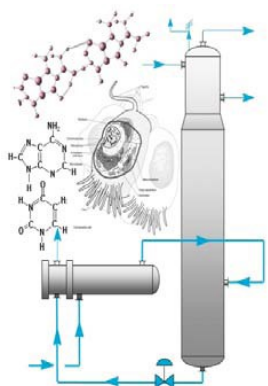


# October Newsletter

Chicago Section

[www.aiche.org/Chicago](http://www.aiche.org/Chicago)

October 2019



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## AIChE Chicago October Meeting Membrane for a Thirsty World

**Dr. Norman Li**

*President  
NL Chemical Technology, Inc.*



**Date:** *Tuesday October 15, 2019*

**Time:** *5:30 to 8:45 PM*

**Where:** *Granite City Food & Brewery*

**Address:** *801 Plaza Dr, Schaumburg, IL 60173*

**Cost:**  
 Members: \$40  
 Non-Members: \$50  
 AIChE Global Member Only: \$45  
 Students: \$10  
 Unemployed/Retired: \$15

### Agenda:

**5:30-6:30 PM:** Registration, Networking and Cash Bar  
**6:30-7:30 PM:** Dinner  
**7:30-7:45 PM:** Section Announcements  
**7:45-8:45 PM:** Technical presentation

Click on the link to register!

<http://www.cvent.com/d/dhqjyn>

## Chair's Corner

We had an excellent September meeting that included a tour of the Stickney Water Reclamation Plant led by Dr. Dominic Brose of the Metropolitan Water Reclamation District of Greater Chicago. I'm certain everyone learned something about the importance of environmental chemistry and how wastewater operations continue to evolve to better serve the needs of the public and protect the environment.

Last month, I summarized what I feel is the Chicago Section's core mission. I would like to elaborate on how our monthly meetings are aligned with that mission:

- Promote excellence in chemical engineering education and local practice;
  - \* Technical speakers provide ongoing engineering education after graduation.
  - \* Meetings provide CEUs/PDHs for licensure to practice.
- Advance the development and exchange of relevant knowledge;
  - \* Technical speakers are subject matter experts and many conduct research and development in their fields.
  - \* Members are provided opportunities to talk about their experience and perspectives on issues raised by the technical speaker.
- Uphold and advance the profession's standards, ethics and diversity;
  - \* Technical speakers are selected to represent the standards of engineering, including ethics.
  - \* Technical speakers are selected to promote diversity.
- Enhance the lifelong career development and financial security of chemical engineers through networking;
  - \* Meetings include a social hour for networking.
  - \* Members of AIChE and the Chicago Section receive registration fee discounts to promote attendance.
- Stimulate collaborative efforts among industry, universities, and professional societies;
  - \* Meetings are selected to include occasional facility tours.
  - \* The January meeting is a joint meeting with the ACS local section.
  - \* The April meeting is a local university and includes a student competition.
  - \* Students receive registration fee discounts to promote attendance.
- Achieve excellence in operations of the Chicago Section
  - \* Meetings are entirely planned by volunteers from their offices or homes.
  - \* Cvent provides a meeting website platform and email-based registration.
  - \* Cvent and Stripe allow for offsite and onsite registration using credit cards, which is preferred by most attendees.



Overall, the finances of the monthly meetings are intended to be neutral such that the registration fees are balanced with the venue and meal expenses. In 2018-2019, the average expense for a meeting attendee was approximately \$35 per person. The full price of a registration in 2018-2019 was set as \$50 for the general public and is set high enough to always generate revenue for the Chicago Section. Discounts on registration fees that are below the meeting cost are structured to advance the core mission:

- Students are provided a discount of approximately 70% (\$10 registration fee) to encourage them to network with experienced engineers. This student discount is offset by donations from other meeting attendees.

- Unemployed Chicago Section members are provided a discount of approximately 60% (\$15 registration fee) to reduce the hardship of paying for dinner at a restaurant so they can network. This discount has a negligible impact on the finances of the Chicago Section.
- Retired Chicago Section members are provided a discount of approximately 60% (\$15 registration fee) to reduce the hardship of paying for dinner at a restaurant. Many of the retirees who attend Chicago Section members are actively involved in the Chicago Section, and their presence is important for passing down knowledge and wisdom about the engineering profession. This discount is not offset by another current income source; however, the strong cash position of the Chicago Section is largely a result of the past efforts of retirees and can sustain this discount for years to come.

I am in support of sustaining all these discounts and would like to propose one more where I think there may be a long-term benefit to the Chicago Section. Currently, young professionals (YPs) are required to pay a registration fee of \$40 as a Chicago Section member. Given that YPs are in the process of paying student loans, saving to buy houses, and having young children, I would like everyone to consider a new discount below the average meeting cost for YPs. This would encourage them to become more involved with senior chemical engineers. After the November meeting, I will lead the Board of Directors to review the meeting finances and to consider a new YP discount in addition to adjusting the registration fees for 2020 events if needed.

I would like to conclude by thanking our dedicated volunteers in the Programming and Logistics committees. Our elected Vice Chairs Programming, Ha Dinh and Sarika Goel, have done an outstanding job soliciting speakers and coordinating their attendance. Our Logistics Committee, Paolo Palmas and Lance Baird, have done the grunt work of obtaining agreements with restaurants and coordinating with restaurant managers to make sure that the meal preparation is flawless.

**Jarad L. Champion, P.E., BCEE**  
**AIChE Chicago Section Chair**  
**AIChE Senior Member**

## ***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 \$1000 honorarium presented at our sectional 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, 2020.

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

Jim Simnick  
BP Amoco Complex, 603-2W 150 W  
Warrenville Road, Naperville, IL 60566  
Ph 331-702-4071 (office)  
Ph 630-269-8662 (cell)  
fax 630-420-4832

## October Meeting

*Dr. Norman Li*

*President, NL Chemical Technology, Inc.*

### **Biography:**

Dr. Norman Li is president of NL Chemical Technology, Inc. Mount Prospect, Illinois. He was at Exxon Research and Engineering Co. as a senior scientist and at UOP and Honeywell as Director of Research. In 1995, recognizing the critical needs of clean water in many parts of the world, he founded the NL Chemical Technology, Inc. to develop cost-effective advanced membrane technologies for worldwide operations of water purification and desalination of seawater.

Dr. Li has made major technical contributions to the advancement of chemical engineering in general and separation science and technology in particular. He has more than 100 technical publications, 44 U.S. patents, and 21 books edited, all in the field of separation science and technology. Dr. Li has received many honors and awards. He was elected to the National Academy of Engineering of USA in 1990 and was elected to be one of the "100 Distinguished Chemical Engineers in the US" at the Centennial Celebration of American Institute of Chemical Engineers (AIChE) in 2008.

Dr. Li has received the AIChE's Founders Award and the Institute Lectureship; the American Chemical Society (ACS)'s Award of Separation Science and Technology and the E. V. Murphree Award in Industrial and Engineering Chemistry. In addition, he received the Perkin Medal from the Society of Chemical Industry - the highest honor in the chemical industry in the US, and the Alan S. Michaels Award, the highest honor in the membrane field, from the North American Membrane Society (NAMS). The International Congress on Membranes and Membrane Processes and AIChE all held special symposia in his honor at their international conferences.



### **Abstract:**

#### ***"Membrane for a Thirsty World"***

The provision of clean drinking water, the treatment and reuse of waste water, the desalination of sea water and the efficient recycling of streams and intermediates in chemical manufacturing processes are among the pressing challenges facing the world today. Membrane technology offers one of the most important responses to these challenges, with an astonishing rate of growth.

The major efforts of present industrial research and development of advanced membrane technology are focused on improving the effectiveness and efficiency of the polymeric membranes. This presentation will first review the history of the development of industrial membranes and their manufacturing processes. It will then focus on Reverse Osmosis and

Nanofiltration membranes. Their special features of anti-fouling, low-energy consumption and high selectivity for certain minerals will be discussed.

On the membrane manufacturing process, we have the total experience from developing laboratory research results to commercial processes. The future directions of the industrial R&D in this field will be discussed.

**Date:** *Tuesday October 15, 2019*

**Time:** *5:30 to 8:45 PM*

**Where:** *Granite City Food & Brewery*

**Address:** *801 Plaza Dr, Schaumburg, IL 60173*

**Agenda:**

*5:30-6:30 PM: Registration, Networking and Cash Bar*

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*7:30-7:45 PM: Section Announcements*

*7:45-8:45 PM: Technical presentation*

***Click on the link to register!***

***<http://www.cvent.com/d/dhqjyn>***

# 2019 AIChE Annual Meeting

**November 10-15, 2019**

**Hyatt Regency, Orlando**



In addition to programming from 22 of AIChE's [Divisions and Forums](#), the 2019 Annual Meeting will feature the following innovative Topical Conferences:

- Applications of Data Science to Molecules and Materials
- Advanced Fossil Energy Utilization R&D
- Ammonia Energy
- Chemical Engineers in Medicine
- Concentrated Solar Energy for Power Generation and Chemical Processing
- Entrepreneurship in Chemical Engineering - Sponsored by CIEE
- Food Innovation and Engineering
- Innovations of Green Process Engineering for Sustainable Energy and Environment
- Microbes at Biomedical Interfaces
- Next-Gen Manufacturing
- Sensors
- Synthetic & Renewable Fuels



## September Meeting & Tour Photos



## *Young Professional September Event Summary*

September's Young Professional news is brought to you in poem form:

I had the best time of them all  
At YP's first event of Fall  
We chose a cozy meeting place  
To set a tone for this year's pace  
'Twas not a den or hall or cavern  
The locals called it Pierce's Tavern  
YPs grabbed seats and took their places  
And welcomed to our group new faces  
ChemEs talked 'bout hobbies and work  
Some free YP food was a perk  
We hope you join us connoisseurs  
Next time we will host a tour!

-By YP Programming Committee





## Young Professional Event in October

### *Plant Tour of Gas Technology Institute with Society of Women Engineers*

**Date:** Tuesday October 29, 2019

**Time:** 5:30 to 8 PM

**About:** GTI is a leading research, development and training organization

addressing energy and environmental challenges.

For more information about GTI, visit: [www.gastechnology.org](http://www.gastechnology.org)

Please wear closed toed shoes and preferably pants/jeans.

**Address:** 1700 S Mount Prospect Road Des Plaines, IL 60018

**Cost:** Free

RSVP by Monday, October 21st at this link:  
<https://docs.google.com/forms/d/e/1FAIpQLSe4CIF8j7s7UEs0GQGmQkRYoNYIkR2JANAGPymVQU4RqLDYQ/viewform>

Contact Carissa at [ckloncz@gmail.com](mailto:ckloncz@gmail.com) with any questions.

Hope to see you there! AIChE-YP Chicago

## Inside University of Puerto Rico's Chemical Engineering Camp



Teams of five to six high school students worked against the clock to optimize an oil-water extraction. Their budget was limited and efficiency was chief in their minds. These students were getting their first taste of a chemical engineering challenge. This competition, designed to demonstrate the practical applications of chemical engineering, was the concluding activity at the University of Puerto Rico (UPR) AIChE Student Chapter's Chemical Engineering Camp on April 13, earlier this year.

### Chemical engineering as a career option

The goal of the Chemical Engineering Camp is to help high school students explore chemical engineering as a possible career option. UPR achieved this through a full day of interactive activities, including demonstrations, lab tours, and discussions with students and faculty.

**To read more, check the website:**

[Inside University of Puerto Rico's Chemical Engineering Camp](#)



# “CALL FOR CONTRIBUTIONS”



**AIChE®**  
**MIDWEST**  
**REGIONAL**  
**CONFERENCE**

2020 AIChE Midwest Regional Conference

**Chicago, IL – March 11-12, 2020**

Hosted by Illinois Institute of Technology

Organized by Chicago Local Section of AIChE

## Programming Areas

- ⇒ Energy and Sustainability
- ⇒ Catalysis and Reaction Engineering
- ⇒ Refining and Petrochemical Processing
- ⇒ Process Safety and Occupational Health
- ⇒ Environmental Compliance and Remediation
- ⇒ Biomedical, Pharmaceutical and Nano-Engineering
- ⇒ Process Engineering, Modeling, Control and Optimization
- ⇒ Fluid Properties, Fluid Dynamics and Transport Phenomena



Submission deadline: **October 31, 2019**

Submission site: **[tinyurl.com/Submit2MRC2020](https://tinyurl.com/Submit2MRC2020)**

For conference details: **[www.aiche.org/Chicago](http://www.aiche.org/Chicago)**

### ***Submission questions?***

Contact the Programming Chair at [chmielewski@iit.edu](mailto:chmielewski@iit.edu)

### ***Updated information at:***

<https://www.aiche.org/community/sites/local-sections/chicago/new-mrc12-2020>

## Sponsorship Opportunities

Each year many practitioners, professors and students attend this annual event. Your sponsorship support STEM activities and provides a great avenue to advertise your business. For more information contact **Azita or Janet**



## “SAVE THE DATE”



**AIChE®**  
**MIDWEST**  
**REGIONAL**  
**CONFERENCE**

2020 AIChE Midwest Regional Conference

*Chicago, IL – March 11-12, 2020*

Hosted by Illinois Institute of Technology

Organized by Chicago Local Section of AIChE

The AIChE Midwest Regional Conference continues into its 12<sup>th</sup> consecutive year, with the Chicago Local Section organizing a conference that provides an opportunity for engineers and scientists in the region to learn about new technologies, as well as offer a relaxed atmosphere for networking.

### Important Dates

Call for Oral Contributions Opens	August 30, 2019
Call for Oral Contributions Closing Date	October 31, 2019
Notice of Acceptance of Oral Contributions	December 1, 2019
Call for Poster Contributions Closing Date	January 16, 2020
Notice of Acceptance of Poster Contributions	January 23, 2020
Registration Site Opens	November 7, 2019
Early-Bird Registration Deadline	January 31, 2020
Pre-Registration Deadline (On-site rates begin)	February 29, 2020

### Volunteer Opportunities

Interested in helping with MRC 12? Contact the **Conference Chair** and we'll find a role that is of your interest. This is a great occasion to meet new friends and help your technical community.



## Volunteering Opportunity for ACS' Chemistry Day

We will be supporting the Chicago local section of the American Chemical Society (ACS) in its annual Chemistry Day, celebrating National Chemistry Week. Northwestern University will host this year's Chemistry Day on Saturday, October 19th from 10 AM to 3 PM. "Marvelous Metals" will be the 2019 theme.

- What:** Chemistry Day Volunteering (K-12 Outreach)
- Where:** Northwestern University Tech Building, 2145 Sheridan Road, Evanston, IL 60208
- When:** Saturday October 19th, 2019  
Shift 1: 9:30 AM to 12:30 PM  
Shift 2: 12:30 PM - 3:30 PM
- RSVP:** [janet.werner@honeywell.com](mailto:janet.werner@honeywell.com) by October 16th (Please indicate which shift you would like to volunteer)
- Cost:** Free!



Chemistry Day is a free event, and open to the public. Volunteers are needed for the AIChE Chicago Section booth, where we will introduce children and their parents to chemistry and chemical engineering. There will be 2 shifts for volunteers: morning (9:30 AM – 12:30 PM); afternoon (12:30 PM – 3:30PM). If you would like to help with the booth, please email Janet Werner at [janet.werner@honeywell.com](mailto:janet.werner@honeywell.com) by October 16th and select one or both shifts. Any help is greatly appreciated!

For additional information on ACS's Chemistry Day, see their website at link:

[https://chicagoacs.org/Chicago\\_Section\\_Community\\_Activities](https://chicagoacs.org/Chicago_Section_Community_Activities)

**MARVELOUS METALS**

**OCTOBER 20-26, 2019**

**FREE HANDS-ON SCIENCE COMMUNITY EVENT**

Join the Chicago Local Section of the American Chemical Society for a free community event to celebrate National Chemistry Week. This event is for children of all ages. Learn about this year's theme, Marvelous Metals and the Periodic Table, with numerous exciting hands-on activities and tours.

**When: OCTOBER 19<sup>th</sup>, 2019 from 10am – 3pm**  
**Where: NORTHWESTERN UNIVERSITY TECH BUILDING**  
2145 Sheridan Road, Evanston, IL 60208

Questions, please contact Sherri Rukes at [luvchem@gmail.com](mailto:luvchem@gmail.com)

**We hope to see you there!**

**CELEBRATING THE INTERNATIONAL YEAR OF THE PERIODIC TABLE**  
**#NCW** [www.acs.org/ncw](http://www.acs.org/ncw)



## 2019 AIChE Board of Director Election

Dear Members,

It's election season and time for you to decide who will be on the Board for 2019! **Online voting is open until 11:59 pm, *October 14, 2019.***

The election will commence on September 9th. Ballots will be mailed on August 26th. Due to new international mail restrictions, no ballots will be mailed to international members, however they will all receive emails that include the link to vote electronically. The electronic proxy voting site is now available: [AIChE.SocietyElection.com](http://AIChE.SocietyElection.com). Instructions for electronic proxy will be included with the ballot and emailed to members with email addresses on file. As a reminder, your 2019 dues must be paid in full by September 1st in order to be eligible to vote. All ballots must be received by October 14th.

The Election results will be announced on November 11 at AIChE's Annual Meeting in Orlando, FL, and in the December issue of CEP.



## Slate of Candidates

### For President-Elect

[Gregory Frank](#)

Amgen, Inc

[Deborah L. Grubbe](#)

Operations and Safety Solutions, LLC

### For Director

[Linda Broadbelt](#)

Northwestern Univ.

[Douglas S. Clark](#)

Univ. of California, Berkeley

[Brian H. Davison](#)

Oak Ridge National Laboratory

[Robert M. Kelly](#)

North Carolina State Univ.

[Robert D. Kiss](#)

Sutro Biopharma

[Ann L. Lee](#)

Juno Therapeutics

[Peter Lodal](#)

Eastman Chemical Co.

[Todd Pryzbycien](#)

Renssealer Polytechnic Institute.

To Learn more about the candidates view on different topics, e.x Climate Change, check Discussion Center on AIChE Engage,

[AIChE election and climate science Discussion Central](#)

## 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 local network grows.

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](mailto:aichechicago@gmail.com).

## Why Renew Your AIChE Membership?

Make sure that you check the box and pay the local section dues on your bill from AIChE Global.

Renew Membership



**The local section dues are only \$20.00 per year**, compared to the \$200.00 charged by AIChE Global. Most companies that pay your dues, will cover the cost of the local section dues, with no issues. Local section members get a discount on the cost of our monthly meetings.

- Subscription to AIChE's flagship publication: CEP\*
- Education—Access to e-learning courses and instructor-led training, offering Continuing Education Units and PDHs
- Access to Career Engineer—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 Access Engineering Library collections

**[View COMPLETE benefits](#)**

## Upcoming AIChE Conferences, Meetings & Webinars

### Chicago Local Meetings

October 15, 2019	Speaker: Dr. Norman Li, NL Chemical Technology, Inc.
November 19, 2019	Speaker: Dr. Ben Freireich, PSRI

### AIChE Conferences

October 1-2, 2019	11th AIChE Southwest Process Technology Conference, SugarLand TX
October 7-8, 2019	4th Bioengineering & Translational Medicine Conference, Duke University, NC
October 14-15, 2019	2019 Conference on Hydrogen Safety, Sacramento, CA
October 20-22, 2019	2019 Bioenergy Sustainability Conference, Nashville, TN
October 27-29, 2019	AfroBiotech Conference 2019, Atlanta, Georgia
November 8-9, 2019	2019 Annual AIChE Student Conference, Orlando, FL

### AIChE Webinars

October 2, 2019	<u>Introduction to Python for Chemical Engineers</u>
October 16, 2019	<u>Time-Scale Analysis: A Process Intensification Tool</u>
October 23, 2019	<u>How Damage Mechanism Reviews Impact Operations</u>
November 20, 2019	<u>Pre-start-up Safety Review</u>



## Officers and Contact Information

Chair	Jarad Champion
Chair Elect	Jeff Zalc
Chair Programming	Ha Dinh
	Sarika Goel
Secretary	Ben Ketter
Treasurer	McKay Rytting
Directors at Large	Adam Kanyuh
	Pat Shannon
	Olha Zvarych
House Committee	Paolo Palmas
	Lance Baird
	Asmara Soomro
Newsletter Editors	Riya Narjari <a href="mailto:rnarjari@hawk.iit.edu">rnarjari@hawk.iit.edu</a>
	Azita Ahmadzadeh <a href="mailto:azita.ad@gmail.com">azita.ad@gmail.com</a>

## AICHE CHICAGO SECTION

AICHE Chicago Section  
13964 Doral Lane Homer  
Glen, IL 60491  
[aichechicago@gmail.com](mailto:aichechicago@gmail.com)

We are on the web  
[www.aiche.org/Chicago](http://www.aiche.org/Chicago)

## We want you for AIChE-Chicago!

## 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 AIChE 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 AIChE is a way to add skills and accomplishments to your resume.

[aichechicago@gmail.com](mailto:aichechicago@gmail.com)

<http://www.aiche.org/community/sites/local-sections/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 [aichechicago@gmail.com](mailto:aichechicago@gmail.com) with "newsletter article" as a subject line.

AIChE Publicity Committee Fees	Academic (non-AIChE)		Company		Recruiters	
	Per Month	Per Year	Per Month	Per Year	Per Month	Per Year
<b>Advertisements (3X3)</b>	100	450	150	675	N/A	N/A
<b>Half-Page (~7"x 4.5")</b>	280	1260	420	1890	N/A	N/A
<b>Job Posting (Size?)</b>	50	225	100	450	250	N/A
<b>Special Sizing</b>	Contact Publicity Committee <a href="mailto:aichechicago@gmail.com">aichechicago@gmail.com</a>					

For the purchase of a year ad, customers have the option of changing ads/jobs month to month. Online payment can be done using <http://www.cvent.com/d/9cq5pw/4W>

Student and AIChE Member Related Postings are Free.

