



The South Texan

VOLUME 100 NUMBER 5-6

JANUARY/FEBRUARY 2000

JANUARY / FEBRUARY MEETINGS

THURSDAY - JANUARY 20, 2000

January Meeting

Joint Meeting with American Chemical Society (ACS)

Topic: "Reflections on Texas' Technological Future"

Speakers: **Malcolm Gillis** President

William Marsh Rice University

Ervin Kenneth Zingler Professor of Economics

Our speakers this month are Malcolm Gillis and Ervin Kenneth Zingler. Malcolm and Ervin will discuss the technological future for the State of Texas.

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FRIDAY - FEBRUARY 4, 2000

February Meeting

February Joint Social Event with ChE Students from Texas Colleges

Hosts: University of Houston - AIChE Students

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MEETING LOCATION

CROWNE PLAZA HOTEL - GALLERIA AREA
2222 WEST LOOP SOUTH
BETWEEN SAN FELIPE AND WESTHEIMER

WORKSHOPS

(NO FEES - NO RSVP) 5:30-6:30 p.m.

EXECUTIVE COMMITTEE 5:30-6:30 p.m.

SOCIAL PERIOD 6:00-7:00 p.m.

DINNER 7:00-7:45 p.m.

PRICE \$ 20.00 with reservation
22.00 without reservation

Students and Unemployed 1/2 price

MEETING / SPEAKER 7:30-8:30 p.m.

AUTO - R.S.V.P.

By 12:00 Noon Monday, January 17th

Call David Mitchell: (713) 295-4847

Or register on-line at our web site:

<http://www.sts-aiche.org/reservations/reserventry.htm>

WORKSHOPS

CAST

Topic: *Institutionalizing Six Sigma in Large Corporations: A Leadership Roadmap*

Speaker: **Dr. Steven Zinkgraf**
Sigma Breakthrough Technologies, Inc.

Focus: Recently, many large corporations have implemented Six Sigma - with varying degrees of success.

Contact:

Continued on page 4

Soundar Ramchandran, Solutia, Inc.

281-228-4248, Fax 281-228-4167

sbramc@solutia.com

John Cheng, Montell USA, Inc.

281-280-5374, Fax 281-280-5350

Wai-Ming_John_Cheng@Montellna.com

ENVIRONMENTAL ISSUES & GOVERNMENT INTERACTION

Topic: *Houston Galveston Area Air Quality Plan*

Speaker: Lily Wells, Houston-Galveston Area Council

Focus: The Texas Natural Resource Conservation Commission has published additional proposed revisions to the State

Contact:

Continued on page 4

Dennis Griffith, Brown and Root 281-575-4582

Fax 713-465-6914 - dennis.griffith@pdq.net

Steve Clegg, Catrep Corporation

713-954-9549, Fax 713-954-9568 - sclegg@ix.netcom.com

PROFESSIONAL DEVELOPMENT

Topic: *Ethical Choices*

Facilitator: **Larry Lowell**

Come and help plan and give your input for the March Dinner Meeting Panel Discussion on Ethical Choices

Contact: **Larry Lowell** 281-334-4907

lnlowell@flash.net

PROCESS ENGINEERING PLANT OPERATIONS

Topic: UOP High Capacity Multi-downcomer (MD)
Trays, Raschig Super-Ring" Packing
UOP High Flux Tubes

Speaker: **Stann Stirling**
UOP Process Equipment

Focus: UOP will discuss how to take advantage of using high capacity MD family of trays and Raschig Super-Rings" to debottleneck existing columns or reduce the cost of capital equipment. UOP will also discuss the use of High Flux Tubes to significantly increase the heat duty in existing heat exchangers in boiling services as well as reduce the size and quantity of new exchangers.

Contact: **Jim Morris**, Jacobs Engineering Company

713-669-2497, Fax 713-661-8476 - jim.morris@jocobs.com

2000 South Texas Section

CHAIR

CHRISTOPHER TAGOE

Equistar Chemical Bayport
5761 Underwood Road
Pasadena, TX 77507
Ph.: (281) 474-0457
Fax: (281) 474-0456
Chris.Tagoe@equistarchem.com

CHAIR-ELECT

MATTHEW KOLODNEY, P.E.

T.N.R.C.C.
5425 Polk Avenue, Suite H
Houston, Texas 77023-1423
Ph.: (713) 767-3752
Fax: (713) 767-3761
E-Mail: mkolodne@tnrcc.state.tx.us

SECRETARY

JACKIE FORSYTH

EniChem
4803 Decker Drive
Baytown, Texas 77520
Ph.: (281) 424-6895
Fax: (281) 424-6169
E-Mail: jforsyt@enicchema.com

TREASURER

DAVID MITCHELL, P.E.

GDS Engineers, Inc.
9009 West Loop South, Suite 800
Houston, Texas 77096-1719
Ph.: (713) 295-4681
Fax: (713) 667-9241
E-Mail: dcmitch@gdseng.com

EXECUTIVE COMMITTEE POSITION 1

RICHARD STREET

Aspen Technology, Inc.
9896 Bissonnet
Houston, Texas 77036-8220
Ph.: (713) 313-1384
Fax: (713) 313-5200
E-Mail: richard.street@aspentech.com

EXECUTIVE COMMITTEE POSITION 2

DRAGO BUKUR

Texas A&M University
Chemical Engineering Dept.
College Station 77845-3122
Ph.: (409) 845-3401
Fax: (409) 845-6446
E-Mail: d_bukur@tamu.edu

EXECUTIVE COMMITTEE POSITION 3

PAUL TEMME

Valero Refining Company - Texas
Houston Refinery
P.O. Box 5038
Houston, Texas 77262-5038
Ph.: (713) 923-3440
Fax: (713) 923-3561
E-Mail: temmep@valero.com

EXECUTIVE COMMITTEE POSITION 4

VENKAT VENKATASUBBIAH

Parson Polyalefins
1002 Gemini, Suite 207
Houston, TX 77058-2746
Ph.: (281) 280-5374
Fax: (281) 280-5350
E-Mail: sunmoonstar@earthlink.net

PAST CHAIR

CHARLES A. (MICKEY) REEVES

The Pace Consultants, Inc.
4828 Loop Central Drive, Suite 900
Houston, Texas 77081-2213
Ph.: (713) 669-7808
Fax: (713) 661-8476
E-Mail: mickey.reeves@jacobs.com

INSTITUTE LIAISON

R. L. "BOB" GOODMARK

Shell Oil Products Co. (Retired)
E-Mail: rlgoodmark@ghg.net

MEMBERSHIP CHAIR

JERRY GRESHAM

Gresham & Gresham
P. O. Box 820888
Houston, Texas 77282
Ph.: (713) 780-1000
Fax: (713) 781-3300
E-Mail: gresham@pdq.net

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E-mail: typeforu@aol.com

NEWSLETTER EDITOR

LAURA J. GIMPELSON P.E.

LG Environmental Engineering
4638 Cairns Drive
Houston, TX 77084
Ph.: (281) 856-8833
Fax: (281) 856-0543
E-Mail: aichesoutx@aol.com

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The Purpose of the Section, a nonprofit scientific, educational and charitable organization, are 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.

WEBSITE ADDRESS: <http://www.sts-aiche.org>

From the Chair



In case you have not noticed, our meeting this month is being held jointly with the American Chemical Society (ACS). Our February meeting, likewise is being held in conjunction with the AIChE Student Conference at the University of Houston. Your local section recognizes the role of the current student membership will

play in the future activities of the Section and sees this February meeting as an opportunity to encourage the students.

We apologize for the change from our normal schedule for these two events. You may ask why. Our monthly meetings have typically attracted the same crowd over the last several years. The executive committee recognizes that in order to appeal to a wider section of the membership, we need to try a few different approaches. Joint meetings have been a way to introduce our services and programs to a more varied clientele and thereby gain some additional participation. In connection with this, we would like to hear your thoughts about different programming ideas to appeal to more of the membership.

1999 was a year of great accomplishments for the section. Under the leadership of Chair **Mickey Reeves**, the executive committee greatly improved communications with the section's members. After much of discussion about how to utilize the electronic medium to better serve our members, the web page was used for on-line registration and email notification of local meetings.

Until last year, the section had depended on the newsletter to reach it's members. Unfortunately this mode of communication was not always timely. The web site was also redesigned to provide quick access to local section activities. If you have not accessed the web site recently, we strongly suggest you do so and explore how easy it is to check on section activities and register for the monthly meetings. Thanks to **Rick Street** and **Tom Tiller** for executing this project.

The Board spent more time in 1999, planning the affairs of the section. There were four planning meetings instead of the typical two. As chair I plan to continue that practice.

Another key initiative was the 'red book' update project. The project is being chaired by **Charlie Waligura** and **Bob Goodmark**. These books, when completed, will provide the framework for guiding the activities of the various committees and executive positions, and greatly improve continuity from year to year.

Also to improve continuity, changes were made to the makeup of the executive committee as recommended by the long range planning committee. As a result of those changes, this year, about half the members of the executive committee will continue to serve. We believe that a slower turnover rate in this leadership group will lead to better service for the membership. Joining the Board this year will be a new secretary (**Jackie Forsyth**), and Chair-elect (**Andrew Wilson**). Directors for positions 2 is (**Dragomir Bukur**) and 4 (**Venkat Venkatasubbiah**).

We look forward, with your help and involvement, to a very eventful and productive year.

Chris Tagoe, Chair

REGIONAL MEETING

ALL CHEMICAL ENGINEERS IN THE PASADENA, DEER PARK, CLEAR LAKE & BAYTOWN AREAS ARE INVITED TO A SOUTH TEXAS SECTION - AIChE REGIONAL MEETING

WHEN: Thursday, January 13, 2000 at 4:30 to 6:00 PM

WHERE: EniChem Americas, Inc. 4803 Decker Drive Baytown, TX 77520

Directions: Take I-10 East from downtown, past Beltway 8. Exit at Spur 330 - Decker Dr. Baytown Exit. Proceed south on Spur 330 — Decker Dr Continue past Bayway Dr. Watch for plant on the right hand side. Plant is located between Bayway Dr. and Baker Rd. Park in lot and go to Administration Bldg. in front. Plant Phone no. is 281 424-6115 (Key map 500FG)

TOPIC: Vacuum Equipment Selection and Performance

SPEAKER: Tim Butzbach, Tech Support Graham Vacuum and Heat Transfer

This is the Fourth Regional meeting for the 1999-2000 season, designed to accommodate engineers who work east of Interstate 45 (east Harris County). Dress is casual/work clothes.

ALL chemical engineers are invited, whether a member or not. This meeting will discuss vacuum equipment selection and performance. Are you considering additional vacuum equipment or improved energy / emission requirements? This discussion by Graham Vacuum will enlighten you about what are the important variables in the selection of vacuum devices. It will cover initial capital cost, performance, maintenance, utility consumption, controls, and long-term costs. The retrofit or new equipment will be addressed as well. A brief introduction to their new vacuum software, now available, will also be included. Good technical support and fundamentals are needed to ensure reliable operation on a piece of critical process equipment, which is often neglected after installation. Come learn how to keep it as trouble-free as possible.

RSVP are requested. Drinks will be provided. Any questions or to reply, please contact David Silarski at GTC: (281) 597-4806, FAX (281) 597-0932 or dfaski@yahoo.com (The phone number has voice mail, so call anytime it is convenient. Thanks) Also see STS- AIChE WebPages: www.sts-aiche.org for further details.

INVITE YOUR FRIENDS TO COME ALONG!!!

MARCH NEWSLETTER DEADLINE FEBRUARY 4, 2000



Andrew Wilson
Chair-Elect-2000

Jackie Forsyth
Secretary-2000/2001

TNRCC Oxone Reduction Plan

January 27, 2000

Call 73-993-2430 for more information.

DOT/NHTSA Safe Communities

January 27, 2000

Houston Doubletree Hotel

Speaker: VP Al Gore

Call 73-993-2430

US Forest Service is developing a profile of Houston's vegetation cover. Call **Mickey Merritt**, TX Forest Service at 281-477-6126 if you are interested

WORKSHOPS *Continued from page 1*

CAST

Noteworthy successes have been Motorola, Allied Signal and General Electric. This presentation addresses the general success factors associated with successful large-scale implementations of Six Sigma. John Kotter's eight-step model to leading change programs is reviewed and a resulting hands-on Six Sigma leadership roadmap will be discussed in detail.

The Six Sigma leadership roadmap consists of five steps: (1) Select the right projects; (2) Select and train the right people; (3) Develop and implement improvement plans; (4) Manage for excellence and (5) Sustain the gains. Case studies of successful Six Sigma companies will be related to this roadmap.

Steve Zinkgraf holds a Ph.D. in applied statistics from Texas A&M University. After spending a number of years in academia, Steve joined Motorola in 1988 as a Statistical Quality Engineering Group Leader leading a large electronics plant's SPC effort. Other positions held while at Motorola include Engineering Group Leader, Production Manager and Plant Quality Manager. Steve has also spent time at Compaq Computer Company as a staff statistician and at ABB leading an internal consulting group focused on implementing Six Sigma in combination with Lean Manufacturing systems. Steve currently owns his own consulting firm, Sigma Breakthrough Technologies, Inc.

Our December workshop covered the topic of financial benefit determination from improved dynamic performance. Dr. Pierre Latour showed us how to quantify missing intangibles from applying closed-loop optimization and constrained multivariable predictive control. The workshop was well-attended with 22 attendees.

Please note that the January 2000 meeting is scheduled for January 20 in order to accommodate a joint meeting with the American Chemical Society (ACS). Also, please note that there will be no workshop at the February 2000 meeting. The list of speakers for the future meetings are as follows:

- | | |
|--------|--|
| Feb 3: | No CAST workshop |
| Mar 2: | Wayne Fischer , <i>Using Projection Methods to Transform Warehoused Process and Product Data into New Knowledge</i> |
| Apr 6: | Calvin Spencer , <i>Kellogg Brown & Root, Thermodynamic Property Selection for Process Simulations</i> |
| May 4: | Vasant Patel , Consultant, <i>Linear Programming for Refining Unit Operations</i> |

The CAST division of the AIChE covers all areas of computing and systems technology as applied to chemical process industries. Please feel free to contact either John Cheng or myself if you have any suggestions or ideas to improve the workshop or increase its value to the CAST group. We are very interested in hearing from you. It has been extremely wonderful getting to know you through our workshop, and we would like to take this opportunity to wish you all A Very Happy New Year!!!

Contact:

Soundar Ramchandran, Solutia, Inc., 281-228-4248, (FAX) 281-228-4167, sbramc@solutia.com, or

John Cheng, Montell Olyolefins, 281-280-5374, (FAX) 281-280-5350, wai-ming_john_cheng@montellna.com

ENVIRONMENTAL ISSUES & GOVERNMENT INTERACTION COMMITTEE

Implementation Plan for the Houston Galveston Area to attain the one-hour ozone standard by 2007. Among the provisions in the latest proposal are additional on-road and off-road measures including lower highway speed limit, a 20 percent reduction in car usage, NOx catalyst retrofits, and low sulfur fuels. Additional information about the proposed revisions is available at the TNRCC Web site at <http://www.tnrcc.state.tx.us/oprd/rules/propadap.html>

The Environmental Issues Workshop and the Government Interaction Committee will meet with Ms. Lily Wells, the Chief Air Quality Planner of the Houston-Galveston Area Council, to discuss the latest plan and to develop written comments for the STS-AIChE to submit to TNRCC.

Environmental Issues Workshop Contact:

Venkat Venkatasubbiah, Parsons Engineering Science, 713-943-5441, (FAX) 713-943-5427, venkat_venkatasubbiah@parsons.com

Government Interaction Committee Contacts:

Dennis Griffith, Brown and Root, 281-575-4582, (FAX) 713-465-6914, dennis.griffith@pdq.net

Steve Glegg, Catrep Corporation, 713-954-9549, (FAX) 713-954-9568, sclegg@ix.netcom.com

ATTENTION ALL CURRENT AND PAST SOUTH TEXAS EXECUTIVE COMMITTEE AND COMMITTEE CHAIRS

In 1989, Bob Goodmark, Charlie Waligura, and others, developed a series of Section Officers and Committee Chair manuals, affectionately known as the **Red Books**. Charlie is heading up a committee to update the Red Books. If you have one in your possession, please return it to Charlie Waligura or Mickey Reeves. You can reach Charlie at (713) 561-8410 and Mickey at (713) 669-7808.

Another Year Gone!

Is it January again already? Boy, '99 went by in a hurry! I tend to get a little reflective this time of year; what got done, what didn't. The Professional Development Committee continued with the Refinery Fundamentals Courses and Scheduling Process Engineering course. We are working on some other courses to follow, and I hope we can announce them soon.

It appears the local job market has not gotten much better for us chem-e's, but it hasn't gotten much worse either. I've seen a local uptick lately, but I wouldn't call it a trend yet. As I've mentioned before, job markets outside the Houston local area are viable, particularly in the power generation industry.

On the personal side, I've accomplished a couple of my personal goals for this year. One was financial, and the other was to quit smoking cigarettes. As of this writing, I am nicotine free for 26 days. Just in case someone else may care to know, the Zyban pill does seem to work. An added bonus for me this year, I should become a grandfather on or about the New Year (*twin girls they think*).

So as we progress into the holiday season, I raise my glass to all of you. We've made it through another one!! I hope this season brings joy & happiness, peace with friends & family and personal satisfaction to all as we remember what really important things are.

CE Weekly Subscription Rates Temporarily Lowered

November 1 through December 31, 1999 EC Publications is celebrating the new millennium by reducing the cost of a subscription to CE Weekly:

Electronic Subscriptions

Are available for one year only, \$20 US. Also includes one print issue and the Year 2000 Directory of Contract Staffing Firms to mailed Jan. 5, 2000 to whatever address they have on file for you as of Jan. 4, 2000.

Print Subscriptions

\$40 US for one year, \$25 US for 12 weeks, Also includes the Year 2000 Directory..as described above. Current subscribers may extend their subscriptions (*electronic or print*). There is a one-year limit on subscriptions, or extensions, at these prices.

CE is Committing Itself to Better Serving the Contract Staffing Industry in the 21st Century

As we approach the beginning of the twenty-first century, the staff of CE Weekly is committing itself to better serve the needs of the contract staffing industry. In the weeks and months ahead, you will notice improvements and additions to many of their services. Some will be minor, others will be major.

CE Weekly began by adding a trial offer to those who want to try their services for 30 days at the low cost of \$10. This is an excellent opportunity for job-seekers to "test" the contract arena. Trial offers do not include printed copies of either publication, *Contract Employment Weekly* or the *Year 2000 Directory of Contract Staffing Firms*. Trial participants can search the entire online jobs database, upload and edit their online resumes, and take advantage of the growing array of online job-seeking services for 30 days.

ContractJobHunter Replaces ceweekly.com

As of November 8th a brand new website was launched. ContractJobHunter (cjhunter.com), which will replace ceweekly.com. Positions advertised in CE Weekly Magazine will continue to be posted, but now on cjhunter.com.

ContractJobHunter will be similar to ceweekly.com in that most of its services will be available only to paying members. CE Weekly subscribers (*both print & electronic*) will have access to all member services offered on cjhunter.com. CE Weekly electronic subscribers will automatically become ContractJobHunter members. If you have a resume online with CE Weekly, it will now be posted on cjhunter.com instead of ceweekly.com. All ceweekly.com User Ids and passwords will automatically work for accessing the Members' Pages on cjhunter.com. Basically, all subscriber services available now on ceweekly.com will be offered on cjhunter.com. You can get to the new site by going to either cjhunter.com, contractjobhunter.com, or ceweekly.com.

Many other features will be incorporated into cjhunter.com as it evolves. The goal is to see ContractJobHunter become the "online headquarters for *serious* contractors and consultants."

Regards to All & Happy Holidays
WR

From the Editor

This issue combines the meeting announcements for January and February meetings. Both monthly meetings are joint meetings with other groups. The January meeting is with the ACS and the February meeting is part of the AIChE Student Regional Conference. Check the backpage for meeting locations and dates.

During my first year as editor, my goal was to get the newsletter into the postal system so that 95% of the members received the newsletter the weekend before the monthly meeting. Based on comments from the members, this goal has been met even when meeting or workshop information was submitted after the deadline. To get the newsletter into your hands the weekend before the monthly meeting, all submittals are due to Holly Pro Graphics and myself by the 5th of the month. Special announcements and items for the personal happenings section must be submitted by the 10th of the month. Submittals can be made by fax, hand delivery, and e-mail. See page 2 for addresses and numbers.

My goal for this year includes adding more pictures, clip art and human interest notes. Pictures from section events, award presentations to members, and other highlights shall be published as space allows if submitted by the 5th of the month. I am especially looking for pictures from the members that show receiving awards, medals or other special occasions. I did not establish the personal happenings column to serve as the section's obituary page. Call Holly Pro Graphics by the 5th to determine the format to submit photos, clip art, and other graphics.

Laura J. Gimpelson
Editor

SCIENCE FAIR JUDGES NEEDED

The Science Engineering Fair of Houston (SEFH) needs judges. SEFH is sponsored by the University of Houston-Downtown, the Houston Museum of Natural Science, and ECH — The Engineering, Science & Technology Council of Houston. Students competing in SEFH have already won local school and school district science fairs in Houston and the surrounding 17 counties. Winners (in the senior division) compete for scholarships and entry into higher level fairs (at the state or international level). Judging takes place on Friday, March 24, 2000, at the Astroarena. More information regarding SEFH is available on their web site (<http://www.dt.uh.edu/naturalscience>).

Be a Category and Place Judge

Judges are needed to determine place order in all of the categories of the science fair (truly SEFH's greatest need). If you choose to do this you will interview and score a number of students competing in only one category and age-level of the science fair; e.g. junior-high environmental science, ninth-grade chemistry, senior engineering, etc. This type of judging takes place during the daytime hours of Friday, March 24, 2000.

Or Be a Judge for A.I.Ch.E.

....that is, if you're a Chemical Engineer. The South Texas Section of the American Institute of Chemical Engineers participates in the Science Engineering Fair of Houston as both a financial sponsor and as a special awarding agency. Our special awards consist of *CRC Handbooks of Chemistry and Physics* and engraved certificates presented to students who have prepared the best exhibits related to Chemical Engineering in each age group category. Winners, their parents, and their Science teachers will be attending the May meeting. The winning exhibits will also be displayed at this meeting.

To make this important series of events possible, members of AIChE's South Texas Section are needed to serve as science fair judges. This activity basically consists of identifying exhibits related to Chemical Engineering and then choosing the best among them. This is much easier and more fun than category/place judging (but they need you more than we do). This activity will take place at the Astroarena on Friday, March 24, 2000, between 6:00 and 9:30 p.m.

If you would like to assist with either of these important activities, call Ernie Althaus at 713-839-7463. The South Texas Section will reimburse you for incidental expenses such as Astrodome parking and refreshments if you chose to assist in its judging activity.

SPEAKER-JANUARY MEETING *(Continued from page 1)*

Malcolm Gillis spent the first twenty-five years of his professional life teaching economics and bringing economic analysis to bear on important issues of public policy in nearly twenty countries, from the U.S. and Canada to Ecuador, Columbia, Ghana, and Indonesia. Since 1986, his career has been devoted primarily, but not exclusively, to university leadership.

His research and teaching activities fall into two broad classes of national and international issues: fiscal reform and environmental policy. He has published over 70 articles in journals. He is author, co-author, or editor of eight books, including a widely acclaimed 1988 publication, *Public Policies and the Misuse of Forest Resources*, and *Tax Reform in Developing Countries*, published in 1989, and the leading textbook in its field, *Economics of Development* (4th edition), now available in five languages.

His record also involves substantial service to his profession, to governments, to foundations, and hospitals. These include five years as co-editor of the oldest economics journal, the *Quarterly Journal of Economics*, two years as a member of the Governor's Council of Economics, two years as a member of the Governor's Council of Economic Advisers for the State of Alaska, three years as a member of the Visiting Committee for the Energy Division of Oak Ridge National Laboratory, board member of the American Forestry Association, and for several years a member of the International Advisory Committee for Hainan Province, China. In 1990-91, he chaired the Economic Future Commission for the Governor and General Assembly of the State of North Carolina. In 1992-93 he also served on the board of the North Carolina Air Cargo Authority and as a member of the Government Performance Audit Committee for the North Carolina Legislature. He is life member of the Houston Livestock Show and Rodeo, Board of

Trustees for the Foundation for Hospital Art, and the Foundation for Chilean Education. He serves as a board member of Houston Advanced Research Center, the Greater Houston Partnership, St. Luke's Episcopal Hospital, AMIGOS de las Americas, the Houston Symphony, Texas Aviation Hall of Fame and Museum, the Houston Technology Center, and AECOM Technology Corporation. He is a director of the Federal Reserve Bank of Dallas, Houston Branch. He was on the Advisory Board of Texas Commerce Bank from 1993-98. He has served as a member of the Executive committee and the chair of the Tax Committee of their Association of American Universities. In 1989, he was Distinguished Fulbright professor, Catholic University of Chile. In 1999 he was elected a director of the Council for Higher Education Accreditation and to the Business and Higher Education Forum. In July of 1993 professor Gillis became the sixth president of William Marsh Rice University.

FEBRUARY MEETING *(Continued from page 1)*

These ChE students are looking forward to talking to experienced Chemical Engineers (that's you!) who can share professional experiences and offer advice as they try to understand how they turn what they learned in college into starting a challenging, interesting professional life.

Friday Nite Dinner and Social Hour

When: February 4, 6:00 PM

Where: Univ. of Houston Athletic Alumni Center

Dinner: Southern Hospitality Buffet

Price: \$16.00/person - Cash Bar

See STS-Website for detailed directions

Reserve on the website or by phone by January 19, 1999!

The following Companies sponsored this issue of the STS - AIChE newsletter.
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1999 - 2000 TENTATIVE SCHEDULE

MONTH	DAY	LOCATION	TOPIC	SCHEDULED WORKSHOPS
JANUARY	20	RED LION HOTEL WESTHEIMER # 510	JOINT MEETING WITH ACS	GIC, CAST, PEPO, PD
FEBRUARY	4	U OF H ALUMNI HALL	TBA	NONE
MARCH	2	ASTRODOME	TBA	GIC, CAST, PEPO
APRIL	6	ASTRODOME	TBA	GIC, CAST, PS, PEPO
MAY	4	ASTRODOME	TBA	GIC, CAST, PEPO
JUNE	1	PORT OF HOUSTON	BOAT TOUR	NONE

All changes will be posted on www.sts-aiche.org

CAST = Computer Applications; ENV = Environmental Issues; GIC = Government Interaction;
PD = Professional Development; PS = Process Safety, PEPO = Process Engineering / Plant Operations



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