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LETTER FROM THE CHAIR



Dear members & friends,

Please join us for our annual AIChE/TIEEP Spring Water Forum at the Silver Sycamore Thursday, March 7th both online or in-person. This combined event is sponsored by Foret Plasma Labs and HGA, and we thank them for their support. There will be 3 speakers (40 min each) and then our Dinner Speaker for a total of up to 3 PDH credits. See speaker details below in the newsletter.

Registration for the TIEEP Water Forum and the STS-AIChE Dinner Meeting are separate.

Attendance at the TIEEP Water Forum – both [in-person](#) and [virtual](#) – is **FREE**, but pre-registration is required.

Please see registration details for the STS-AIChE Dinner Meeting [here](#).

All undergraduates are free to be a member of STS if they are an AIChE National member. We are working with National to correct the online form so that undergraduates can select STS in their yearly renewals. In the meantime, please let us know if you would like to sign up as an undergrad and we can formalize STS membership in our system.

Please mark your calendars for the following upcoming monthly meetings:

March 7: STS/TIEEP Water Forum and STS Dinner Meeting at the Silver Sycamore.

April 4: STS Dinner Meeting

May 1: STS/TIEEP Energy Forum and STS Dinner Meeting at the University of Houston

Best Regards,

William Shaw, M.S.

2024 STS AIChE Chair

E: sts-chair@aiiche.org

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

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

Thursday, March 7, 2024, 4:00-8:30 pm CT

Event format: In-Person / Online

Silver Sycamore ([Link](#))

5111 Pine Ave ([Map](#))

Pasadena, TX 77503

Please join the South Texas Section for our monthly dinner meeting. We will co-host (with Texas Industrial Energy Efficiency Program) the 2024 workshop [Water Forum](#). The dinner keynote will be delivered by Dr. [Julia Wellner](#), University of Houston.

- **4:00 PM - 6:00 PM** TIEEP Spring Water Forum (2 PDHs)
- **6:00 PM - 6:30 PM** Social/Networking Time
- **6:30 PM - 8:30 PM** Dinner and Presentation

Registration

TIEEP Spring Water Forum Registration (free to attend)

- In Person Registration - [CLICK HERE!](#)
- Online (via Zoom) - [CLICK HERE!](#)

AIChE Dinner Registration

- In Person Registration - [CLICK HERE!](#)
 - Non-members - \$35
 - STS Members -\$25
 - STS YP Members - \$15
 - STS Student Members - Free
- Online (via Microsoft Teams) - [CLICK HERE!](#)
 - Members - \$5
 - Non-members - \$15

We also encourage you to follow our [LinkedIn page](#) for updates and promote networking.

Keynote Presentation

Hurricane Harvey and Urban Sediment Transport

Speaker: [Julia Wellner](#), Associate Professor, University of Houston



Abstract:

The Houston area recorded the largest flooding event in US history during Hurricane Harvey from August 25-31, 2017, mobilizing sediment in fluvial-estuarine systems. An integrated quantitative analysis (Stearns et al., 2023) determined the net minimum volume of sediment transported during the storm was ~6-51 times larger than the average annual volume of sediment delivered to Galveston Bay in modern times (<200 years), and ~30-118 times larger when compared to Holocene rates. ~25% of the measured volume was deposited in Addicks and Barker reservoirs. In the stream drainages, sediment was mobilized from the west-northwest of Houston and pulsed towards Galveston Bay, highlighting the extreme short-term variability in sediment delivery. Sediment flux during Harvey is an example of sediment storage followed by a pulsed delivery of high sediment volume rather than continuous delivery of sediment. A comparison of sediment volumes transported through natural and modified drainages through Houston demonstrates that channel modification resulted in significant bypass of sediment downstream. Urban watershed management is more effective when continual updates are implemented based on regional circumstances rather than based on historical fluxes.

About the Speaker:

Dr. Julia Wellner is an Associate Professor in Stratigraphy, Sedimentology, and Glacial Processes at UH's Department of Earth & Atmospheric Sciences. She participated in the recent work on Sediment Movement During Hurricane Harvey. Her research interests also include Antarctic Ice Sheet history since the Eocene, including geomorphic signatures of ice sheet retreat across the continental shelf, sedimentation patterns in fjords and their relation to oceanographic controls. She also studies Plio-Pleistocene sequence stratigraphy from three-dimensional seismic data, and Holocene climate of the Antarctic.

Pre-Dinner Workshop

2024 TIEEP Spring Water Forum (PDH certificates available)

Theme: *Water: The Big Picture*

This is a TIEEP event co-hosted by STS-AIChE.

Overview:

The water that we use inside our chemical plants and oil refineries is part of a massive system that includes both natural and manmade elements. In this year's TIEEP Water Forum, we will explore the macro water system in the Houston/Gulf Coast area, and how this impacts water usage in the process industries. This includes ways to improve the efficiency of water use, issues of equity and sustainability, and a discussion of a strategic approach to industrial water management.

Speakers and Topics:

1) **Philip Taucer, PE**, Associate, Water Resources Planning, Freese and Nichols, Inc.

Topic: Hitting the Trail: The Long Path for Future Water Management

2) **Margaret Cook**, Senior Research Associate, Energy-Water-Climate Nexus, Houston Advanced Research Center (HARC)

Topic: Water, Sustainability, and Equity in Texas

3) **Amanda Tyndall**, Vertical Market Manager Industrial & Environmental for Veolia Water Technologies & Solutions Analytical Instruments.

Topic: Industrial Water Management Strategies for Compliance, Sustainability and Cost Efficiency



Philip Taucer (left), Margaret Cook (center), and Amanda Tyndall (right): Speakers for the TIEEP Spring Water Forum

Event Sponsors:



For additional information and updates, please use [this link](#).

LIST OF UPCOMING EVENTS:

Date	Event Name	Speaker/Guests	Venue
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March 7, 2024	TIEEP/STS Water Forum	Julia Wellner	Silver Sycamore
April 4, 2024	April Dinner Meeting	TBD	TBD
May 1, 2024	TIEEP/STS Energy Forum	TBD	University of Houston
May 23, 2024	Houston Ship Channel Tour	--	TBD
June 8, 2024	Social - Astros Game	--	Astros Stadium
July 8, 2024	Social - Kirby Icehouse	--	Kirby Icehouse

ANNOUNCEMENTS:

STS - AIChE 2025 Elections: Call for Nominations

STS-AIChE is seeking candidates for the following positions:

- Chair Elect
- Treasurer
- Position-1 Chair: Education
- Position-3 Chair: Communications

If you are interested in learning more about these leadership positions, please reach out to STS past-Chair Andreas Matzakos (sts-pastchair@aiiche.org). Also please feel free to suggest these positions to your friends/colleagues who are interested in engaging and contributing to the local chemical engineering community.

Global Solution and Outreach Programs (GSOP) Progress Meeting, March 16

- GSOP Climate Collaboration Inc. stands at the forefront of addressing the global challenge of climate change. GSOP seeks to create a sustainable future for generations to come.
- GSOP will require thousands of young professionals and subject-matter experts of all ages from all over the world to do [integrated-systems analyses using the Wicked-Problem Approach](#) over a three-year period.
- Two offerings will be held to allow attendance in different time zones: 8:00-9:30 A.M. US CST and 8:00-9:30 P.M. US CST. Attendance is free, but registration is required: [Morning meeting](#) and [Evening meeting](#).
- March 16 meeting is being promoted widely to 10,000+ individuals now working to resolve global warming, 7,000+ staffers working for U.S. Senators and Representatives, members of about 100 Facebook and LinkedIn climate-concerned groups, and in publications such as [World Reporter](#).
- GSOP is led by chemical engineers. Three of the four officers of GSOP Climate Collaboration Inc. are ChEs including STS members Tom Rehm and Balaji Ramarao. Another ChE, Dick Hutchinson, retired in Maine, led a major U.S. Army project in the 1990s, involving the Department of Energy and several national laboratories, at which the [Wicked-Problem Approach was demonstrated](#).

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:

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

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. 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.



Add on option: <https://ecommerce.aiche.org/aiche-online/Membership/Home/MemberAddonsStandAlone>

STS-AIChE Join Us link: <https://ecommerce.aiche.org/aiche-online/Membership/Home/MemberAddonsStandAlone>

Membership is free for students.

RECENT ENGAGEMENTS:

Science & Engineering Fair of Houston (SEFH), February 16-17 2024

- SEFH was held between in person at Fort Bend Epicenter, Rosenberg on February 16-17, 2024 for the *Junior* (6-8) and *Senior* (9-12) category
- AIChE STS has participated in SEFH for many years and awarded prizes in both categories. The winners will be honored at the STS May Dinner Meeting. We thank all the presenters and STS volunteers for participating in the event.
- For *Junior* Category, projects include: 1st place - From Landfill to Lab: Unveiling the Biodegradable Potential of Everyday Materials, 2nd place - Pestalotiopsis Microspora: The Optimal Way to Degrade Polyurethane, and 3rd place - Best Method of Phosphorous Remediation
- For *Senior* Category, projects include: 1st place - A Novel Nanocarbon Infused Gum Arabic Sensing Skin Optimized for On-skin Electronics and Temporary E-Tattoos and 2nd place - Engineering a Greener Future: A Novel, Biodegradable, Self Powered, Chitosan Food Package



Some snippets of the winners of the Science & Engineering Fair of Houston 2024.

CONTACT:

Contact STS-AIChE Newsletter Editor, Dr. Harsh Aggarwal 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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