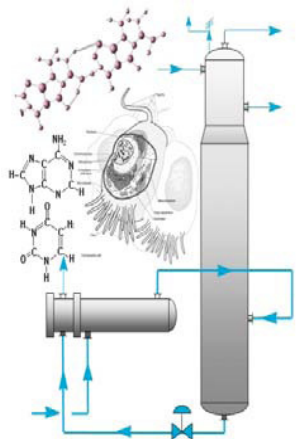


March Newsletter

Chicago Section

www.aiche-chicago.org

March 2010



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AIChE Chicago

March 2010 Meeting Notice

Updates on ASTM Methods for Liquid Chromatography/Mass Spectrometry

Dr. Larry Zintek

"US Environmental Protection Agency"

Date: **Wednesday, March 10th, 2010**

Location: **Plymouth Rooftop Bar**

327 S. Plymouth Ct. Chicago, IL 60604

Cost: **Members: \$25** **Non-Members: \$30**
Students: \$5 **Unemployed Members: \$15**

To Register CLICK the Link

<http://guest.cvent.com/EVENTS/Info/Invitation.aspx?i=e9d01ef5-0ba8-4681-a2bd-4b0b6195eec5>

Agenda

4:30 PM **Tour of EPA Lab**
5:30 PM **Social Hour**
6:30 PM **Dinner**
7:30 PM **General Meeting**



Chair's Corner

Work in Progress

Since 2008, the board of directors of the AIChE Chicago section made an effort to document all the details necessary to run the section as smoothly as possible and capture all the lessons learned for future reference of the section leaders. This is an ongoing effort and I certainly hope that continues until we have a complete handbook for our section.

As you know, we have planned and executed a two-day symposium since 2006, although we had something similar but at a different scale even before that. Over the years, this symposium has evolved into "Midwest Regional Conference" and we have added the "High School Program" and got the support of the AIChE national in different aspects. The volunteers who were planning and executing many different tasks for these conferences during the past several years, chose to have other volunteers run the program and this created a great chance to generate a detailed document including the roles, steps and timetable.

As you may guess, the details and amount of volunteer work needed to manage this program is substantial. This clearly magnifies the fact that we are blessed to have very dedicated people with invaluable experience in our section who really believe in the value of our professional society.

The combination of experienced volunteers and fresh ideas should be a powerful

formula for success and we are aiming for a very successful conference this year. Please check the website for opportunities to help with the program and also to get up-to-date information about the conference.

The next meeting will be hold in downtown Chicago that includes "EPA lab tour". ***Can you help us spread the word?*** Please print out the first page of this newsletter and post in a public area at your workplace, or send it to your co-workers who may not be aware of this event.



I have another request from you that comes from the AIChE national. AIChE national has scheduled many webinars in different subjects and they are asking the local sections to provide some ideas about future presentations. Please let us know if there is any subject you would like AIChE national to focus on in the webinars please let us know by sending an email to aichechicago@gmail.com.

Check <http://apps.aiche.org/chemeondemand/home.aspx> for list of the webinars available to you.

With March comes the beginning of spring and although it's still chilly outside, the signs of rejuvenation are showing up. I hope the spirit of earth renewal power us up and boost our energy.

I hope you find this issue of the newsletter informative and useful.

Reza Mostofi
UOP

March 2010 Meeting Information

Abstract:

Update on Proposed and Approved ASTM Methods for Liquid Chromatography/Mass Spectrometry of Interest to US EPA

The US EPA is developing new standardized methods for qualitative and quantitative determination for chemicals of national significance. This presentation will demonstrate why and how we are developing quick and robust liquid chromatography tandem mass spectrometry (LC/MS/MS) methods for analysis of potential endocrine disruptors, pesticides, and degradation products of chemical warfare agents. These methods focus specifically on analyzing organophosphonic acids, carbamates, rodenticides, ethanolamines, thiodiglycols, alkylphenols and bisphenol A in water samples. The process for approval of test methods into ASTM International will be discussed.

Speaker's Bio

Larry Zintek is the National Organic Methods Development Expert at the Chicago Regional Laboratory in EPA Region 5. He has a BS in Biochemistry from Illinois Benedictine College and a PhD in Chemistry from The University of Iowa. His 9 years of experience at the EPA includes chemical analytical method development for emerging contaminants of concern such as endocrine disrupting compounds for the Office of Water and chemical threat agents for the National Homeland Security Research Center and Water Security Division. These methods focus specifically on analyzing organophosphonic acids, carbamates, rodenticides, ethanolamines, thiodiglycols, alkylphenols and bisphenol A in water samples. ASTM International was used as the approval authority for these methods.

Larry maintains a close working relationship with the EPA Office of Water, Office of Emergency Management and Office of Research and Development labs for method development and environmental projects and studies. He is also an adjunct professor at Benedictine University in Lisle, Illinois.

To Register Click the link:

<http://guest.cvent.com/EVENTS/Info/Invitation.aspx?i=e9d01ef5-0ba8-4681-a2bd-4b0b6195eec5>

Historical Engineering Events in March

March 3, 1831—Thomas Jennings became the first African-American to receive a patent for his invention of 'dry-scouring', a process better known today as dry-cleaning.

March 8, 1775 – Priestley discovers oxygen through experiments with mice.

March 13, 1970 – PDP-11 minicomputer introduced by DEC (Digital Equipment Corporation) and remained in active production until 1996. It was one of the most popular 16-bit minicomputers ever produced.

March 16, 1926 – Dr. Robert Hutchings Goddard launched the world's first successful liquid-fuel rocket.

March 22, 1985 – The Vienna Convention for the Protection of the Ozone Layer is adopted in response to studies documenting the harm caused to the environment and our own health by ozone-depleting substances.

March 24 is Ada Lovelace Day, a day to recognize and celebrate women in technology. Ada Lovelace was a noblewoman in England in December 1815, and "wrote the world's first computer programmes for the Analytical Engine, a general-purpose machine that Charles Babbage had invented.

March 27, 1933 – Polyethylene is discovered.

March 30, 1842 – Dr. Crawford Long first uses ether as anesthesia to provide his patients with painless surgery.

Selected from:

www.engineeringpathway.com/ep/

AIChE National's Live Webinar in March

Teaching Reactive Chemical Hazards to Chemical Engineers

Presented by: Dr. Daniel A. Crowl

Wednesday, March 3, 2010

The recent recommendation by the U.S. Chemical Safety Board to include reactive hazards in undergraduate chemical engineering presents a challenge to chemical engineering departments who may not be familiar with how industry handles these hazards.

This webinar presents an introduction to how industry handles reactive chemical hazards, and provides resource material to teach this subject in an existing course in chemical engineering. Experimental methods to characterize reactive chemicals are presented, along with methods to manage and control reactive hazards in the work place.

Burgeoning Prospects for Waste-to-Energy in the United States

Presented by : Ted Michaels,

Wednesday, March 10, 2010

This webinar provides an overview of the waste-to-energy industry in the United States and describes the prospects for future growth.

With heightened national interest in developing renewable energy sources and reducing greenhouse gas emissions, communities are again looking at waste-to-energy as a critical tool to manage their solid waste. However, the ability of waste-to-energy facilities to thrive will rely in large part on how legislators and regulators treat waste.

In this session, we take an in-depth look at federal legislation and regulations currently under consideration, and examine what potential impacts they will have on waste-to-energy.

This is the third in a 3-part series on "Waste-To-Energy", co-partnered with the AIChE Sustainability Engineering Forum. Please note that each webinar in the series requires separate registration, and has been designed to function as both a standalone presentation and a component in the series.

Long Term Care Planning in a Recessionary Environment

Presented by: Graham M. Fuller

Wednesday, March 17, 2010

The current recession, market volatility and investment losses have many Americans questioning their ability to achieve financial security. In light of this unprecedented economic uncertainty, now is the time to revise risk management strategies and reevaluate your retirement planning. Until recently, many investors were planning on using their retirement assets to self-insure the cost of long-term care. With the deterioration of the market, these funding strategies have been severely compromised. Advances in medical treatment and technology are extending our lives longer than ever before. Unfortunately, living longer does not guarantee your quality of life. As we age, there is a greater likelihood that an individual will experience some type of acute or chronic ailment that requires medical or extended healthcare. This potential medical need, in turn, creates necessity for post-retirement healthcare planning.

Gathered by: Darlene Hug

YPAB Activity

YPAB "GREEN"HOUSE PARTY

Date: Saturday, March 13th, 2010

Time: 4pm

Location: Jessica Swary's House!!
Lombard, IL (RSVP to jessicaswary@msn.com for directions)

Admission: \$2 or two (2) recyclable items (see acceptable items below)

Who should come: Chemical Engineering students and young professionals 21 years and over

Food and drinks courtesy of AIChE National!

Join us for our very first HOUSE PARTY! Our topic will be how we as Chemical Engineers can use our knowledge and expertise to help make the world a greener place.

Included in the discussion will be the Clean Tech Open Competition.

(<http://www.cleantechopen.com/app.cgi/content/competition/ideas/index>). Make sure to save the date, then keep watching the YPAB website www.aiche-chicago.org/ypab for details and updates.

Recyclable items to bring:

Plastic 1-7, glass jars, metal cans, paper/cardboard, light bulbs (including CFLs), household batteries, cell phones, books (except previously library or school-owned), plastic grocery bags, eyeglasses.

Need a Volunteer @ Registration Desk

If you are planning to attend next monthly meeting please consider helping us at the registration desk. For more information, please send an email to aichechicago@gmail.com

Engineers without Borders – IIT Chapter

(will be presented in April Meeting)

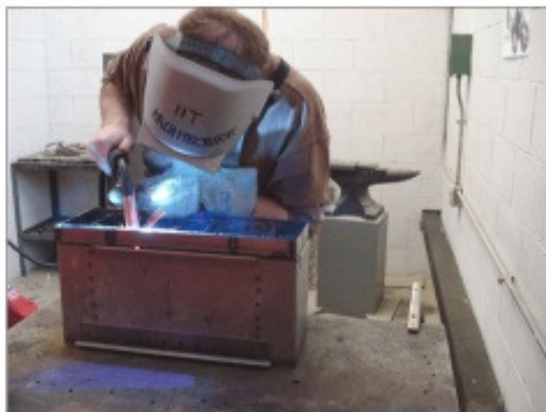
We are a student run organization with a history of working as an EWB Chapter in conjunction with a local NGO Haiti Outreach located in Pignon, Haiti. We are entirely student funded, meaning we fund raise for all of our own projects. We do sustainable projects in developmental countries. In April we would like to present some of these projects we have previously worked on and completed and are still working on. These projects include water projects, solar energy projects, and as well a sustainable charcoal

compactor for Haiti. We will probably have some updates on Haiti's status as well with an update on our activities this year and efforts towards earthquake relief.

The main purpose of this presentation is to make AIChE aware of who we are and what work we are doing. I chose to try and work more with AIChE professional because we have historically excellent relations with ASCE Professional; and in recent years our membership of Chemical Engineers has begun to increase, including myself with a background in Chemical Engineers.

School Expansion Project

- Developed by IIT students
- Unique concrete design



ARCHITECTURE THAT MATTERS

ILLINOIS INSTITUTE
OF TECHNOLOGY

ASCE Illinois Tech
future begins here.

ENGINEERS
WITHOUT
BORDERS
USA
Illinois Institute of
Technology Chapter

2010 IIT ChBE Alumni Day April 30, 2010

The Department of Chemical and Biological Engineering at the Illinois Institute of Technology is pleased to invite AIChE Chicago Section members to attend the 2010 ChBE Alumni Day, hosted on Friday, April 30 on IIT's main campus. The event begins at 2:00 pm with a student poster competition highlighting the current research projects being conducted by ChBE undergraduate and graduate students. The annual Peck Lecture, featuring University of Michigan **Professor Ronald G. Larson**, will commence at 4:00 pm. His presentation, titled, "***From Rheology to Biology: The Application of Polymer Hydrodynamics to Problems in Biology***," will describe the development of computational and experimental methods for analyzing polymer dynamics in microflows.

The event will conclude with a dinner for ChBE alumni and students. Additional information about the event is available at www.chbe.iit.edu.

Heuristics in Chemical Engineering

Although experienced engineers know where to find information and how to make accurate computations, they also keep a minimum body of information in mind on the ready, made up largely of shortcuts and heuristics. The present compilation may fit into such a minimum body of information, as a boost to the memory or extension in some instances into less often encountered areas.

An Engineering Rule of Thumb is an outright statement regarding suitable sizes or performance of equipment that obviates all need for extended calculations. Because any brief statements are subject to varying degrees of qualification, they are most safely applied by engineers who are substantially familiar with the topics.

Nevertheless, such rules should be of value for approximate design and cost estimation, and should provide even the inexperienced engineer with perspective and a foundation whereby the reasonableness of detailed and computer-aided results can be appraised quickly, particularly on short notice such as in conference. Much more can be stated in adequate summary fashion about some topics than about others, which accounts in part for the spottiness of the present coverage. Accordingly, every engineer undoubtedly will supplement or modify this material in his/her own way.

Available online at:

<http://www.aiche.org/uploadedFiles/Students/DepartmentUploads/heuristics.pdf>

Edited for On-Line Use by G. J. Suppes, February, 2002

Reproduced with Permission from "Material from Chemical Process Equipment Selection and Design", by Stanley M. Walas

Published by Butterworth-Heinemann, Boston, 1990

Future City Competition 2010

The Future Cities competition was designed to invigorate the minds of middle school students to provide creative and innovative solutions for a futuristic city of Chicago, a city which will be environmentally responsible while facilitating the needs of an urban society. The objective of the competition was to use SimCity to build a computer model of a futuristic city, build a physical model of their city using creative materials preferably recycled goods only, demonstrate their writing skills through an essay and abstract explaining an engineering design problem and detailing the features of their respective city. Finally, they also had to develop a team presentation on the physical model. Teams of middle school students from around the Chicagoland area competed in this challenge, assisted by engineering mentors, including Riju Konwar and Timothy Bannon (both of UOP).



“Franklin Middle School and their “Emerald City”



“Yehia Fouad, Pulak Sharma, and Colin Reid Judging the Franklin Middle School Team.”

The Regional Competition took place at UIC on January 16, where additional chemical engineers served as judges, including Yehia Fouad, Colin Reid, and Pulak Sharma (all of UOP). AIChE sponsored the Energy Award, which was given to Franklin Middle School for their “Emerald City”.



“Timothy Bannon with his Future Cities Team”

By: Ellen Kloppenborg (UOP) & Riju Konwar

Engineering Week 2010



The 26th Annual DuPage Area Engineers Week Expo was held Saturday, February 20, 2010 at the Illinois Institute of Technology Rice Campus in Wheaton. The expo was open to all ages, though targeted grades K-8. Those present could learn about the wide variety of engineering disciplines, attend programs on topics like cryogenics and lasers, and participate in a number of hands-on activities.

Sola Cardoso, Ellen Kloppenborg, and Rob Sanders (all of UOP) and Steve Schade represented AIChE and chemical engineering to this audience by means of a poster and a pumping display, which showed properties of fluid flow and mixing to all who stopped by to visit.

By: Ellen Kloppenborg (UOP)



Universities Seminars in March

Illinois Institute of Technology (IIT)

March 3

Presented by ChBE and WISER

Turning Waste into Black Gold: Pyrolysis of Agricultural and Forestry Residues

Franco Berruti, University of Western Ontario

http://www.iit.edu/engineering/chbe/programs/pdfs/berruti_seminar_abstract_030310.pdf

March 17

Mechanobiological Regulation of Tumor and Stem Cell Biology in the Central Nervous System

Sanjay Kumar, University of California at Berkeley

http://www.iit.edu/engineering/chbe/programs/pdfs/kumar_seminar_abstract_031710.pdf

March 24

Thomas Boland, University of Texas - El Paso

March 31

David Dzombak, Carnegie Mellon University

Northwestern University

March 4,

A molecular view of DNA structure and mechanical properties: Effects of sequence on bending and hybridization

Dr. Vanessa Ortiz

University of Wisconsin, Madison

Thursdays at 8:45AM in Tech M345

Refreshments will be served at 8:30am

Save the Date!

AIChE²⁰¹⁰



Midwest Regional Conference
September 30 - October 1 | Chicago, Illinois



Make plans to join chemical engineers from Chicagoland and beyond for two exceptional days of education and networking.

- Hear presentations on new technology
- Learn about Energy Generation
- Introduce High School Students to Chemical Engineering
- Learn about Pharmaceuticals
- Meet with University Students
- Exchange Ideas
- Make new friends

Visit www.aiche-chicago.org for more information.

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New Books

Hydrogen and Syngas Production and Purification Technologies

Ke Liu, Chunshan Song, and Velu Subramani

ISBN: 978-0-471-71975-5

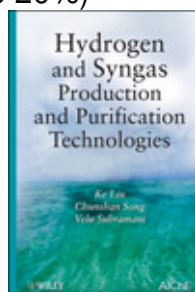
Hardcover

545 pages

January 2010

Non-Member Price: \$110.00

Member Price: **\$88.00** (You Save 20%)



Fluid Flow for the Practicing Chemical Engineer

James P. Abulencia and Louis Theodore

ISBN: 978-0-470-31763-1

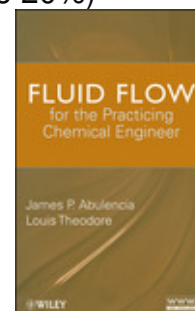
Hardcover

600 pages

July 2009

Non-Member Price: \$110.00

Member Price: **\$88.00** (You Save 20%)



Congratulation to 2010 Shining Star award Winner

Congratulations **Azita**!

Azita Ahmadzadeh won one of National AIChE's Shining Star Awards. The Shining Star Award recognizes Outstanding Volunteerism at the local section level. The award provides free registration and expenses paid (up to \$1000) to the Spring National Meeting, the Leadership Development Conference, or the Fall Annual Meeting.

Azita's nomination was based on the following contributions. For four years, Azita has served on the symposium planning committee. This symposium has now become the AIChE Midwest Regional Conference. For the last three years, Azita has served as Fundraising Chair. In 2007 & 2008, she raised over \$15,000 each year. In spite of the economy in 2009, she raised over \$12,000. These activities helped support over 1000 high school students receiving "Engineering as a Career" program presentation and lunch by AIChE Chicago.

In 2008, **Azita** volunteered to be Newsletter Editor. Since she took over, we have gone from a sporadically published newsletter to a comprehensive monthly electronic (PDF) newsletter that is artistically arranged. In addition to information on upcoming section events, the newsletter includes articles on engineering career topics, information on National AIChE webinars & meetings, and advertising.

To ensure the newsletter is issued in a timely fashion, Azita actively solicits its input. She also serves as symposium photographer. Since the newsletter has improved, attendance at section meetings has



increased significantly. We have also received positive member feedback on the newsletter.

Career Resources

As a service to our members, we are posting jobs that are sent to us by recruiters or companies. You can access this list at:

http://www.aiche-chicago.org/Job_Postings.html

AIChE national also has a very useful guide for career opportunities that you can access as a member.

<http://www.aiche.org/CareerResources/>

Judges Needed for Student Poster Competition

Judges are needed for the student poster competition that will be held at the **April 14** local section meeting. Posters will be judged on quality and organization, the student's delivery and ability to answer questions, and the importance/relevance of the project. Please contact Ellen.Kloppenborg@UOP.com if you would be willing to assist.

Upcoming Meetings

- March 10, 2010** EPA lab tour (Chicago, IL)
- March 21–25, 2010** 2010 AIChE Spring Meeting
San Antonio, TX
- April 14, 2010** Student Night @ UIC
- May 2 –5, 2010** SBE's Second International Conference on Stem Cell Engineering,
Boston, MA
- May 11, 2010** Project Design for risk Management
- June 4-6, 2010** Leadership Development Conference ,
Kingsport, TN
- June 27-30, 2010** AIChE's 2010 Process Development Symposium: Energy Challenges
for Process Developmen The Lodge of Four Seasons
Lake Ozark, MO
- August 1-4, 2010** The 5th International Conference on Bioengineering and Nanotech-
nology Co-sponsored by Society for Biological Engineering (SBE)
Biopolis, Singapore
- September 12-16, 2010** 55th Annual Safety in Ammonia Plants and Related Facilities Sym-
posium Hyatt Regency
San Francisco, CA
- September 30 - October 1, 2010** 2010 AIChE Midwest Regional Conference Illinois Institute of Tech-
nology
Chicago, IL
- October 7-8, 2010** 2010 AIChE Regional Process Technology Conference Moody Gar-
dens Hotel
Galveston, TX
- October 11-13, 2010** AIChE-DECHEMA Global Conference on Energy Efficiency in Process
Development
Hong Kong SAR, China
- November 7–12, 2010** 2010 AIChE Annual Meeting,
Salt Lake City, Utah

Conference Schedule

9:00 10:00 am -

Keynote Address by Jean Mavrelis, KMA Diversity

10:00 10:50 am

Power Brainstorming, Diversity in Thinking Styles and Ideas by Hazel Wagner

10:55 11:45am

How to be a Better Leader through Embracing Diversity at Work from Anjani Panchal

11:45 12:45 pm

Working Lunch and Womens Network Sharing Panel

12:55 1:45 pm

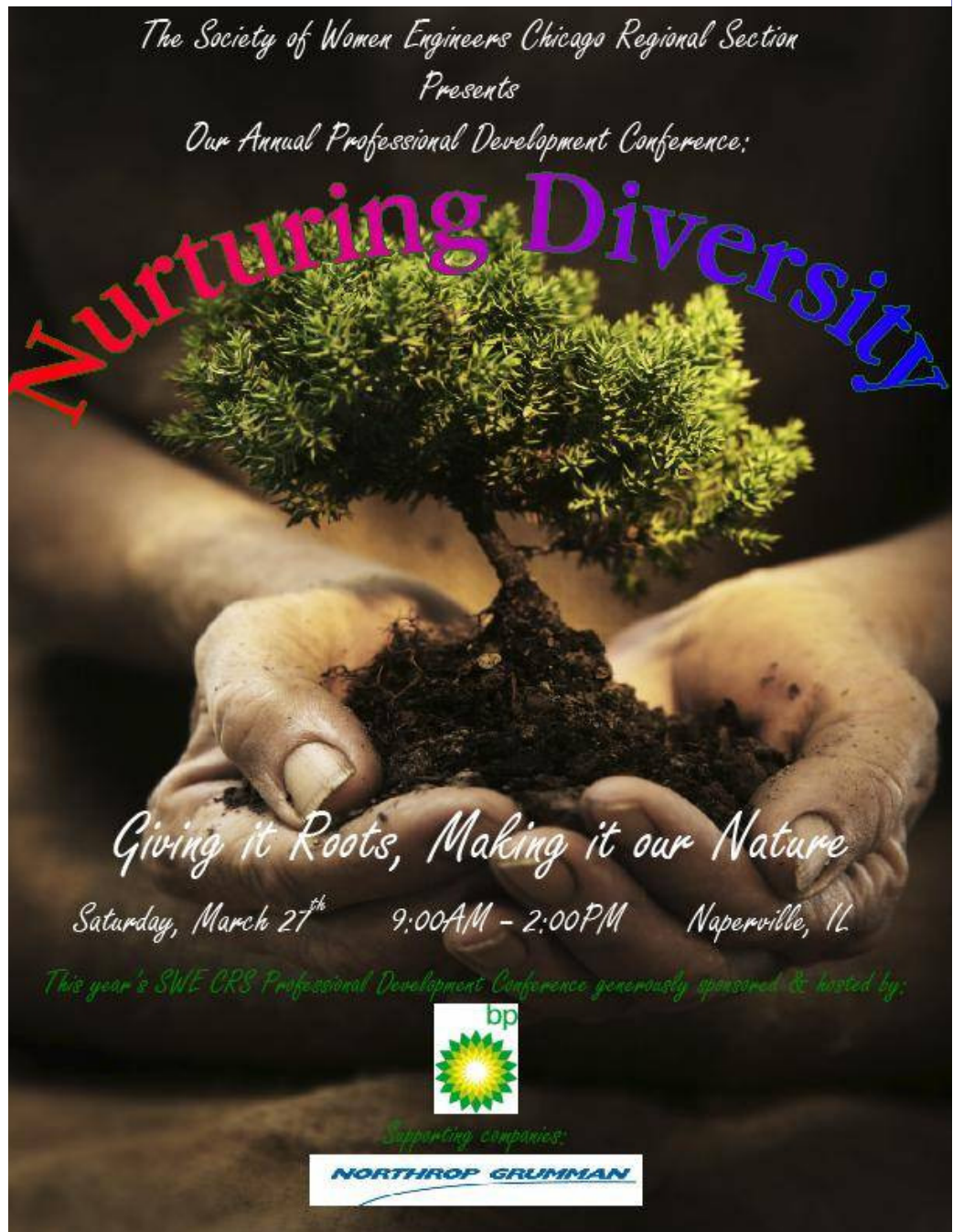
Achieving Personal Excellence by Nina Sanyal

1:45 2:00pm

SWE CRS Membership Meeting and Evaluations

Keynote Speaker:

Jean Mavrelis, KMA Diversity




*The Society of Women Engineers Chicago Regional Section
Presents
Our Annual Professional Development Conference:*

Nurturing Diversity


Giving it Roots, Making it our Nature

Saturday, March 27th 9:00AM - 2:00PM Naperville, IL

This year's SWE CRS Professional Development Conference generously sponsored & hosted by:



Supporting companies:



"The keynote session will discuss women networking across cultures. White women tend to assume they have the same gender issues as women of color, however this is not the case. This session will focus on building relationships between white women and women of color."

Both men and women engineers and technologists are encouraged to attend this conference.

Family Friendly Outreach Event for Kids

Parents are encouraged to bring their children to the conference. We will have kid-friendly engineering outreach activities to keep your children entertained while you attend the conference. Boys and girls of all ages are welcome to attend! When you register for the conference, please let us know if you'll be bringing kids and their ages.

Proceeds from the conference will be added to the SWE CRS scholarship fund for a graduating female high school senior majoring in engineering. <http://www.swe.org/chicago/pdconf2010.html>

Officers and Contact Information

| | |
|-------------------|---|
| Chair | Reza Mostofi reza.mostofi@uop.com |
| Chair Elect | Steve Rosenblum Steve.Rosenblum@uop.com |
| Chair Programming | Steve Schade ssschade@juno.com |
| Secretary | Mike Buettner Mike.Buettner@alfalaval.com Peter Herena peter.herena@kenexis.com |
| Treasurer | Catherine Fieber catherine.fieber@gmail.com |
| Newsletter Editor | Azita Ahmadzadeh azita.ad@gmail.com |

Directors at Large

| | |
|--|--|
| John Mylar ralym@sbcglobal.net | Dennis O'Brien Dennis.O'Brien@jacobs.com |
| | Bill Glogowski glogowwk@middough.com |

AICHE CHICAGO SECTION

American Institute of Chemical Engineers

Chicago Section
13964 Doral Lane
Homer Glen, IL 60491
aichechicago@gmail.com

We are on the web
www.aiche-chicago.org

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-chicago.org/Section_Info/Volunteer.html

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.

Student and AIChE Member Related Postings are Free.

