



Spring Meeting Emphasizes Energy, Safety

Chemical engineers will soon descend upon San Antonio, TX — the Lone Star State's second-largest city — for the 2010 AIChE Spring Meeting and 6th Global Congress on Process Safety, which will be held March 21–25 at the Grand Hyatt San Antonio. A program schedule, a list of meeting highlights, and registration information are available at www.aiche.org/spring.

So much to choose from

The program includes more than 150 sessions and numerous special events on topics ranging from traditional fossil fuels and petrochemicals to renewable and alternative energy sources, from process development to process safety, from distillation to mixing, and much more.

Headlining the event are some of the mainstays of Spring Meetings — the Ethylene Producers' Conference, the Topical Conference on Refinery Processing, the Natural Gas Utilization Conference, and the Distillation Topical Conference. Two other long-time features, the Loss Prevention Symposium (now in its 44th year) and the Process Plant Safety Symposium (in its 12th year), were recently combined with the Center for Chemical Process Safety's (CCPS) International Conference — forming what will this year be the 6th Global Congress on Process Safety.

Energy and the environment. John Hofmeister, founder and chief executive of Citizens for Affordable Energy (CAE) and former president of



Shell Oil Co., kicks off the conference with the Energy Leadership Keynote Address on Monday morning. CAE's mission is to “educate citizens and government officials about pragmatic, non-partisan affordable energy solutions, environmental protection, energy alternatives, efficiency, infrastructure, public policy, competitiveness, social cohesion, and quality of life.” Hofmeister will talk about the need for a balanced energy portfolio that includes fossil fuels and renewable energy sources.

Lisa P. Jackson, Administrator of the U.S. Environmental Protection Agency (EPA), has been invited to deliver the Spring Meeting Keynote Address on Monday afternoon. Jackson graduated summa cum laude from Tulane Univ.'s School of Chemical Engineering and earned a master's degree in chemical engineering from

Princeton Univ., and is a member of AIChE.

In September, EPA issued its final rule for mandatory reporting of greenhouse gas (GHG) emissions from large emitters. AIChE's Environmental Div. will sponsor three hands-on workshops where speakers will explain the rule's requirements and provide detailed guidance on how to comply with the standard. They will cover GHG accounting, reporting, and verification methodologies. One session will be aimed at a general audience, while the other two are more narrowly focused, one specifically on the needs of refiners and the other on the concerns of olefin producers.

The 10th Topical Conference on Gas Utilization will dedicate its keynote presentation to Cedomir M. Sliepcevich, who pioneered the first commercial process for liquefaction and ocean transport of liquefied natural gas (LNG). Sliepcevich, who passed away in October (his obituary appears on p. 17), is known as “the father of LNG technology.” Richard Mallinson, the C. M. Sliepcevich Professor of Chemical Engineering at the

Univ. of Oklahoma, will give the address.

The Energy and Resource Efficiency Plenary scheduled for Tuesday, March 23, will feature Amory B. Lovins, cofounder, chairman, and chief scientist at the Rocky Mountain Institute (RMI). Lovins will discuss RMI's Factor Ten Engineering work, and



◀ The Alamo at night. Photo by Richard Nowitz.

he will announce the winners of the joint AIChE and RMI 10xE Competition. For more on this, see “Revolutionizing Design to Boost Resource Efficiency” on p. 6.

Young professionals. AIChE’s Young Professionals Advisory Board (YPAB) collaborated with several divisions, including the Fuels and Petrochemicals, Process Development, and Management Divisions, to organize several sessions that address the concerns of chemical engineers in the early stages of their career.

For example, the Management

Div. session “Young Professionals Managing Seniors: Challenges and Opportunities” explores the challenges faced by young engineers when they are promoted into management and become responsible for others who are more senior in age and tenure. With presentations titled “But I Have Kids Older Than You,” “What I Wished I Was Told,” “If Working with Your Kids isn’t Pretty, Then Working for Your Kids is Ugly,” and “Young Women Managing Older Men,” the discussion promises to be educational not only for young engineers but for anyone who works with them as well.

Other sessions cosponsored by YPAB include the Process Development Div.’s “How to Do Business — Crossing Cultural Boundaries” and “Balancing Profitable and Green Manufacturing: A New Mindset for a New Manufacturing World.”

Globalization. The Institute’s Strategic Plan includes the goal “become a global organization of chemical engineering practitioners.” Toward that end, the Sociedad Espanola de Quimica Industrial e Ingenieria Quimica (SEQUI) will present a session on research and development trends. Presentations will deal with energy and sustainability, as well as bioengineering.

An added benefit. Meeting attendees can also attend the American Filtration and Separations Society (AFS) 2010 Annual Conference, which will be co-located in the Grand Hyatt March 22–25. The AFS conference will consist of three technical tracks — Biotechnology, Fundamentals and Applications, and Energy and Environment — with more than 90 presentations.

Learning safety lessons

The theme of the 6th Global Congress on Process Safety (GCPS) — “Process Safety: Learning from the Past to Improve the Future” — has two meanings. One meaning

relates to the 25th anniversary of the Bhopal disaster and the fact that, once again, “lessons learned” is a big part of the GCPS.

The other meaning refers to younger engineers who are new to process safety learning from the experience of those who have been in the field longer. To facilitate this type of learning, some sessions will have a nontraditional format, such as panel discussions where there will be more opportunities for interaction among the speakers and audience.

The GCPS plenary speaker, Sherman Glass, president of Exxon-Mobil Refining and Supply Co., will be speaking on this overall theme of learning from the past. Other common threads running through the program are regulations, risk assessment, and inherently safer design.

Regulations. Process safety regulations around the world will be one focus of this year’s GCPS. A hot topic is targeted enforcement efforts, such as the U.S. Occupational Safety and Health Administration’s (OSHA) National Emphasis Programs (NEPs), the Safety Case in the U.K., and other similar programs. “We’re in a special position where our audience includes people from both industry and regulatory bodies, and we think this will provide a unique venue for useful discussion and analysis of the programs,” says Roxy Schneider, project engineer and operations leader at CCPS.

Risk assessment. Two tracks will focus on layer of protection analysis (LOPA) — one presenting case studies of applications of LOPA, and another on the misapplications of LOPA and the lessons learned. Several sessions on quantitative risk analysis (QRA) will highlight methods, tools and examples of lessons learned from applications of QRA, as well as how risk assessment is used to help decision-makers make informed decisions.

Inherently safer technology (IST) and design (ISD). Inherent safety

ESSENTIAL LOGISTICS INFORMATION

Registration for the Spring Meeting is open, and available online at www.aiche.org/spring.

The Grand Hyatt San Antonio (600 East Market St.) will serve as the meeting headquarters and guest hotel. Guests should make their hotel arrangements as soon as possible by using the information posted at the Spring Meeting website.

Guests traveling by air will arrive at the San Antonio International Airport. Shuttle transportation between the airport and the Grand Hyatt is provided for a fee by SATTRANS, between 7:00 a.m. and 1:00 a.m. For reservations, call 210-281-9900 or visit <http://saairportshuttle.hudconltd.net/res>. A \$4 roundtrip discount is available to meeting attendees. Details are available on the Spring Meeting website

Meeting participants may register onsite and pick up badges and registration materials at the Grand Hyatt beginning Sunday, March 21, at 7:30 a.m.

Guest tours will not be arranged by AIChE, but will be available through Alamo Sightseeing Tours: www.alamosightseeingtours.com. The tour company is offering a \$5 discount on bus tours and \$2 off its trolley tours.

(IS) refers to eliminating hazards rather than accepting and managing them. Currently there is much interest across industry, academia, advocacy groups and governments in mandating IST/ISD to achieve process safety and security goals. It is also rather new, and there is much debate as to what it is, how and when it is best applied, how to judge this creative process and who should do the judging, how and whether IS differs from traditional engineering, and what the role of IST/ISD should be.

This year's GCPS will offer almost an entire day of both presentations and panel discussions on IST/ISD. "This is a unique opportunity not only to learn about this cutting-edge development in process safety, but also to have a voice in defining the concept," Schneider points out.

To accommodate the unusually large number of abstract submissions, this year's Congress has been expanded beyond the traditional Loss Prevention, Process Plant Safety, and CCPS International Conferences. Mixing topics from all three symposia, it will deal with various aspects of learning about process safety. Schneider enthuses that "this is great, because now GCPS attendees will have even more options as to which sessions to attend."

"Say-Town" venue a first for AIChE

Known variously to locals as "Mission City," "River City," or "SA Town" (pronounced "say-town"), the city of San Antonio boasts many intriguing attractions — both historic and modern — that many attendees will be discovering for the first time.

Although AIChE previously held its 1992 Safety in Ammonia Plants and Related Facilities Symposium in San Antonio, Spring 2010 marks the first time a major AIChE meeting is taking place in "San Antone" (another



◀ Riverwalk. Photo by Carol Barrington.

River. Winding through the city, River Walk serves as commercial boulevard, sprawling town center, and sanctuary. Along its miles of landscaped pathways are restaurants, shops, green spaces, open-air markets, museums, nightspots and a vast array of amusement opportunities.

Turning from the contemporary to the revolutionary, the Grand Hyatt is also shooting distance from San Antonio's most historic and iconic landmark, the Alamo — the 18th Century Spanish Mission and fortress compound where, in 1836, Texas troops, outnumbered 27 to 1, futilely fought for independence from Mexico. Called "the Shrine of Texas Liberty," the Alamo was designated a National Historic Landmark by the U.S. National Park Service in 1960. Today, the site houses a museum devoted to the Texas Revolution, and remains a touchstone in U.S. history, popular mythology, and pop culture.

AIChE in the San Antonio area has an interesting history of its own. Until 1987, AIChE members in the Austin/San Antonio area were incorporated into AIChE's Houston-based South Texas Local Section. The "South Texas" name is now a misnomer, as several additional sections located geographically south of Houston have been created since the South Texas Section was established in 1942.

By the mid 1980s, AIChE membership in the southern part of Texas had exceeded 4,500, and the geographic distance between Austin/San Antonio and the section's Houston hub called for a branch office. In 1987, a nucleus of motivated AIChE member volunteers in the Austin/San Antonio area inaugurated the Balcones Fault Section to better serve local members' needs.

nickname). This fact may come as a surprise, considering the east-central Texas region's preeminence as a center of chemical engineering industry, education and member involvement.

The delay in bringing a major AIChE conference to San Antonio was mostly a matter of logistics. Until recently, a suitably sized facility that could accommodate the Spring Meeting's needs was not readily available in the San Antonio area. The 2008 opening of the Grand Hyatt, with its easy access to the San Antonio Convention Center and proximity to the city's most popular tourist attractions, has finally presented an opportunity for AIChE to introduce its members to this compelling meeting site.

The Grand Hyatt sits adjacent to the city's most-frequented attraction — the San Antonio River Walk. Also known as Paseo del Río, River Walk is an urban thoroughfare built along the banks of the San Antonio

President's Message An Exciting Year Ahead

It is my privilege to serve as your 2010 AIChE President. AIChE is a wonderful organization, serving the needs of a very diverse membership. The profession of chemical engineering has evolved tremendously since the Institute began in 1908, and we will continue to see this evolution and growth in the coming year. The future of chemical engineering is strong, as our profession embodies the science and technology needed to address many of the grand challenges faced by the world today and into the future.

As we begin this year, business conditions continue to be a challenge — for each of us individually and for the Institute. 2009 was a stressful year for AIChE financially, but as with the general economy, we are seeing signs of a recovery. The speed and type of recovery we will experience are open for debate, and we must be prepared to be flexible in our planning.

Employment is a concern for many of our members, and AIChE has responded by increasing the content in the Career Services section of the website as well as providing many relevant articles on career issues, in *CEP*. CareerToolsPlus (www.aiche.org/careertools) is an outstanding resource to hone skills and find jobs.

Last year, under the leadership of 2009 President Scott Fogler and Executive Director June Wispelwey, AIChE added numerous resources. The webinars available through ChemE on Demand now number over 100, and key “how-to” articles and recordings of meeting sessions are also available. Six new Institute awards designed to recognize the contributions of industrial members were established, and AIChE Smart-Brief — a weekly electronic newsletter summarizing items of interest to chemical engineers — was launched.

If you have not recently visited the AIChE website (www.aiche.org), I encourage you to explore the many resources available.

Over the past three years, the ScaleUp Program has helped us to add a significant number of student members to the rolls of AIChE. These students are experiencing the benefits of membership and gaining experiences in areas (such as process safety) that will serve them well in their future careers. The number of long-term, professional members continues to slowly decrease, and we need to find creative ways to add to our membership base.

To address this, we will be looking for ways to provide greater value to our members as well as improving members’ understanding of the benefits and value that AIChE provides today. New service and business models for AIChE will be explored. Additional virtual content, adding to ChemE on Demand, will help us to serve members with expanded subjects. We will continue to work with our student members and young professionals to learn how AIChE can more effectively meet their future career and professional needs and establish a foundation for their long-term participation in the Institute.

In early 2008, AIChE leadership established a strategy and identified five goals that would shape key activities for the next five years:

- become a global organization of chemical engineering practitioners
- strengthen industry and technology groups and create new groups where needed to support the diverse interests of members
- aggressively develop innovative new products and services for members using web-based technologies
- engage with others to improve the undergraduate curriculum in

chemical engineering and promote lifelong learning

- impact societal issues by informing and educating the public and government in complex technical areas.

Membership and member services are incorporated into each of the areas.

The International Committee, the three Operating Councils (chemical engineering technology, career and education, and societal impact), and AIChE staff all have assignments in guiding progress in these areas, and we will continue to work on them in the coming year.

A lot of progress has been made this past year on developing web-based new products and services. During 2010, we want to build on the success of ChemE on Demand by expanding our virtual footprint. You will see more shared content in the form of live and archived conferences, additional webinars, publications, and online seminars and courses. Our virtual communities will expand beyond Facebook, Twitter and LinkedIn to include blogs and portals that will allow us to address specific areas of technology, geography, products, and special interests. We plan to expand our career advancement and job search offerings using this technology. Virtual meeting capabilities and collaborative information creation will become part of our portfolio. And, we will continue our effort to become the Global Network and Portal for Chemical Engineers.

We have a great year ahead of us! As AIChE continues to advance chemical engineering in theory and in practice, as we continue to maintain a high professional standard among our members, and as we continue to serve society, we will show that chemical engineers can indeed make a difference.

Hank Kohlbrand, 2010 President

"Cheddy" Sliepcevich, AIChE Fellow and ChE Pioneer

Cedomir M. Sliepcevich, professor emeritus at the Univ. of Oklahoma (OU), died on Oct. 22, 2009, at age 89. "Cheddy" (as he was called by his friends and colleagues) devoted his life to teaching and improving the world through technology.



Born in Anaconda, MT, Sliepcevich earned a BS (1941), MS (1942), and PhD (1948) at the Univ. of Michigan, all in chemical engineering. While at Michigan, he helped pioneer a generalized systems approach to thermodynamics that is still used in teaching. Also in the late 1940s, Sliepcevich took part in one of the U.S.'s first bioengineering programs, involving the development of the earliest clinical artificial kidney and leading to the development of modern hemodialysis technology.

Sliepcevich arrived at OU in 1955 as professor and chair of the School of Chemical Engineering, serving as associate dean from 1956 through 1962. His leadership in research, graduate study, accreditation and faculty development revitalized the college. In 1963, he devoted himself full-time to teaching and research. He was named the Robert W. Hughes Centennial Professor of Engineering at OU before retiring in 1991.

Sliepcevich also pioneered the first commercial process for liquefaction and ocean transport of liquefied natural gas (LNG), for which he received the 1986 Gas Industry Research Award from the American Gas Association Operating Section. His technical leadership in this area brought him recognition as "the father of LNG technology."

Among many honors, Sliepcevich received the International Ipatieff Prize from the American Chemical Society, the George Westinghouse Award (ASEE), and AIChE's William H. Walker Award. He was elected to the National Academy of Engineering in 1972, and, in 1974, he was inducted into the Oklahoma Hall of Fame. At OU, the C. M. Sliepcevich Professorship in Chemical Engineering was created in his honor.

He is survived by his wife, Cleo. The OU Foundation has established the C.M. Sliepcevich Scholarship Fund in his memory.

OBITUARIES

William E. McWhirter, 81, League City, TX

George W. Michalski, 80, Cedar Hill, TX

Glen W. Olsen, 81, Ballwin, MO

Leonard Wimpfheimer, 77, Westfield, NJ

AIChE® Calendar Conferences



For information and registration details, visit www.aiche.org/conferences or call Customer Service at 1-800-242-4363 or 1-203-702-7660 (outside the U.S.)

MARCH 21–25, 2010	2010 AIChE Spring National Meeting Grand Hyatt San Antonio • San Antonio, TX
MAY 2–5, 2010	SBE's 2nd International Conference on Stem Cell Engineering Hyatt Harborside • Boston, MA
JUNE 4–6, 2010	AIChE Leadership Development Conference Hosted by the East Tennessee Local Section, Kingsport, TN
JUNE 27–30, 2010	AIChE Process Development Symposium: Energy Challenges for Process Development The Lodge of Four Seasons • Lake Ozark, MO
AUGUST 1–4, 2010	5th International Conference on Bioengineering and Nanotechnology Biopolis, Singapore
SEPTEMBER 12–16, 2010	55th Annual Safety in Ammonia Plants and Related Facilities Symposium Hyatt Regency • San Francisco, CA



Scheduled Webinars

Register and view live and archived webinars at <http://www.aiche.org/webinars/>

JANUARY 13, 2010 2:00–3:00 PM EST	Energy Efficiency, Smart Grids, and Chemical Engineering Presented by Dr. Thomas F. Edgar
JANUARY 20, 2010 2:00–3:00 PM EST	Introduction to Solids Processing Presented by Karl V. Jacobs <i>(Free for AIChE Members)</i>
JANUARY 21, 2010 2:00–3:00 PM EST	Engineering the Stem Cell Microenvironment Presented by David Schaffer <i>(Free for SBE Members)</i>
JANUARY 27, 2010 2:00–3:00 PM EST	Waste Management: From Major Environmental Problem to Source of Materials and Energy Presented by Dr. Nickolas Themelis & Dr. Marco Castaldi
FEBRUARY 3, 2010 2:00–3:00 PM EST	Do You Really Think You Can Become a Leader Without Change Management Skills? Presented by Robert F. Anderson
FEBRUARY 10, 2010 2:00–3:00 PM EST	Fluid Mixing: Still Needed for the Process Industries in the 21st Century Presented by Dr. Arthur Etchells III
FEBRUARY 17, 2010 2:00–3:00 PM EST	Bridging the Generation Gap Presented by Dr. Linda Gravett & Dr. Robin Throckmorton