#### AIChE Chicago Section

# December Newsletter

Chicago Section



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www.aiche.org/Chicago

December 2015

## Holiday Social

December 20, 2016

6pm Adobe Gila's 5455 Park Place Rosemont, IL RSVP By December 18 to nguzman@bakerrisk.com





Renew your AICHE Membership

by 12/31/2015!

http://www.aiche.org/community/membership/renew

## Save the Date for the January Meeting!



reminder...

January 20th, 2016 January Meeting Joint with ACS European Crystal Banquets Arlington Heights, IL

## Reminder—Use your credits!

AIChE Global professional members get six free credits each year, good for live or archived content, with permanent access to the content selected. If you haven't used all your credits, they will expire at the end of the year.

Check out the archived webinars and conference presentationsavailable at the AIChE website, and besure to renew your membership to getJust asix free credits good for next year!

## Congratulations to Chicago Section Member's Achievements

#### Dr. Urmila M. Diwekar

#### Energy and Sustainability Award

Award Sponsor(s): Air Products & Chemicals Inc.



Dr. Urmila M. Diwekar is the president and founder of the Vishwamitra Research Institute, a non-profit research organization. From 2002-2004, she was a full Professor in the Departments of Bio, Chemical, and Industrial Engineering at the Institute for Environmental Science and Policy, University of Illinois at Chicago (UIC). Dr. Diwekar was the first woman full professor in the history of UIC's department of chemical engineering.

Previously, she was on the faculty of the Carnegie Mellon University (CMU), with early promotions to both the Associate and Full Professor

levels. In chemical engineering, she has worked extensively in the areas of simulation, design, optimization, control, stochastic modeling, and synthesis of chemical processes. Dr. Diwekar has made major contributions to research on batch distillation, including authoring the first book on batch distillation.

In 1999, Dr. Diwekar founded the Center for Uncertain Systems: Tools for Optimization and Uncertainty (CUSTOM) to foster interactions between various industries, national laboratories and various academic disciplines. She is the author of more than 120 peer-reviewed papers, and over 300 presentations and seminars. She has served as a member of the executive committee, and later as a Director of both the Computers and Systems Analysis (CAST) division and the Environmental division of the American Institute of Chemical Engineers (AIChE). She was also the programming chair for the newly formed Sustainable Engineering Forum. In 2009, she was elected to fellow of American Institute of Chemical Engineers and also to fellow of American Institute of Medical and Biological Engineering. This year Dr. Diwekar will be the first woman to receive the prestigious Cecil Award of Environmental division in the AIChE annual meeting.

#### Harold H. Kung

#### R.H. Wilhelm Award in Chemical Reaction Engineering

Award Sponsor(s): ExxonMobil Research & Engineering Company



Harold H. Kung is professor of chemical engineering at Northwestern University, where his areas of research include surface chemistry, catalysis, and chemical reaction engineering. His professional experience includes work as a research chemist at E.I. du Pont de Nemours & Co., Inc. He is recipient of the P.H. Emmett Award and the Robert Burwell Lectureship Award from the North American Catalysis Society, the Herman Pines Award of the Chicago Catalysis Club, the Japanese Society for the Promotion of Science Fellowship, the John McClanahan Henske Distinguished Lectureship of Yale University, and the Olaf A. Hougen Professorship at the University of Wisconsin, Madison. He is editor of *Applied Catalysis A: General.* He has a Ph.D. in chemistry from Northwestern University.

### **Charles Hemlex**

#### Fluidization Processes Recognition Award



Charles (Chuck) Hemler from UOP is recognized both within UOP and in the industry as an expert in the field of Fluidized Catalytic Cracking (FCC), being involved in several technology innovations and patents in addition to his numerous technical publications in the field. A chemical engineering graduate of the University of Notre Dame, Chuck retired from UOP as a Senior Fellow having spent more than 40 years contributing to research, development, engineering, and sales activities in support of the Fluid Catalytic Cracking (FCC) Process. He joined AIChE in 1964, started full time with UOP in 1969, and in his years at UOP contributed numerous literature articles, book chapters, patents, and technical presentations for the refining industry related to FCC. Later Chuck also served as the Vice-Chairman of the Executive Committee of PSRI (Particulate Solid Research, Inc.) and was one of three presenters when AFPM celebrat-

ed the 70th anniversary of the FCC Process. He is currently retired and resides with his wife in Mount Prospect, Illinois.

#### CHICAGO SECTION

#### Prof. Hamid Arastoopour

#### PTF (Particle Technology Forum) Award

#### Thomas Baron Award



Prof. Hamid Arastoopour, of Illinois Institute of Technology, is a pioneer in the development of the theory and mathematical model for flow of multi-sized particles with varying particle properties distribution, and the required CFO/PBE model and FCMOM (finite-sized domain method of moments) numerical technique. His research is considered to be one of the major contributions to the scale-up of pharmaceutical and energy conversion processes and has played a significant role in shortening the gap between laboratory-scale and commercial-scale processes. He is a highly prolific researcher, authoring more than 100 publications and 13 U.S. patents.

Dr. Arastoopour's pioneering work on the development of a theory and governing equations (model) for the flow of multi-sized particles based

on the kinetic theory, published in the AIChE Journal in 2005, is having a significant impact on the design of processes that include particles such as coal and solid waste gasification and drying and granulation of solid pharmaceutical products. The National Energy Technology Laboratory (NETL) has incorporated his theory and model for the flow of multi-sized particles in the DOE MFIX computational fluid dynamics (CFD) code that is being used for the design of clean coal gasification and separation of CO2.

His recent research on a new and innovative approach for prediction of particle size distribution variation in the fluid/ particle and fluidized bed processes due to particle reaction, agglomeration, and breakage by linking population balance equations (PBE) with CFD represents a major step in enhancing our ability to design and simulate fluid/particle systems based on a fundamental approach. His approach includes using the method of moments in a finite-sized domain using a complete set of orthogonal functions (FCMOM). In his 2013 publication in Chemical Engineering Science, he demonstrated that his approach provides a highly efficient computational system.

## UOP's Meagan Lewis elected to AIChE 2016 Board of Directors



Meagan Lewis is a Product Line Manager in the Catalyst, Adsorbents, and Specialties group at UOP, a Honeywell Co. She works closely with UOP's manufacturing plants, sales team, and development groups to ensure on-time delivery and quality products for the olefins, detergents, and SPA product lines. Meagan joined UOP in 2008, and has held roles in project management and field service for the Technical Services group. Meagan received her BS in chemical engineering from the Univ. of Illinois at Urbana-Champaign, and her MBA from Loyola Univ., Chicago, where she graduated with honors.

During her professional career, Meagan has been a very active member of AIChE and has held several leadership roles on the global and local levels. Most recently, Meagan was the Meeting Program Co-Chair for AIChE's 2014 Spring Meeting in New Orleans. At that same meeting, she received AIChE's 2014 Herb Epstein Award for Technical Programming in recognition of the work she did to expand the Young Professionals Committee's technical programming and collaboration within the Institute. Other roles that Meagan held include: treasurer of the Young Professionals Committee (YPC); chair of the YPC Technical and Social Programming subcommittee; and service on the AIChE Chicago Section's YPC Membership and Programming committees. Meagan is also a member of the Fuels and Petrochemicals Div.

The chemical engineering world is lucky to be filled with experienced and knowledgeable experts who have solved many of the world's challenges. Unfortunately, many of those expert engineers are closing in on retirement age, and it is well known that there is a bi-modal distribution of age in our profession and in AIChE membership. It is critical that we work to minimize the gap in expertise and inspire the next generation of engineering professionals. Additionally, we need to continue to capture the interests of young professional and mid-career engineers to bridge the gap of knowledge. As a director of AIChE, I plan to motivate current and potential chemical engineers by:

building upon the AIChE brand to recruit members worldwide, particularly where local sections are not available

identifying and aligning the Institute's objectives with the professional needs and communication styles of mid-career and young professional engineers

promoting modern methods of knowledge transfer between less-experienced engineers and the experts in our profession

continuing efforts to inspire K–12 students to pursue careers in engineering.

## Young Professionals (YP) Holiday Social Hour

AIChE-Chicago YPC is organizing a holiday social hour for December. We will meet at 6:15 PM on December 16th, 2015 at Brick House Tavern + Tap, located in Downers Grove, IL. If you would like to attend, please contact Fernando Franco,<u>fernandofranco@outlook.com</u>, for more details. Everyone is welcome.

Best wishes in this holiday season,

**Programming Committee** 

YPC AIChE-Chicago

#### **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 <u>April 1, 2016</u>

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

Link to Memorial Tributes (National Academy of Engineering) about Ernest W. Thiele



Emertu Thiele

## **Upcoming AIChE Conferences and Webinars**

Chicago Section Monthly Meeting						
January 20, 2016	AIChE Chicago January Monthly Meeting—Joint with AC					
March 3-4,2016	8th Midwest Regional Conference, IIT, Chicago					
	AIChE Conferences					
January 5-7, 2016	International Conference of Biomolecular Engineering IC- BE, Singapore					
February 29-March 2, 2016	FDA-AIChE Workshop on Adopting Continuous Manufa					
March 3-4,2016	8th Midwest Regional Conference, IIT, Chicago					
April 10-14, 2016	2016 Spring Meeting and 12th Global Congress on Pro- cess Safety, Houston, TX					
June 7-9, 2016	2016 Process Development Symposium, Boston, MA					
AIChE Webinars						
January 13, 2016	Battery Basics					
January 20, 2016	Molecular Simulations of Surfactants, Lipids, and Polymers					
January 27, 2016	When the Only Thing Consistent About Your PHAs Are In- consistencies					

#### PRELIMINARY DAILY PROGRAM:

8:30–9:15 a.m. Engineering Expo

Meet with current engineering students and see some of their projects

9:15–10 a.m.

Presentation on Engineering Careers Learn about how engineers contribute

to all aspects of society

10–10:45 a.m. Team Building Exercise Work with other students to complete a hands-on engineering-related task

10:45–11:30 a.m.

#### **Engineering Panel Session**

Learn about the day-to-day activities of practicing engineers and engineering students; time to ask your most burning questions

> 11:30 a.m.–12:30 p.m. Engineering Lunch

An opportunity for one-on-one discussions with engineering professionals and students

> 12:30–1:30 p.m. Keynote Speaker

Dr. Pete Ludovice Comedian and Engineering Professor at Georgia Tech

1:30–2:30 p.m. Tours of the Illinois Tech campus

Only 200 students are accepted for each day and spaces fill up fast!

#### Questions? Please contact:

HOSTED BY

Ellen Kloppenborg at Ellen. Kloppenborg@Honeywell.com or 847.391.2792.

#### Register online at: http://tinyurl.com/hsoaichemrc16

ILLINOIS INSTITUTE OF TECHNOLOGY

## Engineering Career Day

### for High School Students

March 3 or 4, 2016 Illinois Institute of Technology Hermann Hall

Sponsored by the American Institute of Chemical Engineers and IIT Armour College of Engineering



T Armour College of Engineering



## AIChE Chicago Section Scholarship Fund

My fellow AIChE members;

Someday we shall all want to retire and enjoy the fruits of our labors. Toward that goal, we need to plan and train our replacements to follow our example. You can do that with little effort by encouraging the next generation of engineers to enter and continue their education in our field and practice chemical engineering as a professional.

For this purpose, the AIChE Chicago Section has established a Scholarship, available to currently enrolled or planning to enroll in an ABET credited college or university of their choice in a chemical engineering discipline. The scholarship is also available to the immediate family of AIChE Chicago section members.

By contributing to the principal of the Scholarship Fund, which is separate from the section operating funds, you can help us make that happen. We, as a technical society, need to continually find and encourage the talented students to become engineers and bring them into our profession. Small contributions now will pay big dividends in the future.

Please consider a donation to the AIChE Chicago Section Scholarship Fund by:

- a. funding immediate need,
- b. contributing to the endowment of the scholarship program, or
- c. both.

Students or parents affiliated with the AIChE Chicago local section (students attended a high school or attending an ABET credited college or university in the serving area and participant parents in the local section events) can apply for this scholarship. The total amount of the scholarship for each individual is a maximum of \$2000 over four (4) years of enrollment, which needs to be renewed annually.

To contribute, please make your check payable to AIChE Chicago Section Scholarship Fund, and mail it to:

#### AIChE Chicago Section Scholarship Committee

13964 Doral Lane

Homer Glen, IL 60491

aichechicago@gmail.com

or:

Visit <u>http://www.cvent.com/d/j4q7yv/4W</u> and click on the" Donate" button, and make your contributions using a credit card.

When making a contribution, please provide your name and address. The section will send a thank you letter to document your contribution to a AIChE, a nonprofit organization under the IRS code at section 501(c)3 (Tax Deductible).

Thank you in advance for your consideration and contribution.

Very truly yours,

Azita Ahmadzadeh

AIChE Chicago Section Scholarship Development Team

## **Scholarship Program**

#### I. PURPOSE

One of the purposes of the Chicago Section as stated in the By-Laws is to foster engineering education. The scholarship program is one way this is accomplished.

#### II. ELIGIBILITY

Eligibility for a scholarship is limited to persons who are:

- 1. Undergraduate or graduate student membership shall not be sufficient qualification for either the student member or a member of their family, unless they have attended at least 4 meetings in one AIChE-Chicago programming year (Sept-May).
- Closely related to an AIChE Chicago Section member in good standing at the time of application. "Closely related" means: A) Children and grandchildren, whether natural, adopted, stepchild, or ward; B) Parents; or, C) Legal spouses.
- 3. High school seniors, who are applying for the scholarship, should demonstrate their interest in the chemical engineering practice and discipline.
- 4. Beginning or currently engaged in a course of study leading to a first degree in an ABET (or equivalent) accredited chemical engineering program.
- 5. The recipient of no more than (3) AIChE Chicago Section scholarship awards prior to this year's application.

#### III. THE AWARD

- 1. Each award shall be in an amount of \$2000 for those who are in a Chemical Engineering program over four (4) years.
- 2. The maximum number of awards to be made in any AIChE Fiscal Year (FY) shall be set by the Board of Directors (BOD) no later than March 31 of each FY.
- 3. The Selection Committee shall advise the BOD of their recommendations and the BOD shall have the authority to approve all or reduce the number of awards.

#### IV. APPLICATION

1. Application for the scholarship must be made using the application form and in the manner prescribed by the Selection Committee.

- 2. Each application packet is required to include a personal statement requesting the scholarship award as well as academic and personal references.
- Applications must be received by the AIChE Chicago Section not later than March 1<sup>st</sup> for the next academic year.

#### V. SELECTION

- 1. The AIChE Chicago Section Scholarship award is intended to be competitive.
- 2. Evaluation of applicants will be based on the information provided in the application materials.
- 3. Applicants will be ranked according to selection committee evaluation criteria, which are mainly based on the applicant's credentials.

#### VI. NOTIFICATION

Notice of any award, or decline to award, will be sent by USPS first class mail or electronic mail to all applicants no later than May 30th.

#### **VII.** ADMINISTRATION

- 1. There shall be a Selection Committee of five members established and maintained for the purpose of evaluating applicants and determining awards to be made.
  - A. The AIChE Chicago Section Chair shall be a member, and shall appoint the Selection Committee, and preside over the Selection Committee meeting.
  - B. The Immediate Past-chair shall be a member, and serve as the Secretary of the Selection Committee.
  - C. The AIChE Chicago Section Board of Director (BOD) shall annually select, by majority vote, one section member to replace the longest serving member of the Selection Committee.
- 2. No member selected by the BOD shall serve more than three (3) consecutive years, except to serve an unexpired term.

#### VIII. RULES

- 1. The AIChE Chicago Section Secretary will verify the eligibility of each applicant.
- 2. All scholarship awards, including renewals, will be made competitively, based on the information provided in the application.

- 3. In the event an award is declined, the Selection Committee may, at its option, make an award to the applicant having the next highest evaluation.
- 4. All AIChE Chicago Section scholarships must be used in the first academic year following the award.
- 5. The awards made shall be presented, on behalf of the recipient, to the ABET accredited engineering institution. If the studies or admission of the recipient of an AIChE Chicago Section Scholarship are delayed for any reason the Chair of the section must be notified within 30 days. Failure to do so may disqualify the applicant for the following years.
- 6. The AIChE Chicago Section Scholarship is to be independent of any and all other awards, scholarships, and/or grants-in-aid accruing to the benefit of the student.
- 7. In making any award the committee shall not discriminate against any individual on the basis of any legally protected status under the applicable laws of the United States of America.
- 8. All recipients and alternates are subject to these same rules.

## 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 sections scholarship program. Applications are due <u>March 1st</u>. Please see rules for eligibility in above pages.

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

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

DECEMBER NEWSLETTER

- Access to CareerEngineer—a comprehensive job site tailored to chemical engineers ۲
- Access to the AIChE eLibrary—a wealth of information from Knovel Life Sciences and the McGraw-Hill • AccessEngineering Library collections

## **View COMPLETE benefits**

### Visit our website!

Be sure to check out our website to make sure you have the latest information on meetings and events! Miss a meeting? You can even find old newsletters and past events!

If you want to help us improve our website, please give us feedback, or even better, volunteer to help us with the website!

Thank you for being part of AIChE Chicago!

## www.aiche.org/Chicago

AIChE Chicago is now on Facebook and LinkedIn! Like us on Facebook www.facebook.com/AIChEChicagoSection

Join our group on LinkedIn!



Renew Membership



#### AIChE Senior Membership

If you are currently a member of AIChE, you may want to consider becoming a Senior Member. Senior Members have the privilege of holding office, voting on amendments to the Constitution, nominating and voting for officers and directors. Being a Senior Member is a prerequisite for becoming an AIChE Fellow. A member may, after regular application and election, become a Senior Member. A Senior Member who has satisfied the Fellow Bylaw requirements and has demonstrated significant accomplishments in, and contributions to, the profession may be nominated for consideration to be elected Fellow.

#### Senior Member FAQ

#### Q: What benefits are there in becoming a Senior Member?

A: Senior members may hold office in the Institute and vote on amendments to the AIChE Constitution. Four year regular members may also do this.

#### Q: Are dues the same or higher than for a Regular Member?

A: They are the same.

#### Q: Is Senior Member status at AIChE the equivalent of Chartered Member at IChemE?

A: No. Chartered Engineer is more like Professional Engineer.

#### **Q**: What is the definition of "proficient in chemical engineering"?

A: As defined by the AIChE Constitution, chemical engineering is the profession in which a knowledge of mathematics, chemistry, and other natural sciences gained by study, experience, and practice is applied with judgment to develop economic ways of using materials and energy for the benefit of mankind. To be proficient in chemical engineering a practitioner must be engaged in the profession for a sufficient period to demonstrate that he/she can apply chemical engineering skills to industrial applications and would typically have some budget authority, supervise or train other chemical engineers or those in related fields, or be responsible for approving the work of others.

# Interested in Senior Membership? Complete the Senior Membership Upgrade form today!

http://www.aiche.org/sites/default/files/docs/pages/7867 SeniorMemUpgradeFormreviseFallwritable12.13.12.pdf

Officers and Contact Information				
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Chair Elect	Tom King Thomas.king@honeywell.com			
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### AICHE CHICAGO SECTION

American Institute of Chemical Engineers

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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.

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

AICHE Publicity Committee	Academic (non-AICHE)		Company		Recruiters		
Fees	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 <u>http://www.cvent.com/d/9cq5pw/4W</u>



Student and AICHE Member Related Postings are Free.