Volume 119 Number 9

March 2019

# The South Texan



Thursday, March 7, 2019

Monthly Meeting @ The Bougainvilleas Houston

(12126 Westheimer Rd, Houston, TX 77077)

5:30PM - 6:30PM Workshops

6:00PM - 7:00PM Social/Networking Time

7:00PM - 8:00PM Dinner and STS Announcements

8:15PM - 9:00PM Dinner Presentation/Speaker

Check us out on YouTube!

# March Dinner Meeting

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Title: Global Warming, An Engineering Perspective

**Abstract:** Human activity releases greenhouse gases (e.g., carbon dioxide, methane, nitrous oxide) into the atmosphere, which causes global warming. The resulting climate change causes numerous environmental problems, such as rising ocean levels, increased hurricane intensity, greater flooding, and more wildfires. Since pre-industrial times, the global average temperature has increased about 1.2°C. The United Nations recommends that we limit the temperature increase to 2.0°C, which will occur in approximately 2039 when the atmospheric carbon dioxide concentration reaches about 450 ppm. Addressing this problem requires profound changes in our energy infrastructure, thus providing numerous challenges and opportunities for chemical engineers.

Speaker Bio: Mark Holtzapple received his chemical engineering degrees from Cornell University (BS, 1978) and the University of Pennsylvania (PhD, 1981). After his formal education, he served as a captain in the US Army Natick R&D Center and worked on a miniature air conditioner for soldiers wearing chemical protective clothing. In 1986, he joined the faculty in the Department of Chemical Engineering at Texas A&M University. He has received many awards for teaching and research, including the Presidential Green Chemistry Challenge Award from the president and vice president of the United States. His research focuses on sustainability including conversion of waste biomass to fuels, chemicals, and animal feed; high-efficiency engines and air conditioners; conversion of waste heat to electricity; high-torque electric motors; and water desalination.



# **March Dinner Meeting**

# **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 for the main meeting is now open through our website.

	Pre-Registration	Pre-Registration	At the door	At the door
	Members	Non-Members	Members	Non-Members
Regular/Retired	\$25	\$35	\$35	\$45
Student / Unemployed	\$15	\$25	\$25	\$35

# **Meeting Location—The Bougainvilleas Houston**



This month's meeting will be held at The Bougainvilleas Houston (12126 Westheimer Rd, Houston, TX 77077).

Double-click on the image to the left for directions from your location. For more details and information, please check our <u>website</u>.

# **March Meeting Dinner Menu**

#### Menu: A Cajun Evening with STS AIChE at the Bougainvilleas

#### **Buffet Dinner:**

Garden Salad with Italian Dressing Corn Bread Blackened Chicken with Creole Sauce Chicken and Sausage Gumbo Dirty Rice Collard Greens

#### **Vegetarian Dinner Option:**

Vegetable Stuffed Portabella Mushroom with a Balsamic Glaze\*\*

\*\* This dish is by request only – reservations are due two (2) days before the event.

#### Dessert:

Bread Pudding Fruit Platters

#### **Coffee Station:**

Regular Coffee Decaffeinated Coffee

#### Non-Alcoholic Beverages:

Iced tea with Lemon Wedges Water

#### **Alcoholic Beverages:**

Cash Bar\*\*

\*\* Cash only - no electronic payment option

Online Registration closes at 4PM the day prior to the event (Wednesday March 6th). After this time, you may register at the door.

# **Workshop I**

Workshop starts at 5:30 PM

Title: Utilization of Radioisotopes in Process Diagnostics

Speaker: Matt Moffett



**Abstract:** In this presentation we will be discussing the real-world application of radioisotopes in process trouble shooting. We will start with a brief history of the technology and then move into the various applications with case studies of:

- Cooling tower scans
- Distillation column scanning
- Neutron backscatter applications
- · Radioactive tracers for leak tests, flow rates, distribution studies
- Some other diagnostic techniques that add value
- Possible future avenues of process diagnostics

The presentation will be followed by Q & A and discussion on possible application for individual members and their respective benefits.

Speaker Bio: Matt's career in process diagnostics started in 1994 with Tru-Tec, Division of KOCH Industries. He was exposed to many exciting opportunities to grow in knowledge and gain excellent experiences during this time. He traveled extensively, working in refineries and chemical plants all across the US as well as internationally. Starting Cordova Group in 1999 with 1st office in Venezuela. We started up and continue to service the Jose Complex, the Heavy Crude Upgraders. The dynamics of upgrading heavy crude to synthetic provided a host of opportunities to apply different methods of process diagnostics related to gamma scanning and other techniques.

About a year ago, an opportunity to work with Quantum Technical Services to expand their cooling tower services presented itself. This is a patented method by which the actual bulk density of the new plastic fill can be measured.

Currently Matt is the president of Cordova Group, Inc. and works frequently with Quantum in an advisory/support role.

# **Workshop II**

Workshop starts at 5:30 PM

Title: Process Simulation in Real World

Speaker: Wendy Young



**Abstract:** Most students are only exposed to process simulation in the senior design course. What happens when you graduate? Where would you use these types of tools in the "real world"? We'll offer some insights into process simulation basics and common mistakes using examples of real-life problems.

**Speaker Bio:** Wendy Young is the Sales & Marketing Manager for Chemstations, Inc. providing process simulation software solutions through the CHEMCAD suite of products. She obtained her B.S. in Chemical Engineering from Texas A&M University in 1997 and is currently in the Executive MBA program at Rice University (2020). Her experience includes positions in chemical manufacturing, pharmaceutical manufacturing, and technical sales.

Wendy has been involved with AIChE since college where she served in various positions within the Texas A&M Student Chapter. She founded the Young Professionals Group of the AIChE South Texas Section in 2002 and became Chair of the national Young Professionals Advisory Board (now YPC) from 2003-2005. She moved on to Chair the Membership Committee and served on AIChE's Board of Directors from 2007-2009. Wendy was a founding Co-Chair of AIChE's Water Initiative (now ISWS) and the Co-MPC for the 2015 AIChE Spring Meeting. She was the 2017 Chair of the Chemical Engineering Technology Operating Council (CTOC).

#### March 2019 STS-AIChE Chair's Letter - Tom Rehm

Hello South Texas Section.

We held our February 7<sup>th</sup> STS Dinner at the Holiday Inn IAH, the first STS dinner meeting on the northside since I became actively involved with the South Texas Section in September 2014. As a far-north-side member (Atascosita), I say it's about time! At our February 12<sup>th</sup> ExCom meeting, there was general agreement that we should hold at least one dinner meeting each year 'up north'. Considering the scrumptious food, there was no objection to returning to Holiday Inn IAH. The room arrangement will be different next time. The folks at the far end of the room needed binoculars to see the presentation. Too bad since it was very interesting. Andrew Smith of Sympatec traveled from Colorado (on his dime) to give us a very interesting presentation on "Advances in lab and process particle characterization." Improvements in particle characterization have many business advantages, including reduction of electrical power requirements by improving processing efficiency, with commensurate carbon footprint reduction.



My apologies to patrons and sponsors for the absence of a looping ppt presentation at our February 7<sup>th</sup> meeting. We had to wait for workshops to finish in order to bring in a screen for our main dinner meeting. By the time it was set up, we were into our dinner meeting announcements. It won't happen again.

By the time you read this, the 2019 Science and Engineering Fair of Houston will be concluded. I am told that many of you are stepping up to volunteer for this important event. Thank you for that. And thank you to Matt Kolodney, Vic Edwards, and Connor Schonert for leading our volunteers in making a significant contribution to this event.

An upcoming and very significant K-12 event is HISD's "When I Grow Up" Career Expo, March 23, Hattie Mae White ESC, 4400 West 18th Street, Houston; <a href="http://www.hisdcareerreadiness.org/meet/expo/">http://www.hisdcareerreadiness.org/meet/expo/</a>. To become involved, please contact Matt Kolodney or Connor Schonert; <a href="mkolodney1@comcast.net">mkolodney1@comcast.net</a>, <a href="mailto:connorschonert@yahoo.com">connorschonert@yahoo.com</a>.

Events a little farther out on the calendar include the Scout Fair (April 6), the Energy Forum (April 11), the ECH Annual Awards & Networking Banquet (May 30), and the Sally Ride Festival (Fall 2019). Please contact Matt or Connor to volunteer for these events!

Just prior to the February 7th STS Dinner, the final form of an AIChE Press Release was approved. On March 31, the first day of the AIChE Spring Meeting in New Orleans, AIChE will a press release announcing the launch of The Climate Solutions Community (TCSC), an interdisciplinary group spearheaded by the AIChE. This is an important initiative. We chemical engineers can make positive steps in responsibly transitioning our global society over the new few decades from heavy reliance on fossil fuels to a sustainable future. See the press release in this issue of *The South Texan*. A TCSC website is being developed, including online registration. If you want to be involved, please contact Tom Rehm at tom@tomrehm.com.

To repeat an announcement from our February issue of *The South Texan*, TCSC will conduct a half-day workshop on April 2<sup>nd</sup> at the AIChE Spring Meeting. The agenda is contained within this issue of *The South Texan*.

I am steadily beating this drum, as most chemical engineers are concerned about global warming. Our March 7<sup>th</sup> STS dinner meeting will be the first of three consecutive meetings in which the after-dinner speaker will focus on climate solutions. Professor Mark Holtzapple, Texas A&M Chemical Engineering Professor, will speak on "Global warming: An engineering perspective."

Our March 7<sup>th</sup> dinner meeting is also College Night. We will have many of our best ChE college students attending. You are encouraged to wear your school colors. I apologize in advance (to some) for I am an Arkansas Razorback, class of '72. Woo Pig Sooie!

I look forward to seeing you at The Bougainvilleas on March 7.

# **The Climate Solutions Community**

Interdisciplinary group seeks technically feasible and economically viable ways to mitigate, adapt and become resilient to climate change



The American Institute of Chemical Engineers (AIChE), through its technical subsidiary the Institute for Sustainability (IfS) and in cooperation with other AIChE technical and leadership entities, has established a new community – The Climate Solutions Community (TCSC) — a global collaboration that will bring together the expertise of a diversity of engineering and scientific disciplines to help industry and society to confront and manage the effects of climate change.

The AIChE Board of Directors approved the formation of The Climate Solutions Community in October 2018. Tom Rehm, a process safety specialist and Chair of AIChE's South Texas (Houston) Local Section, will lead the community in its formative stages.

In discussing the new community, Rehm noted that chemical engineers' versatility and formidable problem solving skills make them well-suited to help address many of the world's foremost challenges, including climate change. "It is incumbent on AIChE and its member stakeholders to apply their unique insights and technical abilities to identify viable solutions to mitigate, adapt, and become resilient to the effects of climate change," said Rehm. He added that a key task assigned to The Climate Solutions Community's Steering Committee will be to develop a portfolio of technical and government policy solutions necessary to address both industrial and societal challenges related to climate.

The Steering Committee includes representation from a spectrum of AIChE constituencies.

Members of the Steering Committee include Sunil Hangal (Environmental Compliance Assurance Management), Chair of the Environmental Division's Climate Change subcommittee; Dale Keairns (Deloitte Consulting), 2008 AIChE President and Chair of the Center for Energy Initiatives; Dan Lambert (Savannah River National Laboratory), a Past Chair of AIChE's Nuclear Engineering Division; Christopher Pope, member of the Societal Impact Operating Council; Mary Ellen Ternes (Earth & Water Law, LLC), Chair of the Public Affairs and Information Committee's Climate Change Task Force; and Neil Yeoman (Koch-Glitsch, retired), past two-term AIChE Director and a Founder of the Separations Division and Virtual Local Section. Darlene Schuster, Executive Director of the Institute for Sustainability, will work with the Steering Committee to launch the new community in early 2019.

To generate momentum for The Climate Solutions Community, the organizers will conduct a technical and information session at AIChE's 2019 Spring Meeting and Global Congress on Process Safety, March 31 to April 4, in New Orleans, LA. In addition to technical presentations, the program will include panel and group discussions addressing topics related to mitigation, adaptation, resiliency, and public policy.

Engineers and industrial scientists from across disciplines are invited to participate in The Climage Solutions Community. Areas of work will include mitigation of carbon footprints in electrical power generation and distribution, hydrocarbon processing, transportation, and urban areas; adaptation; and resiliency.

More information about The Climate Solutions Community and how to participate will be announced in early 2019.

# **Sponsors for 2019 - Thank You**

Silver Sponsors

**Business Climate Leaders** 

BCL BUSINESS CLIMATE LEADERS **Bronze Sponsors** 

Microrganic Technologies





Business Climate Leaders is an action team of Citizens' Climate Lobby

#### Sponsorship of the South Texas Section – now on a rolling 12-month basis

In past years, sponsorship was tied to a calendar year. Those who became sponsors later in the year had less exposure than full-year sponsors, but at the same cost as full-year sponsors. A proposal to the STS Executive Committee, for sponsorships over a rolling 12-month period, was approved in mid-January. The 12-month rolling period will be based on the date of sponsorship application.

We will have eight STS meetings in 2019 in the greater Houston area on the west, east, north and south sides of the city so that we may try to cater to all our members across town. Please see the <u>dinner meeting schedule</u>.

In 2019 we are offering three levels of sponsorships:

	Bronze	Silver	Gold
Looping PowerPoint at each of our eight 2019 dinner meetings during the social hour	10 second still	20 second silent video	60 second audio video
Self-promotion at dinner meetings		60 seconds in one meeting	Two minutes in each of three meetings
Display table at dinner meetings		One meeting	Three meetings
Opportunity to speak at an STS dinner meeting in 2020			✓
Complimentary dinner tickets for use at any dinner meeting during 2019	2	4	8
Plaque with sponsoring company Logo			✓
Sponsor Logo display in the monthly STS newsletter	✓	✓	✓
Acknowledgment from the meeting podium	✓	✓	✓
Donation to the South Texas Section	\$500	\$1,000	\$2,000

# **2019 STS Opportunities**

#### 2019 STS Speaking Opportunities

In 2019, the South Texas Section and our partners will continue very successful events:

- Networking lunch programs, on the east and west sides of town, two per month;
- Monthly dinner meeting workshops;
- A stand-alone workshop evening in December 2019;
- The Energy Forum in April 2019;
- The Water Forum in November 2019; and
- The Southwest Process Technology Conference in October 2019.

If you would like to speak at any of these events, please contact me.

#### 2019 Exhibit Opportunities

There are exhibit opportunities at the Energy Forum, the Water Forum, and the Southwest Process Technology Conference (SPTC). In 2019, all will be held in the Houston area, including the SPTC which has been held in Galveston in recent years. If you choose to be a South Texas Section Sponsor, we can work out a discount arrangement for exhibiting at these three events.

#### 2019 STS Theme: Global Warming Solutions

In our 2019 STS Monthly Dinner and Social Schedule, please note the topics of our March, April, May, and October dinner presentations. We are living in an unprecedented time in human history. Through industrialization, we are seemingly harming our planet. With the wealth of fossil fuels at hand, putting it to use was inevitable and during much of that use who could have foreseen its effects? Until recent years, climate change observations could perhaps be argued, but no longer.

At the AIChE Annual Meeting in Pittsburgh last month, the Institute for Sustainability (IfS) and the AIChE Board of Directors approved the formation of The Climate Solutions Community (TCSC). This community will be within the IfS. As with the IfS membership, TCSC membership will be multi-disciplinary. All engineers and industrial scientists will be welcomed to join the AIChE with the objective of working together to identify and recommend technically viable and marketable solutions. We need to begin turning the corner on this problem so that it can be done to maximize the economic benefit to our country. Energy markets can benefit, including oil and gas sectors, with planning. The mix will gradually change, but we will continue to need energy and an ever-increasing amount of it. We need and welcome companies in the oil and gas sectors to work with us to solve this problem.

# **50 Years of AIChE Membership Awards**

STS Members Richard H. Nielsen and Richard Prickett were honored for 50 Years of AIChE Membership.



Richard H. Thielsen (L) displays his 50 years of AlChE Membership award. Also in the photo is STS – AlChE 2019 Chair Tom Rehm (R).



Richard Prickett (L) displays his 50 years of AlChE Membership award. Also in the photo is STS – AlChE 2019 Chair Tom Rehm (R).

# STS-AIChE 2017 Distinguished Service Award

The recipient of the 2017 South Texas Section – AIChE Distinguished Service Award is James Turner.



James Turner (R ) displays his South Texas Section – AIChE 2017
Distinguished Service Award which he has just received from 2019 STS
– AIChE Chair Thomas E. Rehm (L).

James is an Executive Process Director in Fluor's Sugar Land Office. He has published and presented many technical articles about process design and project execution, and holds patents for a combined hydrotreater process design. He has served as a Panelist at the NPRA Q&A and Technology Forum.

James has served as Chair Elect, Chair, and Past Chair of the South Texas Section of AlChE. He is also a Trustee on the AlChE Foundation Board, and has held several positions with AlChE, including member of the Executive Board Programming Committee, and several positions with the Fuels and Petrochemicals Division, including Chair of the Division, Director, Newsletter Editor, and Treasurer. In 2012 received the Fuels and Petrochemicals Service Award for distinguished service to the division and industry. He was elected to the Membership Grade of Fellow in 2016.

James is a graduate of Texas A&M University with a bachelor's degree in Chemical Engineering. He serves on the Texas A&M Chemical Engineering Department Industry Advisory Council and the Texas A&M TEES Industry Advisory Council, and has been inducted into the Texas A&M Chemical Engineering Academy of Distinguished Alumni.

# **STS-AIChE 2018 Chair Appreciation Plaque**

Carlos A. Salamanca was presented the 2018 South Texas Section -- AIChE Chair Appreciation Plaque for his tireless efforts as 2018 STS -- AIChE Chair.by 2019 STS -- AIChE Chair Thomas E. "Tom" Rehm at the February South Texas Section Monthly Dinner Meeting at Holiday Inn IAH



2018 STS-AlChE Chair Carlos A. Salamanca (L) displays his 2018 STS-AlChE Chair's Appreciation Plaque. Also in the photo is STS – AlChE 2019 Chair Tom Rehm (R).

# 2019 AIChE Young Engineer of the Year

Swarup Bade was awarded the AIChE Young Engineer of the Year Award and was recognized at the Young Engineers Award Recognition Event on February 18, 2019. Swarup is our current Past Chair for Young Professionals (YP) and served as the 2018 STS YP Chair. Please join us to congratulate Swarup and thank him for all he has done for STS-AIChE and for the YP group.





#### **STS-AICHE Annual Awards**

# It's STS Awards Nomination Time!

Nominations are being accepted thru May 1, 2019 for the following STS Annual Awards:

- 2018 STS Best Applied Paper Award
- 2018 STS Best Fundamental Paper Award
- 2018 STS Best In Practice Paper Award \*\*NEW!!\*\*
- 2018 STS Outstanding Young Professional Award (Under 35)
- 2018 STS Distinguished Service Award (Over 36)
- 2018 STS Special Service Award(s)

Nomination Forms are available in *The South Texan* or nominations may be made using the STS web-site (<a href="https://www.aiche.org/community/sites/local-sections/sts/forms/sts-award-nomination-form">https://www.aiche.org/community/sites/local-sections/sts/forms/sts-award-nomination-form</a>) or by contacting:

Matt Christiansen 281-544-6476 Matthew.Christiansen@shell.com

Tom Menn 281-485-3719 <u>ThomasMenn@SBCGlobal.net</u>

Ryan Stephens 281-544-8447 Ryan.Stephens@Shell.com

# **STS-AIChE Annual Awards**

# South Texas Section – AIChE 2018 Annual Awards Nomination Form

#### THIS NOMINATION FORM MUST BE RECEIVED BY MAY 1, 2019 TO BE ACCEPTED!

Mail the completed form to:

Thomas E. Menn	Or	Matt Christiansen	ı, PhD	Or	Ryan Stephens, PhD
Awards Chair		Best Papers Judg	jing Chair		Best Papers Judging Co-Chair
P. O. Box 458		Shell Projects and	d Technology		Shell Global Solutions (US) Inc.
Pearland, Texas 77	588-0548	Technology Cente	er		
		3333 Highway 6 S	outh		
		Houston, Texas 7	7082		
Tel.: 281-485-3719		Tel.: 281-544-647	6		Tel: 281-544-8447
ThomasMenn@SB0	CGlobal.net	Matthew.Christia	nsen@shell.co	<u>m</u>	Ryan.Stephens@shell.com
of the nomination a	after AIChE & STS join AIChE and/or	Membership is ver STS AIChE befo	rified. All Best	Paper No	the STS Awards Committee confirming receipt ominees not Members of AIChE or STS der to be eligible for the recognition due a
NOTE: ONLY ONE	PERSON OR PAP	<u>ER MAY BE NOMII</u>	NATED PER FO	DRM!	
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E-	MAIL ADDRES	SS:			
I wish to nominate					
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NOMINEE or AL	JTHOR'S NAME	<b>:</b> :			
ADDRES	S:				
S <sup>-</sup>	TREET:				
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E-	MAIL ADDRES	ss:			

# **STS-AIChE Annual Awards**

TYPE OF NOMINATION: (PLEASE CHECK ONLY ONE SPACE BELOW.)	
2018 STS Outstanding Young Professional Award (Under age 35)	
2018 STS Distinguished Service Award (Over age 35)	
2018 STS Best Fundamental Paper Award	
2018 STS Best Applied Paper Award	
2018 STS Best In Practice Paper Award **NEW!!	·
For STS Outstanding Young Member or Distinguished Service Awards, pledeserving of this award back of this form and ignore the rest of the form. You this form.	
For Best Paper Nominations	
Please enter the name of the nominated 2018 Best Paper again:	
(Sorry to trouble you but this is in case the sheets	get separated.)
Enter the contact Author's name again:	
(Sorry to trouble you but this is in case the sheets	get separated.)
Check Best Paper Category Again:	
Fundamental	
Applied	
In Practice	

#### **STS-AIChE Annual Awards**

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

#### **MEMBERSHIP**

Note: At <u>least</u> one (1)	author must be a STS Member.	<u>AICHE</u>	<u>STS</u>	
Co-Author # 1:				_
Co-Author # 2:				_
Co-Author # 3:				_
Co-Author # 4:				_
Co-Author # 5:				_
Co-Author # 6:				_
Co-Author # 7:				_
Co-Author # 8:				_
Co-Author # 9:				_
	[Add addition Authors on an a	attached sheet	as necessary.]	
For Best Paper Nominations, p	ease provide following informat	ion:		
NAME OF PUBLICATION:				
DATE OF PUBLICATION:				
VOLUME NO. (If known):	PAGES:	to		
DI FACE ATTACII A CODY OF:	THE ARTICLE EROM THE RURL	CATION TO TH	UO FORM OR U	TUIO IO NOMINATION I

PLEASE ATTACH A COPY OF THE ARTICLE FROM THE PUBLICATION TO THIS FORM OR IF THIS IS NOMINATION IS TEN-DERED BY E-MAIL, PLEASE ATTACH AN ELECTRONIC VERSION OF THE PUBLISHED ARTICLE.

Following receipt of the submitted nomination, you will receive an e-mail from the STS Awards Committee confirming receipt of the nomination after AIChE & STS Membership is verified. All Best Paper Nominees not Members of AIChE or STS may wish to join STS or AIChE and STS until May 31, 2019 in order to be eligible for the recognition due a STS – AIChE Member Best Paper Award Recipient.

# **Young Professional of the Month: Meghan Spivak**



Meghan Spivak graduated from the University of Tulsa in May 2016 with a B.S. in Chemical Engineering, and she was an active member in many campus organizations including the Chi Omega Sorority and the TU Dance Team. She gained valuable engineering experience interning in both the Environmental and Energy industries, as well as conducting research with the Analytical Chemistry department. Upon graduating, she started in Midland, TX with Occidental Petroleum as a Production Engineer in Oxy's Engineering Field Development Program, where she held positions as a Workover and Completions Specialist, or "Company Man", and as a Well Optimization Analyst. She recently rotated to Houston in October 2018 with Oxy, and currently works as an Artificial Lift Engineer in the Operations Support group for the Permian. Outside of work she is involved with the TU Alumni Association's Houston Chapter as the Communications Chair, Oxy's Early Career Network as the Community Service Chair, Big Brothers Big Sisters, the Society of Women Engineers, and AlChE. She is looking forward to getting involved in AlChE's STS and continuing to develop her engineering skills.

# 2019 Offshore Technology Conference - Volunteers Needed

6 - 9 MAY 2019 at NRG Park, Houston, Texas, USA

Receive Free Pass\*, Parking\*, and all the free goodies/junk you can carry away! (\* entire OTC). Note: You can attend Technical Sessions.

Must volunteer before 10 April 2019 (estimated)

Attend Orientation Meeting (<u>mandatory</u>) & serve 4 hours in either Arrangements, Registration, or Student Tours, or "1st Timers" Lounge/Orientation.

Contact Tom Menn @ thomasmenn@sbcglobal.net

# **University Outreach Volunteer Request**

This fall, the Young Professionals will be reaching out to several universities in order to talk to their student AIChE chapters about career options, industry experience, and more!

If you're an alum of the University of Houston, Rice, Texas A&M, or Prairie View, or if you're just interested in sharing your chemical engineering experiences with students, then we would love to have you as a volunteer or even coordinator!

To volunteer, please contact Swarup Bade at <a href="mailto:sts-yp@aiche.org">sts-yp@aiche.org</a> and include any universities you'd be interested in helping with. We'll contact you once we've secured a time and place!

# **Volunteers Needed - HISD Career Expo**

The Houston Independent School District will hold its annual "When I Grow Up" career expo on Saturday, March 23, 2019 at the Hattie Mae White Center (4400 W 18th St., Houston) from 10:00 a.m. to 1.00 p.m. We have an overhead shelter in case of rain. Volunteers get free parking and free lunch.

AIChE will have a table at the event and we are looking for a few volunteers to staff it. We will have a hands-on experiment, a piece of chemical equipment, and a career leaflet. The children cover the full K-12 range.

Feel free to contact Matt Kolodney, STS-AIChE K-12 STEM Outreach Coordinator if you would like to participate or if you would like further information, either by phone (713) 471-8956 or Email (mkolodney1@comcast.net).











# **Community Outreach Volunteers needed for 2019 Trash Bash**

#### 2019 Trash Bash - Saturday March 30, 2019

Please join STS AlChE in their support of environmental stewardship at the Buffalo Bayou. Every March, thousands of people in the Houston/Galveston area gather to clean tons of trash from our waterways. The mission of Trash Bash is to promote environmental stewardship of our watershed through public education by utilizing hands-on educational tools and by developing partnerships between environmental, governmental, and private organizations. Volunteers will help clean the waterways by picking up trash.

Please fill out the registration form and bring it with you to the event. A link to the form is located below.

Trash Bash Registration Form

Click here for Schedule and Directions to the event.

#### **IMPORTANT DETAILS:**

What to Wear: We will be walking around in tall grass, so please wear closed toed shoes, long pants, and long sleeves.

What to Bring: If you have Rakes or other equipment that would aid in picking up trash please bring it along. Make sure to fill out the registration/waiver form linked to above. Any minors attending will need to have one signed by a parent as well.

Before you attend: Please watch this short safety video.

**Community Outreach Organizers will provide**: Waters and light snacks for volunteers. Please ensure you've had an adequate breakfast, as we will be out in the sun.

Trash Bash will provide: gloves, trash bags, t-shirts, lunch, and door prizes at the end.

Where to meet: We will meet at the Terry Hershey Park Parking within 7:30 am and 8:00 am

Where we will be cleaning: The areas to be cleaned are the wooded areas along Buffalo Bayou in Terry Hershey Park from Highway 6 to Beltway 8. We will also clean parts of Langham Creek. Transportation is provided to and from various sites.

What time is the event: Registration, safety, and transportation to the cleanup site will start at 8 AM, please try and arrive 10-15 minutes early so we can get our group together before things start. Cleanup will end at 11 AM. From 11 AM to noon we are invited to join the rest of the TrashBash volunteers in a free lunch, door prizes, and entertainment. A full schedule is available at the link above.

Please contact Sundar Viswanathan at sundara.vis@gmail.com for any questions.

# **Upcoming Events**

# The Climate Solutions Community (TCSC) Workshop



The Climate Solutions Community (TCSC) Workshop will be conducted on April 2, at <a href="https://doi.org/10.2016/nc.2

This workshop will be the first engagement of the TCSC. There is much work to do. Join us and become involved in working toward technically viable and marketable climate solutions.

- · Welcome and Introductions, Tom Rehm, PhD ChE, AIChE South Texas Section Chair
- Shining Light on the Evidence of Climate Change
  - Presentation laying out the data on climate change, Tom Rehm et al
  - Questions for speaker(s)
- Panel Presentations and Q&A: Climate Solutions in Industry
  - Jimmy Kumana, MS ChE, chemicals, primarily energy efficiency
  - Mark Holtzapple, PhD ChE, Texas A&M, fuels, primarily biofuels
  - Charles Rhodes, PhD EE and Gene Preston, PhD EE, electricity, primarily generation
  - Q&A with Panel
- Break (30 minute conference-wide coffee break)
- Three Group Discussions for chemicals, fuels, and electricity: Climate-Change Issues for ChemEs
  - What issues do these industries face related to climate change?
  - Which issues are chemical engineers uniquely positioned to address?
- Three Group Discussions for chemicals, fuels, and electricity: Commercial Climate Solutions
  - What technologies exist to address issues identified in first breakout?
  - What are the gaps which issues don't have a solution or a solution is available in another industry but not yet applied here?
- Summary and Next Steps

If you are planning to attend the AIChE Spring Meeting in New Orleans March 31 to April 4, take time to attend. If you hadn't planned on attending the Spring Meeting but are concerned about climate change, think about taking a couple of days off work to join us; per Google Maps, it's only a five hour drive from Houston to New Orleans. On the evening of April 2nd, attendees who want to lead in the TCSC will assemble at a nearby restaurant and continue our 'Next Steps' discussion.

# **Upcoming Events**

# **March 1st - First Friday Networking Lunch**

The next STS-AlChE First Friday Networking Lunch (FFNL) will be held on Friday, March 1st from 11:30AM - 1:00PM at the Wyndham Houston West Energy Corridor Park Restaurant and Grill (14703 Park Row Dr., Houston, TX 77079). The restaurant is located on the east side of the hotel and there is designated parking available. The lunch menu is an all-inclusive buffet style for \$16 per person and STS-AlChE subsidizes the lunch by \$5. The non-refundable \$11 registration fee includes the subsidized lunch buffet and attendance for the lunch presentation and networking. Pre-registration reserves your seat and walk-ins welcome on an as available basis. STS-AlChE members as well as non-members are welcome to attend.

#### Register at the AIChE STS website.

Topic: Functional Contradictions: Insights into Process Improvement Opportunities

Speaker: Peter Hanik, MBA, PE

Pete is President and founder of Pretium Innovation specializing in intellectual property and team-based innovation systems to create sustainable value. Pete has developed proprietary on-site and on-line services for innovation methods in business strategy, business process redesign, capital efficiency improvement, product concept development, intellectual property enhancement and technology road mapping. Pete was also President, Technology at Reliance Industries, Mumbai, where he led research and development programs in refining, petrochemicals and polymers with a staff of about 300 professionals. Prior to that, Pete was Senior Vice President of Technology, (Research & Development, Quality and Health Safety & Environmental and e-Business) at Millennium Chemicals, President and CEO of Millennium Petrochemicals, Vice President Chemicals & Supply Chain at Quantum Chemical, Vice President Reengineering and Information Systems at Quantum Chemical, Director Applied Research & Technical Service at Quantum Chemical, Regional Sales Manager at Northern Petrochemical, Engineering Manager at Northern Petrochemical and Production Superintendent at Northern Petrochemical.



Pete holds a B.S. in Chemical Engineering from Illinois Institute of Technology and an MBA from the University of Chicago. Pete is active with the American Fuel & Petrochemical Manufacturers Association (AFPM) and has served as a member of Executive Committee, Board of Directors, Steering Committee, Petrochemical Committee (Chairman), and Program Chairman for the 2002 International Petrochemical Conference. Pete has served as a member of the American Institute of Chemical Engineers Industrial Advisory Board 2002 – 2004. Pete is a Registered Professional Engineer (Nebraska).

# **Upcoming Events**

# **March 1st - First Friday Networking Lunch**

Abstract: As process engineers we are often given a specific problem to solve. But our broader mission is to find ways to make things "faster, better, cheaper". Process Intensification is a recent trend that outlines areas of opportunity such as thermal intensification, mixing & mass transfer, chemical separation & crosscutting technologies, and other opportunities. Another approach discussed in this talk is to look for contradictions within the chemical process. A contradiction occurs when one action produces a useful result but also a harmful effect. For example, a chemical reaction may proceed at a higher rate if temperature is increased, but the increased temperature results in more unwanted byproducts. The usual approach is to optimize around the contradiction using tools like six-sigma. In this case we would calculate the economic benefit produced running the reaction at varying temperatures and select the temperature that yields the maximum benefit. But what if we could resolve the contradiction and escape the compromise? Such a solution could result in a breakthrough creating sustained economic advantage. Not all contradictions can be resolved but there are many examples in the chemical industry where resolution of a contradiction resulted in significant and long term benefits. This talk will discuss ways to identify contradictions that could lead to significant process improvement and it will also discuss how to create potential resolutions for contradictions.

Have suggestions, ideas, comments or want to recommend a speaker for future FFNL events? Please contact William Pittman at William Pittman@micropackamericas.com.

# **Upcoming Events**

# **March 15th - Third Friday Networking Lunch**

The next STS-AIChE Third Friday Networking Lunch (TFNL) will be held on Friday, **March 15th from 11:30AM** - **1:00PM** at the **Pipeline Grill** (10003 Spencer Hwy, La Porte, TX 77571). There is no registration fee. The lunch menu ranges from \$8 to \$12, and the South Texas Section will subsidize lunches by \$5 per attendee. STS members as well as non-members are welcome to attend. We only request that you pre-register at the STS-AIChE.org website so we can get an accurate head count for the restaurant. **Everyone is welcome to attend!** 

Register at the AIChE STS website.

Topic: Metallurgy: A Critical Part of Every Chemical Plant

Speaker: Angelique Lasseigne, PhD

Dr. Angelique Lasseigne is the CTO of G2MT and G2MT Laboratories. She has spent the last fifteen years providing metallurgical failure analysis and consulting across a variety of industries as well as developing the next generation of non-destructive sensors to measure through-thickness material properties. Dr. Lasseigne received her undergraduate degrees in Physics and Metallurgical and Materials Engineering from Centenary College of Louisiana and Colorado School of Mines in Golden, CO. She later earned her Master's and Ph.D. degrees in Metallurgical and Materials Engineering from Colorado School of Mines and the Federal Institute of Materials Research and Testing in Berlin, Germany. Angelique then completed an Academy of Science - National Research Council Post-



Doctoral Fellowship at the National Institute of Standards and Technology in Boulder, CO where she continued to develop and test the capabilities of advanced non-destructive material property sensors. Angelique has published over 100 scientific papers and co-authored three books in the fields of welding metallurgy, corrosion, and non-destructive testing for materials characterization.

Abstract: The number of graduates in metallurgical engineering has decreased dramatically in the past few decades (many schools have changed to materials science). The number of metallurgists in chemical plants has also continued to decrease, yet the infrastructure in chemical plants and is older than ever and failures are widespread. Further complicating matters are: (1) the loss of invaluable inside knowledge through retirement, and (2) the industry continues to push for higher throughput rates and more aggressive operating conditions, and (3) wider variance in quality of materials. Metals will continue to be the dominant material because polymers, ceramics, and nano-materials simply cannot compete (for example, in terms of strength to value ratio or temperature capability). G2MT will show why metallurgy is still a critical part of every chemical plant and why metallurgy knowledge is important to extend operating life and dramatically improve plant safety, while increasing value. Examples of failures that have occurred in chemical plants due to various metallurgical issues (during design, fabrication, and operation) will be presented along with recommendations on how to prevent failures.

Have suggestions, ideas, comments or want to recommend a speaker for future TFNL events? Please contact David Alexander at 832-372- 2926 or <u>davidalexanderlaw1249@gmail.com</u>. Alternative contact = William Pittman <u>williampittman@micropackamericas.com</u>.

Need career advice or guidance? STS is now offering a free mentoring service for its members, courtesy of our panel of senior member volunteers. For more information, contact <a href="mailto:jkumana@aol.com">jkumana@aol.com</a>.

# **Upcoming Events**

# STS-AIChE College Night 2019

# STS-AICHE COLLEGE NIGHT

**MARCH 7TH, 2019** 

# WHERE The Bougainvilleas

12126 Westheimer Rd. Houston, TX 77077

WORKSHOPS (5:30—6:30 P.M.)
I. UTILIZATION OF RADIOISOTOPES IN PROCESS DIAGNOSTICS
II. TBD

DINNER/ANNOUNCEMENTS (7—8 P.M.)
STS Leadership

PRESENTATION (8:15—9:00 P.M.)
Global Warming, An
Engineering Perspective
by Mark Holtzapple, TAMU

University of Houston • Prairie View A&M University • Rige University • Texas A&M University

WWW.AICHE.ORG/STS

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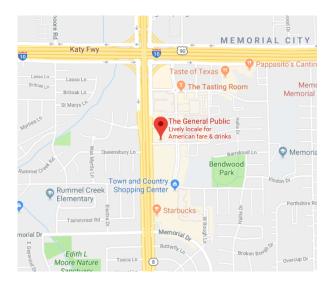
# **Upcoming Events**

# **Young Professionals STS-AIChE Happy Hour**

Come join the YPs for a happy hour - network with other chemies!!

When: March 22 from 4:00 pm to 7:00 pm

Where: The General Public at the City Centre, Houston. Click on the map below for directions.



No RSVP Needed.

# **Past Events - Young Engineer of the Year**

The Young Engineer of the Year 2019 reception was held on the 18th of February. STS-AlChE members attended the event - Swarup Bade (Past YP Chair) received an award for AlChE Young Engineer of the Year. The event also had an entertaining casino night.



# **Past Events - Young Professionals**

The STS-AlChE Young Professionals had their first planning meeting of the year on the 8th of February. They did a handover from the 2018 team to the 2019 team and also planned an exciting schedule this year for the YPs. They are looking forward to increased attendance and participation at this year's events.



The Young Professionals also had their first networking happy hour of the year at Wooster's Garden on the 21st of February. The event was well attended.





# **2019 STS-AIChE Monthly Dinner and Social Schedule**



# 2019 South Texas Section Monthly Dinner and Social Schedule

#### January 10, The Bouganvilleas, 12126 Westheimer Rd, Houston

Mike Allison, Raptor Aerial Services Drones, a new tool for industrial applications

#### February 7, Holiday Inn IAH, 15222 JFK Boulevard, Houston

Andrew Smith, Sympatec
Advances in lab and process particle characterization

#### March 7, The Bouganvilleas

Professor Mark Holtzapple, Texas A&M ChE Department: Global warming: An engineering perspective

April 11 (in conjunction with the Energy Forum), Shaffai Hall, 1622 Federal Rd, Houston Professor Pavel Tsvetkov, Texas A&M Nuclear Engineering Department Gen IV Nuclear

#### May 9, The Bouganvilleas

Fanxu Meng, Houston Advanced Research Center Extreme weather event resiliency

June - Ship channel cruise

July - Astros game

August - Alternate shot two-player-team pool tournament

#### September 5, The Bouganvilleas

Mike Foggia, Process Combustion Corporation: Flameless thermal oxidation – Achieve 99.9999% DRE at < 2ppmv NOx

October 1 (in conjunction with the Southwest Process Technology Conference), TBD (southside of Houston)
The presenter will be a prominent individual with involvement in global warming solutions

November 7 (in conjunction with the Water Forum), Shaffai Hall David Drerup, Operational Sustainability Best practices in PSM data management

December - Holiday Season Social

This schedule does not include other STS events, such as networking lunches, workshops, plant tours, Young Professional events, K-12 outreach, PE review course offerings, etc. 2019 will be an exciting year for the South Texas Section. To become an STS volunteer, contact Tom Rehm at <a href="mailto:tom@tomrehm.com">tom@tomrehm.com</a> or 832-331-6491.

#### **STS-AICHE Season Pass Information**

#### General Comments

The STS-AIChE Season Pass offered the convenience of a single sign-up and single payment for all eight technical meetings in the 2019 season. Season Pass holders also received priority sign-up for all special events.

Season Pass holders receive a significant savings when comparing the on-site cost of the dinner meetings. No need to continue to monitor when meeting registrations are open. Save the hidden costs of multiple transactions and tracking the payments and reimbursements, if applicable.

#### Frequently Asked Questions (FAQ)

#### As a Season Pass Holder do I need to register for each dinner meeting?

No, there is no need to register or RSVP for the individual meetings once you have made your payment to become a Season Pass holder. We do however ask that you sign in at the registration table during the day of the event at the meeting venue.

#### What if I cannot attend a dinner meeting?

Guests and visitors are always welcome. Feel free to send someone else in your place and just let the people at the registration table know of the substitution.

#### What if I cannot attend the meeting and cannot find a substitute?

Even the most dedicated members cannot make every meeting. The season pass is priced assuming that you will miss a meeting. If you can provide at least a one week notice, by e-mailing the Chair-Elect at sts-chairelect@aiche.org, we can give you a guest pass for the next meeting. That way, you can invite your boss to the next meeting to see what you missed!

# I am a big supporter of the section, but I don't want my name posted all over the web. Can I opt-out of the publications?

Yes, just let us know and we will not put your name on our list so that you can continue to fly under the radar. You always have the option of hand writing a name tag.

#### Will I still get in if I forget my name tag at home?

Yes. We keep a master sign-up list at the door. Patrons are at the top of the list!

#### I normally sign up in advance. Am I still saving money?

Yes. The Season Pass is eight meetings for the price of seven. You will also save the time and effort of multiple payments.

# **STS-AIChE 2019 Season Pass**

# 2019 STS-AIChE Patrons

First Name	Last Name	Company Name	
Yurika	Diaz Bialowas	Chemstations, Inc.	
Travis	Fixmer	LyondellBasell	
Jordan	Pearce	PSE	
William Paul	Waits	Core Engineering	
Jack	Chosnek	KnowledgeOne LLC	
Dale	Embry	ConocoPhillips	
Matt	Clark	Armstrong Engineering Associates	
George	Vourazeris	Airgas Merchant Gases	
Matthew	Kolodney	Entech Engineering	
Victor	Edwards		
Sanjay	Sharma	Honeywell	
Maximo	Salazar	Process Eng	
Tom	Rehm	The Climate Solutions Community	
Tom	Menn		
Gus	Georgeton	LyondellBasell	
Joseph	Ramey	Westchase Design	
Gary	Miller	Air Liquide	
John	Middleton	WorleyParsons	
Julie	White	Chevron	
Erin	Green-Colaco		
Jay	McCorkle	WorleyParsons	
Gary	Gildert	Vanguard Catalyst, LLC.	
Ravindra	Saxena	ANR Consulting	
Talia	Sanchez	Spirit Environmental, LLC	
Jeffrey	Melland	Melland Engineering & Consulting	
Trevor	Rice	Chemstations, Inc.	
Carol	Schmidt	Wood	
Venkat R.	Voruganti	Continental Carbon Company	
Deborah	Evans		

# **South Texas Section Corporate Liaison Program**

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> <li>→ Provide meetings and events</li> <li>→ Maintain list of liaisons</li> <li>→ Send out special emails to liaisons</li> <li>→ Advertise program and recognize liaisons and companies</li> </ul>	<ul> <li>★ Forward STS-prepared emails to department/group</li> <li>★ Create meeting invitations for coworkers</li> <li>★ Try to set up carpools where able</li> <li>★ Attend meetings where possible</li> <li>★ Interface with Company Management on STS activities and sponsorship opportunities (as applicable)</li> <li>★ Provide feedback to STS Officers on company interests and comments</li> </ul>	<ul> <li>★ Support the liaison</li> <li>★ Advertise where applicable</li> </ul>			
Benefits					
<ul><li>→ Higher attendance</li><li>→ Better corporate relations</li></ul>	<ul> <li>→ Personalized Nametag for meetings</li> <li>→ Demonstrated leadership within company</li> <li>→ Increased networking ability within corporation</li> <li>→ PDH credits/technical education</li> </ul>	<ul> <li>Recognition at meetings</li> <li>→ PDHs / education for employees</li> <li>→ Networking/team building opportunities</li> </ul>			

In early 2016, Travis Fixmer, a Process Optimization and Design Engineer with Huntsman Performance Products, developed an intranet website which promotes our Section and its activities within Huntsman. He offered to be a resource to individuals who would like to do the same. If you would like to promote our Section, Travis can provide you with guidance on how to proceed.

Others in our section send intra-company emails promoting the South Texas Section. This can be easily done by simply forwarding the STS monthly meeting notice email to employees in your company.

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.

If you have any questions, please contact Tom Rehm at tom@tomrehm.com or 832-331-6491.



#### South Texas Section AIChE

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

2018 Officers and Contact Information

#### **Officers**

Chair Tom Rehm

sts-chair@aiche.org

Chair Elect Mark S. Harkness

sts-chairelect@aiche.org

Past Chair Carlos Salamanca

sts-pastchair@aiche.org

Secretary Debra McCall

sts-secretary@aiche.org

**Treasurer** Yurika Díaz Bialowas

sts-treasurer@aiche.org

#### **Executive Committee**

Position 1: Education

Babak Rafienia sts-position1@aiche.org

Position 2: Outreach

Sheena Reeves sts-position2@aiche.org

Position 3: Communications

Aniket Patankar sts-position3@aiche.org

Position 4: Human Resources

Dr. William Pittman, Ph.D. sts-position4@aiche.org

#### **Volunteers**

Arrangements: John Middleton
Awards: Tom Menn
Membership: David Silarski
Webmaster: Talia Sanchez
Young Professionals: Emily Jackson

#### 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 2018

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

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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: <a href="http://www.aiche.org/">http://www.aiche.org/</a>

Contact the AIChE for PERMANENT ADDRESS CORRECTIONS:

- http://www.aiche.org/contact/form
- 1-800-AIChemE (1-800-242-4363)
- AlChE Home Office 120 Wall Street, FL 23 New York, NY 10005-4020

AlChE Customer Service Center 100 Mill Plain Rd 3rd Fl Danbury, CT 06811

#### **The South Texan Newsletter Crew**

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

Contact us at <a href="mailto:sts-newsletter@aiche.org">sts-newsletter@aiche.org</a> with comments, questions, suggestions, and ideas for next month.

**Newsletter Editor** 

Aniket Patankar sts-position3@aiche.org

Submit an article! Contact:

Matt Kolodney 713-471-8956 MKolodney1@comcast.net



Reserve your ad space! Contact:

Yurika Diaz Bialowas sts-treasurer@aiche.org