AIChE

Chicago Columns

Chicago Section

American Institute of Chemical Engineers

www.aiche-chicago.org



February Meeting Notice

Wednesday February 12, 2003 Greek Islands Restaurant 300 East 22nd St. Lombard, IL (630) 932-4545

Agenda

 Cocktails
 5:30 pm

 Dinner
 6:30 pm

 Presentation
 7:30 pm

Cost

\$22.00 for members \$26.00 for non-members

Menu

The menu will consist of Greek appetizers served family style, followed by salad, Greek style lamb, followed by dessert and coffee.

Directions

Take I-88 and exit at Highland Avenue heading north. Turn right at 22nd street. The restaurant is about one block east of Highland Avenue.

Reservations

Make your reservations by calling the AIChE Reservation Hotline at 847-588-3323 or emailing evalopez@teianalytical.com.

Or register online at www.aiche-chicago.org.

Deadline is noon February 7, 2003.

Topic

Lincoln Financial Advisors and Morgan Stanley have a synegized effort as partners in providing estate-planning services to Morgan Stanley clients. At the February meeting, Colleen Ignacio of Morgan Stanley and Jim Stone of Lincoln Financial Advisors will present:

Pursue Your Financial Goals With the Help of a Professional Financial Advisor

Building and managing a successful investment program requires a significant amount of time and attention. As an investor, you must determine which of the many investment opportunities in the marketplace today are best suited to your individual objectives, assign the appropriate allocations, track transactions, as well as respond to changing market and economic conditions.

Personalized Investment Advice

They will discuss how you work with an advisor to develop a financial plan based on your individual goals and investor profile by considering factors such as your assets, liabilities, current and projected cash flow, time horizon, financial objectives and risk tolerance, then help you to select appropriate investments from a comprehensive array of financial products and services available through our firm. These include: stocks, bonds, mutual funds, unit investment trusts, insurance, tax-exempt investments, retirement and estate planning services, personal trust services, professional portfolio management, credit products, online services and more.

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Extensive Capabilities

They are part of full-service global financial services firm, and have ready access to a wealth of sophisticated resources and employ Morgan Stanley's award-winning equity research and world-class investment banking and asset management capabilities to help you capitalize on emerging investment opportunities. The firm has an award-winning research team, which includes more than 250 analysts (more than half of whom are based outside the United States), 20 economists and 24 strategists who are recognized as among the best in the securities industry. Morgan Stanley can provide investors with high-quality equity Initial Public Offerings and secondary offerings, as well as domestic and international debt offerings.

Chair's Corner

Alan Levine, Law Engineering Chair 2002-03 Chicago Section AIChE

I would like to take some time to talk about the Structural Work Act (SWA). This is a hot topic in the engineering community and is even hotter in the political arena. I hope to present some facts upon which everyone can make their own judgment.

The SWA was originally passed before Workman's Comp legislation existed and was intended to protect workers injured on the job. Hence, when the Workman's Compensation Acts were passed, the SWA became redundant. A few years ago the engineering community supported others in the business community in getting the repeal of the original SWA, since it overlapped Workmen's Comp, thus creating another venue to sue for on the job injuries (and in many cases double awards were the result). Our efforts were part of a broader attempt to get tort reform legislation. The idea was not to eliminate liabilities, but to rationalize the awards which result [the McDonald's coffee cup case is one example]. At the time, there were economic studies showing that Illinois firms were at a disadvantage compared to those in adjacent states, because the higher awards in Illinois made the

liability premiums higher. At the time, the opposition to repeal the SWA appears to have been led by the Illinois Trial Lawyers Association.

What has brought the matter to a head-- this time-is that the Governor-elect has indicated his support
for a re-enactment of the SWA, as a high priority
item. Many argue it is a payback for union support
of his candidacy. With the Democratic majority in
both houses it is likely that such re-enactment
would proceed very rapidly.

Today, the SWA is often presented as a Safety Act to protect workmen on job sites, however, the language in the original SWA generally did not address safety, only that of recouping monies for injuries. There are those who say that the real issue at hand is about restricting legal suits and limiting liability, not protecting people. If the argument to reintroduce the SWA is to protect people working on the job, the suggestion appears to be that OSHA is not doing an adequate job. After all, the primary focus of OSHA is to protect people. Most would argue that OSHA does far more to protect the health of people, than the original SWA. Instead it seems, that to reintroduce the SWA, would essentially allow workers to be paid twice for time off due to the same injury.

I hope after reading this, that you will take some time to do further research and form your own opinion before the re-enactment becomes a done deal. The SWA has the potential to affect the livelihood of engineers in all fields. In the current economic times, we should act to protect the safety and economic viability of our futures.

The objectives of the AIChE are to advance chemical engineering in theory and practice, to maintain a high professional standard among its members and to serve society, particularly where chemical engineering can contribute to the public interest. If you have any questions, comments or snide remarks regarding the newsletter, please contact the editor at polarbear4x@yahoo.com .

Chicago Section Columns is published eight times a year by the crimson lips go Cleveland rocks, Cleveland rocks.... oops, sorry, I mean, the Chicago Section AlChE. Opinions expressed herein are those of the authors and are not necessarily those of the officers of the Chicago Section, Lewis or Oswald. Articles for inclusion in the next Chicago Section Columns must be received no later than January 24, 2003.

Symposium 2003 = CUBIC 2003

This year, we are riding the wave of new technology growth in the Chicago Area by sponsoring CUBIC 2003. Plan to attend this all day meeting covering Nanotechnology and Biotechnology Developments in this area. This meeting includes a job fair. Note the names of the departments - the trend is to split what was once the "Department of Chemical Engineering" into the "Department of Chemical and Bioengineering." In some cases, separate departments are developing for Biomedical, Biomolecular or Bioengineering. Here is the preliminary announcement:

CUBIC 2003

Chicago Universities Bioengineering Industry Conference March 7, 2003 Holiday Inn Centre City Chicago, Illinois

University of Illinois at Chicago

Department of Bioengineering

Northwestern University

Department of Biomedical Engineering Illinois Institute of Technology

The Pritzker Institute of Medical Engineering

Academic research sets the tone for Small Tech in the city of Big Shoulders. Learn what some of Chicago's premier academic institutions are turning their attention to in the area of bioengineering and nanotechnology.

Agenda

8:00 - 8:30a	Registration and coffee	
8:30 - 9:45a	Introductions, welcome and	
	keynote address	
9:45 - 10:45a	Panel discussion	
10:45 - 11:00a	Break	
11:00a - 12:15p	Simultaneous scientific sessions	
12:15 - 1:15p	Student posters, buffet lunch,	
	and informal discussion	
1:15 - 2:30p	Simultaneous scientific sessions	
2:30 - 5:00p	Op Industry and Student	
	Career Fair	
5:00 - 7:00p	Reception and continuation of	
	student poster sessions	

Exhibit space will be available for industry and educational institutions and organizations, including companies that are interested in advertising their products and services, professional societies wishing to recruit new members, and academic institutions with educational opportunities.

Registration

Registration for this event is open to students, entrepreneurs and executives from Bioengineering, emerging Technology, Life Sciences, Information, Communications and Entertainment and Media industry sectors and the Venture Capital community.

To obtain registration materials, please contact the conference administrator at 312-996-2335. AIChE Members will receive a separate mailing.

Nominations Requested For

The 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 March 01, 2003.

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

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Another Passion - Pottery
J. PETER CLARK
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I was a young engineer, a few years out of graduate school in 1972 when I made what was for me the first indulgent purchase. I was visiting one of the first Folk Arts and Crafts Fairs on the Mall in Washington, DC, sponsored by the Smithsonian Museum.

In a small booth was a young Indian couple demonstrating their unique form of pottery making and selling the most unusual pots I had ever seen. They were small, fitting easily in the palm of my hand, and a deep, lustrous black. The only decoration was an incised band near the top, but it was very precise and subtly colored in beige. The surface was very smooth, and the color was captivating. I bought the pot for \$42 and sheepishly brought it home, little knowing that it was the start of a new interest.

The couple were Tse Pe and Dora, natives of San Ildefonso pueblo in New Mexico, and they had just started making pots together, but they came from a long tradition of pot making in their pueblo and others near it. Today they are divorced, but Dora is widely known and her modern pots sell for thousands of dollars. Her daughter, Irene, is also a skilled potter.

Pottery is so closely associated with civilization that much of the science of archeology depends on recognizing pottery shards and associating them with times and cultures. The discovery of making impermeable vessels from clay permitted carrying water from a distant source, storage of foods, and cooking in new ways.

Firing of clay to bricks as well as ceramic vessels

permitted building where stone was not available. It was inevitable that a purely functional article such as a pot would soon be decorated and eventually become a work of art.

There are three common ways to make a pot from clay. The Southwest Indians build shapes from coils of wet clay. A relatively modern invention, the potter's wheel, permits shaping of symmetrical forms easily. Finally, pots can be made from a single lump of clay by pinching and forming. This approach has challenges that appeal to certain artists.

The Pueblo Indians were among the first settled cultures in North America. The villages of Acoma and Oraibi (Hopi tribe) contend for the oldest continuously occupied sites in North America. The exploring Spanish were puzzled at the multistory adobe structures and the difficulty of attacking the villages on top of mesas. Eventually, the peaceful Indians were apparently converted to Christianity and coexisted with the Spanish settlers.

They had been making and decorating pottery for centuries. In the late 19th and early 20th centuries, the art was revived and pieces were made inspired by shards that were found showing decorations and symbols that still had meaning. One of the first artists to receive recognition by the broader art world was Maria Martinez of San Ildefonso, who with her husband made unique black pots with very subtle matte decorations, achieved by painting before firing.

The clay the Indians use is naturally red, from iron compounds. Some clay is white and is reserved for special purposes. The red clay, if fired in an oxidizing environment, remains red, and painted decorations retain their color, often black.

However, the Indians often fire in a smothered fire,

usually of cattle dung. In this reducing atmosphere, the iron in the clay turns black. Decorations are often only distinguished by a difference in surface texture from the highly polished body.

The women usually shape the pots and the men decorate, using very fine brushes of fiber from cactus plants. The shapes vary from simple vases to open bowls, plates, round pots with tiny holes called seed pots, and graceful double necked shapes called wedding vases. Modern potters, including Dora and her daughter, often decorate with pieces of turquoise, but that is not historic.

Each pueblo has a distinctive style, though over the years there has been some migration among them. San Ildefonso and Santa Clara are famous for the highly polished black pottery which first captivated me. Santa Clara often is decorated with deep incisions and carved symbols while San Ildefonso use more painted decorations. Jemez has distinctive polished red ware with black painting. Acoma produces white pottery with very fine, delicate black decorations, but some artists use other colors. Hopi pots are often tan in color and have elaborate decorations. It is said that the Hopi try to make white pots but the clay turns a darker color in firing. The Navajo make pots but they are very utilitarian. Often they have a decorative ring around the neck, but the ring is never completed.

Grandchildren and great-grandchildren of Maria are still making pots in her tradition today. The best artists, such as Maria, Lucy Lewis, Rose Chino, Blue Corn, and Dora are exhibited in such museums as the Heard in Phoenix, the Smithsonian, the National Museum of Women in the Arts, and the Maxwell Museum in New Mexico. Over the years, we have acquired about 28 pots and two plates, with some of the better known artists represented.

We also have over a dozen pots from a modern, non-Indian artist who is somewhat inspired by their style, my brother Jimmy. He makes pinch pots, including one that is over 19 inches across and only 1/8 inch thick. Most of his others are smaller. His work has been featured on the cover of Ceramics magazine and in several hard cover compilations of modern ceramic art, and now sells for several thousand dollars apiece.

One does not collect pottery or any other art in order to make money, but it is a fact that good quality art tends to at least hold its value and often increases. We have enjoyed meeting some of the artists whose work we own and enjoy having the excuse to visit the New Mexico and Arizona pueblos when we can. Whether it be pottery or some other art form, learning about it, collecting what we can, and supporting artists adds a satisfying dimension to our life.

Taking Chem Engineering into the Classroom

Volunteers are need to make classroom presentations on chemical engineering in schools throughout Chicago. (See the January issue of Columns for a complete list of schools.) Power Point presentations and simple hands-on experiments are available at http://www.aiche-chicago.org/speakerskit.htm.

Topics include cleaning up an oil spill, scaling up a small alphabet soup recipe, making ice cream, and explaining the chemical engineering profession.

Section members who make a classroom presentation receive one free admission to a Section monthly meeting of their choice. To volunteer, contact Ellen Sullivan at 847-588-3840 or ellen@teianalytical.com.

U. S. EPA Region 5 EPCRA § 313 / TRI Training Workshops

The U. S. EPA Region 5 will sponsor a number of full-day Emergency Planning and Community Right-To-Know Act (EPCRA) Section 313 / Toxic Release Inventory (TRI) workshops in Illinois, Indiana, Ohio, Minnesota, and Wisconsin locations. The TRI workshops will be conducted during the spring 2003 as a part of the Region's effort to provide compliance assistance to the regulated industries. These workshops are intended to assist persons preparing their annual reports (Form R and/or Form A) on releases and other waste management activities concerning EPCRA Section 313 listed chemicals. The TRI Form R and Form A reports must be submitted to the EPCRA Reporting Center and designated state environmental offices on or before July 01 of each year.

Facilities Covered By The EPCRA Section 313 Requirements

A facility must comply with the provisions of Section 313 if it meets all of the following criteria:

- 1. The facility's primary Standard Industrial Classification (SIC) Code is in any of the following SIC codes: 2000 3999, 5169, 5171; and certain facilities included in SIC codes 10, 12, 4911, 4931, 4939, 4953, and 7389. Any federal facility meets this criteria irregardless of its SIC Code.
- 2. The facility has 10 or more full time (equivalent) employees. If the total number of hours worked by all employees is 20,000 or more per calendar year, the facility meets the ten-employee threshold.

3. The facility manufactured or processed listed toxic chemicals above any one of the threshold levels. For listed chemicals that are not persistent and bioaccumulative, the threshold levels are 25,000 pounds for processing, 25,000 pounds manufacturing, and 10,000 pounds for otherwise using during a calendar year. The activity threshold limits for the listed Persistent Bioaccumulative Toxic chemicals (PBTs) are much lower. For example, the activity threshold for polycyclic aromatic compounds (PACs) is 100 pounds, for mercury is 10 pounds, for mercury compounds is 10 pounds, and for dioxin and dioxin-like compounds is 0.1 gram.

The New TRI Lead Rule. On January 17, 2001 EPA published a final rule entitled "Lead and Lead Compounds; Lowering of Reporting Thresholds; Community Right-To-Know Toxic Chemical Release Reporting; Final Rule" [Federal Register, 66 (11), pages 4499-4547]. In this rule making EPA concluded that lead and lead compounds meet EPA's criteria for classification as PBTs. Reporting thresholds for lead was lowered to 100 pounds (except for lead contained in stainless steel, brass and bronze). Similarly, reporting thresholds for lead compound was lowered to 100 pounds. For more information on TRI please see the U.S. EPA Internet homepage http://www.epa.gov/tri.

The following is a schedule of the workshops, together with information on how to register.

Additional workshop schedule will be published in the TRI Homepage in the future:

Location	Contact		
Indianapolis, IN 46240; Marriott North Hotel, 3645 River Crossing Parkway.			
Chicago, IL 60604; U.S. EPA Building, 77 W. Jackson Blvd., Conf. Rm. 331	(1)		
Beachwood, OH 44122; Hilton Cleveland East / Beachwood Hotel, 3663 Park East Driv			
Cincinnati, OH 45202; Westin Hotel, 21 East 5th Street			
May 20, 2003 Minnetonka, MN 55343; Minneapolis Marriott S.W. Hotel, 5801 Opus Parkway.			
Middleton, WI 53562; Madison Marriott West Hotel, 1313 John Q. Hammons Driv	e (1)		
	Indianapolis, IN 46240; Marriott North Hotel, 3645 River Crossing Parkway. Chicago, IL 60604; U.S. EPA Building, 77 W. Jackson Blvd., Conf. Rm. 331 Beachwood, OH 44122; Hilton Cleveland East / Beachwood Hotel, 3663 Park East Drive Cincinnati, OH 45202; Westin Hotel, 21 East 5th Street Minnetonka, MN 55343; Minneapolis Marriott S.W. Hotel, 5801 Opus Parkway.		

- (1) Registration contact person: Fran Guido tel. no. 312/886-4348 (fax no. 312/353-4788); The workshop is free; the program starts at 8:15 AM and concludes at 4:30 PM local time.
- (2) Prior to registration, interested individuals are advised to verify dates and specific location for training workshop for any changes; the Agency bears no responsibility for your decision to purchase non-refundable transportation tickets or accommodation reservations. Space is limited, thus, registration is on first come first served basis. Workshop locations (hotels) have no information on the content of the workshops.

Job Postings

The Job Posting service is still available for AIChE Chicago section members. Please submit your resumes or available positions to Jerry Bard at geraldb@genevaonline.com, or contact Jerry at 262-279-6394. Don't miss out on this opportunity to reach your target audience.

You can also submit your resume or position on our website, www.aiche-chicago.org in the Professional Development section. Please also consider the website of AIChE in New York as a resource. The web address is www.aiche.org/careerservices/.

Position Wanted

S-0030 SENIOR OPERATIONS/ENGINEERING MANAGER. Fifteen years of effective production and process management. B.S. ChE and MBA. ISO 9000 and QS 9000 certification. Experience includes P/L management with profit margin improvements, inventory management, Just-in-Time delivery. Have recruited, developed and managed key executives. For further information, contact Jeffrey George at (414) 529-3388 or e-mail flexible@execpc.com

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At Ambitech, chemical engineers perform a variety of process design activities including simulation of continuous and batch processes, heat and material balances, feasibility studies and utility analyses. They also develop detailed engineering documents such as P&IDs, equipment specifications, perform relief system calculations, lead HAZOPs and perform commissioning and startup functions. Chemical engineers also serve as project managers, project engineers and instrumentation/control engineers.

Ambitech is committed to the development of each individual and to promotion from within. We focus on teamwork and reward outstanding performance. We provide our employees with state-of-the-art technology in an outstanding work environment, along with competitive salaries and an outstanding benefit package.

For More Information

For more information on current or future job opportunities with Ambitech, contact our Human Resources department at (630) 963-5800 ext. 111, email: ckoenig@ambitech.com.

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American Institute of Chemical Engineers

Chicago Columns singers

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