Institute News

President's Message

An Exciting Year of Contrasts and Progress

"This is a great time to be a chemical engineer." Several other AIChE Presidents have uttered these words, but perhaps they have never been more true than they are today.

AIChE's Vision is to provide value as: the global leader of the chemical engineering profession; the lifetime center for professional and personal growth, and security of chemical engineers; and the foremost catalyst in applying chemical engineering expertise in meeting societal needs.

Our world, and we as inhabitants of the world, face many challenges. These challenges are often organized under several different "megatrends" — energy, water, health and nutrition, transportation and infrastructure, and climate change.

AIChE and megatrends. As chemical engineers, our education has uniquely prepared us to make contributions in all of these areas — and as chemical engineers, we really *can* make a difference. This year, AIChE has taken many steps forward in preparing us for a future where these megatrends are becoming more important.

We launched the new Center for Energy Initiatives (CEI) to better tie together and more effectively focus AIChE activities in energy. The new Water Advisory Board was formed to guide future AIChE efforts in better utilizing and managing this critical resource. The Society for Biological Engineering (SBE) continues to expand its work in the megatrends associated with health and nutrition and with energy. The Institute for Sustainability (IfS) is bringing the concept of a sustainable future into all areas of chemical engineering.

The Virtual Community. AIChE continues to expand ChemE on Demand (www.ChemEonDemand.com) to provide a broad range of information on subjects ranging from chemical engineering technology to communication to personal finance. We now have more than 134 webinars available, with 25 more scheduled to appear in the next few months. We have almost 500 meeting sessions and 700 articles available through this website — a key member resource.

AIChE also launched ChEnected (www.chenected.com), which provides a range of social networking connections, videos, and blogs as a way to better connect chemical engineers who enjoy the virtual community. We are in the process of launching a Virtual Local Section to provide members who do not live near an active local AIChE section a way to interact and enjoy the local section experience. In addition, we have started an e-learning effort, and the first course, a Center for Chemical Process Safety (CCPS) course on biofuels, is available now.

Beyond U.S. Borders. As the world becomes more connected, AIChE is gaining more international members. We have 14 international student chapters and several local sections outside of the U.S. We are seeing increasing interest from professionals (and professional organizations) in South America and Asia in the resources that AIChE has to offer, and we expect continued growth. Our journals and meetings are drawing more of their content from abroad. CCPS has an extensive international component, which will continue to grow as a result of increasing global interest in process safety.

Enhanced career resources. During 2010, AIChE recognized the need to provide additional tools to help members manage their careers. The AIChE Career Management Center (www.aiche.org/CareerResources) provides a wealth of information, ranging from job boards to assistance with building an effective resume. Our virtual career fairs provide a way to engage potential employers without travel. Numerous webinars on managing your career and building skills are available.

Societal. AIChE continues its support of the Washington Internships for Students in Engineering (WISE) program, which provides a way for students to conduct research on a public policy issue in Washington, DC. We have also provided support for Engineers without Borders, National Engineers Week, and a variety of congressional briefings. In addition, we have increased our focus on safety in education, which will serve our members and society well.

Some final thoughts. When we entered 2010, the economy was very chaotic, sending messages of despair and recovery in the same breath. AIChE's financial health depends heavily on membership and successful meetings — membership numbers have stabilized, and we have had strong meeting attendance. As the highlights in this article point out, although the year started out with many unknowns, we made tremendous strides in many areas and have continued progress on our vision.

I am proud of our members, AIChE staff, and especially the volunteers who give so much time and effort to make AIChE successful. AIChE is a real team effort and depends on each of us to participate. Resolve to get more involved in 2011, and you will find it fun and rewarding. It has been a pleasure and an honor to serve you this year as your president.

Hank Kohlbrand, 2010 President

10AIChE®

Annual Meeting, Salt Lake City, UT

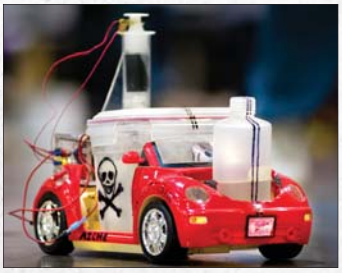
◀ Students from Oregon State Univ. celebrate their victory in "Chem-E Jeopardy," Nov. 6 at the Annual Student Conference which was hosted by the Univ. of Utah and Brigham Young Univ. AIChE Student Chapters. Some 1,300 undergrads attended the Conference for scholarly competitions, career workshops, networking, and fun.

▼ Students had fun at the Saturday night Student Conference Bash.

The annual Chem-E-Car Competition, sponsored by Chevron, is always a high point of the Student Conference. Thirty-two schools participated in safety sessions and a poster presentation, leading up to the Nov. 7 finals.

◀ Students from Cornell Univ. prep their Chem-E-Car at the starting line. Cornell went on to win the competition with its vehicle "Zoidberg," which was powered by a zinc-carbon battery and used an iodine clock stopping mechanism.

▲ A student from Michigan Tech measures chemicals in the Chem-E-Car pit area.



◀ The Univ. of Wisconsin's "Badger Battery Car."

▲ At the Honors Ceremony on Nov. 7, the Institute inaugurated several new awards that celebrated achievments in the industrial sector. Clockwise from top left: Jean Tom received the Process Operations Award on behalf of Bristol-Myers Squibb; AIChE President Henry Kohlbrand presented the Engineering and Construction Award to James Shoriak of Marathon Petroleum; Daniel Arriola of Dow accepted the Industrial Research and Development Award; and Chris Gosling (left) of UOP, with Giovanni Faraci of ENI, jointly received the Sustainable Energy Award.

▲ From left: John Forgac, Connie Carroll, and Shariq Yosufzai at a Board reception. Yosufzai received AIChE's inaugural Industry Leadership Award in recognition of his work at Chevron.

Photo: Gordon Ellis

▲ From left: Diane Spencer, Brenda Da Costa, AIChE Treasurer Andre Da Costa, and Emmett Miller mingled at the Welcome Reception.

◀ AIChE member James Smith (left) learns about "ChEnected" — the AIChE blog — from Danielle Kozich, who works with AIChE to promote its online activities.

◀ 2011 AIChE President Maria Burka welcomed leaders at a Board of Directors reception.

▶ Annual Meeting Program Co-Chairs Yoram Cohen (left) and Vincent Grassi were recognized for their contributions.

Photo: August Miller/Pizac Photography

Photo: Gordon Ellis

▲ Members of the Minority Affairs Committee (MAC) joined other Institute leaders and guests for this "family photo" at the MAC Reception on Nov. 8. Seated and holding the plaque is James Wei, a founder of MAC and recipient of MAC's William Grimes Award.

Photo: Gordon Ellis

▲ Al Wechsler (left), chair of the AIChE Foundation's Board of Trustees, talks with AIChE Past President Bill Doumas at the Volunteer Recognition Reception.

▲ Roland Clift of the Univ. of Surrey's Centre for Environmental Strategy presented the Danckwerts Lecture, "Chemical Engineering Outside the Pipe: Industrial Ecology and Sustainability."

▲ Kristi Anseth of the Univ. of Colorado delivered the Professional Progress Award Lecture, "Biology In 4 Dimensions: Dynamic Hydrogel Niches for Tissue Regeneration," on Nov. 9.

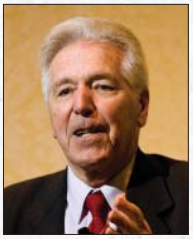
▲ The Society for Biological Engineering's (SBE) James E. Bailey Award Lecture, "Evolving Biological Engineering," was delivered by Harvey W. Blanch of the Univ. of California, Berkeley.

▲ Julio M. Ottino of Northwestern Univ. was the 62nd Institute Lecturer. His presentation was entitled, "Chemical Engineering in a Complex World: Grand Challenges, Vast Opportunities."

▲ From left: Kevin Seibert (Eli Lilly), John Lepore (Merck), and Robert Iser (FDA) were panelists at a Quality-by-Design (QbD) Roundtable, Nov. 9.

▲ Spike Narayan of IBM was a panelist at the Nov. 8 plenary, "Energy and Water Sustainability for a Smart Planet."

▶ The Corporate Innovation Award was presented to Genentech, represented by Ann Lee, who spoke on "Genentech: A Rich History of Chemical Engineering Innovation."



◀ Esteban Brignole of Universidad Nacional del Sur, Argentina, presented the James Oldshue lecture, entitled "Transesterification of Lipids with Supercritical Alcohols for Biofuels Production."

Photo: August Miller/Pizac Photography

◀ AIChE Young Professionals network at a reception with Institute leaders.

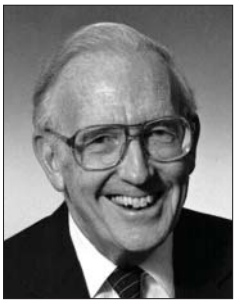
James R. Fair, Past AIChE Director and Founders Award Winner

James Rutherford Fair, the John J. McKetta Centennial Energy Chair Emeritus in Chemical Engineering at the Univ. of Texas at Austin, died on Oct. 11. Born in Charleston, MO, in 1920, Fair had a long career in both industry and academia, and is remembered as an inspiring teacher, mentor, and colleague, and a pillar of the chemical engineering profession.

After a distinguished career in industry, primarily with Monsanto, Fair moved to UT-Austin in 1979, where he was awarded the first endowed chair in the College of Engineering. His industrial background included assignments in research, process design, manufacturing technical services, and commercial development. During World War II, he worked on the government's high explosives and synthetic rubber programs. His final position at Monsanto was Director of Corporate Technology. He also served as Affiliate Professor of Chemical Engineering at Washington Univ. in St. Louis from 1964 to 1977.

Donald Paul was chair of the UT-Austin College of Engineering when Fair joined the University. "Jim seamlessly integrated his vast industrial experience into our teaching and research programs and had a tremendous impact on both," says Paul. "A great example of his ability to bridge the academic-industrial interface was the industrially sponsored Separations Research Program (SRP) that he initiated." Fair led the SRP from 1982 to 1996.

AIChE Past President Thomas Edgar was a young faculty member at UT-Austin when Fair joined the school. "I was pleased when Jim was recruited to UT-Austin, which enabled him to start one of the first (and largest) industrial-academic research consortiums in chemical engineering," says Edgar. "The SRP set a standard for how universities and industry could collaborate on fundamental and applied research, using the pilot-scale facilities at UT-Austin that continue to operate today with state-of-the-art computer control systems. This ensures that the legacy of Jim Fair, who was active in the SRP until his untimely death, will live on."



A Fellow of AIChE, Fair was an Institute director from 1965 to 1967, and in 1979 was named Institute Lecturer. In 1983, he was honored as an Eminent Chemical Engineer at AIChE's Diamond Jubilee, and in

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Univ. of Michigan Honors Stuart Churchill and Names Sharon Glotzer Churchill Professor

Earlier this year, colleagues and former students of Stuart Churchill gathered at the Univ. of Michigan, Ann Arbor, for a celebration of Churchill's 90th birthday. Churchill, the Carl V. S. Patterson Professor Emeritus of Chemical and Biomolecular Engineering at the Univ. of Pennsylvania, had been a faculty member at the Univ. of Michigan, where he earned his PhD in chemical engineering in 1952. He chaired the chemical engineering department there from 1962 to 1967, before joining U. Penn.

Churchill has made many contributions to the fields of combustion, heat transfer, and fluid dynamics. He also served as AIChE President in 1966, and was elected to the National Academy of Engineering in 1974.

▲ Sharon Glotzer

The April 23 ceremony honoring Churchill was preceded by the appointment of Sharon C. Glotzer as the Univ. of Michigan's Stuart W. Churchill Collegiate Professor of Chemical Engineering. Glotzer is a leader in the simulation of complex fluids and self-assembled materials. At the Univ. of Michigan, she also holds appointments in materials science, physics, applied physics, and macromolecular science and engineering. She is director of research computing for the College of Engineering, and is the founding director of the Institute for Computational Science and Engineering. Among her many honors is the C. M. A. Stine Award, presented by AIChE's Materials Engineering and Sciences Division.

▲ Former students joined Stuart Churchill for his 90th birthday celebration. From left to right: Warren Seider, Marty Gluckstein, Irv Miller, Jim Wilkes, David Hellums, Churchill, Mark Strenger, Humbert Chu, Christina Chan, John Chen, Lance Collins, Vicki Booker.

2011 AIChE Election Results Annouced

The Tellers have examined the votes for candidates for Officers and Directors of the Institute, and have declared the following to be the results of the election. The newly elected AIChE officers were formally announced on Nov. 8, 2010, at the annual business meeting in Salt Lake City, UT.

President
(by automatic succession)

Maria K. Burka
National Science Foundation

President-Elect

David A. Rosenthal
Marsulex Refinery Services

Treasurer

Andre R. Da Costa
Chevron

Directors (2011–2013)

T. Bond Calloway, Jr.
Savannah River National Laboratory

Karl V. Jacob
Dow Chemical Co.

Freeman E. Self
Bechtel

Katherine S. Ziemer
Northeastern Univ.

AIChE Fellows and Young Professionals Team Up for Pilot Mentoring Program

A new program is pairing some of AIChE's most experienced chemical engineers with some of the Institute's youngest members.

AIChE recently launched the Fellows/Young Professionals Mentoring Program, with AIChE Fellows volunteering to help guide young engineers into the profession. The pilot effort, which began in the summer, involves 16 pairs of AIChE Fellows and young members, spread across the U.S. and matched according to engineering expertise and background.

After an initial six-month pilot test, the mentor-mentee pairs will report on the success of their partnerships to help determine a future course for the program. Early feedback indicates a successful start-up, and the Fellows are anticipating opening the program to include more mentors and young engineers.

According to David Eckhardt, a Fellow and past director of AIChE, the current mentors consist of only AIChE Fellows, but expansion of the program will likely include non-Fellow mentors.

Eckhardt says that he did not hesitate when offered the opportunity to participate in the pilot program. "It is very gratifying when other professionals, particularly young AIChE members, can benefit from what I have learned in 40-plus years of AIChE membership," he says.

He explains that the organizers paired the mentors and young professionals based on shared background. For example, Eckhardt holds a BS in chemical engineering and an MBA, as does the person he is mentoring.

Connie Carroll, another Fellow and mentor, says, "My goals for the program were to provide assistance and support to my mentee, as she started her new job after graduating this summer, and to learn more about the challenges facing today's young professionals and thus how AIChE can be more relevant and valuable to them."

Carroll adds that her mentoring experience has been rewarding. "The young professional with whom I was paired is tremendously bright, with a great attitude and a high-potential future. We intend to stay in contact after the program ends."

David Wishnick, a leader of AIChE's Young Professionals Advisory Board, says that his experience as a mentee has allowed him "to gain perspectives on decision-making from someone with far more industry experience than I. The exchange of information has allowed me to question my own standards and philosophy," he says.

Al Wechsler, chair of the AIChE Foundation's Board of Trustees, believes that the mentoring program will benefit mentors, mentees, and the Institute. "Young Professionals will get useful advice on advancing their careers, developing a professional network, workplace skills, and technical knowledge. Mentors will receive a great deal of satisfaction from interacting with Young Professionals and seeing them progress personally and professionally — as well as learning how to interact with the younger generation of engineers while learning some new technologies. Finally, AIChE will benefit by keeping Fellows and Young Professionals active in the organization, and having more young members move to leadership positions," says Wechsler.

Ultimately, adds Eckhardt, the goal of the mentoring program is "to build better individuals, a better profession, and a better industry — which in the long run will benefit all members of the Institute."

The Fellows will evaluate the pilot program in January, and anticipate expanding it to a larger scale. For more information, e-mail aewechsler@earthlink.net.

James R. Fair (cont'd)

2000 he was recognized in a special symposium for his contributions to AIChE's distance learning program. Other AIChE honors included the William H. Walker Award for Excellence in Contributions to Chemical Engineering Literature (1973), the Award in Chemical Engineering Practice (1975), and the Founders Awards (1976). He also received the Gerhold Award in Separations Technology from AIChE's Separations Div.

Fair earned BS, MS, and PhD degrees in chemical engineering from Georgia Tech and the Universities of Michigan and Texas, respectively. He authored or co-authored seven books, and supervised the master's and doctoral research of 42 graduate students. He was also a former vice president of Fractionation Research, Inc., and a registered Professional Engineer in Texas and Missouri. He was elected to the National Academy of Engineering in 1974.

Fair is survived by his wife of 61 years, Merle Innis Fair, two children, and six grandchildren. Students and colleagues are establishing the James R. and Merle Fair Endowed Graduate Fellowship at UT-Austin. To learn more, visit www.engr.utexas.edu/giving/opportunities/jimfair/.

In Memoriam

Frank E. Biasca, 90, Los Gatos, CA

John W. Buckman, 73, Charlotte, NC

William G. Cunningham, 82, Chesterfield, MO

Suren V. Desai, 67, Libertyville, IL

James E. Dodgen, 89, Colorado Spring, CO

Thomas L. Gage, 67, Billings, MT

Lionel Kantrowitz, 77, Paramus, NJ

Hisashi O. Kono, 79, Morgantown, WV

Wolfgang B. Pietsch, 72, Naples, FL

Joseph J. Rakos, 77, Edison, NJ

George H. Weekley, 88, Little Rock, AR

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.)

JANUARY 9–13, 2011	**2nd International Congress on Sustainability Science and Engineering (ICOSSE '11)** JW Marriott Starr Pass Resort • Tucson, AZ
JANUARY 16–19, 2011	**SBE's 3rd International Conference on Biomolecular Engineering** Grand Hyatt San Francisco • San Francisco, CA
MARCH 13–17, 2011	**2011 AIChE Spring Meeting** Hyatt Regency Chicago • Chicago, IL
MAY 2–5, 2011	**Offshore Technology Conference (OTC) 2011** Reliant Park • Houston, TX
JUNE 5–8, 2011	**AIChE-DECHEMA Global Conference on Sustainability in the Process Industries (ESPI)** Hong Kong Univ. of Science and Technology • Hong Kong, SAR, China
SEPTEMBER 11–15, 2011	**56th Annual Safety in Ammonia Plants and Related Facilities Symposium** Sheraton Montreal Hotel • Montreal, QC
OCTOBER 16–21, 2011	**2011 AIChE Annual Meeting** Minneapolis Convention Center • Minneapolis, MN

Scheduled Webinars

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

DECEMBER 8, 2010 11:30 AM –12:30 PM ET	**SEF Webinar: Credentials for Sustainability Professionals** Presented by Deborah L. Grubbe, P.E., C.Eng.
DECEMBER 8, 2010 2:00–3:00 PM ET	**Get Your Professional Engineering Registration Now! Why It is Important and How to Do It** Presented by Scott D. Love, Dr. Peter B. Lederman, and James B. Porter, Jr. *(Free for AIChE Members)*
DECEMBER 9, 2010 2:00–3:00 PM ET	**AIChE's Leadership Webinars: Chemical Engineering Essentials from Academic Authors Session Two: Elementary Principles of Chemical Processes** Presented by Dr. Ronald W. Rousseau
JANUARY 5, 2011 2:00–3:00 PM ET	**Mentoring: What You Need to Know and Do** Presented by Dr. Lois Zachary
JANUARY 12, 2011 2:00–3:00 PM ET	**AIChE's Leadership Webinars: Chemical Engineering Essentials from Academic Authors — Session Three: Process Dynamics and Control** Presented by Dr. Thomas F. Edgar
JANUARY 19, 2011 2:00–3:00 PM ET	**Solid/Gas Separations: Fundamentals and Applications** Presented by Dr. Karl V. Jacob