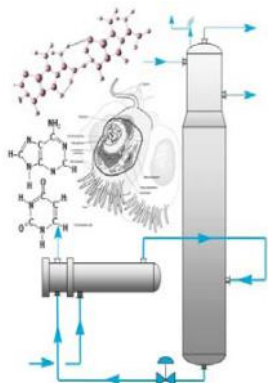


# December Newsletter

Chicago Section

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

December 2014



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## December Social

Thursday, Dec 18th, 6:30-9:00 P.M.  
*Kona Grill*  
3051 Butterfield Road, Oak Brook

Nothing spreads the holiday cheer like good friends, good food and good drinks. Join us for our the last event of 2014! Food & Drinks will be individually billed.

Please RSVP to [nguzman@bakerrisk.com](mailto:nguzman@bakerrisk.com) by Wed, Dec 17th.



Renew your AIChE Membership  
by 12/31/2014!

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

# Chair's Corner

## Seasons Greeting from AIChE Chicago

The AIChE annual meeting has always been a great event that I look forward to attending and this recent one was no exception. To be part of such community from all over the world is amazing by itself and to feel the passion in many individuals energizes me year after year. This year was even more extraordinary since three local members were honored who happened to be all from UOP, the company I am part of.



These individuals are **Laura Leonard**, **Frank Zhu** and **Kurt Vanden Bussche**.

### *The Industrial Progress Award*

This award recognizes significant contributions by an individual under the age of 40 — working in industries served by chemical engineers.



#### **Ms. Laura E. Leonard**

Principal Development Specialist in Olefins and Detergents Development, UOP LLC, A Honeywell Company

*“For a consistent track record of technical leadership and innovation, translating fundamental knowledge into commercially relevant engineering solutions.”*

**L**aura Leonard's work has impacted multiple refining and petrochemicals technologies, with major contributions to light olefin production, clean fuels technology, and integrated refining-petrochemical complexes. In 2010, Leonard became the senior technology specialist for UOP's Oleflex™ technology, a catalytic dehydrogenation process for the production of light olefins from their corresponding paraffins. Her leadership on the Oleflex™ process included technology renewal efforts to enhance process performance by combining fundamental understanding of solids flow and catalyst chemistry. Her effective communication, intelligent risk-taking, and leadership of diverse cross-functional teams impact all 17 announced Oleflex™ units around the world. She has also contributed to the commercialization of UOP's SelectFining™ process (a selective FCC naphtha hydrodesulfurization process), and to innovative catalyst and process solutions to the problem of gasoline desulfurization without significant loss of product octane.



## *The Energy and Sustainability Award*

*Sponsored by Air Products*

This award recognizes individuals in industry, teams, or entire companies who have accomplished significant energy savings, improved the sustainability of chemical processes, or developed innovative technologies for energy generation or delivery that hold significant promise of favorable economic or environmental impact.



### **Dr. Frank (Xin) Zhu**

Senior Technology Fellow, UOP LLC, A Honeywell Company

*“For the development and application of novel process design and operation optimization methodologies, and computational tools to achieve significant energy savings in the refining and petrochemicals industries.”*

**F**rank Zhu's practical methods to improve process design and operational performance have been implemented in refineries and petrochemical complexes worldwide. During his tenure at UOP, Zhu has applied those techniques to numerous projects that achieved typical energy savings of 20–30% — or about \$20–30 million per year. He recently applied human factors principles to simplify process design and operations management, which is expected to reduce human errors during operation. He has numerous publications, including the recently published book “Energy and Process Operations for the Process Industries” (AIChE and Wiley, 2013). He has 17 issued U.S. patents, 31 applications pending, and 59 patents pending in foreign countries. He earned his PhD in chemical engineering at the University of Adelaide.

Also at the AIChE Gala, the Chairman and Chief Executive Officer, Archer Daniels Midland Company, **Patricia A. Woertz** was honored in celebration of excellence in advancing diversity in the engineering profession. Honorees and their companies were being recognized for their distinguished leadership in strengthening diversity in the workplace.



### **Patricia A. Woertz**

**Chairman and Chief Executive Officer, Archer Daniels Midland Company**

Patricia A. Woertz is chairman of the board of directors and chief executive officer of Archer Daniels Midland Company. She joined ADM as CEO and president in April 2006.



## CRE Practice Award

Catalysis and Reaction Engineering Practice Award recognizes individuals who have made pioneering contributions to industrial practice of catalysis and chemical reaction engineering.



### Dr. Kurt Vanden Bussche

R&D Director, Materials Characterization, UOP LLC, A Honeywell Company

*"For his technical achievements and leadership in industrial practice of catalysis and CRE, particularly for development of innovative catalyst and reactor technologies and for his contributions to the profession through leadership within ISCRE Inc."*

**K**urt has established a track record of developing step-change solutions in new and mature areas by applying CRE fundamentals in design and scale-up of technologies, in areas as diverse as Polymer Electrode Membrane (PEM) fuel cells, hydrogen peroxide synthesis, methane conversion, naphtha reforming, fluid catalytic cracking and design of novel catalysts and reactors, which is evidenced by his 14 peer-reviewed scientific articles and 61 US patents. Kurt made pioneering contributions to the field of process intensification, with emphasis on miniaturized equipment, including integration of compact H<sub>2</sub> reformer and purification with PEM fuel cells and micro-mixing. Kurt is currently the President of ISCRE-Inc., where his area of emphasis is the improved coordination of global CRE activities, collaborating with the European and Asian sister organizations APCRE and WPCRE.

Another great local news is that **Edith Flanigen**, a leading chemist from Honeywell's UOP, was presented the National Medal of Technology and Innovation by President Barack Obama in recognition of her achievements in science and technology and her lasting contribution to America's competitiveness.



Please join me in congratulating these individuals that help Chicago play its strong role in the advancement of technology and in particular the chemical industry.

This is all good news to end this year and start the new one, happy holidays to all and hope to see you soon at the next local gathering.

Please send us your company or other local news that you think it should be included in the local section newsletter.

Finally I would like to include another almost [a century old article](#) related to AIChE which I think many would enjoy reading. (page 10-12 of the current issue)

*Azita Ahmadzadeh*

AIChE Chicago Chair person  
UOP, A Honeywell Company

## **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, 2015](#)**

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](mailto:james.simnick@bp.com)

[Link to Memorial Tributes \(National Academy of Engineering\) about Ernest W. Thiele](#)



*Ernest W. Thiele*

## **January Meeting Information**

### **“Bioinspired Sponges: Functional Metal-Organic Frameworks (MOFs)”**

**Dr. Omar Farha**

#### **Abstract:**

Metal–organic frameworks (MOFs) are an emerging class of solid-state materials built from metal-based nodes and organic linkers. They exhibit permanent porosity and unprecedented surface areas which can be readily tuned through coordination chemistry at the inorganic node and organic chemistry at the linkers. The high porosities and surface areas are highly attractive in the context of chemical threat filtration and decomposition as well as other catalytic processes. As exemplified by many catalytic enzyme assemblies in nature, site-isolation is a powerful strategy for performing catalytic reactions to synthesize complex molecules in an efficient way. MOFs provide an exciting platform for deploying different homogenous catalysts as building blocks. Importantly, the catalytically active moieties in these materials can be made in a site-isolated fashion and the cavities surrounding them can be engineered to conceptually mimic enzymes. This talk will address the catalytic activity of few examples of such MOFs

#### **Biography:**

Omar K. Farha is a Research Professor of Chemistry at Northwestern University, Distinguished Adjunct Professor at King Abdulaziz University, and President of NuMat Technologies. His research accomplishments have been recognized by several awards and honors including an award established by the Northwestern University Department of Chemistry in his honor: the Omar Farha Award for Research Leadership “awarded for stewardship, cooperation and leadership in the finest pursuit of research in chemistry” and given annually to an outstanding research scientist working in the department. His current research spans diverse areas of chemistry and materials science ranging from energy to defense related challenges. Prof. Farha has been named a “Highly Cited Researcher” by Thomson Reuters. His research accomplishments have been highlighted by numerous organizations including Chemical & Engineering News, Chemistry World, Chemistry Views, Science, Nature, Nature Chemistry, Fortune Magazine, Huffington Post, Chicago Tribune, The New York Times, The Department of Energy-EERE, MSNBC, Bloomberg Business Week, WGN Radio, Chicago Sun-Time, BBC Radio and many others.



**Registration information coming soon!**

The January Meeting will be held joint with ACS Chicago.



## November Meeting Summary

About 60 members attended the November monthly meeting. Before the technical presentation, Co-Vice Chairs of Programming Mike Toraason and Jesse Calderon spoke about their shared duties and responsibilities on the AIChE Chicago Officer Board. Speaker Dr. Robert Kleinberg from Schlumberger spoke on “Principles and Methods of Horizontal Drilling & Hydraulic Fracturing.” Dr. Kleinberg’s speech even included some background and of fracturing and geologically why areas of the US have oil repositories. Attendees were very interested in the meeting’s topic and several attendees stayed after the meeting ended for a chance to ask more questions.

For larger photos, visit our [Picasa web album](#) or go to our [Facebook Page!](#)



## *Young Professionals News*

### Young Professionals Panel for UIC/IIT Students Summary

In November, the Young Professionals group worked with the UIC chapter of AIChE to host an outreach event for college students. A panel of 10 YPs answered students' questions about job searching, the transition from college to industry, career paths, and more. It was a great opportunity to introduce many students to YPC, and the students were equally appreciative of our time and efforts!





## ***Upcoming AIChE Conferences and Webinars***

<u>December</u>	
7-Dec	<a href="#"><u>The 2nd IBN International Symposium</u></a>
15-Dec	<a href="#"><u>2014 Global Summit on Process Safety</u></a>
<u>January</u>	
11-Jan	<a href="#"><u>5th ICBE—International Conference on Biomolecular Engineering</u></a>
<u>February</u>	
9-Feb	<a href="#"><u>2015 AIChE CCPS Asia-Pacific Conference</u></a>
<u>March</u>	
1-Mar	<a href="#"><u>4th International Conference on Accelerating Biopharmaceutical Development</u></a>
12-Mar	<a href="#"><u>7th Annual AIChE Midwest Regional Conference</u></a>
<u>April</u>	
26-Apr	<a href="#"><u>2015 Spring Meeting and 11th Global Congress on Process Safe-</u></a>

## ***Upcoming Chicago Local Section Meetings***

<i>Friday, Jan. 23, 2015</i>	<i>Dr. Omar Farha</i>
<i>February Meeting TBD</i>	<i>TBD</i>
<i>Thurs, Mar 12, 2015</i>	<i>Monthly Dinner Meeting Held in Conjunction with 7th Annual Mid-</i>

## Defining Chemical Engineers, A Perspective

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CHEMICAL AGE

Vol. 39, No. 9

### The American Institute of Chemical Engineers

A Summary of Its Accomplishments in the Establishment of the Professional Status of the Chemical Engineer and a Statement of Its Influence in the Promotion of Chemical Engineering Education and Chemical Industry

By Dr. John C. Olsen

Secretary, American Institute of Chemical Engineers

A HUMAN organization or institution should be able to show that it serves some useful purpose in society. If it cannot do so it should be disbanded. Undoubtedly Dr. Osler's suggestion that a man should be chloroformed after he has passed the age of usefulness might be applied often with profit to institutions which have outlived their usefulness. Respectable or even honored ancestry should not be made to serve as an excuse for present day inactivity. The question proposed by the editor of CHEMICAL AGE, "What Has the American Institute of Chemical Engineers Accomplished?" certainly deserves an answer.

Richard K. Meade, in an article in the July, 1919, issue of CHEMICAL AGE has given an excellent account of the extended discussion which preceded the organization of the American Institute of Chemical Engineers. The objects sought by the organizers were so clearly set forth in that discussion that very little change has been found necessary in the constitution or methods of operation of the Institute. The most prominent of the purposes of the organizers was recognition of Chemical Engineering as a profession and raising ethical standards among chemists.

#### Strictly Professional Societies Are Necessary

As human society is organized the establishment of a profession is of very great importance. The public must not only recognize the special qualifications which constitute a Physician, for instance, but the members of this profession must be conscious of certain very clearly defined obligations to the public and of limitations upon personal conduct. It was vital to the development of chemical industry that the special qualifications which enable a man successfully to design, construct or operate chemical plants should be clearly set forth and recognized by business men and the public in general. There were and still are many who have been trained as chemists who do not recognize the existence of the chemical engineer as distinguished from chemists generally.

#### Quibble Over the Difficulty of Distinguishing the Practitioner

One objection strongly urged against forming an organization of chemical engineers was that it would be found impossible to define chemical engineering or make an intelligent distinction among applicants for membership. The anticipated insuperable difficulties

have not materialized. Under the able leadership of Dr. Arthur C. Langmuir the Membership Committee has generally found very clearly marked characteristics by which the designing, the constructing, or the operating chemical engineer can be differentiated from the analytical, research or other class of chemist.

It was inevitable that there should be individual cases where education or experience was such that it was found difficult to draw the line. Such cases have not been found numerous. That the distinction is not an imaginary one is shown by the frequently heard remark by those who attend meetings of the Institute that its membership, its programs and discussions are distinctly different from those of other chemical societies. Educational authorities by this time have generally recognized the chemical engineering profession by the introduction of chemical engineering courses in all the leading universities and technical schools.

#### Standardization of Chemical Engineering Education

Having established the process of selection of the chemical engineer by an examination of a man's education and practical experience and success, it was a logical step that the Institute should devote some of its energies to a study of chemical engineering education in universities and technical schools. A committee on this subject was appointed at the first meeting of the Institute. Reports have since been made by this Committee semi-annually. Some of these have been very extensive and taken together constitute probably the most important contribution to the literature on this subject.

The last report rendered by the Committee under the chairmanship of Dr. Arthur D. Little showed a truly astonishing lack of uniformity in the courses prescribed by the various schools offering courses in chemical engineering. It is evident that there has been very little cooperation or discussion by those drafting these courses. The result has been wide variations in the training and qualifications of the chemical engineering graduate and what is still more serious, he has been in many cases very poorly qualified by education for his professional work. This situation has no doubt arisen from the fact that there has been no organization which could take the initiative and leadership in bringing about uniformity and raising the standard in the educational institutions.

The American Institute of Chemical Engineers occupies an excellent strategic position from which it



DR. JOHN C. OLSEN  
Secretary, American Institute of Chemical Engineers



September, 1922

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can, with fair prospects of success, exert its influence to bring about greater uniformity and improvement in the courses offered. As the membership of the Institute is composed very largely of chemical engineers occupying responsible positions, who must employ the young graduate chemical engineer and observe his success or failure, the opinion of the members of the Institute as to the results of educational processes must be excellent. The various reports of the Committee on Chemical Engineering Education have expressed the judgment of the Institute on many phases of chemical engineering education.

A new committee soon will be appointed which will attempt by cooperation with educational authorities to secure modification of existing courses in order to bring them into closer harmony with the views of the Institute. An attempt also will be made to prepare a list of the universities and colleges which offer approved courses in chemical engineering. The work of this committee undoubtedly will lead to substantial improvements in educational methods which in turn will increase the efficiency and success of the chemical engineering graduates. The American chemical industry will profit greatly by an advance in this direction. The improvement in the quality of the graduates of chemical courses since the introduction of courses in chemical engineering has been very marked during the last decade or two. It may confidently be expected that quite as marked an improvement will be shown as the result of the improvement and standardization of chemical engineering courses.

#### Code of Ethics

Another activity of the Institute which is of quite as great importance as the educational qualifications of chemical engineers, is concerned with the ethical questions peculiar to the profession. These, broadly speaking, may be considered from two points of view. One of these concerns the character of the individual chemical engineer; the other involves the ownership of patent rights, chemical processes and methods. The personal honesty and trustworthiness of the individual chemical engineer is of the greatest importance on account of the confidential information of great value which he often has in his possession. On the other hand it is equally vital to the welfare of the profession in general as well as to the individual chemical engineer that he should understand clearly his own property rights in this confidential information and the processes which he may develop. While the general principle is well recognized that every man is the rightful owner of the product of his own labor, whether physical or mental, when other men have cooperated with him the determination of ownership is not always a simple matter.

In drafting a Code of Ethics, the American Institute of Chemical Engineers has endeavored to state the principles governing these and other questions of ethics which arise in chemical engineering work. That the Code was carefully drafted is indicated by the fact that no amendments have been found necessary. The enforcement of the Code insofar as the members of the Institute is concerned, is in the hands of the Membership Committee and the Committee on Ethics. In passing on the qualification of new members, the Membership Committee must assure itself that the conduct of each candidate for membership is in accordance with the Code of Ethics. Candidates for membership are, at times, denied admission to the Institute on this account as well as because of lack of educational requirements and successful experience in chemical engi-

neering work. Infractions of the Code of Ethics by members are taken care of by the Committee on Ethics. The fact that no case of this kind has arisen indicates that the Membership Committee has done its work with great care.

The opportunity to visit chemical factories has often been accorded to the Institute as a body on account of its Code of Ethics and the rule by which every member of the Institute pledges himself not to visit a plant in the same line of manufacture as his own without declaring this fact to the management and offering the same privilege of visiting his own plant.

No direct means have been found for enforcing the principles of the Code of Ethics on non-members of the Institute. It is believed, however, that the indirect influence toward raising the ethical standards of the chemical engineering profession has been considerable, and that this influence will increase with the growth of the Institute, and that its Code of Ethics will be accepted more and more as the expression of the recognized ethics of the profession.

#### The Transactions

Another important contribution of the Institute to chemical industry has been the publication of papers on chemical engineering topics. This has been accomplished by offering a hearing and opportunity for discussion at the meetings of the Institute to chemical engineers, whether members of the Institute or not, who are ready to present papers on chemical engineering subjects. An opportunity is afforded in this way to present such papers before a group of experts whose criticism is of great value. Papers on other phases of chemistry have not been accepted for reading or discussion. Papers read, with the discussion, have been published in bound volumes of transactions published annually or semi-annually. These volumes contain a very valuable collection of papers on a great variety of chemical engineering subjects. A large number of these papers also are published in various trade journals, thus giving wide publicity to the subjects presented and to the authors.

#### General Activities

The Institute has endeavored to influence legislation along lines favorable to the chemical industry through its Committees on patents, on the metric system, licensing of engineers and on other matters as occasion has arisen. When the Federated American Engineering Society was organized, the American Institute of Chemical Engineers became a member of this society, and in this way has supported this organization in its endeavor to make the influence of the technical man felt in national and state affairs. This influence has no doubt been of very great benefit to the nation as well as to the engineering profession.

The American Institute of Chemical Engineers is the only national chemical society which is represented in this organization. The influence of the trained engineer in our national and civic life will undoubtedly increase very greatly in the near future and it is of great importance that the chemical engineer should contribute his share to this important movement.

#### The Engineering Professions

The increasing appreciation of the importance of the engineering professions is shown by the very rapid increase in enrollment of engineering students at our universities and technical schools. The large number of technically trained college graduates will serve not only to fill the increasingly numerous positions of responsibility in our industrial establishments, but also will furnish for public service, men who have had the

exact training of the technical professions. Legislation with reference to our industrial problems undoubtedly will be favorably influenced by this change in the character of our public men.

#### Social By-Products

A very pleasing feature of the meetings of the American Institute of Chemical Engineers, which cannot be said to have been anticipated by the founders of the society, has been the close personal friendships which have arisen between a great many of the members as well as in many cases members of their families. This undoubtedly has been made possible by the careful selection of members, the relatively small membership and the large percentage of members who attend each meeting.

This personal acquaintanceship no doubt has made the meetings more pleasant socially as well as more profitable professionally. While the percentage of the total membership in attendance at meetings is large, the total number has not been large enough to make the meetings unwieldy. It has been possible, therefore, to hold meetings in relatively small cities particularly where some interesting chemical engineering development could be seen and studied.

#### Membership Growth

Considerable discussion has arisen at times as to whether it is desirable for this society to grow until its membership has reached many thousands. Undoubtedly many of the advantages of a small group of well-acquainted members would then be lost. Efforts have been made to amend the constitution so as to provide for more grades of membership in order to secure a more rapid growth in membership. All such propositions have been voted down. The present membership is, therefore, convinced that the advantages of a relatively small society of carefully restricted membership outweigh the advantages of a large society of less closely affiliated members.

#### The Trend of Chemical Segregation

The general tendency in the chemical profession seems to be to maintain a number of smaller societies composed of specialists in a well-defined division of chemistry, with the rapid increase in specialized knowledge in every branch of chemical research. This tendency will, no doubt, become more and more accentuated. The formation in a large general society of divisions of such specialists seems not to have fully satisfied their professional requirements as well as such an organization as the American Institute of Chemical Engineers.

The necessity arises at times for action by the entire body of chemists of all classes. The need might well be met by an organization such as the Federated American Engineering Society. The various chemical societies have on a number of occasions shown the inclination and the ability to cooperate when common action seemed necessary.

It is to be anticipated that the American Institute of Chemical Engineers will continue to grow in membership with the expansion of chemical industry. The qualifications prescribed by its constitution are the only limitations upon its growth in membership and there are undoubtedly many chemical engineers fully qualified for membership who are not at present members. The present membership is firmly convinced that the maintenance of these qualifications is necessary in order that the usefulness of the Institute shall continue to grow. It has been criticized for being too exclusive, but specialists in other branches of chemistry have the same opportunity to organize and establish similar professional standards.

#### Standardization of Chemical Equipment

The Institute will, no doubt, undertake new activities as their desirability becomes evident. One line of professional work for which there seems to be a necessity is the preparation of standard specifications for chemical engineering apparatus. Those which have so far been made seem to have been formulated by men who were not chemical engineers, and in some cases were prepared for entirely different purposes or uses than those which the chemical engineer has in mind. The drafting of such specifications can be satisfactorily made only by a body of specialists organized as a professional society such as the American Institute of Chemical Engineers.

#### Government Cooperation with Chemical Industry

Following the establishment of the chemical division of the Bureau of Foreign and Domestic Commerce and the appointment of Carl R. DeLong, formerly of the U. S. Tariff Commission as head, comes the appointment by Secretary of Commerce Hoover of an advisory committee in the field of heavy chemical manufacture. The duties of the committee will be to consult with Mr. DeLong regarding the manner in which the new division can best serve the industry in promoting the export trade in heavy chemicals.

The committee comprises: Chairman, Henry Howard, Grasselli Chemical Co., Cleveland; S. W. Wilder, Merrimac Chemical Co., Boston; E. M. Allen, president Mathieson Alkali Works, New York; Robert T. Baldwin, National Aniline & Chemical Co., New York; Dr. Charles L. Reese, E. I. du Pont de Nemours & Co., Wilmington; A. G. Rosengarten, Powers, Weightman & Rosengarten, Philadelphia; Lancaster Morgan, General Chemical Co., New York, and H. H. Dow, Dow Chemical Co., Dow, Mich.

At the initial conference Aug. 30, the general question of foreign trade in heavy chemicals was discussed by Mr. Hoover, who with Mr. DeLong and Dr. Julius H. Klein, director of the Bureau of Foreign and Domestic Commerce, explained to the chemical men the facilities of the Department of Commerce, and the efforts being made to promote foreign trade. Mr. Hoover declared that the new chemical division is willing to assist the industry in any way they suggest, and pointed out that the extent of service rendered will be measured by the co-operation extended by the industry.

What is going to happen in industry in the next ten or twenty years, following the great upheaval in the human mind in the war we have been through? There is going to be a chemical development in industry as great as the mechanical development. The man who does not get his plant under chemical control is going to be left behind. Now, to get your plant under chemical control is not a difficult thing. It does not require a college education but it does require brains. A college education is not brains; it is an index to knowledge, but a lot of men have that index and do not know how to use it. A lot of men who do not have a college education have brains.

What you want in your mills to get advantage of this great wave of chemical development, is to keep the chemist under your control. Put your young chemist in the laboratory and tell him what you want and make him produce it. He can do it, but you will find your chemist has no imagination. Tell him what you want to find out, the wastes there are that you want to disclose, and he can do it for you. That is practical chemical control.—K. J. Herman, president, K. J. Herman Co., Chicago, Ill.



## ***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](mailto:aichechicago@gmail.com)

or:

Visit <http://www.cvent.com/d/j4q7yv/4W> 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).
2. 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.
3. 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**

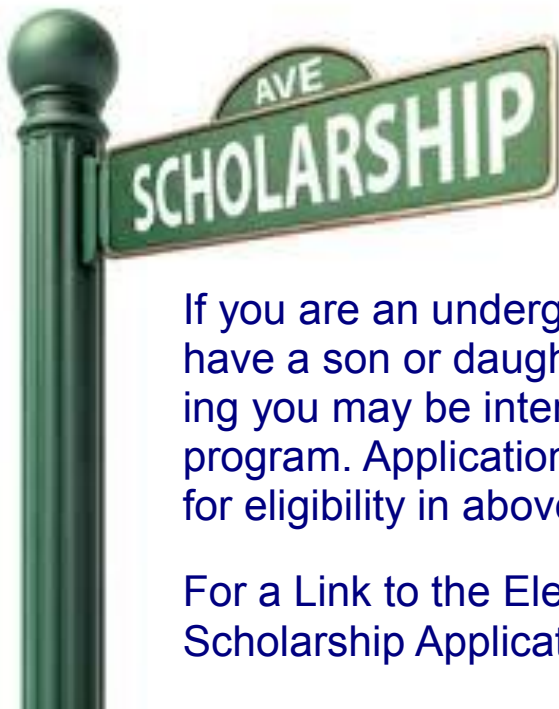
1. There shall be a Selection Committee of five members established and maintained for the purpose of evaluating applicants and determining awards to be made.
  - A. The AIChE Chicago Section Chair shall be a member, and shall appoint the Selection Committee, and preside over the Selection Committee 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 **March 1st**. 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>



# AIChE<sup>®</sup>

## MIDWEST REGIONAL CONFERENCE

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- Energy and Sustainability
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## *AIChE Chicago has a new look!*

We are pleased to reveal our newly website for AIChE Chicago. Feel free to Take a Peek.

We hope you will visit the new website at our new address, [www.aiche.org/Chicago](http://www.aiche.org/Chicago) and while you are there, let us know what you think! We know there is still work to do, and in the coming months, we hope to continue improving the site so that it best serves how we communicate with you.



Thank you for being part of AIChE Chicago!

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

## **AIChE Chicago is now on Facebook and LinkedIn!**



Like us on Facebook [www.facebook.com/AIChEChicagoSection](http://www.facebook.com/AIChEChicagoSection)



[Join our group on LinkedIn!](#)

## ALAN ZAGORIA WINS THE 2014 ERNEST W. THIELE AWARD

Congratulations to [Alan Zagoria](#), Engineering Fellow at UOP for being awarded the 2014 Ernest W. Thiele award! This prestigious award will be presented to Alan Zagoria at a meeting of the Chicago AIChE section in the coming months.

Alan Zagoria is awarded the 2014 Ernest Thiele Award for his leadership and creativity in hydrogen technology in refining and other areas. Alan Zagoria is well-known for his contributions to the practice of Chemical Engineering through his innovative implementation of methods to improve the efficiency, profitability and effectiveness of hydrogen utilization in refineries, petrochemical and gas plants, steel mills, and water treatment plants.

He is also recognized as a leader in the AIChE, particularly in his outreach to encourage high school and university students to pursue engineering careers, and in his work with Engineers Without Borders. Alan is currently an Engineering Fellow in the Optimization Services Group where he leads refinery configuration studies, utilizing LP models, financial analysis, and UOP process models to advise customers on how to maximize the profitability of refinery projects. Alan's status as UOP Fellow recognizes not only his significant technical contributions but also his role in mentoring others.

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 Alan Zagoria on his achievement.

### ***CALL for POSTER abstract submission for January Joint Meeting***

There will be a poster session during the social time (5:00—7:00 pm) in January 2015 monthly meeting. The theme of this meeting is related to gas storage, clean energy, hydrogen power, heterogeneous catalysis, nerve agents, detoxification, zeolites, and entrepreneurship.

If you are working in these areas and interested in presenting your work, please submit the the poster abstract to [Dr. Josh Kurutz \(jkurutz@alumni.caltech.edu\)](mailto:jkurutz@alumni.caltech.edu) by end of **December 30, 2014**.

## **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](http://www.aiche.org/sites/default/files/docs/pages/7867_SeniorMemUpgradeFormreviseFallwritable12.13.12.pdf)





## PRELIMINARY DAILY PROGRAM:

8:30–9:15 a.m.

### Engineering Student Activities Fair

Meet with current engineering student organizations

9:15–10 a.m.

### Presentation on Engineering Careers

Learn about how engineers contribute to all aspects of society

10–10:45 a.m.

### Demonstration Sessions

Robotics demonstration, formula hybrid race car, engineering games

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

**Astronaut Al Sacco**, the first chemical engineer in space!

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:

Ross Ludwig at  
rludwig1@iit.edu or 312.567.5193

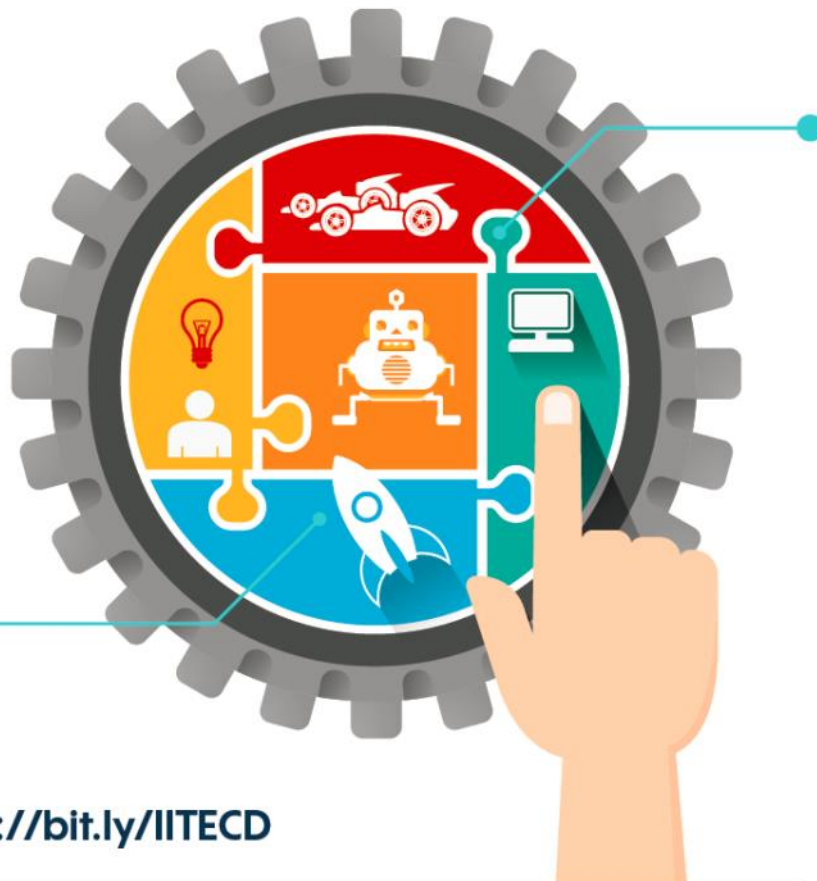
## SAVE THE DATE

# Engineering Career Day

March 12 or 13, 2015

Illinois Institute of Technology  
Hermann Hall

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



Register online at: <http://bit.ly/IITECD>

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### Officers and Contact Information

Chair	Azita Ahmadzadeh <a href="mailto:Azita.ad@gmail.com">Azita.ad@gmail.com</a>
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### Directors at Large

Dan Rusinak	Steve Wozniak <a href="mailto:Steve.wozniak@honeywell.com">Steve.wozniak@honeywell.com</a>
Jenn Guilfoyle <a href="mailto:Jennifer.guilfoyle@honeywell.com">Jennifer.guilfoyle@honeywell.com</a>	

## AICHE CHICAGO SECTION

American Institute of Chemical Engineers  
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.

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