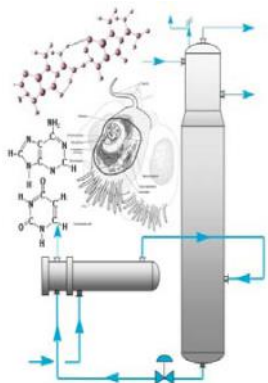


March Newsletter

Chicago Section

www.aiche.org/Chicago

March 2016



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AIChE
MIDWEST
REGIONAL
CONFERENCE

Mar 3—4, 2016

**Illinois Institute of Technology
Chicago, IL**

Featuring...

Keynote Speakers:

Carlo Segre, *Illinois Institute of Technology*

Jeffrey Hubbell, *University of Chicago*

Corey Correnti, *BP (Retired)*

Manu Vora, *Business Excellence, Inc*

For Conference Information and Registration, visit the [conference website!](#)

AIChE Chicago March Dinner Meeting

Jeffery Hubbell, University of Chicago

Materials & Protein Eng. For Modulating the Immune System



Thursday, March 3, 2016

Hermann Hall, Illinois Institute of Technology, Chicago

Poster Session: 5:45-6:30 PM

Registration: 5:45-6:30 PM

Dinner: 6:30-7:30 PM

Meeting and Presentation: 7:30-8:30 PM

Event Information and Registration here:

<http://www.cvent.com/d/1fq2rh>

If you are registered for the conference, *check your registration* if you already paid for the Dinner Meeting!

March Dinner Meeting Information

Material & Protein Engineering for Modulating the Immune System

Abstract:

Adaptive immune responses are triggered particularly powerfully in the lymph nodes and in the lymphoid tissues associated with mucosae. We are developing nanomaterials to exploit interstitial flow from the site of administration to the lymph nodes, using the nanomaterials to carry both antigen and adjuvant biomolecules. We are particularly interested in therapeutic vaccination in cancer, and we have determined that the tumor-draining lymph node is a particularly opportune lymphoid target for cancer vaccination. We are exploiting nanoparticles formed by emulsion polymerization and formed by self-assembly from block polymer amphiphiles and water soluble polymers as these delivery vehicles for both antigen and adjuvant molecules, creating multifunctional platforms that can be adapted to a wide variety of antigens. In addition to inducing adaptive immune responses, so-called inverse vaccination to induce antigen-specific tolerance is of high interest. We are exploring biological and polymer approaches to deliver protein antigens in a tolerogenic manner, including targeting antigen to the surfaces of erythrocytes after injection, based on the premise that aged erythrocytes are cleared tolerogenically, along with exogenous antigen cargo they may carry. We have shown the ability to induce antigenspecific anergy as well as T regulatory responses, working in models of autoimmunity and of immune response to protein drugs. The liver is a target of particular interest, and we are developing polymers that can target antigen, tolerogenically, to particular cell populations in the liver .



Biography:

Jeffery Hubbell is the Barry L. MacLean Professor of Molecular Engineering Innovation and Enterprise in the Institute for Molecular Engineering at the University of Chicago. His research focuses on the design of biomaterials to assemble in such a way that they can stimulate the immune systems to fight infection or malignancy, or turn off some aspects of the immune system to address auto-immune diseases such as type-1 diabetes. Hubbell has coined the term “immunomodulatory materials” to describe this newly emerging field of research. Based on his research, Hubbell has founded three companies: Kuros Biosurgery, Anokion, and Focal, Inc.

Hubbell received his bachelor's degree from Kansas State University in 1982, and his PhD from Rice University in 1986, both in chemical engineering. His academic career began at University of

Texas and California Institute of Technology. As a professor of biomedical engineering at the Swiss Federal Institute of Technology (ETH) he served as director of the Institute for Biomedical Engineering. Prior to his move to the University of Chicago, Hubbell served as founding director of the Institute of Bioengineering at the École Polytechnique Fédérale de Lausanne (EPFL).

In addition to membership in the National Academy of Engineering, Hubbell is the former president of the Society for Biomaterials. Hubbell is an elected fellow of Biomaterials Science and Engineering, of the American Association for the Advancement of Science, and of the American Institute of Medical and Biological Engineering. Earlier in his career, Hubbell received the W.J. Kolff Award for Outstanding Research from the American Society of Artificial Internal Organs, the Outstanding Dow Young Faculty Award from the American Society of Engineering Education, and the National Science Foundation's Presidential Young Investigator Award.

If you are registered for the conference, check your registration if you already paid for the Dinner Meeting!

For Registration and Information:

<http://www.cvent.com/d/1fq2rh>

Give the Gift of Membership

The AIChE Board of Directors has created a Membership Gift Program where active members of AIChE can give the gift of membership to a deserving engineer, at a special price of only \$49.

Consider giving your colleague or family member this gift, exclusively reserved for new members of AIChE, today!

For more information, click on the link below:

<http://www.aiche.org/community/membership/gift-program>



8th Annual Midwest Regional Conference



AIChE
MIDWEST
REGIONAL
CONFERENCE

Mar 3-4, 2016

**Illinois Institute of Technology
Chicago, IL**

Keynote and Plenary Speakers:

Lorenz Biegler - Professor and Head, *Carnegie Mellon University*

Linda Broadbelt - Professor and Chair, *Northwestern University*

Chris Burcham - Senior Research Advisor, *Eli Lilly and Company*

Corey Correnti - Senior Vice President, *BP (Retired 2015)*

Jeffery Hubbell - Professor of Molecular Engineering, *University of Chicago*

Shakeel Kadri - Executive Director, *AIChE Center for Chemical Process Safety*

Carlo Segre - Professor of Physics, *Illinois Institute of Technology*

Manu Vora - President, *Business Excellence, Inc.*

Technical Sessions including:

- Process Safety
- Electro-Chemical Processes
- Biofuels
- Drug Delivery
- Process Design and Optimization
- Pharmaceutical Processing
- Refining and Petrochemical Engineering
- CFD Methods and Applications
- Process Operations and Control
- Process Modeling and Estimation
- Environmental Engineering
- Sustainable Power Systems
- The Hydrogen Economy

...Plus Young Professionals Networking Social on March 4th!

On-Site Registration Available at Conference!



For more information and registration links, visit our website
<http://www.aiche.org/chicago-midwest-regional-conference>

Conference Sponsors

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

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of Engineering



ILLINOIS INSTITUTE OF TECHNOLOGY



[WANGER INSTITUTE FOR SUSTAINABLE ENERGY RESEARCH]
AT ILLINOIS INSTITUTE OF TECHNOLOGY



Ambitech



NETZSCH

PSCG
Process Safety and Reliability Group



2016 Midwest Regional Conference, March 3-4, 2016

The Conference highlights by Topical Area are:

Refining and Process Engineering

4 Keynote and Plenary Lectures and 15 Technical Sessions:

Thursday 9:45-11:30 - **Process Safety I** and **Process Design and Optimization I**

Thursday 12:45-1:45 - Plenary Lecture: **Shakeel Kadri**, *AICHE Center for Chemical Process Safety*

Thursday 2:00-3:45 - **Process Safety II** and **Multiphase CFD Tutorial**

Thursday 4:00-5:45 - **Process Safety III** and **Process Design and Optimization II**

Friday 8:15-9:30 - Keynote Lecture: **Corey Correnti**, *Senior Vice-President, BP (retired, 2015)*

Friday 9:45-11:30 - **Process Modeling and Estimation** and **Refining and Petrochemical Engineering I** and **Fluid Properties and Transport Phenomena**

Friday 12:45-1:45 - Plenary Lecture: **Lorenz Biegler**, *Carnegie Mellon University*

Friday 1:55-2:40 - Plenary Lecture: **Henrik Rasmussen**, *Haldor Topsoe*

Friday 2:00-3:45 - **Process Operations and Control** and **Refining and Petrochemical Engineering II** and **Process Safety Workshop I**

Friday 4:00-5:45 - **CFD Methods and Applications** and **Environmentally Conscious Process Design** and **Process Safety Workshop II**

Biological and Bio-medical Engineering

3 Keynote and Plenary Lectures and 9 Technical Sessions:

Thursday 9:45-11:30 - **Biofuels I** and **Cancer Therapies**

Thursday 12:45-1:45 - Plenary Lecture: **Linda Broadbelt**, *Northwestern University*

Thursday 2:00-3:45 - **Biofuels II** and **Drug Delivery I**

Thursday 4:00-5:45 - **Drug Delivery II**

Thursday 7:30-8:30 - Keynote Lecture: **Jeffery Hubbell**, *University of Chicago*

Friday 9:45-11:30 - **Tissue Engineering I**

Friday 12:45-1:45 - Plenary Lecture: **Christopher Burcham**, *Eli Lilly and Company*

Friday 2:00-3:45 - **Tissue Engineering II** and **Pharmaceutical Processing**

Friday 4:00-5:45 - **Modeling of Biological Systems and Pathways**

[Energy, Environment and Sustainability](#)

2 Keynote and Plenary Lectures and 8 Technical Sessions:

Thursday 8:15-9:30 - Keynote Lecture: **Carlo Segre**, *Illinois Institute of Technology*

Thursday 9:45-11:30 - **Biofuels I** and **Electro-Chemical Processes I**

Thursday 12:45-1:45 - Plenary Lecture: **Linda Broadbelt**, *Northwestern University*

Thursday 2:00-3:45 - **Biofuels II** and **Electro-Chemical Processes II**

Thursday 4:00-5:45 - **The Hydrogen Economy**

Friday 9:45-11:30 - **Environmental Engineering**

Friday 4:00-5:45 - **Sustainable Power Systems** and **Environmentally Conscious Process Design**

[Young Professionals](#)

1 Keynote Lecture and 5 Sessions:

Thursday 2:00-3:45 - **Multiphase CFD Tutorial**

Thursday 4:00-5:45 - **Job Search Strategies**

Friday 2:00-3:45 - **Process Safety Workshop I** and **Leadership Workshop**

Friday 4:00-5:45 - **Process Safety Workshop II**

Friday 5:45-7:00 - Keynote Lecture: **Manu Vora**, *Business Excellence, Inc.*

Friday 7:00-9:00 - **YP Social**, (off-site)

Registration Discounts available for students and YP members of AIChE (see [Registration Page](#) for details)

[AIChE Chicago is now on Facebook and LinkedIn!](#)

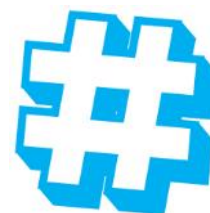


Like us on Facebook www.facebook.com/AIChEChicagoSection



[Join our group on LinkedIn!](#)

Join us in sharing your photos of the conference on our facebook page with #AIChEMRC!



Young Professionals Networking Social

Come and join your fellow YP's in celebrating a successful conference by relaxing at the YP Social for networking, drinks, and great conversation! Feel free to join us even if you weren't able to make it to the conference!

What: YP Social after the 8th Annual Midwest Regional Conference at IIT

When: Friday, March 4th 7:00 – 9:00 PM

Where: Rocky's Chicago

234 W 31st Street

Chicago, IL 60616

Soft drinks and appetizers provided courtesy of our YP Networking Event Sponsor, Reactor Resources



**REACTOR
RESOURCES**

Hosted by AIChE Chicago Young Professionals Committee (YPC)



February Meeting Photos



For more photos, visit our [Google Photos Album!](#)

Young Professionals News

Career Panel at UIC Summary

On Wednesday February 17th, engineers from UOP, BP, and Nalco spoke to a group of over 30 UIC AIChE members about careers in chemical engineering. The panel discussion and Q&A session covered job searches, career advancement, and work/life balance among other topics. A similar event is being considered IIT. Watch for updates on our mailing list!

NOMINATIONS FOR 2016-2017 AIChE Chicago SECTION OFFICERS

Members may nominate only one candidate for each office (Chair-Elect, Vice-Chair Program, Treasurer, Secretary) and one Director-at-Large for 2016-2017 Fiscal year.

You must fill out a letter of intent form:

<https://form.jotform.com/50354560774154>

Please submit nominations either on line or download the form and send it to Adam Kanyuh (adam.kanyuh@honeywell.com). The nomination deadline is on **March 12**.



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, 2016

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](#)



Ernest W. Thiele

Upcoming AIChE Conferences and Webinars

Chicago Section Monthly Meeting

March 3-4, 2016	8th Midwest Regional Conference, IIT, Chicago . AIChE Chicago March Monthly Meeting on March 3rd.
April 2016	Date TBD. AIChE Chicago April Monthly Meeting and Annual Student Poster Competition

AIChE Conferences

February 29-March 2, 2016	FDA-AIChE Workshop on Adopting Continuous Manufacturing, Bethesda, MD
March 3-4, 2016	8th Midwest Regional Conference, IIT, Chicago
April 10-14, 2016	2016 Spring Meeting and 12th Global Congress on Process Safety, Houston, TX
June 7-9, 2016	2016 Process Development Symposium, Boston, MA

AIChE Webinars

March 2, 2016	Fugacity Demystified
March 9, 2016	Optimizing Heat Transfer Fluid Performance Through System Design
March 16, 2016	Black Swans in the Chemical Processing Industries
March 23, 2016	Combustible Dust—What you should know about NFPA 652
April 6, 2016	Whoops! I Made a Mistake Sizing My Relief Device and Then I Installed It Incorrectly!

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 <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



Azita Ahmadzadeh and the 2014-2015
AIChE Chicago Section Scholarship
Recipient

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 1st 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

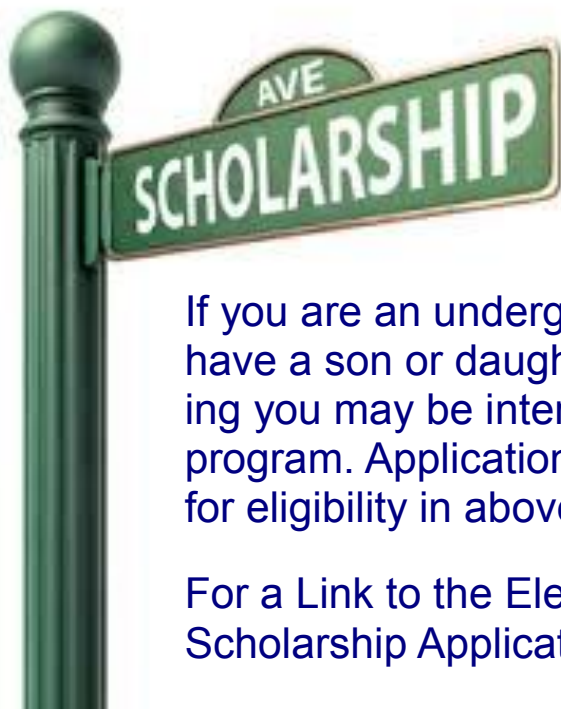
1. There shall be a Selection Committee of five members established and maintained for the purpose of evaluating applicants and determining awards to be made.
 - A. The AIChE Chicago Section Chair shall be a member, and shall appoint the Selection Committee, and preside over the Selection Committee meeting.
 - 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 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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	Jesse Calderon jcalderon@bakerrisk.com
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	Steve Wozniak swozniak@ambitech.com
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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 aichechicago@gmail.com with "newsletter article" as a subject line.

AICHE Publicity Committee Fees	Academic (non-AICHE)		Company		Recruiters	
	Per Month	Per Year	Per Month	Per Year	Per Month	Per Year
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.

