



# The South Texan

2003 Marx Isaacs Award for Outstanding Large Section Newsletter

VOLUME 104 NUMBER 2

OCTOBER 2003

## MONTHLY MEETING • OCTOBER 2, 2003



**Speakers:** **Kimberly Haynes Slaughter**,  
Senior Transportation Planner  
METRO Consultant  
S. R. Beard & Associates

**Gary Lemley** (Not Pictured)  
Director of Engineering  
Houston METRO

**Subject:** *Houston's METRO Solution Plan*

Kimberly Haynes Slaughter has 15 years of transportation planning experience with special emphasis in transit operations planning & analysis, travel demand forecasting, public involvement, air quality conformity, and interagency coordination. She is employed with S.R. Beard & Associates, LLC as a Senior Transportation Planner. S.R. Beard & Associates currently serves as Houston METRO's General Planning Consultant. Kimberly has managed the transit service planning and ridership forecasting components of Houston METRO's METRO Solutions plan development over the past two years. She will be sharing her insight and expertise on the METRO Solution Plan this October 2nd, along with METRO associate Gary Lemley.

As Director of Engineering with METRO, Gary Lemley has project management responsibilities for High Occupancy Vehicle Lanes, park & ride facilities, general mobility projects, and new bus support facilities. Gary has been with METRO since 1987 and prior to that was a Project Engineer with Brown & Root. Gary received his B.S. degree in 1973 at the University of Houston and he has been a licensed professional Engineer since 1979. He will be presenting the final portion of the presentation outlining the METRO Solution Plan.

Contact: Mat Kolodney - *Chairman Elect*

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### Workshop Announcements

Refer to pages 3 and 4 for detailed workshop topic and speaker information. Check room assignments in the Hotel Lobby to join the group that interests you.

#### Computing And Systems Technology (CAST)

Topic: *"Online Application of Process Models"*

Speaker: **To Be Announced**  
Aspen Technology, Inc.

#### Process Engineering / Plant Operations (PEPO)

Topic: *"Anaerobic Biological Treatment"*

Speaker: **Shashi Zorur**  
U.S. Filter  
(Warrendale, PA)

#### Environmental Engineering

Topic: *"Byproduct Recovery of Alkyl Halides and Water Soluble Anions and their Conversion to Salable Products Using Phase Transfer Catalysis"*

Speaker: **Peter J. Joyce**  
Value Recovery, Inc.

### How to Stay in Touch with South Texas Section

Website: <http://www.sts-aiche.org>

#### Newsletter Access:

- 1) Snail Mail to all registered STS members - one week before meeting +/- one week.
- 2) Website at [sts-aiche.org](http://sts-aiche.org) - click on Newsletter or Newsletter Archives - accessible mid-month, before meeting.
- 3) E-Mail - enroll at the Topica prompt at the bottom of the STS home page - includes URL to current Newsletter, accessible mid-month before meeting.

#### Workshops and Dinner Meeting Topics, Speakers, Synopses, and Bios:

About a week after meeting, speakers and topics appear on the website home page for the next month's meeting. Navigation keys home on detailed synopses and bios for each workshop or dinner meeting presentations.

### Meeting Location RADISSON HOTEL ASTRODOME

(Kirby at South Loop)

WORKSHOP (NO FEES - NO RSVP)	5:30-6:30 p.m.
EXECUTIVE COMMITTEE	5:00-6:00 p.m.
SOCIAL PERIOD	6:00-7:00 p.m.
DINNER	7:00-7:45 p.m.
PRICE.. \$22.00 with reservation • \$24.00 without reservation	
..... Students and Unemployed 1/2 price	
MEETING / SPEAKER	7:30-8:30 p.m.

AUTO - R.S.V.P. By 4:00 p.m., Tuesday, September 30, 2003

Call (713) 295-4847

Make reservation using the STS web site: [www.sts-aiche.org](http://www.sts-aiche.org)

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Fax: (281) 575-5258

## From the Chairman

Dave Mitchell



September (#7) was the beginning of the numbered months. It is followed by October (#8), November (#9) and December (#10). Once the year began in March such that these were indeed their real numbers, but the Romans played games with the calendar - moving the beginning to January, changing a few names to honor their Emperors, etc.

Numbering, counting, and measuring are important in our careers. Otherwise we would be no better than philosophers or others who do not put their ideas to a test. At one time in history one would be considered a genius for being able to do long division. Obviously, it takes much more now. Obviously, it will take much more in the future.

What have you done lately that was more than your job? Not that doing one's job is easy. U.S. productivity continues to grow, largely due to the workforce working longer hours. For engineers it will take more than mere hours on the job. Were you numbered among those who attended the ATM in September? Do we count you in our monthly seminars? Have you volunteered to work on a committee? Can you measure an improvement in technical or social skills in the past 5 years? What do you plan in the next 5 years? Is it safe to rely on knowing long division? Memorizing the periodic table? Past computer skills? Will the competition for jobs be any easier in the future? Would better social skills help for your next meeting or job interview?

We are learning, growing, and having fun. Join us.

## From the Editor

Jim Morris

As is stated in the lower right hand box of the Section Officers, *The South Texan*, opinions expressed are those of the authors and not of AIChE. That includes local section and National. To the extent that my editorial last month offended or mistated the local section or National position, I regret having been so outspoken.

### 2003 South Texas Section, AIChE OKTOBERFEST 2003 GOLF TOURNAMENT

**Saturday, October 4, 2003**

At the Southwyck Golf Club, Houston, TX

Tee Time is at 1:30 p.m.

Tournament Admission including Lunch and Drinks  
just \$48.00 per person

#### FOR MORE INFORMATION CONTACT:

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**Bob Bradley** - (936) 447-2453

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*The Purpose of the Section, a nonprofit scientific, educational and charitable organization, is the furtherance of the aims and purposes of the American Institute of Chemical Engineers, and the advancement of the science of chemical engineering and of related sciences through (i) the education of members and non-members in the sciences (ii) career guidance and financial assistance to students of the sciences and (iii) encouragement of research in the sciences.*

#### ADDRESS CORRECTIONS

To expedite your request, all inquiries should be made through New York:

xpress@aiche.org

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3 Park Ave, New York, NY 10016-5991

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## Workshops Announcements – detailed information

### Computing and Systems Technology (CAST)

Speaker:  
**To be announced**  
**Aspen Technology, Inc.**

Subject:  
***“Online Application of Process Models”***

Process simulation has evolved rapidly from a tool for process design calculations into a "what if analysis" tool for process improvement. Over the last few years, use of simulation has significantly grown in the areas of plant operations with easier access to plant information on engineering desktops. Process simulation is being increasingly used as a consistent decision making framework both for design and operations improvements.

This presentation covers the online use of process models in the areas of Performance Monitoring, Optimization and Operator Decision Support. The benefits of using process models online and the

necessary technologies for implementing this will be discussed along with some successful industrial applications.

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John Cheng  
(281) 604-5374  
john.cheng@basell.com

### Process Engineering / Plant Operations (PEPO)

Speaker:  
**Shashi Zorur**

Company:  
**U.S. Filter**  
(Warrendale, PA)

Subject:  
***“Anaerobic Biological Treatment”***

US Filter, a leader in the field, will have one of their experts present a workshop on Anaerobic Biological Treatment. It will be a brief overview, discussing:

What is it?

When would you need it?

Some of the fundamentals – regarding equipment and process design.

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David Karesh  
832-351-6944  
david.karesh@jacobs.com

Jim Morris  
281-358-7986  
ejmorris@vonl.com

### Environmental Engineering

Speaker:  
**Peter J. Joyce**  
President  
Value Recovery, Inc.

Subject:  
***“Byproduct Recovery of Alkyl Halides and Water Soluble Anions and their Conversion to Saleable Products Using Phase Transfer Catalysis”***

Phase-Transfer Catalysis (“PTC”) technology is widely used in the synthetic chemicals industry to react alkyl halides and a myriad of anions and convert them into specialty chemical products. It is estimated that PTC contributes at least one synthesis step to the production of over \$15 billion in sales of specialty chemicals. Until now, this technology has not been applied systematically to the recovery of unwanted byproducts and the elimination of costly waste treatment steps.

The US Toxic Release Inventory has shown over 110 million lbs/yr of production related waste consisting of alkyl halides such as methyl chloride, methyl bromide, ethyl chloride, allyl chloride and higher analogs. In addition, the TRI shows that there were also over 190 million lbs of water soluble reactive anions such as phenolate, cyanide and acrylate. The TRI is probably a conservative estimate of the true scope of the opportunity in the US and worldwide the volume is easily in excess of three quarters of a billion pounds. PTC exploits the residual reactivity of byproduct alkyl halides and anions that can then be converted economically into saleable ethers, nitriles and esters while simultaneously avoiding waste treatment costs.

In his talk, Mr. Joyce will briefly introduce PTC theory as applied to byproduct recovery, review

some experimental data, the wide range of applications and show the fundamental economics of a typical byproduct recovery process. Also discussed will be the difficulties related to introducing a new process and ways in which these can be overcome. Savings are generated from producing a new chemical for sale from the previously wasted chemicals and avoidance of hazardous waste treatment costs. Mr. Joyce is convinced that many entrepreneurial opportunities still exist and are growing exponentially with industry consolidation and will share some of his entrepreneurial experiences in the question and answer period.

Mr. Peter J. Joyce, BS, MS, MBA has 23 years of industrial experience as a chemical engineer and has worked for Hercules, Inc. and Johnson Matthey before starting up Value Recovery, Inc. in May 2000. He holds a MS and BS in chemical engineering respectively from U Cal. Berkeley and Northeastern University in Boston. He has an MBA from Columbia University in NYC. Mr. Joyce has installed or managed the installation of over 200 capital projects that involved the introduction of new technology in the \$40K to \$1 million range

*Environmental Engineering*  
— Continued on page 4

## CALENDAR OF EVENTS

### DINNER MEETINGS

**November 6, 2003**

To be determined

**December 4, 2003**

Holiday Meeting for Spouses,  
Partners, or Whatever Suits You.

Speaker: Emery Nyilas

Company: Wachovia Securities

Subject: "Investment and Retirement:

**January 8, 2004**

Speaker: To be determined

Subject: "Business Climate in the CPI"

**February 5, 2004**

Student Night at St. Arnolds Brewery

(Catered by Lennox Barbecue)

**March 4, 2004**

Speaker: Dr. George King

Company: Houston Advanced Research Center

Subject: Fuel Cells

*Dinner Meetings — Continued*

**April 1, 2004**

To be determined

**May 6, 2004**

To be determined

**WORKSHOPS - TO BE ANNOUNCED**

### SPECIAL EVENTS

**Saturday, October 4, 2003**

OKTOBEERFEST 2003 GOLF TOURNAMENT

Location: Southwyck Golf Club, Houston, TX

Tee Time: 1:30 p.m.

Cost: w/Lunch and Drinks \$48.00

**Contacts:** Daniel Bell - (281) 538-8005

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*Environmental Engineering*

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typical of the specialty chemical industry. His expertise is in the conversion of batch to continuous processes, flavor and fragrance fine distillations and extractions, scrubber system operation and design, recovery and purification of precious metals and organometallic reactions and introduction of automated processes to both industries. Value Recovery has been involved extensively in student projects with local universities to advance the development of the technology. Mr. Joyce was able to start his company with SBIR federal funding and a loan from the State of New Jersey and has built a custom laboratory in Southern New Jersey.

Contact:

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## SAVE THE DATE

4:00 PM, Thursday, November 6, 2003

### “How to Cope with Rising Energy Costs”

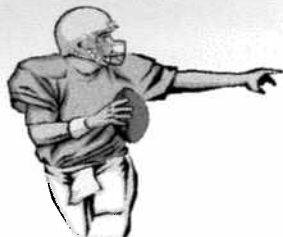
Texas Industrial Energy Management Forum

Prior to our monthly meeting on Thursday, November 6, the South Texas Section will host an Energy Management Forum on “How to Cope with Rising Energy Costs” presented by the Texas Industries of the Future. The forum will include case histories with bottom line results and an interactive panel discussion about how to address the problems the Chemical Process Industries face with rising energy costs. Immediately after the forum, there will be a networking opportunity during the STS-AIChE social period.

The forum will start at 4:00 PM, which is earlier than the workshops that normally precede the monthly STS-AIChE meetings. Depending on funding from outside sources, we may need to charge a nominal fee to the forum attendees to help cover expenses.

When the forum program and participants have been finalized, the information will be posted on our Web site, <http://www.sts-aiche.org/>, with details about registration and costs.

## YOUNG MEMBERS COLLEGE FOOTBALL at SRO's



**WHEN:** October 18, 11 a.m. - 6 p.m.

**WHAT:** Watch your favorite team & enjoy some discounted refreshments

**WHERE:** SRO Sports & Oyster Bar  
444 Northwest Mall (West Loop 610 @ W. 18th Street)

[www.srosportsbar.com](http://www.srosportsbar.com)

**RSVP by October 11:**

[wcyoun@solutia.com](mailto:wcyoun@solutia.com) or call (281) 228-4448

**Chemstations, Inc.**, makers of the CHEMCAD Suite of Chemical Process Simulation software, offers free use of its products to unemployed members of the American Institute of Chemical Engineers. Qualified members will have full access to the software for a 30-day period in which to build or 'brush up' their skills with process simulation. An online discussion forum at Chemstations' website, [www.chemstations.net](http://www.chemstations.net), is available to help users learn the software and discuss applications.

The offer is made in conjunction with the **Career Services** department of the **AIChE** and is open to members who have registered as unemployed with the organization. Unemployed chemical engineers should contact Herb Scheftel, of the AIChE, at [herbs@aiche.org](mailto:herbs@aiche.org) to learn more about and sign up for the program. To join the AIChE, visit <http://www.aiche.org> or call (800) 242-4636.

## JOIN AICHE

### MEMBERSHIP FORM

#### AIChE's South Texas Section

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**I wish to join the South Texas Section of AIChE.**

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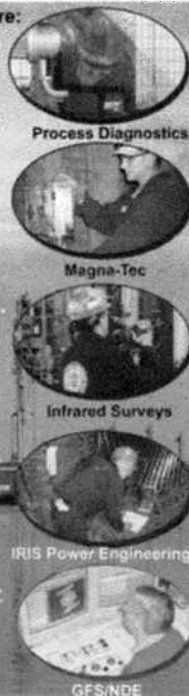
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- Partial Discharge Testing of Motors and Generators
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## 18th Annual OChEGS Symposium

### University of Houston — Department of Chemical Engineering

On behalf of the Organization of Chemical Engineering Graduate Students (OChEGS), we would like to invite you to the 18th Annual OChEGS Symposium. The Symposium provides an exciting opportunity for the department's graduate students to showcase their research for Houston's engineering community. Fields of research include reaction engineering and catalysis, materials engineering, transport and separations, bioengineering, petroleum and energy engineering and computer aided process engineering.

This year's Symposium will take place from **8:00am to 2:00pm** on **Friday, October 24**. The agenda includes 9 presentations followed by lunch and a poster session. The event will be held on the main campus in the **Cullen College of Engineering, Room W-122 in building D3**. Donuts and coffee will be served at 8:00am and lunch will be provided. For parking, directions and general information please access the OChEGS Symposium link on the department website at [www.chee.uh.edu](http://www.chee.uh.edu)

If you plan to attend this year's please contact one of the OChEGS officers listed by phone or email. Feel free to invite

any colleagues or friends that may be interested in attending the Symposium as well.

The OChEGS Symposium is supported entirely through the fundraising efforts of the graduate students. The event relies upon donations from companies affiliated with our guests. If your organization would like to make a donation, please indicate so in your response to the officers. *All contributions are greatly appreciated.*

Thank you for your continued support of the Chemical Engineering Department at the University of Houston. We hope to see you at the Symposium on **October 24**.

#### To attend, please contact one of the following:

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