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LETTER FROM THE CHAIR



Dear members & friends,

Happy New Year! Thank you to all the members for your support. A big thanks to past chair [Dr. Andreas Matzakos](#) who has upgraded our management systems (Office 365, Teams, Outlook, tools to plan events) and so much more. Also, thank you to the board members and all the volunteers. We could not had done what we do with out their help.

We want to improve. Please give us some feedback by filling out the [2023 Engagement Survey](#). We plan to have regular feedback surveys for each event during the year in hope of adjusting faster to your concerns/suggestions.

We have several events scheduled for 2024 with a focus on providing more balanced to what we do (learning/technical, networking, social, serving, giving, mentoring, career support, and PDH credits). More to come on these opportunities.

- Formal Evening Dinner Meetings
- Lunch Meetings (less formal, localized closer to your work is the target)
- Lunch & Learn Program (Hoping to kick this off depending on volunteer support and interest)
- Networking/Social Events (Houston Ship Channel, Astros Game, YP hosted Happy Hours)
- Service Opportunities (Mentorship Program, Awards, Scholarships, Houston Food Bank, Science Fair Judging)

Some goals we're wanting to achieve for 2024 are as follows:

- Decrease venue costs (Current \$35-60, target \$15-35)
- Balance activities (Give, Serve, Learn, Engage)
- Increase membership (current ~700 yearly, target 1500 of the 4500 in the region)
- Increase young professional membership (current ~30, target 400 of 1500 in the region)
- Increase volunteer support (current 15-25, target 30-50)
- Increase scholarships (increases as membership and sponsorship increases)
- Initiate Lunch and Learns Program (virtual)
- Continue to provide relevant technical presentations for our members
- Increase our Mentorship Program (started in 2024)

The STS Executive Committee is working hard this year for you. Please don't hesitate to reach out to any of the team for any comments.

Best Regards,

William Shaw, M.S.

2024 STS AIChE Chair

E: sts-chair@aiiche.org

<https://www.linkedin.com/in/williamashaw/>

[STS AIChE JANUARY 2024 DINNER MEETING \(Link\)](#)

Thursday, Jan 11, 2024, 5:30-8:30 pm CT

Event format: In-Person / Online

The Bougainvilleas ([Link](#))

12126 Westheimer ([Map](#))

Houston, TX 77077



Please join the South Texas Section for our monthly workshop and dinner meeting. The keynote presentation for the STS-AIChE dinner will be delivered by a panel of experts consisting of AIChE Fellows [Billy Bardin](#), [Lori McDowell](#) and [Syamal Poddar](#). The moderator will be AIChE Fellow [Andreas Matzakos](#).

- **5:30 PM - 6:30 PM** Pre-Dinner Workshop (1 PDH)
- **6:00 PM - 6:45 PM** Social/Networking Time
- **6:45 PM - 7:30 PM** Dinner and Announcements
- **7:30 PM - 8:30 PM** Keynote Panel on Leadership Development with AIChE Fellows (1 PDH)

Registration

Workshop is free to attend.

- In Person Registration - No registration needed.
- Virtual Registration - [CLICK HERE!](#)

Dinner Meeting Registration

- In Person Registration - [CLICK HERE!](#)
 - STS Student Members - \$40
 - STS YP Members - \$45
 - STS Members - \$50
 - Non-members - \$60
- Online (via Microsoft Teams) - [CLICK HERE!](#)
 - Members - \$5
 - Non-members - \$15

Please submit your panel questions on [menti](#) or use code 2575 4574

Keynote Presentation

Leadership Development (1 PDH)

Abstract

The purpose of the panel is to educate the STS membership, especially the young professionals, about the traits of leadership, and how to develop them in their early career. Our world and our industry are in need of leaders at all levels to achieve better collaboration and working on the right problems facing society and humanity. Leaders can be nurtured by proper mentorship, training, and practice.

The panelists will expand on their view of how they developed and they applied leadership in their careers and why this helped them achieve more. Moreover, they will explain how they share this acquired skill by helping the new generation of engineers to achieve their leadership potential.

About the Panelists

- Panelists:
 - [Billy Bardin, Ph.D.](#) – Director, Dow Chemical and 2023 AIChE President
 - [Lori McDowell, Ph.D.](#) – Strategic-Partner, Schooley Mitchell and AIChE Fellows Council Chair 2023
 - [Syamal Poddar, Ph.D.](#) - President, Poddar Associates
- Moderator: [Andreas Matzakos, Ph.D.](#) AIChE STS Past-Chair (2023)



Billy B. Bardin, Ph.D., P.E., 2023 AIChE President

Dr. Billy B. Bardin, PE, is the 2023 AIChE National President and the Global Climate Transition Director at Dow. He joined Union Carbide/Dow in 2000 and has held global leadership roles in research, development, and manufacturing. He developed and commercialized technologies including catalytic processes for feedstocks/derivatives, processes for olefins production, and digital manufacturing. Dr. Bardin created new approaches for promoting technical excellence and fostering career development.

Dr. Bardin served on AIChE's Board of Directors (2017–2019) and chaired the Audit Committee. He also served on the Career and Education Operating Council (CEOC) and the managing board of the Center for Chemical Process Safety (CCPS). He is a Trustee of the AIChE Foundation, a leader of the Catalysis and Reaction Engineering Division, and a member of the South

Texas and Eastern North Carolina sections. He is a leader in the Licensing and Professional Development Committee and the Disabilities Outreach and Inclusion Community. Dr. Bardin was the founding Chair of AIChE's [RAPID](#) Manufacturing Institute. He is a Fellow and Life Member of AIChE.

Dr. Bardin holds a BS ChE from North Carolina State University (NCSU) and MS/PhD ChE from the University of Virginia (UVA). He is a Professional Engineer in West Virginia. Dr. Bardin is a leader on academic and industrial boards at Purdue Univ., NCSU, UVA, the MxD manufacturing institute and the Journal of Advanced Manufacturing & Processing. He has been recognized numerous times, most recently as a Visionary Leader by the National Association of Manufacturers.



Lori McDowell, Ph.D.

Lori McDowell is currently CEO of Reimagine U Strategies and a Strategic-Partner with Schooley Mitchell. Lori also serves as the Chief Commercial Officer at Refinery Calculator Inc., an energy market intelligence and consulting company, where she leads the sales team and is helping the company grow.

Lori is passionate about helping individuals and businesses succeed. At Reimagine U Strategies, Lori provides training, speaking and coaching to help high achieving individuals get past any roadblocks and find fulfillment in their careers and their life. She is author of [The Reinvention Mindset](#), to be released in late Spring 2024. At Schooley Mitchell, Lori works with businesses to help them reduce expenses and optimize their operations. Together Schooley Mitchell and Reimagine U Strategies can be a one-stop shop for business optimization and self-improvement, helping both companies and individuals. Lori is also committed to working with nonprofits, and supporting [IDEAL](#) Initiatives.

Before stepping out as an entrepreneur, Lori worked for Matheson, Praxair and WR Grace. Lori has worked in business development, technical sales, marketing, and R&D. Lori is on the Board of The Hall Group, Inc. and the nonprofit, TENEf USA.

Lori received a BS in ChE from University of Pennsylvania, an MS in Environmental Eng from CalTech, and a PhD in ChE from University of Delaware.

Lori has been active in the American Institute of Chemical Engineers since 1992, where she held numerous roles including serving on the Board of Directors. She is the organizer of The Leadership Development Topical Conference and a frequent presenter and she is the Past-Chair of the Fellows Council. Lori is a former President of Women's Energy Network (WEN), is on AFPM's Women in Industry Steering Committee and previously served on the Board of National Business Development Association.

Lori is also active in community events and is a member of the Economic Alliance Houston Port Region, Greater East Montgomery County Chamber of Commerce and Partnership Lake Houston. She loves sports, travel, working out and the beach.



Syamal Poddar, Ph.D.

Syamal Poddar is the Founding President of the consulting company, Poddar & Associates, consulting nationally and internationally. His 40+ years career includes working for Exxon and Bechtel Corporation, with diversified management and global professional & leadership responsibilities.

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

Besides being an active member of the STS for many years where Syamal served as STS – AIChE Chair Elect in 2015, 2016 Chair, and 2017 Past Chair. He has served as an OTC Volunteer on behalf of STS – AIChE for many years. Syamal is a Fellow of the Institute, a member of Fellows Council, and served as the chair of the Fellows Council. He held practically all leadership positions for F&PD and is a past director of the Management Division, member of Environmental Division and Societal Impact Operating Council of American Institute of Chemical Engineers (AIChE). He is a member of the Foundation Board of Trustees. Syamal earned his PhD in Chemical Engineering from University of Pennsylvania and is a PE registered in Texas. He also received the 2023 STS Distinguished Service Award.



Andreas N. Matzakos, Ph.D.

Andreas Matzakos is a recognized industry leader with strong track record on R&D program management, product development and novel technology deployment in Energy and Chemicals R&D. He is an AIChE Fellow and the past-chair of

the South Texas Section. He has 30+ year experience in Process Development and Engineering, Catalysis and Reaction Engineering, Upstream/ Downstream Facilities. He is specialized in process modeling, optimization and design of Specialty Chemicals, Fuel Decarbonization, Gas Conversion, Improved Oil Recovery, and Water Treatment plants. He has developed and deployed many new processes in the above areas. He has passion for safety, health, environment, sustainability and transition to decarbonized energy sources. Before retiring from Shell in 2023 he held the position of Academic Partnerships Manager in Houston, Texas. In that role he developed long-term partnerships with academic and third-party R&D providers in the US, pursuing cutting edge technology development that aimed to solve challenging energy problems.

Andreas has led numerous R&D Teams, HS&E committees, project engineering teams and he participated in numerous joint industry committees, including the [RPSEA consortium](#) and the AIChE [RAPID](#) Institute. He has served as adjunct professor at the Chemical and Biomolecular Engineering Department of Rice University and he been awarded 8 US patents.

Andreas received a Diploma of ChE from the National Technical University of Athens, Greece, and a Ph.D. in ChE from Rice University in Houston, Texas. He enjoys cycling, swimming, travel, reading and photography.

Pre-Dinner Workshop

Problem Solving for Competitive Advantage (1 PDH)

Abstract

As engineers we face three broad classes of problems. Type 1 problems are Inspection problems. We know the problem and we know the solution. Type 2 problems are engineering problems. We know the problem and we know how to get the solution. Type 3 problems are Innovation problems. We may not fully understand the problem, the known solutions are insufficient or there are no known solutions. Type 3 problems are the minority of problems faced but solution of Type 3 problems often offers opportunity for breakthroughs. I was blessed to work with many very creative people and a number of these people seemed to have a natural ability to solve Type 3 Problems. Over the years I have studied how naturally creative people come up with innovative solutions to Type 3 Problems and I have developed a structured process for solution of Type 3 problems. I have applied this approach to a number of common business problems including Product Development, Product Offerings, Manufacturing Process Improvement, Business Process Improvement, Business Strategy, and Patent Development. This presentation will present the structured process for generating ideas to solve Type 3 problems including a couple of examples. If desired, attendees will be given free software to assist in structured brainstorming.

About the Speaker



Peter Hanik, MBA, P.E.

Most recently Pete Hanik served as the 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 is President and founder of Pretium Innovation specializing in intellectual property and team-based innovation systems to create sustainable value.

Pete holds a B.S. in Chemical Engineering from Illinois Institute of Technology and an MBA from the University of Chicago. Pete has served the American Fuel & Petrochemical Manufacturers Association (AFPM) 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).

LIST OF UPCOMING EVENTS:

Date	Event Name	Speaker/Guests	Venue
January 11, 2024	Dinner Meeting and Workshop	Peter Hanik	The Bougainvilleas
February 7, 2024	Social/Networking/Volunteer Event	--	Saint Arnolds
March 7, 2024	TIEP/STS Water Forum	TBD	Silver Sycamore
April 4, 2024	April Dinner Meeting	TBD	TBD
May 1, 2024	TIEP/STS Energy Forum	TBD	University of Houston
May 23, 2024	Houston Ship Channel Tour	--	TBD

ANNOUNCEMENTS:

STS AIChE Election Results

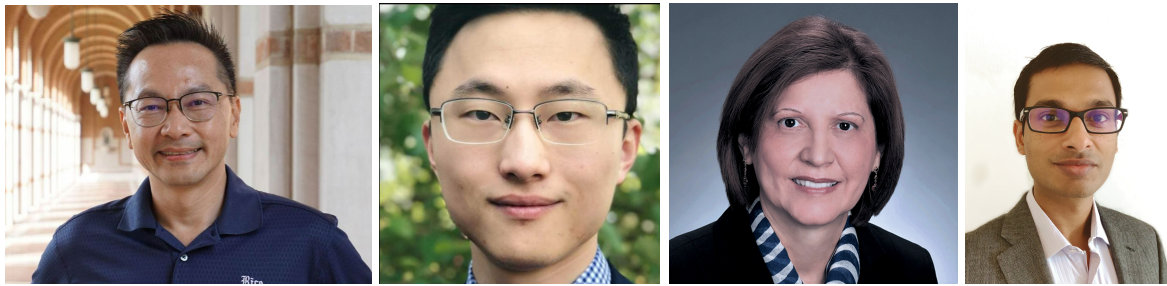


We are pleased to introduce new members of our board. Please join us in welcoming them as they begin their tenure starting January 1st.

- STS AIChE Chair-Elect
 - Kirtan Trivedi
- STS AIChE Secretary
 - Joseph Hernandez
- Position 2
 - Jacinta Conrad
- Position 4
 - Dale Embry

STS Members receive 2023 AIChE National Awards

- Dr. [Michael S. Wong](#), the Tina and Sunit Patel Professor in Molecular Nanotechnology and Professor and Chair of Chemical and Biomolecular Engineering at Rice University, has received the [Lawrence K. Cecil Award](#) in Environmental Chemical Engineering from AIChE. [Lawrence K. Cecil Award](#) is the most prestigious environmental award within AIChE and is given by the Environmental Division. Wong was recognized for his “outstanding chemical engineering contribution and achievement in the preservation and improvement of the environment”. Dr. Wong was also elected as AIChE Fellow in 2022.
- Dr. [Haotian Wang](#), Associate Professor of Chemical and Biomolecular Engineering at Rice, has been named in [35 Under 35](#) list of chemical engineering professionals for 2023 by AIChE in the "*Energy and Environment*" category. Wang's research focuses on renewable energy technologies, including novel electrocatalysts for carbon dioxide reduction and CO₂ thermal hydrogenation catalysis. Dr. Wang has also received a 2023 Young Investigator Award from AIChE for Innovations in Green Process Engineering.
- Dr. [Lirio Quintero](#), Senior Technical Advisor at Baker Hughes, is named a [Fellow of AIChE](#). She has developed fluid technologies for oil industry applications and has authored more than 50 U.S. patents, three book chapters, and more than 100 technical publications.
- Dr. [Nitish Mittal](#), Staff Research Engineer at ExxonMobil, has been also named in [35 Under 35](#) list of chemical engineering professionals for 2023 by AIChE in the "*Innovation and Entrepreneurship*" category. Nitish leads and supports process systems engineering and techno-economic analysis of chemical reaction and separation processes. He is the Communications Chair for the AIChE STS.



Dr. Michael S. Wong, Dr. Haotian Wang, Dr. Lirio Quintero, and Dr. Nitish Mittal (pictured from left to right) were the winners of 2023 AIChE National Awards.

Spring 2024 PE Course ([Link to Course](#), [Register](#))



Are you looking to **become certified as a Professional Engineer (PE)**? **Need to take the PE exam but don't feel properly prepared?** [AIChE® South Texas Local Section](#) will help you advance your career with the [Spring 2024 PE Review Course for Chemical Engineering](#) hosted by the [University of Houston](#).

[Register Now for the PE Exam Course](#)

The [Spring 2024 PE Review Course for Chemical Engineering](#) will provide you with both test taking strategies and help refresh your knowledge about chemical engineering fundamentals. Professionals who specialize in the areas covered by the exam will walk you through the NCEES reference manual and the NCEES practice exam questions, so you get comfortable with the exam structure and materials.

All Classes meet on Friday from 3:00 to 6:00 pm CDT.

DATE 2024	TOPIC	INSTRUCTOR
26-Jan	Introduction; Mass/Energy Balances & Thermo I	Dale Embry
2-Feb	Mass/Energy Balances & Thermodynamics II (3)	Gary Gildert/Dale Embry
9-Feb	Thermodynamics III (1); Kinetics I (2)	Dale Embry; Gary Gildert
16-Feb	Kinetics II (2); Plant Design Economics (1)	Gary Gildert
23-Feb	Fluid Mechanics I (3)	Todd Willman/Carol Schmidt
1-Mar	Fluid Mechanics II (2); Heat Transfer I (1)	Carol Schmidt; Dennis Glascock

DATE 2024	TOPIC	INSTRUCTOR
8-Mar	Heat Transfer II (3)	Dennis Glascock
15-Mar	Spring Break	
22-Mar	Separations Processes I (3)	Jason Niggg
29-Mar	Separations Processes II (3)	Jason Niggg
5-Apr	Problem Session	Dale Embry, Carol Schmidt, Gary Gildert
12-Apr	Plant Design & Operations (3)	Mariella Raven
19-Apr	Sample Test Exam (3)	Dale Embry

Key learnings

- Chemical engineering fundamentals covered by the [NCEES](#) exam
- NCEES practice exam questions
- Test taking and preparation strategies
- Practice exam in a simulated testing environment

Key dates and information

- PE course enrollment closes January 17
- PE course will start January 26
- Course cost \$750/AIChE members, \$1000/non-members
- Hybrid course offering for in-person or virtual attendance

[Register Now for the PE Exam Course](#)

STS - AIChE Awards: Call for Nominations ([Link](#))



Nominations are being accepted through May 1st, 2024 for the following STS-AIChE Annual Awards:

- 2023 STS Best Applied Paper Award
- 2023 STS Best Fundamental Paper Award

- 2023 STS Best In-Practice Paper Award
- 2023 STS Outstanding Young Professional Award (Under 35)
- 2023 STS Distinguished Service Award
- 2023 STS Special Service Award(s)

Nomination Forms are available in the South Texan or on the STS–AIChE website. Nominations can also be made by contacting:

- Mickey Reeves, mickey.reeves@gmail.com
- Harsh Agarwal, Harsh.H.Agarwal@Shell.com
- Matt Christiansen, Matthew.Christiansen@shell.com
- Tom Menn 281-485-3719 ThomasMenn@SBCGlobal.net

2024 Offshore Technology Conference (OTC): Volunteers Needed ([Link](#))

- To be held between May 6-9, 2024 at NRG Park, Houston, Texas.
- Receive Free Pass, Parking, and all the free goodies/junk you can carry away! (* entire OTC). Note: [You may attend Technical Sessions.](#)
- Attend Orientation Mandatory Meeting & serve 4 hours in either Arrangements or Registration.
- Contact Tom Menn, thomasmenn@sbcglobal.net

STS AIChE Mentorship Program Initiative

- STS AIChE has worked diligently to launch its own mentorship program.
- A team of STS AIChE officers and committee chairs made their best efforts to match mentors and mentees based upon the received data and inform mentors and mentees accordingly.
- The mentorship program was kicked off in December 2023. For questions about the program, please contact Mona Setoodeh, at mona.setoodeh@gmail.com

STS AIChE Engagement Survey

- Request to fill out the following Short Engagement Survey so that we can get a pulse on what you like/dislike in the past and work on improving in 2024.
- Please see this [link](#) for survey.

LinkedIn Page for STS AIChE



Follow our [LinkedIn page](#) for updates and RSVP for the [monthly meeting event](#) created on our LinkedIn page. Don't forget to tag the page (type "@South Texas" and select South Texas Section of AIChE) in your personal posts related to STS AIChE.

Add STS to your AIChE National membership.



For those that forgot to include STS in their AIChE 2024 renewal, please use [this link](#). Membership is free for students.

RECENT ENGAGEMENTS:

ChemE Show featuring STS AIChE SPTC and TIEPP Energy Forum, November 28-30, 2023



- STS AIChE participated in the [ChemE Show](#) on **November 28-30, 2023**, at the Moody Gardens in Galveston, Texas. We organized the technical program on November 29 and 30, as part of the annual *Southwest Process Technology Conference*.
- Many thanks to **Virginia Sommer** and **Bill Shaw** for serving in the advisory board, and to **Alan Rossiter** who organized the TIEPP sessions and presented on Engineering Ethics on the last day.
- Sincerest gratitude towards the numerous STS volunteers who tirelessly helped with event arrangements, chaired 11 sessions and presented their work in more than 30 presentations.
- We also plan to run SPTC as a stand-alone event in 2024, as the ChemE Show is not scheduled in our area.

CONTACT:

Contact STS-AIChE Newsletter Editor, [Dr. Harsh Agarwal](#) at aiche.sts.newsletter@gmail.com with feedback, questions, and ideas for the next newsletter.

Reach out to the communication officer at sts-position3@aiche.org if you have any questions

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