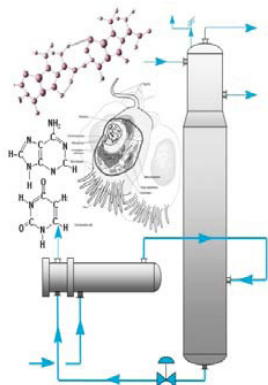


# April Newsletter



*Inside this issue:*

Chair's Corner	2
April Meeting Information	3
YP Announcements	4
Midwest Regional Conference	5
Frontier in Particle Science & Technology	9
Engineering Historical Event in April	10
AIChE Section Election	10
Local Meeting Calen-	11
Job Posting	12

## April 2014 Local Section Meeting & Annual Poster Competition

### *Pick a Pillar*

By:

**Dr. Delmar "Trey" Morrison**

**Principal Engineer  
Exponent Failure Analysis Associates**

**Date: Wednesday, April 9, 2014**

**Location: Illinois Institute of Technology (IIT)  
Chicago, Illinois 60607**

**Cost:      Members: \$35                  Non-Members: \$40  
              Students: \$5                    Unemployed/Retired: \$20**

Click on the link to register!

<http://www.cvent.com/d/m4q2bz>

#### Agenda

**4:00 PM**

**5:30 PM**

**7:30 PM**

**Poster Setup**

**Registration & Social Hour**

**Buffet Dinner & Poster Viewing**

**General Meeting & Awards Presentations**

## Chair's Corner

I'm writing this article from New Orleans where the AIChE Spring Meeting and 10<sup>th</sup> Global Congress on Process Safety is taking place. This year there are about 3000 engineers registered for the conference, and it is the largest spring conference ever. The keynote address was given by William Banholzer, Chief Technology Officer at Dow Chemical, who retired last year. Over 1200 people attended his keynote address: "Possible vs. Practical – Engineers Must Lead the Development of Practical Technologies". There weren't enough chairs, and about 100 people stood in the back of the Grand Ballroom to hear his presentation. Also the exhibition area has representatives from 89 companies, and sixteen companies are sponsoring the conference. Needless to say this conference is a success, and the attendance is a good indicator that our professional society is doing very well.

I also attended the Local Section Leadership Workshop which was held over the weekend, and three other members of AIChE Chicago also attended this workshop so AIChE Chicago was well represented. The South Texas local section also had four members attend the workshop. However, AIChE is not doing all that well with all local sections, and many of the smaller local sections were not represented at this workshop even though this workshop is designed primarily to help the smaller local sections. AIChE is in the process of developing a regional structure that will provide assistance to local sections that are having difficulties. AIChE has already started having monthly regional teleconferences to facilitate communications between

local sections. As a result of one of those teleconference calls, copies of AIChE Chicago's *Newsletter* are being sent to representatives at all the local sections in our five state region so



that members in other local sections will know about AIChE Chicago monthly meeting and have the opportunity to attend when a presentation is being given that is of interest to them. The AIChE Spring Meeting consists of a series of topical conferences that provide attendees with a wide selection of technical sessions:

- 2nd International Conference on Upstream Engineering and Flow Assurance
- Shale Gas and Light/Tight Oil
- 14th Gas Utilization Topical Conference
- 17th Topical Conference on Refinery Processing
- 26th Ethylene Producers' Conference
- Manufacturing in the 21st Century
- Emerging Technologies in Clean Energy for the 21st Century
- Distillation Symposium

In each of these topical conferences multiple sessions are held at the same time. For example, on Wednesday morning in the 17 Topical Conference on Refinery Processing, there will be four morning sessions in the 8:00 am to noon time period and four more sessions in the afternoon. Each session consists of seven papers.

Fortunately, it is possible to buy copies of all the papers being presented because it would require a team of people to cover the papers being presented at just one of the topical conferences.

I've given you a brief description of the AIChE Spring Meeting, but you really should attend

this event in the future to get an appreciation for what it offers. There's also the AIChE Annual meeting in the fall, but I'll leave discussion of that topic for some future Chair's Corner.

*Jerry Wilks*  
Chair

## **April Meeting Information**

**Dr. Trey Morrison**

**“Pick a Pillar”**

### **Abstract:**

This talk will introduce the audience to the four pillars and 20 elements of risk based process safety through industry best practices as advanced through the AIChE CCPS. I will provide an overview of managing the safety of processes for the novices in the group. Then I will bring the topic home by focusing on one of the elements within the pillars of process safety, incident investigation, to illustrate the role of incident and near-miss investigation, root cause analysis, and developing lessons learned through a series of industry case studies.

### **Biography:**

**Dr. Delmar “Trey” Morrison, III** is a Principal Engineer in Exponent's Thermal Sciences practice in their Warrenville office. Dr. Morrison's practice areas encompass product safety, product liability, and chemical process safety. Dr. Morrison's expertise includes chemical engineering, fire dynamics, and the system safety of products and processes. He has au-

thored numerous publications in these areas. Dr. Morrison's doctoral studies in Chemical Engineering at IIT focused on the safety of self-heating materials and reactive chemical



hazards. Dr. Morrison is an active professional in the product safety and chemical process safety communities. In addition to his technical committee memberships and publications, he has served in leadership roles in the field of chemical process safety through process safety conferences sponsored by AIChE in the U.S. and Latin America. Most recently, Dr. Morrison was the Global Congress Chair for the 8th Global Congress on Process Safety in 2012, which had approximately 1000 domestic and international attendees from the fields of process safety and risk analysis, and the Chair of the AIChE 11a Loss Prevention Committee from 2012-2013. The objectives of these activities are to aid in the prevention of major loss incidents that involve fires, explosions, runaway reactions, and hazardous material releases in the chemical, petrochemical, and related industries.

**To Register:**

<http://www.cvent.com/d/m4q2bz>

## **YP Announcements**

### **STEM Career Expo at Fermilab – Outreach Volunteers Needed**

**When:** Wednesday, April 23rd 2014

**Time:** 5:00PM – 9:00PM

**Where:** Fermilab, Batavia, IL

**RSVP:** [janet.chu@sensient.com](mailto:janet.chu@sensient.com) by Wed, April 16th

Fermilab's STEM Career Expo is an expo for Kane County and DuPage County high school students to highlight different career options in science, technology, engineering, and mathematics (STEM).

Join AIChE as we introduce chemical engineering career options to high schoolers! This a great event for chemical engineering outreach because many students attending this expo are already interested in STEM careers. Light dinner provided for volunteers.

Please RSVP to

Janet, [janet.chu@sensient.com](mailto:janet.chu@sensient.com) by Wed, April 16th

### **Pritzker Science Night – Outreach Volunteers Needed**

**When:** Monday, April 28, 2014

**Time:** 4:30PM – 7:00PM

**Where:** Pritzker Elementary, Chicago, IL

**RSVP:** [Julie.gruhn@gmail.com](mailto:Julie.gruhn@gmail.com) by Wed, April 23

Pritzker Elementary school's annual science

night is a great way to introduce chemical engineering to the next generation of chemical engineers. AIChE will be performing a fuel cell car demonstration. Light meal provided for volunteers. Please RSVP to Julie, [Julie.gruhn@gmail.com](mailto:Julie.gruhn@gmail.com) by Wed, April 23rd.

### **YPC Fauske Test Lab Tour**

**When:** Thursday, April 10th 2014

**Time:** 6:00PM

**Where:** Burr Ridge, IL

**Cost:** Free !

**RSVP:** [janet.chu@sensient.com](mailto:janet.chu@sensient.com) by Mon, April 8th

Join YPC for a tour of Fauske's new state of the art thermal stability and combustion testing laboratories in Burr Ridge, IL! Fauske performs testing and consulting services for process safety. For more information about Fauske, visit [www.fauske.com](http://www.fauske.com).

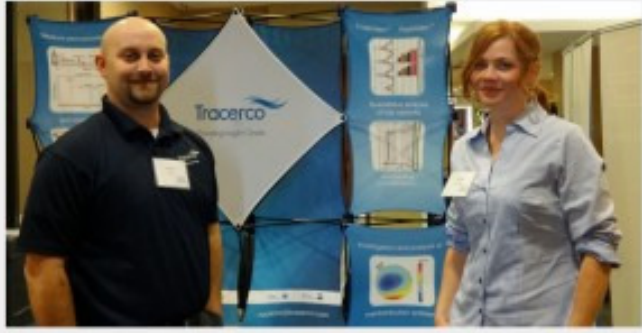
Pizza and soft drinks will be provided. Please RSVP to

Janet, [janet.chu@sensient.com](mailto:janet.chu@sensient.com) by Mon, April 8th.

### **Judges Needed for Student Poster Competition**

Judges are needed for the student poster competition that will be held at the **April 9** 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 [gwilks@citgo.com](mailto:gwilks@citgo.com) if you would be willing to assist.









## THANK YOU

Thank you to all of the YPs who attended and presented at the Midwest regional conference. We had several young professionals help students and recent grads with their resumes and mock interviews. YPs also had a chance to socialize with professionals at students at the YP social at Morgan's







## JOIN US AT THE FIRST FPST CONFERENCE

# FPST

### Frontiers in Particle Science & Technology Conference: Particle Interactions Applied

Hamburger University at McDonald's Campus  
Oak Brook, IL • April 29 – May 1, 2014

**REGISTER NOW**

Come to **Frontiers in Particle Science and Technology**, the new conference organized by the AIChE Particle Technology Forum. **Keynote speakers** from **The Dow Chemical Company** and the **University of Michigan** top the list of expert speakers addressing the latest solutions to the challenges of commercializing particle-based products.

#### Academic Keynote Address: "The Shapes of Things to Come"

Presented by Dr. Sharon Glotzer, *University of Michigan*

Recent advances in computing make possible the rapid screening, prediction and design of particle shapes optimized for a variety of properties and behaviors. In this talk, Dr. Glotzer will present new results on particle packings and assemblies. Her talk will show how dense and crowded structures depend upon features in "shape space".

#### Industrial Keynote Address: "An Industrial Perspective on Problems Facing the Particle Technology Community"

Presented by Dr. Karl V. Jacob, *The Dow Chemical Company*

While some might say that "all the good problems" in particle technology have been solved, Dr. Jacob contends that many important challenges remain. This address will reflect on recent accomplishments in the particle technology field, as well as the new challenges that those solutions have led to.

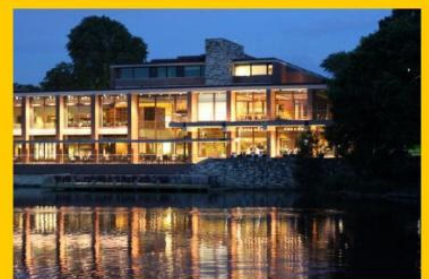
Join leading practitioners and researchers in particle technology will present papers on topics such as:

- Particle Cohesion
- Agglomeration, Clustering and Attrition
- Applications of Nanoparticle Technology
- Packing of Granular and Granular Fluid Systems
- Scale Up Challenges & Solutions
- Best Practices in Particle Science & Technology

#### Confirmed Speakers:

Benjamin Tiemens, *UOP, a Honeywell Company*  
 Matthew Purvance, *Itasca Consulting Group Inc*  
 Robert Behringer, *Duke University*  
 Benjamin Amblard, *IFP New Energies*  
 Kerry Johanson, *Materials Flow Solutions*  
 Paul Mort, *Procter & Gamble*  
 Carl Wassgren, *Purdue University*  
 Matthew Walter, *GEA Process Engineering*  
 Raghubir Gupta, *RTI International*  
 Philip Plantz, *Microtrac*  
 Brian Korgel, *The University of Texas at Austin*  
 Jeffrey Marshall, *The University of Vermont*  
 Rajesh Dave, *New Jersey Institute of Technology*  
 Benjamin Maynor, *Liquidia Technologies*  
 Joseph McCarthy, *University of Pittsburgh*  
 Jennifer Curtis, *University of Florida*  
 Arshad Kudrolli, *Clark University*  
 Daniel Lacks, *Case Western Reserve University*  
 Poupak Mehrani, *University of Ottawa*  
 Brenda Remy, *Bristol-Myers Squibb*  
 R. Bertrum Diemer, *DuPont Company*  
 Peter Blaser, *CPFD Software*

To learn more, visit: [www.aiche.org/fpstconference14](http://www.aiche.org/fpstconference14)



## FPST: Frontier in Particle Science and Technology

Technology transfer is the bridge between basic research towards industrial applications.

Only by sharing ideas beyond our four walls can we really inspire to develop that next great product or process. The problem is many conferences have too broad a focus and too many overlapping presentations. As a result, you may get to see a couple good papers that is relevant to your research over the course of several days.

The American Institute of Chemical Engineering (AIChE) and the Particle Technology Forum (PTF) wanted to change this. We are launching a new kind of conference. One where every paper is relevant and there are no overlapping sessions. Imagine seeing 20 good papers in two days on a topic you care about with each paper given by an expert in the field from both academia and industry. If you are interested in such a conference, see that attached flyer for a conference this month in Chicagoland that you may be interested.

## Historical Engineering Events in April

**April 25, 1925** – Florence Rena Sabin is the first woman elected to National Academy of Science.

**April 14, 1932** – First atom is split by a proton beam on a lithium target.

**April 6, 1938** – Teflon ® is discovered.

**April 19, 1957** – Release of FORTRAN programming language.

**April 25, 1961** – Robert Noyce and Fairchild awarded patent for the integrated circuit.

**April 16, 1977** – Apple II personal computer released, featuring a central processing unit (CPU), keyboard, floppy disk drive, and a \$1,300 price tag.

**April 26, 1986** – The Chernobyl nuclear plant exploded in the Ukraine and parts of Belarus, Russia; it was the world's worst civil nuclear catastrophe.

**April 29, 1998** – Ten percent of the Amazon rain forest is preserved. On this day, Brazil agreed to set aside about 25 million ha (62 million ac) of the Amazon rain forest for conservation in cooperation with the World Bank and the World Wildlife Fund.

**April 30, 2008** – Toyota Prius worldwide sales top 1 million mark.

Selected from:

[www.engineeringpathway.com/ep/](http://www.engineeringpathway.com/ep/)

### Election Of Section Officers

#### ABSENTEE BALLOTS

Election of officers will be held at the annual meeting on **May 14**. If you expect to be absent from this meeting, you may vote by absentee ballot. Please contact our secretary at [aichechicago@gmail.com](mailto:aichechicago@gmail.com) to obtain one.

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

<b><i>April 9, 2014</i></b>	<a href="#">What Every Young Engineer Should Know About Process Safety</a> Webinar 2 PM EDT
<b><i>April 29-May 1, 2014</i></b>	<a href="#">Frontiers in Particle Science and Technology</a> Oak Brook, IL
<b><i>May 9, 2014</i></b>	<a href="#">Modeling Non-Ideal Reactors and Mixers</a> Webinar 2 PM EDT

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

<b><i>April 9, 2014</i></b>	Student Poster session, IIT,
<b><i>May 14, 2014</i></b>	<b><i>MWRD Stickney waste water treatment plant Tour</i></b>





## **PROCESS ENGINEERS**

URS Corporation is a fully integrated engineering, construction, environmental, and technical services organization with the capabilities to support the full project life cycle – from inception through start-up and operation to decommissioning and closure. We are a publicly-traded company with more than 56,000 employees in 50 countries. Currently we are looking to fill the following requirements in our Chicago Process Engineering group:

### **Job Description**

- Provide detailed design of processes for refineries and chemical plants
- Use simulators to develop heat and mass balances
- Develop Piping & Instrumentation Diagrams and Process Flow Diagrams
- Perform hydraulic network calculations for line sizing starting with Process Flow Diagrams
- Perform relief valve calculations
- Interact with other disciplines, including equipment specialists and instrument engineers

### **Minimum Position Requirements**

- Bachelor's degree in Chemical Engineering
- Experience in the design of facilities for refineries and chemical plants
- Knowledge of major processing equipment, including fired heaters, vessels, heat exchangers, pumps, and compressors
- Technical aptitude and ability to grasp a general knowledge of multiple disciplines and technologies
- All experience levels are desired; new and recent grads are also encouraged to apply
- US citizenship or permanent residency

To apply, please send resume and cover letter to:

Doug Chidley

Business Leader

URS Chicago Process Engineering

[douglas.chidley@urs.com](mailto:douglas.chidley@urs.com)

All applicants must also register on [www.bestworkofyourlife.com](http://www.bestworkofyourlife.com)

## Knowledge is power.

At URS, we believe that the more involved you are with a process from beginning to end, the better equipped you are to provide solutions. Today, through our proven experience, we are helping clients across the Midwest meet the increasing demand for energy and chemicals. From feasibility studies, process and detailed design through construction for oil, gas, and chemical facilities, we help our customers succeed. Which is why more people are turning to us to get it done. We are URS.



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Douglas.chidley@urs.com

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## AICHE CHICAGO SECTION

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We are on the web  
[www.aiche-chicago.org](http://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](mailto:aichechicago@gmail.com)

[http://www.aiche-chicago.org/Section\\_Info/Volunteer](http://www.aiche-chicago.org/Section_Info/Volunteer)

## 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.

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

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.

