](#).

Action Item Overload ?

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Topic 1 of 9

Smith & Burgess
Process Safety Consulting

November 2014 STS-AIChE Chair's Letter – Carol Schmidt

What a conference! The Southwest Process Technology Conference, held October 9-10, 2014 in Galveston, did not disappoint. The caliber of presentations were high, the booths were excellent, the YP topics were very interesting and we had a good showing of students from all of our schools. I found myself greatly torn as to which presentation to see, catching up with colleagues and talking to the exhibitors. After the conference, I had a wonderful time winding down at the YP mixer. I was particularly pleased to sit with my coogs and hear about my old professors.

A big thank you to our conference opening speaker, Rui Cruz, all of our session chairs, session speakers, STS volunteers, and AIChE staff for helping to pull it all off. A thank you beyond words to Alan Rossiter and Jayce Mathews for championing this event and Ian Glasgow for putting together a mini-career fair and working with the university professors to rearrange test schedules and make it possible for students to attend. And thank you to our sponsors and exhibitors who add value and make the event financially possible. Please consider being a volunteer next year. Most of this year's presentations slides are available via the AIChE website and many of the presentations will be available via ChemE on Demand.

Our October dinner speaker was Colonel Timothy MacGregor, but he said that some call him "Tim". His talk, "Seeking out and taking advantage of unexpected opportunities while establishing personal and professional goals and aspirations", was a riveting talk about how he set goals and achieved great things, even with an upbringing that anticipated otherwise. His inspirational words and pictures were very personal and heart felt. Since this presentation wasn't digitally recorded, you will just need to talk to someone who was there to get more information.

STS-AIChE annual elections are here. You can find information about the positions and candidates later on in this newsletter. As Chair, I have gained a new sense of appreciation and gratitude for all of the people who give of their time to help their colleagues. In 2012, I was worried that I would have to delay family plans and reduce my hours at work in order to pull off all of the tasks required to keep the section running smoothly. Because of the couple dozen other volunteers that contribute their parts, we have been able to continue serving the chemical engineering community, and I have been able to keep some semblance of sanity through a second child and an increased workload. My husband and I even have regular date nights! Two to three years may seem too long of a time to make a volunteer commitment, but it really hasn't been that much of an inconvenience so far. I have really enjoyed the events and the people with whom I get to have regular contact. I appreciate everyone on the ballot and look forward to 2015.

Our next meeting will be coupled with the Water Forum at Brady's Landing. The afternoon program has been organized by Kathey Ferland, the same person who brings us the Energy Forum in the spring. Please look for the details of this program later on in this newsletter. Our dinner speaker is John B. Sabey with ProSep, speaking on, "Technology Selection for Tertiary Water Treatment and Wash Water Reduction through Innovative Mixing Design". Since we have sponsors for this meeting, registration is heavily discounted, so make sure to sign up early. As always, season pass holders are already pre-registered for technical meetings.

For those who are thinking about taking the 2015 PE Exam, we are happy to announce that we will be offering the PE Review Course with UH again this coming spring. Information can be found later on in this newsletter. I'm beginning to sound a bit like a broken record, but thank you to all of our volunteer instructors and Dale Embry and Nicolette Solano for putting this all together.

Please share this with those in your department, especially your department manager. STS-AIChE is dedicated to serving the chemical engineering community. We need your involvement to ensure we are achieving that purpose. I have met some of the most fascinating people at the monthly meetings. I have gotten help and tips from colleagues that helped me solve technical problems. This is your organization. Make the most of it.

I would like to encourage everyone to share your ideas and suggestions with me and other members of the Executive Committee. Together, we can continue to make STS-AIChE a place of community, fellowship and education for us all.

Sincerely,

Carol Schmidt
Jacobs Engineering

2014 AIChE Southwest Process Technology Conference Wrap Up

The AIChE Southwest Process Technology Conference (SPTC) has become an annual highlight for STS, and this year's conference was yet another resounding success. More than 400 people attended the event. This included a large contingent of engineers from the Greater Houston area, a number from other parts of the USA, and a small international contingent, as well as nearly 50 students.

The technical program was packed with highly topical presentations that covered the fields of Process Safety, Energy Efficiency and Asset Optimization, Thermodynamics & Process Simulation, Upstream Oil & Gas, Distillation & Separation, Catalysis and Reaction Engineering, Process Control & Optimization, Chemical Process Technology, Petroleum Refining Technology, and Process Development & Chemical Manufacturing. There were also special sessions for Students and Young Professionals, and an outstanding Ethics presentation delivered by Ken Arnold of Worley Parsons. The keynote address, "Wonders and Challenges of Process Research in the Chemical Industry," was presented by Rui Cruz, Research & Development Director, Exploration and Production - Dow Oil Gas and Mining.

Another highlight of this year's conference was the dinner meeting, where US Air Force Colonel Tim MacGregor gave an inspiring and memorable talk about pursuing personal and professional goals and aspirations. He challenged us to dream big and grasp the opportunities that come our way, and drew on his own experience in the Air Force to illustrate the possibilities that exist.

The winner of this year's Best Presentation Competition was Mark Lockhart of Burns & McDonnell, for his presentation "Shale Gas Boom and Tight Oil – A Look at Current Projects in the Refining Sector." We would like to thank all the Session Chairs and Co-Chairs for securing the excellent technical presentations that provided such great value to all attendees.

This year we had 32 exhibitors in the main exhibition hall. The exhibition provided a wealth of technical information and great networking opportunities. In addition, we had 8 career fair exhibitors, providing career development opportunities for students, upcoming new graduates, and seasoned engineers.

The conference would not have been possible financially without the generous financial support of our many sponsors and the tireless efforts of conference leadership team: Program Chair Jayce Mathews put together the excellent technical program that provided the backbone of the conference, and James Turner organized the Student Program. Conference Co-Chair Ian Glasgow provided support in many areas, including promotional activities for the Student Program and organizing the Best Presentation Award judging. AIChE's Meetings & Conference Department worked behind the scenes in a variety of capacities to ensure the success of the conference, and Dave Silarski and John Middleton managed our volunteers and on-site arrangements. Alan Rossiter once again served as Conference Chair and worked tirelessly with all the committees and sponsors to ensure the conference was a success.

Next year's SPTC is scheduled for Thursday and Friday October 1-2, 2015. Save the date, and don't miss it!



The SPTC Would Like to Thank Our Sponsors!

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PE Refresher Course Offered Spring 2015

The STS-AIChE & the University of Houston will sponsor a Chemical Engineering Professional Engineering Review Course, Spring of 2015.

The course will be held at UH from 4:00 to 7:00pm on Friday afternoons beginning January 23 through April 10. The cost for the course (not including books) is \$875 for non-members, \$650 for members of both National AIChE and STS-AIChE.

We have continued to update the curriculum based upon feedback from the students over the past three course offerings.

Registration is open until December 19. Contact Dale Embry at dale.l.embry@member.aiche.org or 832-815-1552 for more information.

Preliminary Schedule - Spring 2015 PE Exam Review Course for Chemical Engineering

Dates 2014	Topic	Instructor
23-Jan	Introduction; Mass/Energy Balances & Thermo I	Dale Embry
30-Jan	Mass/Energy Balances & Thermodynamics II (3)	Gary Gildert/Dale Embry
6-Feb	Thermodynamics III (1); Fluid Mechanics I (2)	Dale Embry; Todd Willman/Carol Schmidt
13-Feb	Fluid Mechanics II (3)	Todd Willman/Carol Schmidt
20-Feb	Heat Transfer I (3)	Dennis Glascock
27-Feb	Heat Transfer II (1); Separations Processes (2)	Dennis Glascock; Jose Bravo
6-Mar	Separations Processes II (3)	Jose Bravo or Carlos Trompiz
13-Mar	Kinetics I (3)	Gary Gildert
20-Mar	Spring Break	
27-Mar	Kinetics I (1); Plant Design & Economics (2)	Gary Gildert; Dale Embry
3-Apr	Plant Design & Operations (3)	Katherine Leskin
10-Apr	Sample Test Exam (3)	

All classes will meet on Fridays from 4:00 - 7:00 P.M.

Important Dates:

PE Exam: Friday, April 17, 2015

Application Deadline: Monday, December 12, 2014

PE Review Course Registration Deadline: Friday, December 19, 2014, 5:00pm

PE Exam Registration Deadline: Thursday, February 19, 2014

UH Contact: Nicolette Solano

Phone: 713-743-4304

Email: nsolano2@Central.UH.EDU

Debbie Boyer

713-743-1347

dboyer@uh.edu

Texas Board of Professional Engineers (TBPE) www.tbpe.state.tx.us

National Council of Examiners for Engineering and Surveying (NCEES) www.ncees.org

Books used in the course: Study Materials can be found at <http://ppi2pass.com/> & www.ncees.org

✦ Chemical Engineering Reference Manual for the PE Exam ISBN-10:1-59126-007-8

✦ NCEES PE Exam Chemical Sample Questions and Solutions ISBN:978-1-932613-52-0

2015 Chemical Engineering PE Refresher Course Registration Form

Books used in the course: Study Materials can be found at <http://ppi2pass.com/> & www.ncees.org

- Chemical Engineering Reference Manual for the PE Exam ISBN-10:1-59126-007-8
- NCEES PE Exam Chemical Sample Questions and Solutions ISBN:978-1-932613-52-0

Name (First Last) _____

Preferred Email Address _____

Phone Number (must accept text messages) _____

Shipping Address

Address _____

City _____ State/Province _____ Postal Code _____

Billing Address check if same as shipping address

Address _____

City _____ State/Province _____ Postal Code _____

Drivers Licence (#, State): _____ **Birthdate (mm/dd/yy):** _____

Gender M F

Payment Type Visa Mastercard Discover Check (enclosed)

Card # _____ Expiration Date _____ Security Code _____

AICHE Membership Number (for discounted membership price) _____

I authorize STS-AICHe to charge \$ _____ for payment of the PE Exam Review Course using the above credit card information provided.

For National AICHe & STS members - \$650

For non-members - \$875

Signature _____ **Date** _____

Please send this registration form to:

e-mail: dale.l.embry@member.ache.org

Mail checks to:

STS-AICHe
P.O. Box 421373
Houston, TX 77242

You will receive a confirmation by email within several days of receipt.

Limited space - reserve your space now (cut-off for class registration – December 19th)

Cancellation Policy –by 12/14 - full refund, 12/19 – ½ refund, after 12/19 – no refund

Spring 2014 PE Review Course Exam Passers

Congratulations!



Louis Garces

Yuanhang Liu

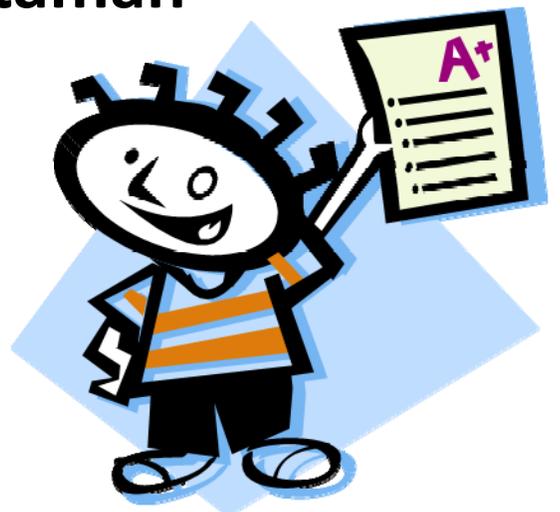
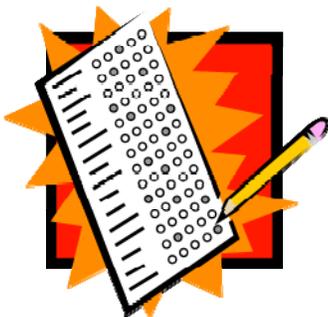
Phillip Niksch

Rupesh Parbhoo

Sabrina Permenter

Parag Shah

George Potaman



South Texas Section 2013 Annual Awards

South Texas Section 2013 Annual Awards Presented at October 3 STS Monthly Dinner Meeting

The Thursday, October 9, Monthly South Texas Section Dinner Meeting at Galveston's Moody Gardens Hotel served as the venue for the presentation of the Annual South Texas Section Awards for 2013. The awards presented were the Best Applied Paper, Best Fundamental Paper, Outstanding Young Professional, and Distinguished Service.

2013 STS Best Paper Awards Judging Committee

The Annual 2013 South Texas Section - AIChE Best Papers Competition had a total of 14 papers submitted with eight (8) in the Applied category and seven (7) in the Fundamental category. The papers were judged by a Committee chaired by Ryan Stephens of Shell (*Westhollow Research Center*) and composed of the following judges:

Ryan Stephens, Chair
Vikram Chikyala
Smita Edulji
Luis Filobelo
Amrit Kalra
Ann Lauritzen
Anand Nilekar
Alex Sakamoto

Flavia Cassiola
David Denley
Erik Engwall
Zhongxin Huo
Timothy King
Steven Lim
Nihar Phalak
Rama Vaidyanathan

The South Texas Section – AIChE wishes to thank the Best Papers Judging Committee, all those who participated in the completion, and all those who worked to make the best papers completion a success.

2013 STS Best Applied Paper Award

The STS 2013 Best Applied Paper is "*Strong, Light, Multifunctional Fibers of Carbon Nanotubes with Ultrahigh Conductivity*" published in **SCIENCE**, VOL 339, 11 January 2013 by Natnael Behabtu, Colin C. Young, Dmitri E. Tsentlovich, Olga Kleinerman, Xuan Wang, Anson W. K. Ma, E. Amram Bengio, Ron F. ter Waarbeek, Jorrit J. de Jong, Ron E. Hoogerwerf, Steven B. Fairchild, John B. Ferguson, Benji Maruyama, Junichiro Kono, Yeshayahu Talmon, Yachin Cohen, Marcin J. Otto, and Matteo Pasquali.



Colin C. Young (c) holds his 2013 STS Best Applied Paper Award. Also pictured are 2014 STS Chair Carol Schmidt (r) and 2012 AIChE President David Rosenthal.

South Texas Section 2013 Annual Awards (Continued)

2013 STS Best Applied Paper Award

The STS 2013 Best Applied Paper is "*Neighbor-induced bubble pinch-off: novel mechanisms of in situ foam generation in microfluidic channels*" published in **Soft Matter**, 2013, 9, 10971 by Rachel Liontas, Kun Ma, George J. Hirasaki, and Sibani Lisa Biswal.



Receiving the 2014 STS Best Fundamental Paper Award were George Hirasaki (*2nd from left*) and Kun Ma (*3rd from left*). Also in the photo were 2014 STS Chair Carol Schmidt (*r*) and 2012 AIChE President David Rosenthal (*l*)

Trevor Rice Receives the 2013 STS Outstanding Young Professional Award



Trevor Rice (*r*) receives the 2013 STS Outstanding Young Professional Award from 2014 STS Chair Carol Schmidt (*l*)

The STS 2013 Outstanding Young Professional Award was presented to Mr. Trevor Rice. Trevor received his Bachelor of Science in Chemical Engineering in 2011 and has been employed as a Systems Engineer at Chemstations, Inc. since 2010. He has been an AIChE Member since 2011 and began serving on the STS Webcasting Committee in 2012. Trevor is the STS YP Webmaster which started this year, 2014.

South Texas Section 2013 Annual Awards (Continued)

Ken Cox Receives the 2013 STS Distinguished Service Award



Ken Cox (c) displays his 2013 STS Distinguished Service Award. Ken is flanked by 2014 STS Chair Carol Schmidt (l) and 2012 AIChE President David Rosenthal.

Dr. Kenneth R. Cox was honored with the STS 2013 Distinguished Service Award. Ken received his Bachelor of Science Degree Chemical Engineering from The Ohio State University in 1974, his Masters in Chemical Engineering in 1977 and his Ph. D. in 1979 both from the University of Illinois (Urbana-Champaign). He currently is the Associate Chair for Undergraduate Studies for the Department of Chemical and Biomolecular Engineering Professor in the Practice at Rice University. Ken has held a similar position at The Ohio State University and previously was employed as a Staff Research Engineer with Shell Development Company in Houston and on special assignment in Amsterdam.

Ken is a Fellow of AIChE and is a Professional Engineer in Texas.

Ken first served the South Texas Section on the STS Executive Committee as Position 2 from 2005 thru 2009. He was elected as STS Chair Elect for 2010, served as STS Chair in 2011, and as STS Past Chair in 2012. He has received the STS Chair Appreciation Award. Ken has also served as AIChE Student Chapter Advisor for Rice University since 2005. His current research is in corrosion and scale prevention for Deepwater Gulf of Mexico. Ken teaches Senior Design Courses plus several other courses in laboratory studies and process safety.

Ken has received the 2008 C.M. and Demaris Hudspeth Award for the Outstanding Club Advisor as well as the George R. Brown Award for Superior Teaching at Rice University. He is also the AIChE Chair for Programming Area 12G Product Design and serves as a member of the SAcHE Committee. He has served on other AIChE Committees as well as those for other organizations.

Ken is the proud father of a daughter and the owner of an Australian Terrier. Ken also does genealogical research on his family tree.

Dr. Angela Summers, P.E. Elected AIChE Fellow

Dr. Angela Summers, President of SIS-TECH, a process safety consulting company with more than 60 employees, was recently elected AIChE Fellow by the Board of Directors of AIChE.

If you work in a process plant, you may be safer because of Angela's pioneering work on safety instrumented systems. She has played a pivotal role in the development of the ISA and IEC standards for the assessment, design, programming, operation, maintenance, and long-term support of safety instrumented systems used to prevent catastrophic releases in the chemical process industry. She also edited or served on a CCPS committee working on nine AIChE Center for Chemical Process Safety books. Dr. Summers has also published 55 journal articles, made 104 conference presentations, and has received 9 US patents and 28 international patents.



Dr. Summers has served as Adjunct Professor at the University of Houston, Clear Lake since 1992. Through teaching and conference presentations, she has trained over 3000 students on safety instrumented systems.

Angela has received a number of awards from AIChE, ISA, the University of Alabama, and Texas A&M University. She is one of only five individuals to have been elected a fellow of both AIChE and ISA.

When you see Angela, please congratulate her and thank her for her contributions to safer process plants.

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STS AIChE 2015 Officer Elections

Elections are now underway for the South Texas Section, American Institute of Chemical Engineers (STS-AIChE) Executive Committee officers with terms starting in January 2015. The open positions are Chair-Elect, Treasurer, Position 1 (Education) and Position 3 (Communications). The ballot form is at the bottom of this page, and you will find candidate bios on the Two following pages.

Voting Options

As in previous years, as a convenience to AIChE STS Members, there are three ways to vote: by e-mail, by regular mail (snail mail) and in person at the November dinner meeting.

The email address to be used for email balloting is: STS_Election@Yahoo.com. An e-mail blast from the Chair will be sent out with information on email balloting. Alternatively, members can vote by sending an email directly to the email address, with the subject as "STS Election", with their name and member number and their election choices. In addition, a ballot box and ballots will be available at our dinner meeting on November 6.

However, you may submit only ONE ballot. Please only vote one time!

Eligibility

In order to vote you must have an AIChE membership grade of "Member" or higher, and also be a member of STS-AIChE. (Currently STS annual dues are \$20, paid in addition to AIChE National dues.)

If you are an eligible member, please vote. Your input is important to STS-AIChE.

Mailing Instructions (secret ballot):

If you wish to vote by mail, please print this ballot, complete it, and mail your completed ballot to:

John Middleton, Chair
Tellers Committee, STS-AIChE
7105 Old Katy Rd. Apt. 2108
Houston, TX 77024-2157

Write your NAME and ADDRESS, as they appear in AIChE records, at the top left side on your envelope. If available, please also write your AIChE Member Number under your address. The Tellers Committee will use this information to validate ballots before opening. Envelopes will be separated from ballots before tallying, allowing for a blind ballot count.

Deadline for Return

Balloting is scheduled to end midnight November 12.

Ballot Form

Please check the box next to ONE candidate for each of the following positions. Alternatively, for any of the positions you may insert the name of a write-in candidate in the space provided after the named candidates, and check the box at the end of that line.

Chair-Elect

- Syamal Poddar
 David Hill

Treasurer

- David Carpenter
 Carlos Salamanca

Position 1 (Education)

- Thomas Rehm
 Shane Tierling

Position 3 (Communications)

- Linton Wong

STS AIChE 2015 Officer Elections (Continued)

Candidates for Chair-Elect

Syamal Poddar

Syamal Poddar is the Founder President of the consulting company, Poddar & Associates, consulting nationally and internationally. His 35+ year career includes working for Exxon and Bechtel Corporation, with diversified management and global professional & leadership responsibilities.

Besides authoring close to 50 technical papers, he has made numerous technical and business presentations nationally and internationally, organized & chaired many conferences and received several awards and recognitions. He is an advisory board member of three Hydrocarbon Processing's conferences.

Besides being an active member of the STS for many years and a Fellow of the Institute, he is a member of Fellows Council. He held practically all leadership positions for F&PD and is a past director of the Management Division, member of Environmental Division and SIOC. He is a member of the Foundation Board of Trustees. Syamal earned PhD in Chemical Engineering from University of Pennsylvania and is a PE registered in Texas.



David Hill

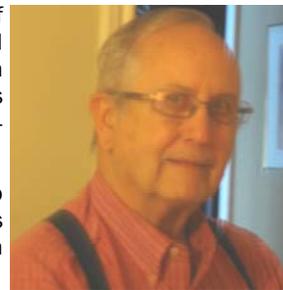
David Hill is running for Chair-Elect position. Picture, bio and statement were not available at press time.

Candidate for Treasurer

David B. Carpenter, P.E.

David Carpenter, P.E. is running for Treasurer position. He has been associated with the South Texas Section of AIChE for 40 years. He obtained his B.S. in Chemical Engineering degree from the Rice University in 1963 and MBA from the Marshall University in 1969. He is the founding Chairman of Tri-State Section. He is experienced in research and development, commercial development, operations, process design and as an entrepreneur. He is a registered Professional Engineer in Texas, 1979 to present. He was a treasurer of ECHOS (Ehiphany Community Health Outreach Service) in 2008-09.

I see the job of Treasurer as two fold – Keep the Train on the Financial Tracks, and also advising the Board as to what can or cannot be done financially. I have always had an interest in the financial aspects of the organizations that I belong to and support. This includes AIChE. I would like to bring my skills and contribute to the organization as Treasurer.



Carlos Salamanca

Carlos earned a BS in Chemical Engineering from the Universidad Nacional de Colombia, and received an MBA from the Bauer College of Business at the University of Houston. He has been an active member of the STS AIChE Young Professionals Board serving as Secretary, Treasurer, Vice-Chair and Chair. He also represents AIChE with the Offshore Technology Conference events including OTC Houston, Arctic Technology Conference, OTC Brazil, and OTC Asia. Carlos is also active with the Toastmasters International Club, and the PMI Houston Chapter. He joined National Oilwell Varco and has held several positions through different oil and gas projects. Actually, he works with offshore oil companies in Latin America with focus on Brazil and Mexico promoting drilling and production equipment and services. Carlos started his career with Texaco, now Chevron, at the lubricants plant in Bogotá, Colombia. Carlos holds a PMP (Project Management Professional) certificate from the Project Management Institute, and an EIT (Engineer-In-Training) certificate from the Texas Board of Professional Engineers. His professional interests focus on Oil and Gas Economics, Project Management, Global Business, Latin American Studies and new Engineering technologies. Carlos likes to read major business publications, leadership, self-improvement, public speaking and management books. He enjoys spending time with family and friends, all sporting events, riding his bicycle, and traveling. Carlos is also fluent in Spanish and is currently learning Portuguese.



It is a great honor to be nominated for a position with the Executive Committee Board. I have been a member for a few years and have seen the impact that the STS has had in the local Chemical Engineering community. Most of these accomplishments come from being surrounded with an active group of Young Professionals. A group where recent graduates can develop our leadership and soft skills needed to move forward in our career. During my experience with the YP group, we supported strategies to involve new members and keep the existing ones really active.

One of my goals is to keep my involvement with the AIChE group and participate in the regular activities. I want to see a strong local section with growing membership. Living in Houston, we are fortunate to have major energy corporations. With those resources, STS AIChE can maximize its power, share lessons learned, and have a stronger diverse group. I would like to play an active role starting with K-12 and university levels developing future leaders. With globalization and professionals rotating through different places in the world, STS can facilitate collaborations among entities and transfer those skills to make our section grow helping our professionals to reach experts in different fields.

STS AIChE 2015 Officer Elections (Continued)

Candidate for Position 1 (Education)

Thomas Rehm, PhD ChE, PE, CSP, CPSA

Thomas Rehm is a retired chemical engineer, his last stint being with Saudi Aramco from 1997 to 2009. As a Senior Loss Prevention Engineer, he 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). He received a Ph.D. in chemical engineering from Northwestern University during a work interlude (1981-1985). Since the mid-90s he has been involved in Process Safety Management. During his retirement, he has done consulting work part-time, with services including facilitation of process hazard analyses, process safety auditing, process safety management consulting, incident investigation, and training. He is married, have five children, and ten grandchildren. He likes to golf and shoot pool.



During my term as chair of the STS Continuing Education Committee, I will determine what interests the members, and identify individuals to speak or give workshops, to meet those interests. I'm sure I will find a way to do this, as I have done in past lives:

After working six years, I wanted to do more interesting work, so I began graduate classes part-time at Northwestern University. In 1982 I received my MS. Before completing it, a professor asked me to stay on, the same one I had in my first evening class in 1978; I wore him out with visits to his office regarding the subject (solution of partial differential equations). Sometime later he took a liking to me when I and another graduate student managed to get a professor removed from teaching graduate courses on the basis of unethical conduct. I took his offer to stay on, and in 1985 received my PhD.

From 1982-1985, I graded undergraduate homework and tests, and taught the odd class when the professor was out. Later experiences included development of a process design and economics module for a 'Chemical engineering for technicians' course at the Amoco Research Center; founding a Deming study group at the research center and organizing a satellite downlink of a Deming seminar for Amoco; development of a PSM seminar for TX State Bar (attorney) CEUs in Houston; presentation of a PSM paper in Arabia in 1998 and 1999; and several courses developed and taught while with Saudi Aramco.

Shane Tierling

Shane has a degree in Chemical Engineering from the University of Texas at Austin. He is currently with KBR as a Process Engineer concentrating in gas treating, acid gas removal and sulfur recovery. He has presented papers on carbon dioxide compression modeling, sulfur thermodynamics and gas treating applications using membranes. He has also served on the Editorial Review Board for the latest edition of the GPSA Engineering Data Book concentrating on Pumps & Hydraulic Turbines and Sulfur Recovery.

As a member of AIChE local section Shane has served as a long running CAST workshop chair, section treasurer and is the incumbent for Position 1 (Continuing Education). He is interested in continuing and strengthening the tradition of strong workshops, which draw our membership to local section meetings, and provide significant membership value. In his spare time he enjoys cycling.



Candidates for Position 3 (Communications)

Linton Wong

Linton was born and raised in El Paso, TX and attended the University of Texas at Austin, graduating with a chemical engineering degree in 2006. He worked at Chemstations, Inc., maker of CHEMCAD process simulation software, as a technical support engineer for 8 years and have been at Baker Hughes as a corrosion applications engineer/advisor for one year. Some hobbies include sports, running, snowboarding, guitar, chess, beer, comics, solving riddles/puzzles, and thinking of puns.

Communication is vital to any organization. I have been involved with the STS-AIChE and the YP for over 5 years through various volunteering roles such as webmaster and volunteer coordinator. This has allowed me to become familiar with what it takes to operate the newsletter, website, and e-mail blasts. Thus, I will efficiently organize responsibility for the newsletter, website, and e-mail blasts, and I hope to get other YPs and engineers involved along the way.



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) 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 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.

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.

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.

More Volunteer Opportunities

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,

South Texas Section to Initiate Company Liaison Program

The South Texas Section (STS) of AIChE is implementing a Company Liaison Program. Gary Gildert (STS Past Chair) and Carol Schmidt (STS Chair) are 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.

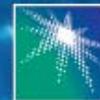
STS-AIChE	Liaison	Company
Responsibilities		
<ul style="list-style-type: none"> ✦ Provide meetings and events ✦ Maintain list of liaisons ✦ Send out special emails to liaisons ✦ Advertise program and recognize liaisons and companies 	<ul style="list-style-type: none"> ✦ Forward STS-prepared emails to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

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 **Gary Gildert** at (281) 433-4283 or sts-pastchair@aiche.org.

أرامكو السعودية
Saudi Aramco



9:25AM

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

5:25PM

**PIONEERING UNCHARTED
TERRITORY BENEATH THE WAVES**

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



South Texas Section AICHE

STS AICHE
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Houston, TX 77242

2013 Officers and Contact Information

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sts-chair@aiche.org

Chair Elect Kelly Richardson
sts-chairelect@aiche.org

Past Chair Gary Gildert
sts-pastchair@aiche.org

Secretary Katherine Leskin
sts-secretary@aiche.org

Treasurer Ven Pinjala
sts-treasurer@aiche.org

Executive Committee

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Shane Tierling
sts-position1@aiche.org

Position 2: Outreach
Bill Epling
sts-position2@aiche.org

Position 3: Communications
Aiyng (Annie) Li
sts-position3@aiche.org

Position 4: Human Resources
Dale Embry
sts-position4@aiche.org

Volunteers

Arrangements: Paul Tripathi
John Middleton

Membership: David Silarski

Young Professionals: Matt Johnson
sts-yp@aiche.org

Awards: Tom Menn

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 2014

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.

Subscribe: Click on the following link: [Subscribe](#).

Unsubscribe: Click on the following link: [Unsubscribe](#). Your email address will be removed from the subscriber list.

— MAINTAIN YOUR CONTACT INFORMATION WITH STS —

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

<https://www.memberconnections.com/olc/pub/CHM/>

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
 1-800-AICHE (1-800-242-4363)
 AIChExpress Service Center
3 Park Avenue
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 with comments, questions, suggestions, and ideas for next month.

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