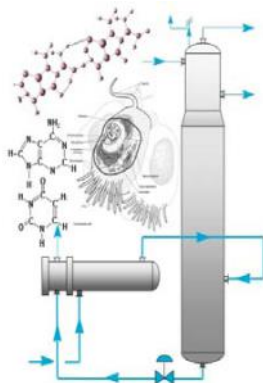


January Newsletter

Chicago Section

www.aiche.org/Chicago

January 2017



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AIChE Chicago January Joint Meeting with ACS

Materials for Biodegradable Electronics

Prof. John Roberts

Founding Director of Center on Bio-Integrated Electronics

Northwestern University



Date: *Friday, January 20th, 2017*

Where: *Roosevelt University—Schaumburg*

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

Registration and Information: <http://www.cvent.com/d/7vqtt2>

Agenda

5:30-6:30	Registration and social hour with cash bar
6:30 - 7:30	Dinner
7:30 - 7:45	Announcements
7:45 - 8:45	Technical Presentation



AIChE[®]
MIDWEST
REGIONAL
CONFERENCE

DON'T FORGET! EARLY BIRD
REGISTRATION ENDS JANUARY
13TH!

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

Chair Corner

Happy New Year! I hope you and your families had a wonderful holiday season, and we wish you the best in 2017! To start this New Year, we have our annual January joint meeting with the American Chemical Society (ACS) where the meeting topic is Materials for Biodegradable Electronics by Prof. John Roberts at Northwestern University. We are excited to partner with ACS on this event because our field of chemical engineering has a strong synergy with the field of chemistry and we share many common future interests. After reading the abstract for this meeting, it made me think that, in our changing society, we will need make efforts to move forward to more environmentally friendly electronic devices. Although many biodegradable electronics are not readily available today, their continued development is key to solving many world problems in the future. Since our world changes so rapidly both in what customers and consumers demand and how technology continuously evolves, we always need to be “Forward Looking” in how we approach our lives. This is true of the electronics industry and many other industries. This topic reminds me of an article I read from O’Reilly and Tushman (cited below) where organizations, to be sustainable, must “exploit” their current product lines for profitability and equally “explore” new product lines for future development. The balancing act of exploiting and exploring is one of the toughest of all organizational objectives to implement in order to be successful. A variety of innovation efforts need to be employed to move the organization’s product line forward and keep the organization sustainable with changes in technology and customer demand. Without a strong future vision, there is no way for an organization to keep up with an evolving world changing on technology developments and world challenges. In other words, we need to do what we do best now (exploit) and, equally, develop what we can best in the future (explore).



O’Reilly C.A. and Tushman M.L. (2004) The Ambidextrous Organization. Harvard Business Review – Innovation. <https://hbr.org/2004/04/the-ambidextrous-organization>

Tom King
AICHE Chicago Section Chair

January Meeting

Prof. John Roberts, "Materials for Biodegradable Electronics"; Join with ACS



ABSTRACT

A remarkable feature of modern integrated circuit technology is its ability to operate in a stable fashion, with almost perfect reliability and without physical or chemical change. Recently developed classes of electronic materials create an opportunity to engineer the opposite outcome, in the form of devices that can dissolve in water to yield completely benign end products. The enabled applications include zero-impact environmental monitors, 'green' consumer electronics and bio-resorbable biomedical implants - none of which can be achieved with technologies that exist today. This presentation describes foundational concepts in chemistry, materials science and assembly processes for bioresorbable electronics, in 1D, 2D and 3D architectures, the latter enabled by approaches that draw inspiration from the ancient arts of kirigami and origami. Wireless sensors of intracranial temperature, pressure and electrophysiology designed for use in treatment of traumatic brain injury provide application examples.

BIOGRAPHY

Professor John A. Rogers obtained BA and BS degrees in chemistry and in physics from the University of Texas, Austin, in 1989. From MIT, he received SM degrees in physics and in chemistry in 1992 and the PhD degree in physical chemistry in 1995. From 1995 to 1997, Rogers was a Junior Fellow in the Harvard University Society of Fellows. He joined Bell Laboratories as a Member of Technical Staff in the Condensed Matter Physics Research Department in 1997, and served as Director of this department from the end of 2000 to 2002. He then spent thirteen years on the faculty at University of Illinois, most recently as the Swanlund Chair Professor and Director of the Seitz Materials Research Laboratory. In Sept 2016, he joined Northwestern University as the Louis Simpson and Kimberly Querrey Professor of Materials Science and Engineering, Biomedical Engineering, Mechanical Engineering, Electrical Engineering and Computer Science, Chemistry and Neurological Surgery, where he is also the founding Director of the newly endowed Center on Bio-Integrated Electronics. His research has been recognized by many awards including the Baeckeland Award (ACS, 2007), a MacArthur Fellowship (2009), the Lemelson-MIT Prize (2011), the Smithsonian Award for American Ingenuity in the Physical Sciences (2013), and the Society of Engineering Science Eringen Medal (2014). He is a member of the National Academy of Engineering, the National Academy of Sciences and the American Academy of Arts and Sciences.



2017 Program Overview

Tuesday, February 28, 2017

8:15 - 9:30am – Morning Keynote

- **Sangtae Kim**, *Purdue University*

9:45 - 11:30am – Technical Sessions

- Bio-fuels
- Process Modeling & Optimization
- Fluid Dynamics & Transport Phenomena I

12:45 – 1:45pm – Plenary Sessions

- **David G. Barton**, *Dow Chemical Company*
- **Lisa Long**, *OSHA*
- **Jacob Oberholtzer**, *SABIC*

2:00 - 3:45pm – Technical Sessions

- Catalysis I
- Process Safety I
- Fluid Dynamics & Transport Phenomena II
- Electrochemical Energy Storage

4:00 - 5:45pm – Technical Sessions

- Catalysis II
- Process Safety II
- Renewable Energy
- Job Search Essentials

5:45 - 6:30pm

- Poster Session

6:30 - 7:00pm

- Mardi Gras Networking Mixer

7:00 - 7:30pm – ChE Standup Comedy

- **Pete Ludovice**, *Georgia Tech*

Wednesday, March 1, 2017

8:15 - 9:30am – Morning Keynote

- **Anne Evens**, *Elevate Energy*

9:45 - 11:30am – Technical Sessions

- Biomedical Engineering I
- Refining I
- Sustainability

12:45 - 1:45pm – Plenary Sessions

- **Eric Brey**, *Illinois Tech*
- **James Rawlings**, *University of Wisconsin*
- **Mary Ellen Ternes**, *Crowe & Dunlevy*

2:00 - 3:45pm – Technical Sessions

- Biomedical Engineering II
- Refining II
- Carbon Capture

4:00 - 5:45pm – Technical Sessions

- Biomedical Engineering III
- Process Control & Optimization
- Environmental Compliance & Remediation
- Reaction Engineering

5:45 - 6:15pm

- *LS Dinner Reception*

6:15 - 6:45pm

- *LS Dinner*

6:45 - 7:30pm – Dinner Keynote

- **Jim Rekoske**, *UOP/Honeywell*

For more information about the AIChE 2017 Midwest Regional Conference, including registration and sponsorship/exhibitor information, visit the [Midwest Regional Conference Website](#).

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

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

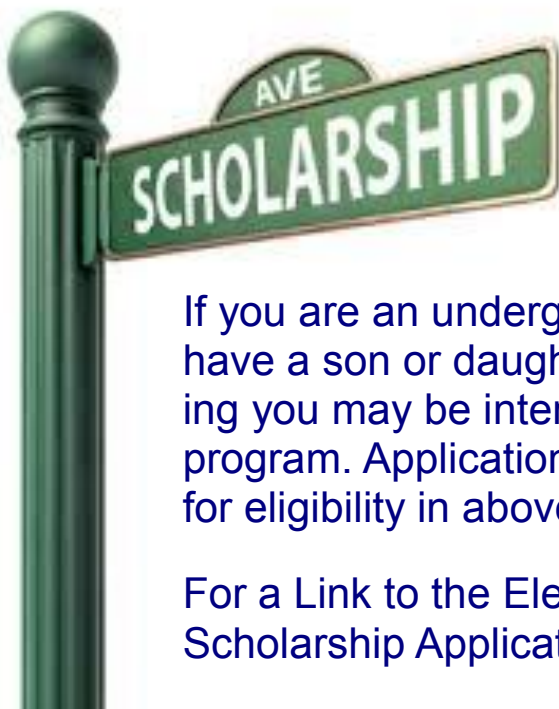
1. There shall be a Selection Committee of five members established and maintained for the purpose of evaluating applicants and determining awards to be made.
 - A. The AIChE Chicago Section Chair shall be a member, and shall appoint the Selection Committee, and preside over the Selection Committee meeting.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

Young Professionals News

Annual Whirlyball Tournament

Happy 2017 to all of you! We would like to extend an invitation for you to come to our 8th Annual Whirlyball Social and Tournament on February 1st, 2017, at the Lombard location on Roosevelt Road. Whirlyball is a combination of lacrosse and basketball, played on bumper cars. Whirlyball is very fun to play, and it has been YPC's most popular event. These are the details of the event:

What: Whirlyball Social and Tournament

Where: Whirlyball of Lombard

800 E Roosevelt Rd,
Lombard, IL 60148

[\(630\) 932 4800](tel:6309324800)

When: Wednesday, February 1st, 5:30 – 8 PM

Cost: \$10.00 per YP player

Appetizers will be provided, and the facility has pool tables and a bar. Please RSVP to Kim, douglasekimberly2@gmail.com, by January 30th if you are interested in playing Whirlyball! If you do not want to play, you are welcome to join us for pizza.



AIChE 35 Under 35 Award

Do you know any outstanding Young Professional AIChE Members? This award seeks to identify and recognize the outstanding achievement and contributions of some of the best and brightest young chemical engineers in our field. Deadline for Nomination is Jan 30, 2017.



<http://www.iche.org/community/awards/aiches-35-under-35-award>

PROFESSOR SATISH PARULEKAR WINS THE 2016 ERNEST W. THIELE AWARD

Congratulations to Professor Satish Parulekar, Professor of Chemical Engineering at Illinois Institute of Technology for being awarded the 2016 Ernest W. Thiele award! This prestigious award will be presented to Professor Parulekar at a meeting of the Chicago AIChE Section during the 2016-2017 meeting season.

Professor Parulekar is awarded the 2016 Ernest Thiele Award for his significant original research contributions in chemical engineering, development of educational material for chemical engineers, teaching and leadership and service activities relate to the AIChE and IIT.

Professor Parulekar's early research on using continuous spectral theory showed his mathematical prowess for solving difficult problems. An inquisitive thinker, he moved into biotechnology and made major advances in that area. All the while he continued to publish chemical engineering manuscripts and books, be a popular teacher at IIT, and provide service to our AIChE organization.

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 Professor Satish Parulekar on his achievement.

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 May 1, 2017

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

PROFESSIONALS NEEDED

2017 AIChE North Central Student Regional Conference

Illinois Institute of Technology

April 7-8th, 2017

With over 350 students and 20 universities expected to attend the North Central Student Regional Conference is an excellent opportunity to network with emerging Chemical Engineers!

The IIT AIChE Student Chapter is looking for professional volunteers to help with:

- **Organizing/Hosting Workshop Presentations**
- **Organizing/Hosting Plant Tours**
- **Judging Chem-E Car**
- **Judging Chem-E Jeopardy**
- **Judging Paper and Poster Competitions**

For more information please contact Brianna Koning at ncrc.aiche.iit@gmail.com.

The conference organizers are also looking for Corporate Sponsors. For more information about sponsoring the conference, please contact Alex Blankenheim at ablanke1@hawk.iit.edu.



Conference Website: tinyurl.com/northcentral2017

Why Renew Your AIChE Membership?

Renew your membership now to keep learning and growing.

Renew Membership



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

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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!](#)

Upcoming AIChE Conferences, Meetings and Webinars

Chicago Section Monthly Meetings

Jan 20, 2017	Meeting Joint with ACS
Feb 28 - Mar 1, 2017	9th Midwest Regional Conference , UIC, Chicago

AIChE Conferences

Jan 8-11, 2017	7th ICBE—International Conference on Biomolecular Engineering , San Diego, CA
Feb 18-19, 2017	Engineering Solutions for Sustainability: Materials and Resources 3 , Denver, CO
Feb 28 - Mar 1, 2017	9th Midwest Regional Conference , UIC, Chicago
Mar 12 - 15, 2017	5th International Conference on Accelerating Biopharmaceutical Development , Scottsdale, AZ
Mar 19 - 22, 2017	7th International Conference on Bioengineering and Nanotechnology , Chicago, IL
Mar 26 - 30, 2017	2017 Spring Meeting and 13th Global Congress on Process Safety , San Antonio, TX

AIChE Webinars

Jan 11, 2017	A Survival Guide to Chemical Engineering and a Guided Tour of Elementary Principles of Chemical Processes
Jan 19, 2017	Next Generation IT for Next Generation Manufacturing
Feb 1, 2017	The US Dept. of Energy Industrial Assessment Center Program: Best Practices from the past 40 years

Officers and Contact Information

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Chair Programming	Beth Carter
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	Janet Werner Janet.werner8@gmail.com

AICHE CHICAGO SECTION

American Institute of Chemical Engineers
 Chicago Section
 13964 Doral Lane
 Homer Glen, IL 60491
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We want you for AIChE-Chicago!

We need your help!

How many opportunities can you find to learn project management, delegation and leadership skills for free? Becoming an officer in the Chicago Section of AIChE is such an opportunity. While you're learning new skills, your local network grows. Just about all of us are either undergoing a career change, contemplating a career change, or are wondering if our career will be changed for us. Volunteering with AIChE is a way to add skills and accomplishments to your resume.

aichechicago@gmail.com

<http://www.aiche.org/community/sites/local-sections/chicago/announcements/volunteerism>

Submitting Articles to AIChE Columns

We welcome email submissions for our monthly newsletter. Commercial announcements are subject to the fee schedule below. News stories, editorials, technical or career related non-commercial contributions are always welcome with no charge. We consider job postings, announcements of for-fee training courses, expositions, conferences as commercial. Categorization of announcements is at the sole discretion of the Chicago AIChE Board of Directors. Chicago AIChE may publicize activities of interest to our members by cooperating professional societies and other non-profits without charge.

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

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

Student and AIChE Member Related Postings are Free.

