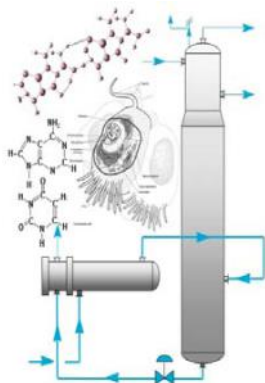


January Newsletter

Chicago Section

www.aiche.org/Chicago

January 2018



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AIChE Chicago January Joint Meeting with ACS

Additive Manufacturing—Now and in the Future

Vince Anewenter

Director, Rapid Prototyping Consortium
Milwaukee School of Engineering



Date: *Thursday, January 25th, 2018*

Where: *Roosevelt University—Schaumburg*

Address: *1400 N. Roosevelt Rd. Schaumburg, IL*

Cost: *Local Section Members—\$15
Non-Members—\$17*

Registration and Information: <http://www.cvent.com/d/rtg400/>

Agenda

5:30 - 6:30 Registration, pre-meeting presentation (DSM)

6:30 - 7:30 Dinner

7:30 - 7:45 Announcements

7:45 - 8:45 Technical presentation including time for questions (Vince Anewenter)

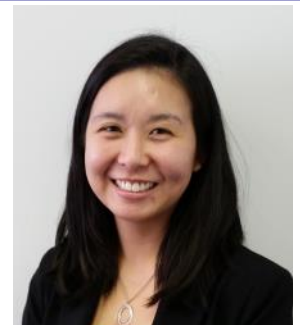


**DON'T FORGET! EARLY BIRD
REGISTRATION ENDS**

JANUARY 31ST!

Register Here: <http://www.cvent.com/d/4tq141/4W>

Chair's Corner



Happy New Year! I hope the new year finds you well! The new year typically brings thoughts of improvements and new year's resolutions. Think about what resolutions you may have for your professional life as well as your personal life. A resolution could be simple, such as keeping your desk clean (maybe that's not so simple depending on the current state of your desk!), or a resolution could be more aspirational, such as learning a new skill.

As you are working on your workplace resolutions this year, please consider how AIChE can help you with your resolution. [This article from the Motley Fool](#) gives 5 career resolutions – do something that falls outside your comfort zone, learn a new skill, make five new industry contacts, be more honest with your boss, and have a more positive attitude. Getting involved in AIChE can help with three out of five of those resolutions. You can volunteer for a committee or give a presentation meeting, which might be outside your comfort zone. As an AIChE member, you can watch technical webinars to learn a new skill. You can also meet new industry contacts at local section meetings.

These are just a few examples of what AIChE membership can do for you, but there are many more ways as well. I have been an AIChE member for almost 15 years and find the membership well worth it. AIChE has an e-library of textbooks that you can use to research technical topics. Each year, members also receive 6 free credits that can be used to view archived videos. You can even view these webinars for Professional Development Hours!

See the full list of AIChE membership benefits here: <https://www.aiche.org/community/membership/benefits>

On a national level, your AIChE membership dues go towards supporting all of these membership benefits as well as supporting AIChE's mission. On a local level, the local section dues you pay comes back to your local section – this means that the \$20 AIChE Chicago membership dues come back to Chicago. If you enjoy the programming that we as a Chicago Section offer or if you simply enjoy reading the digest of local section happenings in this newsletter, please help support us by paying your local section dues!

If there something that we can do to help you with your career resolutions in 2018, please let us know on [our facebook page](#) or send us an [email](#)! Here's to a new year!

Janet Werner

Chair, 2017-2018

January Meeting Information

Vince Anewenter

Additive Manufacturing - Now and in the Future

Speaker's Bio:

Vince Anewenter holds a BS in Business Finance from MSOE's Raider School of Business and is a Journeyman toolmaker. He is currently the Director of the Rapid Prototyping Consortium at the Milwaukee School of Engineering where he has been actively involved in the additive manufacturing industry since 2004. As Director, Mr. Anewenter is responsible for providing strategic additive manufacturing guidance and new product development expertise to a non-compete consortium of over 45 companies located throughout the world. Areas of expertise include: additive manufacturing, 3D scanning, injection molding, stamping, castings and product design.

Vince also serves on the Board of Directors of the Additive Manufacturing Users Group (AMUG) as Treasurer and Director since



2012. AMUG is the largest users conference for the additive manufacturing industry in the world.

Abstract:

Vince Anewenter will present a brief overview of the Milwaukee School of Engineering's Rapid Prototyping Center, how it operates, technology overview, and guiding mission. This will lead into an overview of the current status of the additive manufacturing industry, followed by a forward looking discussion on what the future might hold for current and emerging technologies.

Pre-Meeting Speaker:

Brett Register

R&D Technical Service Manager, DSM Functional Materials (Somos and Fiber Optical Materials)

Speaker's Bio:

Brett Register holds a bachelor of science degree from the University of Wisconsin at La Crosse. Brett's main expertise lies within the 3D Printing/Additive Manufacturing industry. He has worked for DSM for 18 years; during that time, he has held various roles within R&D where he developed 3D Printing resins for stereolithography. In his current role, he helps bring new 3D Printing resins to the market, aids customers in application development, and manages a group within R&D that runs a large number of industrial 3D Printers (mostly Stereolithography). When Brett is not at work you can most likely find him on a trout stream in Southwestern Wisconsin.

Abstract:

Additive Manufacturing (AM) and 3D Printing have been in the news more and more over the past few years. It is often referred to by everyone from design engineers and medical professionals right down to elementary school students. Even with all the talk, there is still a line between hobbyist using the lower cost 3D printing technologies and true additive platforms in real manufacturing applications. In this presentation, DSM will demonstrate many of the applications where true additive manufacturing makes a significant impact in industries like aerospace, automotive and medical.

For January Meeting Information and Registration, click here: <http://www.cvent.com/d/rtq400/>

For additional satellite locations available through ACS, please visit [their website](#).

2018 AIChE Midwest Regional Conference

Registration is Now Open!

Chicago, IL – March 13-14, 2018

Hosted by Illinois Institute of Technology

Organized by Chicago Local Section of AIChE

Early-Bird registration deadline

NOTE:

Regular registration deadline



More information about the AIChE Midwest Regional Conference can be found with this link: [MRC](#).

The planning committee is proud to announce the following slate of invited speakers:

Keynote Speakers:

- **Jim Rekoske**, *Chief Technology Officer, UOP/Honeywell*
- **John A. Rodgers**, *Professor, Northwestern University*
- **Doraiswami Ramkrishna**, *Distinguished Professor, Purdue University*

Plenary Speakers:

- **Russell A. Ogle**, *Principal Engineer, Exponent*
- **Christopher W. Jones**, *Professor and Associate Vice President for Research, Georgia Tech*
- **Thomas Foust**, *Director, National Bioenergy Center, NREL*
- **Kimberly Grey**, *Professor and Chair, Civil and Environmental Engineering, Northwestern University*



Network with others in the field

Learn about Industrial sectors

Develop Professionally



Young Professionals News

The AIChE-Chicago Young Professionals met on December 13th for ice skating and dinner before the holidays. We met at Millennium Park's McCormick Tribune Ice Rink for an hour of skating with holiday music and beautiful views of the city and Chicago Christmas tree. After, we decided to skip Park Grille and head to the Christkindlmarket as most of the group had never been there. With mulled wine and hot cocoa in our hands, we weaved through the market before departing to Good Stuff Eatery for some delicious burgers and lively conversations. The Chicago YP committee thanks all who came and keep an eye out for a notification about our next event!

Best,

AIChE-Chicago Young Professionals Committee (YPC)

Why Renew Your AIChE Membership?

Renew your membership now to keep learning and growing.

Renew Membership



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

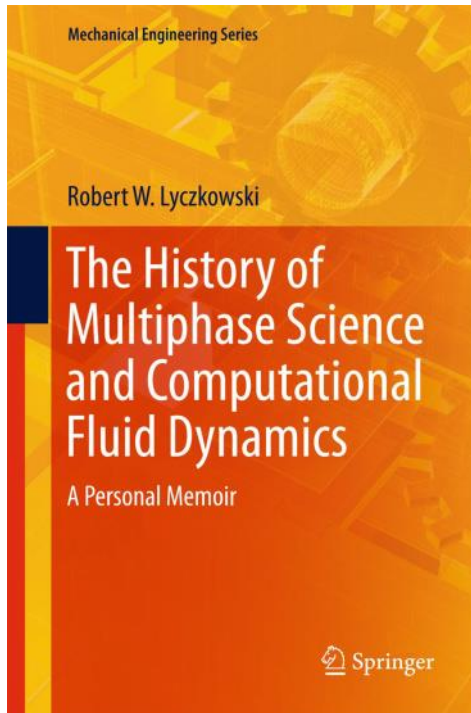
- Subscription to AIChE's flagship publication: CEP*
- Education—Access to e-learning courses and instructor-led training, offering Continuing Education Units and PDHs
- Access to CareerEngineer—a comprehensive job site tailored to chemical engineers
- Access to the AIChE eLibrary—a wealth of information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

[View COMPLETE benefits](#)

New Book by a Chicago Member

The History of Multiphase Science and Computational Fluid Dynamics

Lyczkowski, Robert W., Darien, IL, USA



A Personal Memoir

- ◆ Imparts a personal narrative tracing the critical events in the initiation, development, and propagation of multiphase science and computational fluid dynamics in its historical context.
- ◆ Reveals the amazing chain of incidents and coincidences but for which multiphase science and computational fluid dynamics would never have evolved.
- ◆ Presents in narrative form many facets of multiphase science (MPS), including sand grains, bubbles, and water droplets and how MPS differs from single-phase science.
- ◆ Describes the development of what came to be called the seriated loop (SLOOP) code, intended to replace the RELAP4 code, used to perform safety studies for and to license nuclear reactors and the politics of science.

This book tells the story of how the science of computational multiphase flow began in an effort to better analyze hypothetical light water power reactor accidents, including the “loss of coolant” accident. Written in the style of a memoir by an author with 40 years’ engineering research experience in computer modeling of fluidized beds and slurries, multiphase computational fluid dynamics, and multiphase flow, most recently at Argonne National Laboratory, the book traces how this new science developed during this time into RELAP5 and other computer programs to encompass realistic descriptions of phenomena ranging from fluidized beds for energy and chemicals production, slurry transport, pyroclastic flow from volcanoes, hemodynamics of blood-borne cells, and flow of granular particulates. Such descriptions are not possible using the classical single-phase Navier-Stokes equations. Whereas many books on computational techniques and computational fluid dynamics have appeared, they do not trace the historical development of the science in any detail, and none touch on the beginnings of multiphase science.

A Note about the Author:

More money and effort has been spent on nuclear safety by the former Atomic Energy Commission for whom I worked for a few months in 1973 and 1974, and later by the Nuclear Regulatory Commission, than on the safety of any man-made process or device, with the possible exception of airplanes. But then why did the Fukushima Daiichi nuclear accident occur?

Bob Lyczkowski's book provides a partial answer, without going into the details of the accident. Its description requires a separate book.

Multiphase flow science would not have become useful without the CFD codes for one-dimensional flow developed in Idaho, as discussed in detail by Bob, and later at Los Alamos for two- and three-dimensional flow based on their long history of code development for designing nuclear weapons.

At IIT, with Bob's help, we modified the K-FIX code developed at Los Alamos. to make it well-posed as an initial-value problem and put in reasonable drag expressions and viscosities. See Chapter 12, IIT Begins Using Los Alamos' K-FIX Code. Over the last four decades, we solved a variety of practical problems. These include CFD design of chemical reactors, pyroclastic flow from volcanoes, and blood flow, to explain why the red blood cells move away from the walls of the blood vessels and the platelets move toward the walls. To understand the physics of transport in blood vessels, later on we added dense phase kinetic features to the IIT codes.

Dimitri Gidaspow

Distinguished Professor, Emeritus

gidaspow@iit.edu

CONGRATULATION TO MR. DOUG NAFIS WINNER of THE 2017 ERNEST W. THIELE AWARD

Congratulations to Mr. Doug Nafis, Principal Engineer Honeywell UOP for being awarded the 2017 Ernest W. Thiele award! This prestigious award will be presented to Mr. Nafis at an upcoming meeting of the Chicago AIChE Section.

Mr. Nafis is awarded the 2017 Ernest Thiele Award for his significant innovation and developments in refining and petrochemical process research in the field of chemical engineering, mentoring younger engineers, and promotion of STEM with students through the program "You be the Chemist" that has blossomed into 37 states' activities for middle and high school students.

The Ernest W. Thiele award is presented annually to a Midwest region member of AIChE who has made outstanding contributions to advance the practice of Chemical Engineering. The award is sponsored by BP, and consists of a plaque and a \$1000 honorarium.

Please join us in congratulating Mr. Doug Nafis on his achievement.



DON'T MISS THE PREMIER EVENT ON RESEARCH IN PARTICLE SCIENCE + TECHNOLOGY.

EARLY REGISTRATION NOW OPEN [CLICK HERE TO REGISTER](#)

APRIL 22-26, 2018 • ORLANDO WORLD CENTER MARRIOTT • ORLANDO, FL

KEYNOTE SPEAKERS:

- Hamid Arastoopour,
Illinois Institute of Technology
- Rustom Billimoria, *ExxonMobil*
- Philip Chi Lip Kwok,
The University of Sydney
- Jeffrey Elam,
Argonne National Laboratory
- Liang-Shih Fan,
The Ohio State University
- Masayoshi Fuji,
Nagoya Institute of Technology
- Benjamin Glasser,
Rutgers University
- Stefan Heinrich,
Hamburg University of Technology
- William Heumann,
Heumann Environmental
- Christoph Mueller, *ETH Zürich*
- Wolfgang Peukert,
*Friedrich-Alexander-Universität
Erlangen-Nürnberg*
- James Ritter,
University of South Carolina
- Jennifer Sinclair Curtis, *University
of California, Davis*
- Chris Sinko,
Bristol-Myers Squibb
- Shankar Subramaniam,
Iowa State University
- Chika Takai,
Nagoya Institute of Technology

FEATURED EVENTS

WCPT8 plenaries will cover a wide range of topics, from mesoscience to nature-inspired design, contact charging, and the future needs in R&D. Learn and interact with international leaders in the field of particle science and technology.

Monday, April 23, 2018

Contact Charging in Granular Materials

Heinrich M. Jaeger, *University of Chicago*

Tuesday, April 24, 2018

Nature-Inspired Chemical Engineering – A Pathway to Innovation in Particle Technology

Marc-Olivier Coppens, *University College London*

Wednesday, April 25, 2018

Mesoscience: Opening a New Paradigm of Particle Technology

Jinghai Li, *Chinese Academy of Sciences*

Thursday, April 26, 2018

An Industrial Perspective on the Future Needs in Solids Processing Research and Education

Karl Jacob, *The Dow Chemical Company*

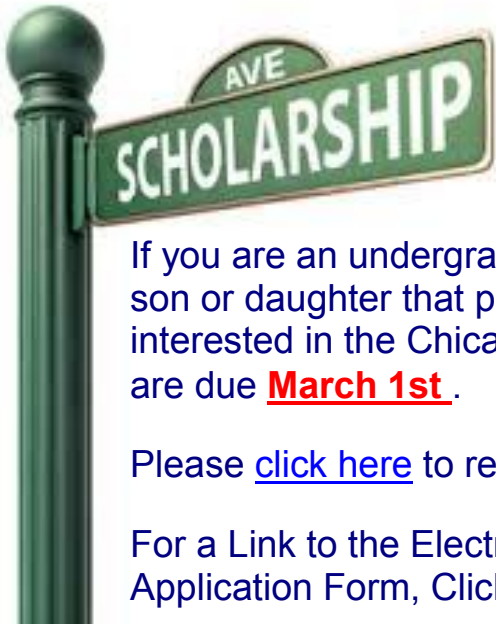
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Attention Students and Parents!



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 1st**.

Please [click here](#) to read rules and eligibility.

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

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

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 1, 2018**

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, J-8

150 W. Warrenville Road, Naperville, IL 60566

Ph 630-420-5936, fax 630-420-4832

email: james.simnick@bp.com

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- The code: **COMMUNITY**
- Our **ENTITY** name along with first and last name in the field of "Who referred you to join?"

Chicago Section

Visit www.aiche.org/community/membership today and start building your **Global Community of ChEnections**.

Here's a sampling of the top benefits more than 53,000 AIChE members in 110 countries have taken advantage of:

- One-year subscription to **CEP Chemical Engineering Progress®** (in print and online). AIChE's flagship publication is included in your dues.
- Preferred rates on **AIChE conferences** — attend just one conference a year and your AIChE membership pays for itself
- Free, unlimited access to the **AIChE eLibrary**, featuring the Knovel® Life Sciences collection
- Six free annual credits to use on AIChE webinars and conference presentations from **AIChE Academy**
- Free **career resources** and **services**
- And much more...



Volunteers Needed for MRC 2018

If you have an interest in volunteering for Midwest Regional Conference activities, please contact Reza Mostofi (mostmoh@gmail.com). The MRC 2018 will be held March 13-14th, 2018 at IIT. More information is available at the conference



www.aiche.org/chicago-midwest-regional-conference

Volunteers Needed for Chicago Local Section

The AIChE Chicago Section needs volunteers to help with:

- **House (Logistics) Committee** - Organize restaurant and food for monthly meetings
- **Newsletter Editing** - format, edit, and draft newsletters
- **Newsletter Contributions** - write meeting summaries, contribute photos, interview members, or write newsletter pieces
- **Welcoming and Registration** – help at registration desk for monthly meetings, develop membership initiatives
- **Awards** – coordinate nominations for AIChE awards

If you have an interest in either of these positions or if you want to volunteer for any other committee, please contact email aichechicago@gmail.com .

AIChE Chicago is now on Facebook and LinkedIn!



Like us on Facebook www.facebook.com/AIChEChicagoSection



Join our group on [LinkedIn!](#)

Upcoming AIChE Conferences, Meetings and Webinars

Chicago Local Meetings

Jan 25, 2018	January Monthly Meeting, Schaumburg
Feb 22, 2018	February Monthly Meeting, Northbrook
Mar 13-14, 2018	Midwest Regional Conference, IIT, Chicago
Apr 10, 2018	Annual Poster Session and April Monthly Meeting, UIC, Chicago

AIChE Conferences

Mar 13–14, 2018	10th Annual Midwest Regional Conference , Chicago, IL
Apr 22-26, 2018	2018 Spring Meeting and 14th Global Congress on Process Safety , Orlando, FL

AIChE Webinars

Jan 24, 2018	Sponsored Webinar: PSM Mindsets for Everyday Use
Jan 25, 2018	Chocolate Engineering: Structure, Rheology, and Bloom

Officers and Contact Information

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Chair Elect	Mike Schultz
Chair Programming	Beth Carter
	Robert Tsai
Secretary	Nick Guzman
Treasurer	Joe Guido
Directors at Large	Adam Kanyuh
	Dennis O'Brien
	Ellen Kloppenborg
House Committee	Arwa Hasan
	Asmara Soomro
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	Janet Werner Janet.werner8@gmail.com

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aichechicago@gmail.com

We are on the web
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

<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.

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

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.

