



Monthly Meeting September 12<sup>th</sup>, 2013

Central Location: Pelazzio Banquet Hall, Houston (Social Hour at 6 PM, Dinner at 7 PM)

Satellite Location: Cilantro's Mexican Restaurant, (Sawdust Rd location in The Woodlands) Social Hour at 6 PM; Dinner at 7 PM, Technical program at 7:45 PM

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**September meeting is sponsored by EPI Engineering and EPCON International**

**Topic: Fluid Flow Analysis - The Key to Your Success in Chemical Engineering**

**Dinner Speaker: Todd J. Willman, PE, MBA**

### **Abstract:**

Learn how fluid flow analysis can be applied to solve root-cause flow problems to significantly improve plant production, profitability and environmental compliance. The September STS meeting will review the fundamentals of fluid flow analysis, discuss how to accurately assess and avoid 2-phase flow conditions using API's standard on thermophysical properties, and derive the benefits from a properly engineered fluid flow system. A number of case studies showing how fluid flow simulation models can be used to solve very complex root-cause problems in process and utility systems will be shared.

Every process and utility system is limited by its hydraulic design. However, chemical engineers typically don't spend a significant amount of their time solving fluid flow problems even though many opportunities exist. Fluid flow simulation principals are not difficult to understand, however, most chemical engineers go through their entire careers without taking the time to appreciate how to apply fluid flow analysis to improve their plant facilities and further their careers. The fundamental concepts of fluid flow analysis (Bernoulli equation, k-values, etc.) and 'application' of fluid flow analysis to real-life problems will be covered, including a local petrochemical plant where EPI Engineering and EPCON International received the IETC Energy Award for 2013. Special emphasis on how to identify opportunities and quantify the savings potential to solve root-cause flow problems in your plant facility will be discussed.

**Bio:** Todd J. Willman, PE, MBA: Co-Founder of EPCON International, the leading provider of fluid flow simulation software for the chemical and refining industries, and President and Director of EPI Engineering, recognized as the fastest growing engineering company in 2012 by the Houston Business Journal. Mr. Willman is author of 6 patents in the fields of thermodynamics, simulation software, and gas hydrate harvesting and recipient of 6 industry awards from Plant Engineering magazine, Chemical Processing magazine and the Texas A&M University sponsored Industrial Energy Technology Conference. He has managed hundreds of modeling and optimization studies at refining, petrochemical and chemical plant facilities with significant return on investment for every study performed. He utilizes his 34 years of experience in fluid flow analysis combined with EPCON Software to solve root-cause problems and realize significant savings in refining and petrochemical facilities. As Chair of the South Texas Section of the American Institute of Chemical Engineers in 2009, he developed closer relationships with key employers in the greater Houston area through sponsored meeting to more than double monthly meeting attendance and started the regional process technology conference in Galveston. As Past Chair, he has been involved in promoting chemical engineers to pursue their PE license through teaching of a PE Exam Review course where he covers fluid flow concepts in detail.



## Workshops begin at 5:30 PM (Workshops are free and open to public)

### CAST workshop

**Speaker: Madhusuden Agrawal**

#### Particulate Flow Modeling for Petroleum and Chemical Process Industries

**Abstract:** Particulate systems are found in many applications involving physical and/or chemical transformations. Therefore, it is becoming more critical to understand how particles are produced and transported as well as how they move and interact with surrounding flows and equipment. Numerical models of particulate systems have become an important tool in the design, operation and performance optimization of equipment and processes involving solid particles. Traditionally these applications required testing on physical prototypes which is a difficult, expensive and time-consuming process; or based on the experience of experts applying correlations and rules of thumb.

CFD modeling supports enhancements in particulate systems by enabling process engineers to model a range of systems, including gas-solid systems, fluid-solid systems and solid handling equipment. The major benefits of the CFD approach include simultaneous analysis of momentum, heat and mass transfer coupled with chemical reaction. Regions of flow maldistribution, poor mixing and stagnant zones can be identified qualitatively and quantitatively. CFD can be applied to design evaluation, verification and optimization, scale-up analysis, performance evaluation, and problem solving, what-if scenarios. This presentation will feature an introduction to Computational Fluid Dynamics and showcase how CFD solution can be applied to model particulate systems in a range of applications from dilute to dense flows, including fluidized bed reactors, separators, filtrations, solid suspension, blending, scrubber, and transport, erosion and corrosion.

**Bio:** Mr. Madhusuden Agrawal is currently a Principal Engineer at ANSYS, Inc. He has 20+ years' experience in numerical modeling of fluid flow and mass/heat transfer. His expertise covers the cutting edge industrial-strength CFD analysis, simulations and optimization in wide range of applications in oil & gas, chemical, biomedical, pharmaceutical, petrochemical, material and consumer products. Mr. Agrawal obtained his Master's degrees from Indian Institute of Technology, Kanpur India and MBA from Franklin Pierce College, NH USA.



### Environmental workshop

**Speaker: Russell Nettles**

#### Storage Tank Estimation Guidance

**Abstract:** Russ' presentation to the American Institute of Chemical Engineers South Texas Section will cover storage tank estimation guidance published in Texas Commission on Environmental Quality's 2012 Emissions Inventory Guidelines, RG-360/12. Recent concerns with United States Environmental Protection Agency TANKS 4.09 software has led to new emissions estimation guidance for heated tanks, tanks containing crude oil and intermediate tanks containing warmer than ambient products.

**Bio:** Russ Nettles joined the Texas Commission on Environmental Quality (TCEQ) in 1994 as an Emissions Inventory Specialist in the Emissions Assessment Section (EAS). From 2000 to 2009, Russ was a Team Leader for one of the EAS point source emissions inventory teams. Russ is now a Technical Specialist in the Emissions Assessment Section of the Air Quality Division. Russ is a 1991 graduate of Texas Tech University, Lubbock, Texas with a Bachelor of Science degree in Mechanical Engineering Technology. For three years, immediately prior to working for the TCEQ, Russ worked for a stack testing company, traveling throughout the contiguous United States, where he performed various Environmental Protection Agency (EPA), California Air Resource Board (CARB), and TCEQ stack sampling methods.

### Process Development workshop

**Speaker: Gabriel Castaneda**

#### Refining Canadian Heavy Crude Oil

**Abstract:** With the increasing offloading of Canadian crude to Gulf refineries by rail and with the eventual approval of the Keystone pipeline, refiners may want to consider processing this heavy oil. A review of the different Canadian oils and their comparison with Venezuelan and Mayan crudes will be presented. An overview of the modifications required to transform a conventional to a heavy crude refinery able to process Canadian heavy oil will be discussed.

**Bio:** Mr. Castaneda currently works for Gabchem Solutions and Commonwealth Engineering as a process engineer. He has previously worked in engineering for EPC companies, Propak Systems and Eastman Chemicals. He has process design experience in refining, upstream, oil sands, heavy oil, gas and polymer processes. In addition, he has a keen interest in the review, design and implementation of processes to reduce costs, increase production and improve returns. Mr. Castaneda holds a Masters in Business Administration and a Masters in Chemical Engineering from McGill University. He graduated with a Bachelor in Chemical Engineering from ITESM and he is a registered professional engineer in Canada.



## 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.

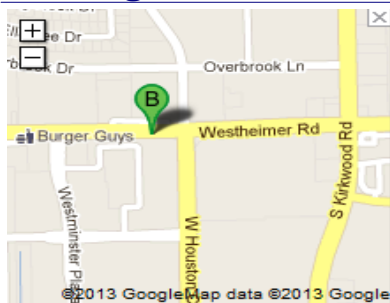
	Pre-Registration Members	Pre-Registration Non-Members	At the door Members	At the door Non-Members
Regular/Retired	\$15	\$25	\$25	\$30
Student/unemployed	\$10	\$15	\$20	\$25
North Houston satellite meeting location	\$12	\$12	\$15	\$15

NOTE: You have until 4 PM CST on September 11th to pre-register online. After that, you will be required to pay the higher cost at the door.

Pre-registration for the main and Satellite meeting is now open through our website at:

<http://sts.aiche.org/>

## Meeting Location— Pelazzio Banquet Hall



This month's meeting will be held at [Pelazzio Banquet Hall](#) (12121 Westheimer Rd, Houston, Texas 77077). Double click on the map to the left for directions from your location. The satellite meeting will be held at [Cilantro's Mexican Restaurant](#), (Sawdust location) at 314 Sawdust Rd, The Woodlands, TX, 77380. Double click on the map below for directions. This location provides a quiet, private room upstairs for meeting. More details are included in the next section below.

## North Houston Satellite Meeting Information—Cilantro's Mexican Restaurant @ Sawdust Road. Happy Hour Margaritas!

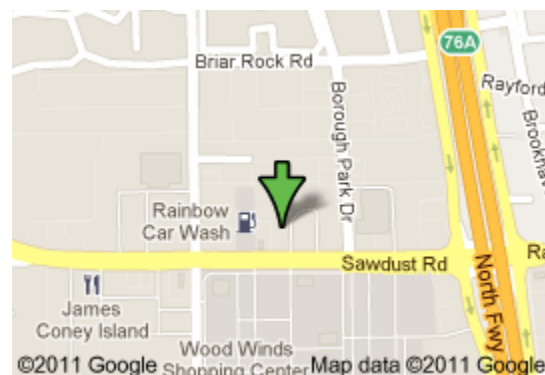
Join us close to your neighborhood for some local networking at The Woodlands/North Houston satellite meeting! We have our own social/networking program.

Due to the wonders of modern technology we have access to the great speakers provided by STS at the main meeting. This month's meeting Thurs., September 12, will once again be at Cilantro's Mexican Restaurant (**formerly Rico's**) at 314 Sawdust Rd, The Woodlands, TX, 77380. On-line pre-registration is available but not required. Order your dinner off the restaurant menu. Contact Chris Tagoe ([cctagoe@yahoo.com](mailto:cctagoe@yahoo.com)) with questions or special needs. Guests are welcome, please spread the word!

Schedule:

- ◆ 6:00 PM Social hour.
- ◆ 7:00 PM Dinner. Order off the menu
- ◆ 7:45 PM Remote tie-in with STS-AIChE technical program
- ◆ \$12.00 in advance / \$15.00 at the door

All guests are welcome!



## Join 2013 AIChE Southwest Process Technology Conference

Registration is now open for the 5<sup>th</sup> Annual AIChE Southwest Process Technology Conference (SPTC), to be held at the Moody Gardens Conference Center in Galveston, October 3 & 4, 2013. SPTC is a favorite gathering for STS members. Don't miss out!

This year's keynote speaker is ExxonMobil Chemicals' Senior Vice President, Lynne Lachenmyer, who will talk on "U.S. Chemical Industry Revitalization: Impact of Abundant Shale Gas Supplies." The technical program also includes sessions on energy efficiency, process safety, reaction engineering, process simulation, distillation & separation, oil refining, upstream oil & gas, and chemical manufacturing, as well as a new track on process control & optimization, and sessions designed specifically for students and young professionals. The October STS dinner meeting will be held on the Thursday of the conference. Our dinner speaker will be Bonnie Dunbar, a former astronaut who now leads The University of Houston's newly created STEM Center. Her title is: "Exploring Space and Investing in the Future: Perceptions and Experiences of a NASA Astronaut." We will hold a post-conference mixer on the Friday evening.



Also – new this year – we will be offering a "Best Presentation Award," to provide some added drive to further boost the quality of the program. We need judges to select the award winner, so if you are planning to attend and are willing to help in the selection process please let us know at [sptc13@aiche.org](mailto:sptc13@aiche.org).

In parallel to the technical program there will also be an exhibition and a career fair, so if you have a product or service to offer, or if your company is looking for new talent, the conference provides an opportunity to reach out to hundreds of chemical engineers in the Greater Houston area.

You will find more information about the conference, including program and registration link, at <http://www.aiche.org/conferences/regional-process-technology-conference/2013>. If you have any questions, email us at [sptc13@aiche.org](mailto:sptc13@aiche.org).

## AIChE South Texas Section 2013 Future Meetings & Speakers

Meeting Date	Topic	Speaker	Location
October 3, 2013	Exploring Space and Investing in the Future: Perceptions and Experiences of a NASA Astronaut	Bonnie Dunbar	Floral Hall A, Moody Gardens

## September 2013 STS-AIChE Chair's Letter – Gary Gildert

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Summer is almost over, but you would never know it from the temperature outside. The kids are heading back to school and our Fall season is beginning.

Our last regular meeting on May 2<sup>nd</sup> meeting at Brady's Landing was a topic of broader interest, and a favorite of mine – Patents. Wendy K.B. Buskop, the Managing Patent Attorney of the patent boutique, the Buskop Law Group of Houston, Texas, talked about "Patent FAQ's – What You Really Need To Know". I picked up a few new tips.

We also have a couple of special events over the summer. We can thank Dennis Griffith (Nominee for AIChE Treasurer) and the Port of Houston Authority for a wonderful trip down the Houston Ship Channel. It was a unique view of our industry shared with friends and guests.

And we can thank the YP's for putting together a Night with the Astro's. We had 67 this year, a great turnout at a summer event. There was all-you-can-eat food ballpark fare. And yes, baseball. The Astros did not win, but the aficionados tell me there were some unique statistics.

Our September 12th meeting at Pelazzio brings a good friend and former STS Chair back to our stage – Todd J. Willman, PE, MBA. The title of his talk is "Fluid Flow Analysis – Your Key to Success in Chemical Engineering". This is his passion and expertise. It will be a good one. The meeting is sponsored by EPI Engineering therefore sponsored meeting prices apply. Free for Patrons, of course.

We have a good number of volunteer opportunities available for our members from half day commitments through multi-year opportunities. Please see the section entitled "Call for Volunteers" later in this newsletter.

We continue to make progress on the webcasting. We have a great crew with Alan anchoring the internet service, Carol on sound, Trevor on video, and me as the equipment mule. All we are missing now is a bigger audience. We have a dedicated group in the Woodlands, but we are open to others. Nothing is better than being at the main meeting, but if you have a small group who would like to get together to network and watch our announcements and technical presentation, or if you would like to "tune in" from you own home, let either Alan or I know via [sts-chair@aiche.org](mailto:sts-chair@aiche.org).

Please feel free to forward this newsletter and e-mails that you get from me to others that may be interested in our programs and activities. While attendance at our meetings has been good relative to historical standards, I know that there are many more professionals in the region that would benefit greatly from our events, which are open to everyone, not just Chemical Engineers or STS members.

I would also like to encourage everyone to share your ideas and suggestions with me and other members of the Executive Committee. In most cases, we can help you turn a good idea into action. Together, we can continue to make the South Texas Section of AIChE a place of community, fellowship and education for us all.

Sincerely,

Gary Gildert  
Johnson Matthey

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## Young Professionals Sections

### YP May Meeting Highlights



Above are the group pictures of Young Professionals and scholarship recipients who participated in the May monthly meeting held at Brady's Landing Restaurant. The meeting started with workshop on topic "Looking for a job is not just Unemployed" given by speaker "Lisa Martin" and ended with a presentation "Patent FAQ's – What You Really Need To Know" given by speaker "Wendy Buskop".

### Featured YP of the Month - Megan Weeks

#### 1. Tell us about yourself

I graduated in 2010 from Rice University with my B.S. in Chemical Engineering, under the tutelage of a Dr. Ken Cox, with whom you are likely familiar. I went straight to work as a process engineer at Terrabon, a biofuels startup. You may remember Dr. Mark Holtzaple, who spoke about Terrabon's technology at the dinner meeting in March of 2011. Sadly, as is the way with startups, Terrabon is no longer with us. The companies' untimely demise facilitated my move to Bechtel's Offshore department, where I started in December of 2012.

Outside of that I dance salsa, do crossfit, travel halfway across the globe, run, and try my best to get every penny of my local taxes back through use, and abuse, of the public library.

#### 2. What do you like most about your current job and what are your responsibilities?

Bechtel's offshore division was started three years ago, so by nature of it being so new, I can take on more responsibility than I originally expected at such a large company. I like that I am in a position to heavily influence how things are done in Offshore in the future.

#### 3. How has STS and AIChE benefited you?

Networking is a huge asset, of course, but the biggest specific benefit of it has been finding out about how others manage their careers – it's really opened my eyes to the options available to me. Also, between STS-AIChE dinner meetings, AIChE webinars, and CEP magazine I can keep learning about chemical engineering applications outside of my current field.

#### 4. Any advice for the ChE students who will be graduating soon?

The highest paying job isn't always the best job. Also, do not under-estimate the value of working with people your age as well as those senior to you. That being said, I know a bunch of engineering students won't listen to that kind of "qualitative" advice.



## Young Professionals Sections (Continued)

### YP Giving

Jason Fischer

Jason Fischer recently graduated from the University of Florida with a Bachelors of Science in Chemical Engineering. While in school, he was a co-op with ExxonMobil in their Chemical's Global Operations Group and Baytown Olefins Plant. He currently works as a process engineer for Univation Technologies, a polyethylene technology licensing venture between ExxonMobil Chemical Company, a division of Exxon Mobil Corporation, and The Dow Chemical Company. Outside of work he has interests in bowling and aviation.



#### QUESTIONS

##### 1. Tell us about yourself

I grew up in Florida and graduated from the University of Florida. I currently work for Univation Technologies as a process engineer. Outside of work, I enjoy bowling and am interested in aviation.

##### 2. What do you like most about your current job and what are your responsibilities? Please provide examples

I like interacting with our clients. It's always fun and interesting to answer their questions because I typically learn something new in the process. I also like getting to see projects go from conception to completion. In my group we perform the initial process design and support the project through engineering, construction, and start-up. It's exciting to see paper documents become a real plant.

##### 3. How has STS and AIChE benefited you? Please provide examples

STS and AIChE provide a good opportunity for me to learn new and different things outside of my daily responsibilities. I really enjoyed the Chemical Safety Board presentation on the Deepwater Horizon incident, as this provides good insight into process safety leading indicators that I do not deal with in my current role.

##### 4. Any advice for the ChE students who will be graduating soon? Please provide examples

I highly recommend participating in a fall/spring co-op or internship program even if you are already a junior. It is worth it to extend the degree program for an extra year. The experience allowed me to see many real world applications that really helped solidified the importance of the curriculum. Plus the experience really helps in the job market by providing real substance to your resume.

##### 5. Was there an STS-YP project that you worked on that you found valuable?

I really enjoyed stuffing the gift bags for the students attending the Offshore Technology Conference. It was a great opportunity to help interest and excite kids in the engineering profession and it also was a good opportunity to network and get to know other STS AIChE members.

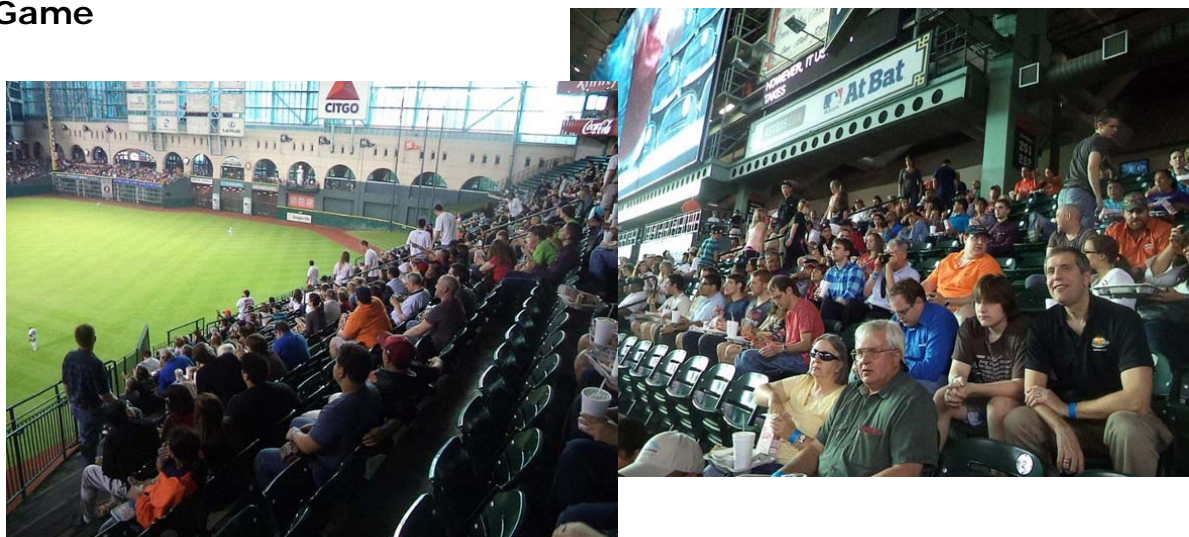
##### 6. Was there an AIChE webinar or e-learning course that you have or would find valuable?

I am always interested in any webinars on process design tips for engineers. I like learning best practices, hearing about best-in-class projects, and understanding the reasons behind design choices.

We want to continue with our YP giving initiative, where the YP's sponsor one young member - including ChE students - at each of our monthly dinner meetings. To qualify, the recipient will have to be involved or share new ideas about YP activities that will be beneficial to the group. If you are interested email 3-4 sentences to [sts-yp@aiche.org](mailto:sts-yp@aiche.org) and we will let you know if you are considered the winner. Please share this message with your young colleagues and encourage them to participate with us.

### YP Baseball Game

The Young Professionals (YPs) organized a baseball game in July at Minute Maid Park. YPs had a great time watching the Astros play the Mariners with an outstanding attendance over 67 people including family, friends and coworkers.



## Young Professionals Sections (Continued)

### STS YP Volunteers Help Out at 2013 OTC

Handouts for 2013 OTC Student Tours and Teachers Energy Education Workshop (A Need Program) provided by the STS and AIChE with YP's passing out the Goodie Bags

The STS and AIChE provided 250 goodie bags to the High School Students participating in the Student Tours and 150 goodie bags to Teachers participating in the Teachers (Energy Education) Workshop (A Need Program). The bags were provided by AIChE with career guidance materials, pens, candy, and other items that showed how diverse a Chemical Engineering degree really can be. For the teachers, extra goodies were given that could be used in the classroom (e.g. mugs, etc). Each bag came with a pamphlet explaining how these items pertained to Chemical Engineering as well as a brief explanation of the polymers that some of the items contained. The 400 bags were stuffed by STS Young Professionals with help from some wonderful AIChE STS volunteers. The Goodie Bag Stuffing Party was organized by STS-YP's Carlos Salamanca and Matt Johnson, hosted by Carol and Nathan Schmidt and attended by about a dozen, wonderful participants. Matt and Tom transported the bags to the Reliant Center. Carol Schmidt passed out bags at the event and brought the leftover bags to the monthly meeting to share with the AIChE membership.



A great big thanks to AIChE National, AIChE STS, AIChE STS YP, OTC, SPE and NEED for working together to educate and entice a new generation of engineers at OTC! Also, a big thank you to Chemstations for donating bracelets that read "ChemE's are heroes"!

If you are interested in helping with or donating to OTC bags for 2014, please contact Carol Schmidt at [Carol.Schmidt@gmail.com](mailto:Carol.Schmidt@gmail.com).

### YP University Visit

Phillip Purpich, Process Engineer at Foster Wheeler visited Texas A&M University to participate in one of the meetings and meet Chemical Engineers. He provided a very comprehensive presentation on the Young Professionals activities for the STS AIChE.



## Young Professionals Sections (Continued)

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### YP Plant Tours

The Young Professionals (YPs) visited the ExxonMobil Baytown Refinery in May. We want to thank Pamela Farmer, Public and Government Affairs who gave us a great visit to the Refinery and Chemical Complex. More than 25 members attended and learned about different processes.



The Young Professionals (YPs) visited the Cameron Custom Process Systems Technology Center in August where R&D processes for Onshore and Offshore operations take place. A big Thank you to Mariana Torrealba and Luis Caires for their hospitality and friendliness responding to our questions

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## Volunteers needed for Sally Ride Science Festival

*The young professionals will once again be volunteering at the Sally Ride Science Festival which will be held at Rice University on October 12, 2013. This event is geared towards exciting students in 4<sup>th</sup> through 8<sup>th</sup> grade about math and science-oriented careers. We will be performing a chemical engineering related science experiment with the kids. Stay tuned for more details and volunteer opportunities! Contact Lisa Swanson ([lisaswanson@providenceeng.com](mailto:lisaswanson@providenceeng.com)) with any questions.*

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## Fifth Annual Engineering Day Is Coming Soon!

The City of Waco Engineering Department (<http://www.waco-texas.com/engineering.asp>) will be co-sponsoring the fifth annual Engineering Day. This year, **Engineering Day 2013** is scheduled for **Tuesday, October 15<sup>th</sup>** at the Waco Convention Center.

Over the past years attendance has grown from approximately 750 students and 24 firms, to over 2000 students and 3 dozen firms, colleges, and state agencies. The support from local engineers and the participation of the schools in the county continues to exceed all expectations. We have now had over 4,000 students attend in the first four years.

The purpose of engineering day is to generate interest in our field with students at a time when they start to look at career choices. We have reserved the same room as last year with the hope that we can continue to broaden the spectrum of engineering disciplines, adding environmental and construction exhibits, and increase student participation.

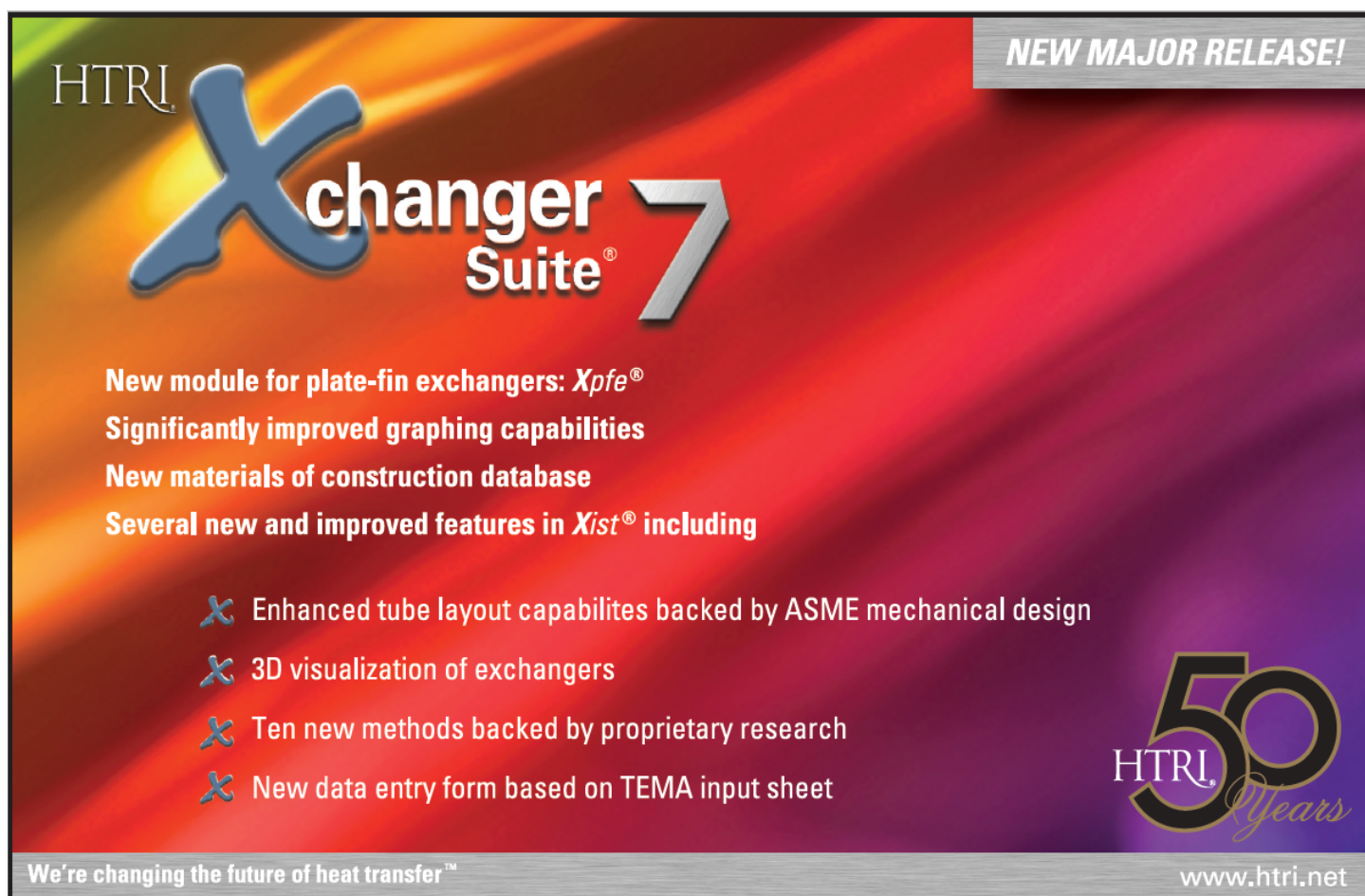
We are beginning the process of compiling the layout and coordinating the exhibiter needs (power please bring extension cords; tables, chairs, etc.). There are no costs for the exhibitors or the students.

We have reserved the McLennan Room in the Waco Convention Center for Tuesday, October 18<sup>th</sup>. The start approximately at 8:30 AM and run until 4 PM.

For more information, Please contact George Hill, P.E. (254-750-6622 or [GeorgeH@ci.waco.tx.us](mailto:GeorgeH@ci.waco.tx.us)) .

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## STS Volunteers Help Out at 2013 OTC

### 2013 Offshore Technology Conference: STS-AIChE OTC Committee Volunteers Again Successful

The 2013 Offshore Technology Conference was a success for South Texas Section which had 18 South Texas Section - AIChE members and a few AIChE non-members volunteering. These 18 volunteers provided a portion of the staffing for the Arrangements, Registration, and Student Tours Committees. For giving of their time to help out at the OTC, each volunteer received a complimentary OTC registration for themselves and their spouses and a reserved area parking pass with in/out privileges with both the registration and parking pass good for the entire OTC.

Because enough persons volunteered, the STS received an honorarium of \$1000 from the OTC. It is hoped that STS will be able to repeat this feat in future years. The funds are to be used to provide hand-outs and career guidance materials to the High School Students and Teachers taking part in the OTC Student Tours.

Those who volunteered to serve one or more of the Arrangements, Registration, and Student Tours Committees are: Mark Demark, John Hottovy, Emily Jackson, Dannis Jen, Matthew Kolodney, Jim Menn, Tom Menn, John Middleton, Syamal Poddar, Mirelle Rosca, Carlos Salamanca, Marisol Sampson, David Silarski, Mark Smith, Roger Trandell, Keith Wang, Walter Worth, and Marc Young.

## In Memory of Dr. Riki Kobayashi (1924 - 2013)



Riki Kobayashi, Louis Calder Professor Emeritus in Chemical Engineering at Rice University, was born in Webster, Texas on May 13, 1924 to Mitsutaro and Moto Shigeta Kobayashi. Preceded in death by his brothers, Tokuye and Ty Kobayashi, he is survived by his wife, Lee, his sons, Brock and wife Denise Hanks, and Alec and wife Sandra, all of Houston, his step-daughters, Susan Lovejoy of Houston and Anne Lovejoy of Portland, ME, his brother Herbert Kobayashi and wife Haruko and sisters, Hope Kobayashi and Lily Landress of Webster and his sister Mitsu Iwata of Nagoya, Japan, his grandson Riki Stevens Kobayashi of Houston and grandchildren Spenser and Parker Marley of Portland, ME and numerous nieces and nephews.

He received a BS in Chemical Engineering from Rice University in February, 1944 at age 19 and an MSE 1947 and PhD, 1951 from the [University of Michigan](#). He was the author with others of the Handbook of Natural Gas Engineering in 1949, a still much-used reference work in the field, as well as nearly 200 professional journal articles. He was characterized at an AIChE Symposium in his honor in 1987 as "one of the century's most prolific researchers in thermodynamic and transport properties," pioneering the measurement of hydrocarbon vapor-water-gas equilibrium, phase transitions and molecular diffusivity and the use of laser light scattering to measure properties in the critical region. His achievements included the invention of differential kinetics. The Gas Processors Association recognized his lifetime accomplishments with their first Donald Katz Award in 1985.

Dr. Kobayashi was a Fellow of the American Institute of Chemical Engineers and the American Institute of Chemists and a member of the National Academy of Engineering and the Academy of Medicine, Engineering & Science of Texas, the Japan Institute of Chemical Engineering (hon) as well as AIChE, AIME, ACS, Sigma Chi, Alpha Chi Sigma, Tau Beta Pi, Phi Lambda Upsilon, and Phi Kappa Phi. Dr. Kobayashi was the recipient of the Outstanding Engineering Award at Rice University, 1985, and the Albert Einstein Medal from the Russian Academy of Natural Sciences, US 2010.

He was a member of the Unitarian Church and gave occasional lay sermons at First Unitarian and Emerson Unitarian Church in Houston. He served in the US Army from 1945-46 and received an Honorable Discharge in Chemical Warfare.

Dr. Kobayashi loved teaching and research and felt that they were equally important to a university. A fellowship was set up in his honor contributed to by many of his former students. He also loved sports and enjoyed tossing a football or a pick-up game of basketball with his students. While he was Dr. Kobayashi to his undergraduates, he was "Riki" to all his graduate students, except for those from Japan to whom he was the more respectful "sensei" (teacher). He kept in close touch with them. He and Lee liked entertaining graduates and undergraduates in their home for food, swimming, and backyard volleyball games.

## STS Recognizes Four 50 Year AIChE Members at May 2nd Meeting

The May 2 (Thursday) South Texas Section Monthly Dinner Meeting at Brady's Landing served as a venue to recognize four STS Members who, in the year 2013, will have enjoyed 50 years of AIChE Membership. STS Chair Gary Gildert presented the 50 Year AIChE Membership Certificates while the recipients were introduced by Tom Menn, STS Awards Chair.

Those honored were:

**John O. Cronk** – John received his BSChE from Iowa State in 1960 and his MBA from Rutgers School of Business in 1970. John then joined Exxon after graduation. While at Iowa State, he participated in the Army ROTC program and was commissioned a 2nd Lieutenant in the US Army (Ordinance) upon graduation. John began fulfilling his ROTC commitment in 1961 and spent 18 months in Munich followed by 12 years in the active reserves and mustered out as a Major. John is a registered PE in Texas and is a Senior Member of AIChE.

John was employed by Exxon for 5 years. He then joined MW Kellogg for 5 years which was followed by 18 years of employment with AIRCO/BOC. After that John joined Big 3/Air Liquide for 13 years and retired in 2003. He currently is a contractor with Air Liquide serving as a Project Manager.

John served as Chair of the ASTM Committee G-4 on Compatibility and Sensitivity of Materials in Oxygen Enriched Atmospheres. He has published 2 papers and was recognized as a Fellow of ASTM in 2003.

John and his wife, Katherine, have no children of their own but they have helped to raise 10 children.



John O. Cronk (C ) displays his 50 Year AIChE Membership Certificate. Joining him in the photo are AIChE Director Freeman E. Self, Jr. (L) & 2013 STS Chair Gary Gildert (R )

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## STS Recognizes Four 50 Year AIChE Members at May 2nd Meeting (Continued)

**George J. Hirasaki** – George received his BSChE from Lamar University in 1963 and his PhD from Rice University in 1967. He then joined Shell working for Shell Development and Shell Oil Company where he remained for 26 years after which he returned to Rice University in 1993. George is a Senior Member of AIChE. He also served in the US Marines for 6 months and then 6 years in the USMC Reserves mustering out as a sergeant.

Currently George is the A. J. Hartsook Professor in Chemical and Biomolecular Engineering at Rice University where he conducts research in NMR Fluid and Rock Properties, Wettability in Petroleum Systems, Asphaltene Deposition, Surfactant/Foam Transport, and Gas Hydrates in addition to his classroom duties in Transport Phenomena and Petroleum Engineering. He was elected a member of the National Academy of Engineering in 1991 and received the SPE Lester Uren Award in 1989, the Society of Core Analysts Technical Achievement Award in 1999, and the Order of the Rising Sun by the Government of Japan. George has 5 patents and has authored 102 papers.

George also likes to windsurf and ski.



Dr. George Hirasaki (C) displays his 50 Year AIChE Membership Certificate. Joining him in the photo are AIChE Director Freeman E. Self, Jr. (L) & 2013 STS Chair Gary Gildert (R)

**Philip A. Ruziska** – Phil received his BSChE from Massachusetts Institute of Technology in 1962 and his MSChE from MIT in 1963. After graduation, he joined Exxon/Mobile ERE and was later the Chief Engineer – Agriculture Chemicals and also worked in the Refinery Chemicals area. He retired from Exxon/Mobil Chemicals after 41 years and then worked as a consultant with Carmagen Engineering.

Phil is a Senior Member of AIChE and he has authored 12 papers and served as the Chair of the AIChE Safety in Ammonia Plant and Related Facilities Committee. He and his wife Barbara are very proud of their two children and six grandchildren.



Philip A. Ruziska (C) displays his 50 Year AIChE Membership Certificate. Shown with Phil are AIChE Director Freeman E. Self, Jr. (L) & 2013 STS Chair Gary Gildert (R)

## STS Recognizes Four 50 Year AIChE Members at May 2nd Meeting (Continued)

**Joe W. Woodward** – Joe received his BSChE from Texas A&M in 1960, his MSChE from Cal Tech in 1961, and his PhD from Cal Tech in 1965. Naturally, while at Texas A&M, he was in the Aggie Cadet Corps and joined the US Army after graduation and mustered out after 2 years as a Captain.

Joe worked for DuPont at Orange, Parkersburg (W Va.), and Beaumont. He then joined Set Point/Aspen where he worked in computer/process control as a Senior Consultant. Joe is retired.

Joe is a Senior Member of AIChE and is the coauthor of four papers. He and his wife Eleanor are beaming over their five children and five grandchildren. He is also active in the Houston Orienteering Club.



Joe W. Woodward (C) displays his 50 Year AIChE Membership Certificate. Joining him in the photo are AIChE Director Freeman E. Self, Jr. (L) & 2013 STS Chair Gary Gildert (R)

## 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%20IEEE%20Houston%207%20Oct%202007.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).

## Julian R. Ward and James R. “Jim” Murphy received 2012 STS Gary Award

Thursday April 4, the South Texas Section – AIChE presented two 2012 STS Gary Awards to Julian R. Ward and James R. “Jim” Murphy in recognition of their efforts on behalf of STS’ Chemical Engineering Opportunities (CEO) Office which for the last 22 years was hosted by Halliburton at their campus at 10200 Bellaire Blvd. here in Houston. Julian could not be present and Dr. Norman F. Carnahan, a longtime associate, accepted the Julian’s Award on his behalf. Julian has provided a photo of himself and his Gary Award.



*Julian R. Ward and 2012 STS Gary Award*

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## Call for Volunteers

The Career and Education Operating Council (CEOC) of AIChE (National) has studies underway in several areas of interest to AIChE members. Additional volunteers are needed for committees performing the areas listed below. Working on one of these committees teaches you about the operation of AIChE, as well as teamwork, management, and leadership. Lessons from the latter three will spill over into your job, personal life, and other nonprofit organizations. The committee topics include:

**A. Leadership development** — New options for the training and development of leaders in AIChE. Our current methods are useful, but we’re looking at others, too.

**B. Fundraising** — There is a modest but significant budget gap in AIChE National, and we can better serve our members if we can shrink it. Additionally, the programming of many local sections could benefit by fund raising.

**C. Local Section Committee (LSC) Support** — Unlike the STS, many local sections are facing difficulties, and the LSC is developing projects to assist “local sections in need.”

**D. Membership** — The AIChE needs to work on increasing membership of National and of local sections. We’re looking for additional good ideas. This includes how to explain the benefits of membership, how to encourage more student members to become YPs and how to encourage more first-time attendees at local section meetings to return and get involved.

**E. Communication** — Many AIChE members don’t seem to learn about AIChE events and programs that they later wish they’d heard about. How can we improve communications with members? This could include mailings, websites, e-mail, telephone, etc.

These studies will involve identifying and evaluating alternatives, preparing “best practices” for local sections, and executing developmental projects. If you might be interested in one or more of these areas, please contact Matt Kolodney ([mkolodney1@comcast.net](mailto:mkolodney1@comcast.net) or 713-471-8956).

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## More Volunteering Opportunities

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**K-12 Co-Coordinator.** STS participates in several K-12 events a year, and with good planning and publicity, they get a good turnout. Events are conducted by HMNS, IEEE, ECH, OTC, SEFH, schools, the Houston Children's Museum, Boy Scouts, and others. Your job will be to help select events appropriate for STS, publicize our participation within STS, and do some event coordination. The majority of our participants are YPs, so this would be a great experience for a YP. It's also a great way to give something back to the community. If you want to learn more, contact Matt Kolodney ([Matthew.Kolodney@tceq.texas.gov](mailto:Matthew.Kolodney@tceq.texas.gov)).

**ECH Councilor.** The Engineering, Science, and Technology Council of Houston is an umbrella organization of local sections of national professional societies (such as STS-AIChE), local-only organizations (such as the Houston Geological Society), and local nonprofit organizations such as the Houston Museum of Natural Science. ECH helps behind the scenes with the Science and Engineering Fair of Houston. It gives annual awards for K-12 science & engineering education. STS is entitled to another councilor. Participation is a great way to network with people in other technical areas, to learn from other technical societies bring good ideas back to STS, to participate in intersociety leadership training, and to do things cooperatively that STS doesn't have the resources to do alone. It's also an opportunity to learn more about Greater Houston and provides growth opportunities beyond those of STS and AIChE. You can learn to identify opportunities, organize a program or event, reach out for support, and execute. If you want to learn more, contact Matt Kolodney ([Matthew.Kolodney@tceq.texas.gov](mailto:Matthew.Kolodney@tceq.texas.gov)).

**Science & Engineering Fair of Houston.** The fair has been transferred from UH Downtown to UH Central, and UH Central Campus is looking to expand and improve it. There are opportunities on a variety of SEFH organizing committees. It's a great opportunity to network and learn about K-12 outreach. If you want to learn more, contact Matt Kolodney ([Matthew.Kolodney@tceq.texas.gov](mailto:Matthew.Kolodney@tceq.texas.gov)).

**Excellence in Education Awards.** The Engineering, Science, and Technology Council of Houston provides awards for Excellence in Education. ECH asks its member societies (such as STS) to nominate possible awardees. We are looking for programs involving schools and companies or nonprofit organizations. If you would like to learn more or nominate a program, contact Matt Kolodney ([Matthew.Kolodney@tceq.texas.gov](mailto:Matthew.Kolodney@tceq.texas.gov)).

**E-Week Committee Representative.** Engineers' Week events in Houston are sponsored by the Houston Section of the Texas Society of Professional Engineers (TSPE). However, it is run by a committee, and each local engineering society is encouraged to send a representative. It's a great opportunity for a YP to network with YPs from other engineering societies, and to get project management experience. It's easier to get to the biweekly 5:45 p.m. meetings if you work near or west of Beltway 8. Our representative gets to attend the Engineer of the Year Banquet free. If interested, call Lisa Swanson.

**Leadership Development.** Leadership is teachable, but is not taught in engineering school, or by many employers. However, you can learn many parts of it at STS and AIChE. The AIChE annual Local Section Leader Workshop (LSLW) is valuable, but doesn't reach enough of our national members. So, AIChE wants to explore new paradigms. If you have new ideas and/or would like to explore the new paradigms, contact Matt Kolodney ([Matthew.Kolodney@tceq.texas.gov](mailto:Matthew.Kolodney@tceq.texas.gov)).

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# South Texas Section AICHE

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

## 2013 Officers and Contact Information

### Officers

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**Past Chair** James Turner  
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**Position 4: Human Resources**  
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### Volunteers

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David Silarski

**Membership:** David Silarski

**Young Professionals:** Carlos Salamanca  
[sts-yp@aiche.org](mailto: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 2013

<<To be developed>>



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<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:



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