www.aiche.org/Chicago

AIChE Chicago Section February 2024 Newsletter



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AlChE Chicago February Meeting and Spraying Systems Co Tour

Physics of Atomization, Spray Nozzles, Development, Validation, and Applications in Industry



Rudolf J. Schick

Chief Science Officer
Spraying Systems Co®

Date: Thursday, February 15, 2024

Location: Spraying Systems Co

Address: 200 West North Ave, Glendale Heights, IL 60139

https://www.spray.com/

Cost: \$25 Professionals

\$15 Retired/Unemployed

\$10 Students

Registration and Information: https://cvent.me/xP57d2?locale=en

Event includes a tour so registration deadline is <u>Feb 13</u> for arrangements (No walk-in registration will be allowed for this meeting)

Agenda:

DATE

5:00-5:45 PM: Dinner and Networking 5:45-6:00 PM: Section Announcements 6:00-7:00 PM: Presentation and Q&A

7:00-8:00 PM: Systems Lab and Manufacturing Tour

Chair's Corner

Hello AIChE Chicago Section,

Warm greetings as we move into February. I'm hoping that our (mostly) mild winter continues this month and that we've moved completely past our sub-zero days. That said, if you're looking for a way to spend some time indoors with friends, we have a few excellent opportunities coming up.

Last month, we had the privilege of listening to Dr. Shirley Meng share her research designing better materials for future batteries. It was a privilege to hear insights and perspective from a leader in energy storage research. I hope



many of you were able to attend this joint session with the Chicago Section of ACS and build or renew some professional connections outside the AIChE community.

Coming up, we've put a spin on our usual get-togethers with an on-site event at Spraying Systems! This local leader in spray technology is offering us a close-up view of their exciting work. They'll cover a few topics where they have developed specific solutions:

1) spray technology for energy storage, 2) spray technology for chemical processing, and 3) spray drying and other process technology for powder manufacturing and processing. Many of our meetings are geared toward academic research and on cutting-edge, labscale, technologies. Here is an opportunity to see some applied technologies first-hand and learn more about the company that developed them.

Looking ahead, we're coming up on the 2024 Midwest Regional Conference on March 5-6 at Illinois Institute of Technology. Our keynote speakers have been announced and we are excited to hear from each of them: Mike Pires, VP at Air Products; Venkat Srinivasan, Director at Argonne National Lab; Manuela Serban, Fellow at Honeywell UOP; and Maneesh Singh, Professor at University of Illinois Chicago. This line-up is definitely something to look forward to!

Our joint meeting with ACS has got us thinking that we would like to foster more connection and cross-pollination with other professional networks in our area. ACS is one that we collaborate with annually, if you have connections or multiple memberships in other professional communities, please reach out and let us know how we can connect. I am available at chair@aichechicago.org.

Thank you for your ongoing participation, engagement, and enthusiasm for our local section of AIChE. Wishing you all an excellent February!

Take care.

McKay Rytting

AIChE Chicago Section Chair 2023-24

Cont. from Page 1

February Meeting information

Biography:

Rudolf J. Schick, MS, MBA is Chief Science Officer at Spraying Systems Co. providing internal scientific leadership while building external partnerships and collaborations in product development. Under his direction, he aligned the company's diverse testing facilities, best evidence from research and practice, and organizational learning to establish the world's largest and most sophisticated industrial spray laboratory. Rudi champions innovation by engaging multiple disciplines and capitalizing on the company's breadth and experience to translate science into commercial product solutions. He also oversees business portfolios focused on disruptive technologies as strategic growth drivers. Rudi is a published author, industry speaker, and his



professional affiliations include the American Society of Testing and Materials (ASTM), former Chair of ILASS (Institute of Liquid Atomization and Spray Systems), American Association of Pharmaceutical Scientists (AAPS), American Physical Society Department of Fluid Dynamics (APS-DFD), and Chair of the Industrial Advisory Council of the University of Illinois.

Abstract:

Spraying Systems Co. is the world's leading designer and manufacturer of spray nozzles and advanced spray technologies. With tens of thousands of standard products, we have the right spray solution for a myriad of applications. We pride ourselves on our excellence in design, engineering support, testing and validation, and advanced manufacturing which serves our customers with expediency and sustainable practices.



For the AIChE Chicago Chapter February 15th meeting, we will deliver a keynote on sprays, and share three additional topics relating to the role of spray technology in Energy Storage, Chemical and Electrochemical Activation (ECA) Cleaning Technology. We will also have a brief tour of Spraying Systems Co.'s state-of-the-art research laboratories.

Registration: https://cvent.me/2W0zkG?locale=en

Event includes a tour so registration deadline is <u>Feb 13</u> for arrangements (No walk-in registration will be allowed for this meeting)

Additional Spraying Systems Co resources:

<u>Capabilities Overview</u> Spray Analysis and Research Services





2024 AIChE Midwest Regional Conference & Chicago Section March Dinner Meeting

Topic:

- · Advances in Refining & Biorefining Technology
- Bioengineering & Nanotechnologies
- · Catalysis & Reaction Engineering
- Energy Storage
- · Green Engineering & Climate Solutions
- Fluid Properties, Fluid Dynamics & Transport Phenomena
- Environmental Remediation & Process Safety
- Machine Learning & Optimization
- · Materials Science and Polymers





Important Dates

- Abstract Submission Deadline: January 26th, 2024
- · Acceptance Status: February 2nd, 2024
- · Early Bird Deadline: February 9th, 2024
- · Poster Submission Deadline: February 16th, 2024

Registration



KEYNOTE SPEAKERS



Mike Pires

Vice President, North and Central Commercial Enablement, Americas Air Products



Manuela Serban

Fellow Catalysts and Process Development for Renewable Fuels Production Honeywell UOP



Meenesh Singh

Professor Department of Chemical Engineering University of Illinois at Chicago



Venkat Srinivasan

Director of the Argonne Collaborative Center for Energy Storage Science (ACCESS) Argonne National Laboratory





Conference Website



2024 AIChE MRC Programming Schedule Preview

Day 1 (Tuesday, March 5):

Time	Track 1 Event	Track 2 Event
8:30 AM—9:30 AM	Keynote: Mike Pires	Keynote: Mike Pires
9:45 AM—11:30 AM	Environmental Remediation / Process Safety	Bioengineering / Materials
11:30 AM—12:45 PM	HS Outreach Lunch	HS Outreach Lunch
12:45 PM—1:45 PM	Keynote: Venkat Srinivasan	Keynote: Venkat Srinivasan
2:00 PM—3:15 PM	Energy Storage I	Green Engineering I
3:30 PM—4:45 PM	Energy Storage II	Green Engineering II
5:00 PM—6:15 PM	Poster Session	Poster Session
6:30 PM—7:30 PM	Dinner Meeting / Keynote	Dinner Meeting / Keynote

Day 2 (Wednesday, March 6):

Time	Track 1 Event	Track 2 Event
8:30 AM—9:30 AM	Keynote: Manuela Serban	Keynote: Manuela Serban
9:45 AM—11:30 AM	Advances in Refining	Fluid Dynamics
11:30 AM—12:45 PM	Lunch	Lunch
12:45 PM—1:45 PM	Keynote: Meenesh Singh	Keynote: Meenesh Singh
2:00 PM—3:15 PM	Machine Learning I	Catalysis I
3:30 PM—4:45 PM	Machine Learning II	Catalysis II
5:00 PM—7:00 PM	Happy Hour	Happy Hour

Link to conference website

Note: We are still accepting abstract submissions past the deadline!

2024 MRC Conference Sponsors

The Chicago Section of the AIChE is grateful for the generous support of our Conference Sponsors!

Silver Level



Bronze Level



TOPSOE

Copper Level

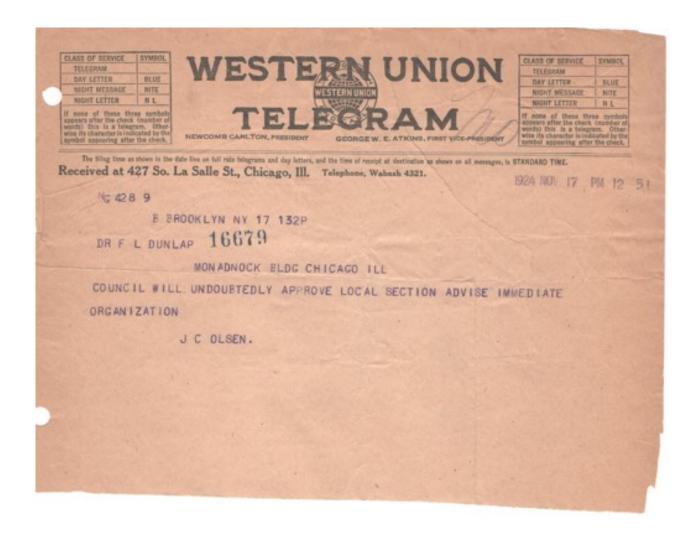


Countdown to the AIChE Chicago Centennial

The Chicago Section was the first section in AIChE, and the upcoming 2024-2025 programming year will mark its 100-year anniversary! Please view <u>our website</u> to read more about our past.

Various historical files from our archives will be highlighted as part of the countdown to this celebrated milestone.

The below scan is a telegram from late-1924 that appears to communicate the goahead for arrangement of the first organized meeting, following the petition to National for formation of the section.



January Meeting Photos

Remember to check out our Facebook page for more photos and news!









February is Black History Month The Library of Congress, National Archives and Records Administration, National Endowment for the Humanities, National Gallery of Art, National Park Service, Smithsonian Institution and United States Holocaust Memorial Museum join in paying tribute to the generations of African Americans who struggled with adversity to achieve full citizenship in American society.

Read More»

Charles Pierce: A Name Every Chemical Engineer Should Know

Originally Posted on AIChE ChEnected on Feb. 28, 2021



During the formative era of the profession, and years before the establishment of AIChE (1908), only a handful of universities offered a formal course of study in the new field of chemical engineering. Illinois Institute of Technology (IIT) was one of them, and in 1901 the school granted its very first chemical engineering degree to a man named Charles Warner Pierce.

Among the earliest chemical engineers

Charles Pierce (1876–1947) was not only one of the first to receive a chemical engineering degree anywhere, but he was also the first African American at any institution to receive a degree in the subject.

Pierce's place in the profession's history had faded from memory for a full century until IIT's chemical engineering department began rediscovering its heritage in the early 2000s in prepration for its centennial. That's when university records revealed the name Charles Pierce as the first holder of the school's chemical engineering degree.

In 2007, IIT's Chemical and Bioengineering Department honored Pierce with its Distinguished Alumni Award, at a ceremony attended by some of Pierce's descendants.

Read Complete Article and More on AIChE ChEnected »

The Man in the Beret and Bowtie

Originally Posted on AIChE ChEnected on Feb. 2, 2021

Brown's legacy

To generations of AIChE members, Henry T. Brown (1932–2020) was a guiding presence and force for change. A Fellow and former director of AIChE, Brown helped lead the slow march toward greater representation of Black and other minority engineers in AIChE, and the eventual creation of a Minority Affairs Committee (MAC) in 1990.

Beginning in the 1960s, Brown and a few colleagues personally filled the needs-gap for minority chemical engineers by offering advocacy, career guidance, and professional development support.

In 2017, AIChE recognized Brown's legacy by establishing the Henry T. and Melinda C. Brown Endowment for the Education of Underrepresented Minority Chemical Engineers. AIChE recently supplemented that scholarship program by launching the Future of STEM Scholars Initiative (FOSSI) in partnership with the American Chemistry Council, Chemours, and HBCU Week. FOSSI provides scholarships, mentorship, and internships for students pursuing STEM degrees at historically black colleges and universities (HBCUs).

Read Complete Article and More on AIChE ChEnected »

Henry T. Brown: "As you know, I'm known at AIChE meetings as the man in the beret and bowtie. I started to approach any person of color at our meetings. I'd introduce myself, hand out a sheet about the Minority Affairs Committee, and say, 'here's the committee, here's the meeting time.' And they'd come to the meeting. Then, it became a matter of getting people involved."



Congratulations to Prof Lueptow on Election to AIChE Fellow

Congratulations to Professor Richard M. Lueptow from Northwestern University, who was recently elected as an AIChE Fellow!

His profile from the <u>announcement on AIChE ChEnected</u> is below.



Richard M. Lueptow is Senior Associate Dean at the McCormick School of Engineering and Applied Science, Professor of Mechanical Engineering, and Professor of Chemical and Biological Engineering (by courtesy) at Northwestern Univ. His research focuses on the dynamics of granular segregation and molecular dynamics simulations of reverse osmosis and nanofiltration membranes, with his expertise ranging from granular flow to water purification to pattern formation. At Northwestern, he is also cofounder of the Master of Product Design and Development program. He has published more than 185 journal papers and also has five years of product development experience working in the biomedical industry.

National Engineers Week

National Engineers Week is February 18-24. The 2024 theme is "Welcome to the Future" and is about celebrating today's achievements and paving the way for a brighter and more diverse future in engineering. Read more about <u>National Engineers Week</u>.



Sun, Feb 18: #Eweek2024 #WelcometotheFuture Kick Off Tues, Feb 20: #FutureCity2024 Finals Thurs, Feb 22: Celebrate #GirlDay2024 Sat, Feb 24: Last Day of #Eweek2024 Mon, March 4: Celebrate #WorldEngineeringDay

Connect with members & participate in discussions on Engage!

Check out AIChE's member benefit, AIChE Engage. Use the robust directory search to find and connect with members. Participate in technical, career, and academic discussions about chemical engineering.



2024 AIChE Chicago Meeting Schedule and Speakers

Month	Date	Speaker	Affiliation	Topic
Feb	15th	Rudolf J. Schick	Spraying Systems Co [®]	Physics of Atomization, Spray Nozzles, Development, Validation, and Applica- tions in Industry (will include lab/manufacturing tour)
Mar	5th			

Upcoming AIChE Conferences, Meetings and Webinars

AIChE Conferences	
Feb 27-29, 2024	Fundamentals of Batch to Continuous Process Conversion in Specialty and API Chemistries
Feb 27-Mar 1, 2024	OTC Asia, Kuala Lumpur Convention Center, Kuala Lumpur, Malaysia
Mar 5-6, 2024	16th AIChE Midwest Regional Conference, Illinois Institute of Technology (IIT), Chicago, IL
Mar 11-12, 2024	Renewable Hydrogen Storage and Transport Conference, Town and Gown of USC, Los Angeles, CA
Mar 15-16, 2024	2024 Southern Student Regional Conference, Auburn University, Auburn, AL
Mar 23-24, 2024	RAPIDxDIPPR DEPLOY Batch-To-Continuous: From Physical Properties to Process Design, New Orleans Ernest N. Morial Convention Center, New Orleans, LA
Mar 24-28, 2024	2024 Spring Meeting and 20th Global Congress on Process Safety, New Orleans Ernest N. Morial Convention Center, New Orleans, LA
May 6-8, 2024	Middle East Process Engineering Conference & Exhibition (MEPEC) 2024, Dhahran Expo, Kingdom of Saudi Arabia

Chicago ACS News and Upcoming Meeting

The Chicago sections of ACS and AIChE traditionally hold a joint meeting in January, but that does not mean the collaboration has to stop there! Please check out the latest Chicago ACS news and consider attending their next general meeting.

Chicago ACS bulletin:

https://chicagoacs.org/news.php

Next Chicago ACS general meeting:



Feb 16 with Professor Carson Burns, University of Colorado Boulder

Attention Students and Parents!

If you are an undergraduate chemical engineering student or have a son or daughter that plans to study chemical engineering you may be interested in the Chicago Section's scholarship program.

Applications are due March 15, 2024.

Please click here to read rules and eligibility.

For a Link to the Electronic Version of the AlChE Chicago Scholarship Application Form, Click on the Link Below:

http://form.jotform.us/form/42814483647159



NOMINATIONS REQUESTED FOR THE ERNEST W. THIELE AWARD

The Ernest W. Thiele award is sponsored by bp and recognizes the outstanding contributions to our profession by a Midwest region chemical engineer. This award was established by the AIChE Chicago Section and is presented annually to a Midwest region AIChE member. This internationally recognized award consists of an engraved plaque and \$1,000 honorarium presented at a monthly section meeting.

Nomination forms and additional information can be obtained from the Thiele Committee Chair. Completed nominations are due to the committee chair no later than *April 01, 2024*.

One of the highest honors a distinguished chemical engineer can receive is our AIChE Chicago Section Thiele award. Please consider nominating a deserving engineer for this prestigious award.

To nominate, please contact: Jeffrey Zalc

bp Solutions, P&O

phone: 630.881.5478; email: jeffrey.zalc@bp.com

More information about this award and the past winners:

https://www.aiche.org/community/sites/chicago-local-section/ernest-w-thiele-award https://www.aiche.org/community/sites/local-sections/chicago/thiele-award-past-winners

Volunteers Needed for Chicago Local Section

How many opportunities can you find to learn project management, delegation and leadership skills for free? Volunteering with the Chicago Section of AIChE is such an opportunity. While you're learning new skills, your professional network grows. Just about all of us are either undergoing a career change, contemplating a career change, or are wondering if our career will be changed for us. Volunteering with AIChE is a way to add skills and accomplishments to your resume.

Volunteers are needed to help with:

- Programming arrange speakers for monthly meetings, and arrange catering and venues
- Logistics arrange catering and venues
- Newsletter Editor prepare and publish ten monthly newsletters
- Newsletter Contributions write meeting summaries, contribute photos, and more
- Engineering Outreach coordinate three annual K-12 outreach events with high schools and colleges
- Professional Development and Sponsorship arrange companies to sponsor pre-meeting talks to help fund student dinners
- Awards and Scholarship Committees Review applications for local Section award and scholarships
- Midwest Regional Conference many opportunities including programming, logistics, website, advertising, sponsorship, high school outreach, poster session and more!
- Young Professionals plan socials and programming for young professionals (under 35)

If you are interested in any of these positions, please contact us aichechicago@gmail.com.

Young Professionals Committee (YPC) Chicago Section

AIChE's Young Professionals Committee (YPC) Chicago Section was created to start and maintain young professionals' involvement in AIChE after graduation and to ensure that students retain their membership through their transition into the work force.

We enthusiastically welcome all people with a degree in Chemical Engineering, including those currently working in industry and academia, recent graduates, and those pursuing other paths. We also welcome current students – both undergraduate and graduate – to our events.

The Chicago YPC exists as a subset of the AIChE Chicago section.

Our goal is to provide technical, career, and networking opportunities to young Chemical Engineering professional in the Chicagoland area. To accomplish this, we seek to provide a variety of technical and social activities, provide outreach and volunteering opportunities, and to create programming that will appeal to ChemE's under the age of 35.

Website: https://www.aiche.org/community/sites/local-sections/chicago/young-professionals

Email us: yp.aichechicago@gmail.com

Connect with us: We have a facebook group under YPC Chicago!

Join our mailing list: We have google group under ypcchicago!



Why Renew Your AIChE Membership?

Renew your membership now to keep learning and growing.





Stay Connected to 40,000+ international members who take advantage of:

- Subscription to AIChE's flagship publication: CEP*
- Education—Access to e-learning courses and instructor-led training, offering Continuing Educations Units and PDHs
- Access to CareerEngineer—a comprehensive job site tailored to chemical engineers
- Access to the AIChE eLibrary—a wealth of information from Knovel Life Sciences and the McGraw-Hill AccessEngineering Library collections

View COMPLETE benefits

AICHE Volunteer and Meeting Attendee Conduct Guidelines

AIChE's volunteers are the core of the Institute and make all of its programs, conferences and educational efforts possible. These offerings provide excellent opportunities for AIChE members and meeting attendees to gain greater technical expertise, grow their networks, and enhance their careers. AIChE events provide engineers, scientists, and students a platform to present, discuss, publish and exhibit their discoveries and technical advances.

At all times, volunteers and meeting attendees should act in accordance with AIChE's Code of Ethics, upholding and advancing the integrity, honor and dignity of the chemical engineering profession. AIChE's Board of Directors has developed these guidelines to foster a positive environment of trust, respect, open communications, and ethical behavior. These guidelines apply to meetings, conferences, workshops, courses and other events organized by AIChE or any of its entities and also to volunteers who conduct other business and affairs on behalf of AIChE.

Specifically

- 1. Volunteers and meeting attendees should understand and support AIChE's Code of Ethics.
- 2. Volunteers and meeting attendees should contribute to a collegial, inclusive, positive and respectful environment for fellow volunteers and attendees, and other stakeholders, including AIChE staff.

- 3. Volunteers and meeting attendees should avoid making inappropriate statements or taking inappropriate action based on race, gender, age, religion, ethnicity, nationality, sexual orientation, gender expression, gender identity, marital status, political affiliation, presence of disabilities, or educational background. We should show consistent respect for colleagues, regardless of discipline, employment status, and organizations for which they work, whether industry, academia, or government.
- 4. Disruptive, harassing or other inappropriate statements or behavior toward other volunteers, members, and other stakeholders, including AIChE staff, is unacceptable.
- 5. Volunteers and meeting attendees should obey all applicable laws and regulations of the relevant governmental authorities while volunteering or attending meetings. Volunteers and meeting attendees taking part in any AIChE event, including the ChemECar CompetitionTM, should also comply with all applicable safety guidelines.

Violations of this conduct policy should be reported promptly to the AIChE President or Executive Director.

Read AIChE's Code of Ethics

AICHE CHICAGO SECTION

AIChE Chicago Section 2501 Chatham Rd Ste N Springfield, IL 62704 aichechicago@gmail.com

https://www.facebook.com/AIChEChicagoSection https://www.linkedin.com/groups/4538581

https://www.aiche.org/community/sites/local-sections/chicago



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We want you for AIChE-Chicago!

AIChE is committed to promoting a fair, just, and equitable profession and society. AIChE believes that all who wish to be a part of the chemical engineering community should have equal opportunity to pursue and achieve success. We work toward a better future for all — through our technical expertise; through how we inspire, engage, retain, and advance future talent; and through how we treat each other within and beyond the profession.

AIChE Equity, Diversity, and Inclusion Statement | AIChE

We need your help!

How many opportunities can you find to learn project management, delegation and leadership skills for free? Becoming an officer in the Chicago Section of AlChE is such an opportunity. While you're learning new skills, your local network grows. Just about all of us are either undergoing a career change, contemplating a career change, or are wondering if our career will be changed for us. Volunteering with AlChE is a way to add skills and accomplishments to your resume.

aichechicago@gmail.com

http://www.aiche.org/community/sites/localsections/chicago/announcements/volunteerism



Submitting Articles to AIChE Columns

We welcome email submissions for our monthly newsletter. Commercial announcements are subject to the fee schedule below. News stories, editorials, technical or career related non-commercial contributions are always welcome with no charge. We consider job postings, announcements of for-fee training courses, expositions, conferences as commercial.

Categorization of announcements is at the sole discretion of the Chicago AIChE Board of Directors. Chicago AIChE may publicize activities of interest to our members by cooperating professional societies and other non-profits without charge.

Please submit your material to <u>aichechicago@gmail.com</u> with "newsletter article" as a subject line.