Get It Right the First Time!

35th ECC Focuses on Improving Capital Project Management

Planning and executing a major capital project has never been easy, and bringing one in on time, on target, and on budget requires a careful balance of economic, manufacturing, legal, and "people" expertise. Staying competitive, particularly in tough economic times such as these, calls for creative thinking and careful planning well upfront to mitigate risk and improve execution.

The 35th Engineering and Construction Contracting Conference will target these and other issues, September 4-5, at the Phoenician in Scottsdale, AZ. AIChE's annual gathering of owners, contractors, and suppliers, committed to improving the outcome of capital projects in the energy, process, and general manufacturing industries, has organized this year's program under the theme "Getting It Right...Upfront!"

The conference employs four different session formats, one of which, keynotes, open the program on both days. On Thursday, September 4, Edward Galante, Sr. Vice President for ExxonMobil Corp., will speak on his company's view of future trends in energy, and the implications and challenges these trends imply for relationships between purchasers, contractors, and suppliers. The next day, David O. Swain, Executive Vice President and Chief Technology Officer at Boeing, will discuss design/engineering innovations from the aerospace industry that could potentially transform the way organizations plan and run capital projects.

Conference panel sessions feature small groups of industry experts presenting varying perspectives on two key issues: contracting and project planning. The contracting session on Thursday morning addresses risk allocation issues and challenges from the viewpoints of the supplier, contractor, and owner. Owen Dinneny of Merck & Co. looks at informed risk allocation, David Reid of Marsh Industry Practice talks on "buying protection" through insurance, and Jim Wulfsberg of Wulfsberg, Wulfsberg Reese Colvin & Firstman speaks on the topic, "Even If It's Right Upfront, Things Happen."

Later that afternoon, the second panel, entitled "Winning Project Planning," looks at establishing deliverables, clarifying roles and responsibilities, and project staffing. The three panelists—Manuel Junco of Fluor Downstream, Bob Lipscomb, of Parsons E&C, and, David Yarwood of Marathon Oil Co.—will focus their remarks on establishing the right team of owner, contractor, and supplier personnel, linking staffing plans to contracting strategies, and developing roles and responsibilities consistent with project goals and deliverables. Attendees will also receive some thought-provoking "take-aways" on contracting strategies, compensation models, and informed risk allocation.

A collage of images from The Phoenician in Scottsdale, AZ, site of the 35th Annual ECC Conference.

Forums are working sessions that aim to generate valuable, practical ideas and tools that attendees can take right back to work with them. These sessions are scattered throughout the conference program and address such topics as: "What You Need to Know to Avoid Arbitration (or even worse) When it Comes to EPC Contracts," "Information Management Mythology 101 for Executives," "Front End Loading: Myths and Misconceptions," "Plan Before You Do!: A Case Study in Lump Sum Contracting in the USA," and, "Safety: Why Do We Have to Wait for a Disaster Before We Do Something?"

Last, but not least, is Friday's "Point/Counterpoint" session, entitled "The Real Story on Metrics: Are Project Teams Using Metrics to Improve Performance or Just to Look Good?" A panel of owners and contractors will participate in what is described as a "lively, no-holds-barred session."

For more information on ECC, or to register, go to http://www.ecc-conference.org/ECC_WEB_2003/2003registration.htm.

Revised 2004 Director Slate

Since the initial slate was published in the April issue of *Extra*, two director candidates had to withdraw for personal reasons. Below is the revised list. See pages 73-76 to learn more about their qualifications, and the August issue for campaign ads and position statements from all officer candidates.

Maria K. Burka
National Science Foundation
Arlington, VA

L. Antonio Estevez
University of Puerto Rico
Mayagüez, PR

Christine S. Grant
North Carolina State University
Raleigh, NC

Dale L. Keairns
SAIC
Pittsburgh, PA

George Liebermann
Xerox Research Ctr. of Canada
Mississauga, Ontario, Canada

Kimberly L. Ogden
University of Arizona
Tucson, AZ

Gary K. Patterson
University of Missouri-Rolla
Rolla, MO

Nicholas Triantafillou
Intel Communications Group
Hillsboro, OR

AIChE OFFERS MEMBERS NEW CAREER TOOLS THROUGH EXECUPLANET

In today's marketplace there are no employment or career guarantees. Everyone must have the tools and the techniques to plan for their future. That's why AIChE has teamed with Lee Hecht Harrison (LHH)/ ExecuPlanet, a leading international career management and development firm, to offer members access to CareerTools®. This Internet-based, user-focused suite of career tools—from self-assessment activities to job search techniques to career management strategies—is tailored to help users accomplish their career goals.

According to Betty Feehan, AIChE's Senior Manager for Career Services, "ExecuPlanet's CareerTools is a terrific new value-added benefit to members at any career stage. It's available 24/7, anywhere there's an Internet connection."

This AIChE-LHH partnership may be of particular interest to local sections, student chapters, and other entities looking to plan career training programs and workshops. LHH can bring workshops and seminars addressing an array of topics to your group—from finding a new position to maintaining your employability. To arrange for a LHH workshop or speaker, contact Feehan at 212/591-7524; or via e-mail at bettf@aiche.org.

CareerTools is one of many career products offered by LHH/ExecuPlanet. "We decided to expand on our existing professional career services for members through this partnership because you can use the career tools for free," Feehan observes, adding "If personal career coaching is what you want, it's available at a substantial discount to members."

The link to the ExecuPlanet partnership can be found on AIChE's Career Services page at http://www.aiche.org/careerservices. It's easy to set up a free account. Click to sign up and try it today. The group password is aiche2003.

Member comments and questions about this new benefit are welcome. Contact careerservices@aiche.org.

Ten-Year Term Life Insurance Plan Now Available to Members

These days everyone is busy. Career, family, home, leisure activities—everything important to us requires planning. But what if the unexpected happens? Who will take care of that?

You can, with a little help from AIChE. The Institute has expanded its offerings to members to include a new very affordable life insurance program that can help you plan for the future without draining your bank account here in the present.

The AIChE 10-Year Level Term Life Plan has the backing and stability of a highly-rated insurance company. Underwritten by the New York Life Insurance Company, AIChE members may now be able to lock in the financial security provided by term life insurance—without the worry of premiums that could go up, or benefits that could go down. Your premiums and benefits remain level for 10 years, guaranteed, and you can build a plan to meet your needs—from $100,000 up to $2 million worth of coverage. The plan also offers portable coverage so it can stay with you throughout your career.

Go to http://www.aicheinsurance.com/tytlhigh.asp for more information on this plan (including features, costs, eligibility, renewability, limitations, and exclusions). And, check out all the AIChE Personal Member Benefits at www.aiche.org/member/benefits/.

WERF, U.S. EPA Host Biosolids Summit

The Water Environment Research Foundation (WERF) and the U.S. Environmental Protection Agency (EPA) are cosponsoring a national Biosolids Research Summit from July 28-30, 2003. The Summit, to be held at the Hilton Alexandria Old Town in Alexandria, Virginia, will address questions about the land application of biosolids—the organic matter that remains at the end of a wastewater treatment process after being broken down by bacteria and other organisms.

The goal of the Summit is to develop a research agenda to address gaps identified in a July 2002 report from the National Research Council (NRC) of the National Academy of Sciences (http://books.nap.edu/books/0309084865/html/index. html). An estimated 6.9 million tons of biosolids were generated in 1998, about 41 percent of which was applied to agricultural land as fertilizers and soil amendments, according to EPA. Although the NRC report found no documented scientific evidence that existing rules governing biosolids have failed to protect public health, it did recommend that EPA update the scientific basis for these regulations, improve knowledge of chemicals and pathogens, and evaluate concerns about health effects and exposure.

Summit organizers seek to identify and prioritize biosolids research for the next five or more years, and ensure that sewage sludge and biosolids management practices protect public health and the environment.

Some 45 to 60 invited attendees—including representatives from state and Federal agencies, academia, wastewater facilities, biosolids management companies, conservation groups, and interested citizens—are expected to take part. These individuals represent a range of views as to the appropriateness and safety of biosolids application, and includes both those for and against the practice.

James Stahl, WERF board member, Los Angeles County Sanitation Districts, and a member of the Summit steering committee, notes: "Bringing meaningful public input and participation into the scientific research process is a challenge. It may mean some changes in how researchers go about their business, including learning how to develop and implement protocols that include stakeholder and public participation. This process will require patience and a willingness to work toward a research standard that is responsive to the needs of the public, as well as to the needs of the water quality field."

To register as an observer, or for information and updates on the conference, go to: http://www.werf.org/Press/Summit/Summit_regform.cfm.

2004 Election—Candidates for Director

To enable members to make informed selections for the upcoming AIChE election, the candidates for director have provided overviews of their experience, as well as their plans for future programs and directions for the Institute. These messages are in each candidate's own words. Following publication in *Extra*, the statements will be posted on AIChE's Web site at **http://www.aiche.org/candidates**. Ballots will be mailed on August 29th. Ballots must be received by October 3rd. The Teller's Committee will meet to verify the results of the election on October 9th. Election results will be announced in November at AIChE's Annual Meeting in San Francisco, CA, and in the December issue of *AIChExtra*.

Maria K. Burka

AIChE's most urgent problem is its financial viability. Realistic options need to be objectively weighed to determine the best course for its members, whether this results in a more modest restructured independent organization or a merger with another professional organization. New and better mechanisms are needed for improving communication with the membership to enable AIChE to make the most significant impact with its present limited resources. Other short-term issues include, but are not limited to, the decline in AIChE membership, the changing career paths of chemical engineers, and better services to help members deal with the weak economy.

The emerging role of biochemical engineering needs to be highlighted and better integrated into AIChE programming and activities. Technology is continuously changing, and AIChE should be a leader, looking ahead to ensure the profession's long-term viability. Unique opportunities also exist for chemical engineers to make significant contributions in developing technologies, for example, for homeland security. Greater national visibility for these activities could also help foster legislation favorable to AIChE members.

Maria's AIChE service has included various leadership positions in the: (a) National Capital Section, including Chair, Vice Chair, head of professional development and, presently, as one of three elected section Directors; (b) Computing and Systems Technology Division, as Secretary/Treasurer and Director; (c) Catalysis and Reaction Engineering Division as Chair, Vice Chair, Director, Programming Chair, Newsletter Editor, and, presently, Past Chair; and (d) involvement in a number of activities aimed at promoting women and minorities in engineering, including the original Genders Committee that explored the needs of women in chemical engineering, and the present Women's Initiatives Committee. She is the Meeting Program Vice Chair for the upcoming Annual Meeting in San Francisco this November, and is a Fellow of the Institute.

Maria is the program director of the Process and Reaction Engineering program at the National Science Foundation. Her responsibilities involve administration of research grants in the areas of reaction engineering, process control, process design and reactive polymer processing. Previous positions at NSF have included program administration of the Biochemical Engineering program. Maria began her career as a process design engineer with Scientific Design Company in New York City, was later a faculty member in the Department of Chemical Engineering at the University of Maryland, and a Senior Scientist with the Environmental Protection Agency, before moving to NSF. She received B.S. and M.S. degrees from MIT, and M.A. and Ph.D. degrees from Princeton University, all in chemical engineering.

L. Antonio Estevez

Antonio is Professor of Chemical Engineering at the University of Puerto Rico, Mayagüez Campus (UPRM), where he has been since 1987. He previously taught at the University of Santiago, Chile, and at Simón Bolívar University, Venezuela. He also visited Cornell University in various capacities from 1995-2000, including a sabbatical leave in 1996-97. Antonio received his Ph.D. from University of California, Davis (1983), M.S. from Central University of Venezuela (1977), and B.S. from the University of Santiago, Chile (1975). He has been invited to give seminars at universities in the U.S., Canada, and Latin America. He has supervised numerous undergraduates in research, more than 15 M.S. students, and one student in the newly created doctoral program at UPRM.

Between February 2001 and April 2003, Antonio was Associate Dean of Academic Affairs, and Director of Graduate Studies at UPRM. He was actively involved in the Council of Graduate Schools, and was appointed to its Advisory Committee on Minorities in Graduate Education. He has been active in the Puerto Rico AGEP (Alliance for Graduate Education and the Professoriate), and worked to establish a network between UPRM and more than half of the 25 alliances established nationwide. Antonio also served as Associate Director of Chemical Engineering at UPRM from 1991 to 1995.

Antonio has devoted considerable service time to professional societies. He has been a member of AIChE since 1984, and was a founding member of the Institute's Local Section 117 in Puerto Rico. He has informally participated in AIChE's Minority Affairs Committee, and was appointed to the Societal Impact Operating Council in 2001. Previously, he served three terms (1995-2000) on the Board of the Interamerican Confederation of Chemical Engineering (ICChE), holding the offices of Vice President, President, and Past President. In 2000, ICChE gave him the prestigious Víctor Márquez Award for service to the chemical engineering community on the Continent, and last year, he was elected as its Secretary General. He is committed to improving ties among ICChE's 21 member societies, including AIChE, and speaks the confederation's four official languages: English, French, Portuguese, and Spanish. He has represented ICChE in 13 local chemical engineering events in 10 different countries. Antonio has also been a member of ACS, Sigma Xi, ASEE, and the Association of Engineers and Surveyors of Puerto Rico.

Antonio's experience and background may help AIChE on several fronts: diversity, inclusiveness, international relations, graduate education, and membership. In his vision, the Institute should make every possible effort to improve the member benefit-to-cost ratio. This may be done by increasing the membership, thus reducing the per-member costs. AIChE should commit itself to diversity and inclusiveness, which may play a key role in reaching out for new members.

2004 Election—Candidates for Director

Christine S. Grant

What does it mean to be a chemical engineer in the 21st century?

Traditionally at the forefront of professional development activities for chemical engineers, AIChE must become relevant to those working in the emerging areas of nanotechnology, electronic materials, and biomolecular processing. However, we need to seek the correct balance to serve members still in traditional chemical engineering areas. As we look towards the future, AIChE must incorporate a revised definition of the practice of chemical engineering into all its programs. Four activities are pivotal to the future of the Institute:

- Increasing the membership by improving the perceived relevance of AIChE to practicing chemical engineers.
- Developing innovative Institute programs through creative technical partnerships.
- Securing the financial status of AIChE.
- Insuring a future pipeline of talented chemical engineers through innovative programs that draw from a diverse population base.

The increasingly interdisciplinary nature of technology and the current AIChE fiscal situation requires new partnerships with the industry, government, academia and technical organizations (e.g., American Chemical Society) to create training and development programs for our members. The newly formed Young Professionals Advisory Board presents an excellent opportunity to address critical issues for our newest members. As a member of the Chemical Technology Operating Council (CTOC), I have begun to work with this board to understand how to better serve the needs of those who will be the future of AIChE. I believe that the experiences of the new professionals, coupled with the wisdom of the seasoned veteran engineers, will form an important alliance to enable members to thrive in the current industrial environment.

Christine received her B.S. in chemical engineering from Brown University (1984); and M.S. (1986) and Ph.D. (1989) degrees from Georgia Institute of Technology. She has worked at both GE's Corporate R&D Center and Procter & Gamble. She is currently an Associate Professor of Chemical Engineering at North Carolina State University. Her research in surface and interfacial science focuses on environmentally benign processes. Christine has served AIChE in the past 14 years as: CTOC–Member, liaison to the AIChE Nanotechnology Initiative (2003-2006); Chair (2002-2003), First Vice Chair (2000-2002), and Second Vice Chair (1999-2000) of the Minority Affairs Committee (MAC); Environmental Division Process Development Section Area Coordinator (1990-1994); Session Chair in AIChE Programming Area IC, "Interfacial Phenomena," and the Environmental Division. Her awards include: AIChE MAC Distinguished Service Award (2001), Georgia Tech's Council of Outstanding Young Engineering Alumni (1996), YWCA Academy of Women Award in Science and Technology (2000), and the GEM Distinguished Alumni Academic Award (2003).

Dale L. Keairns

The financial state of the Institute is driving a restructuring of AIChE. We are not electing Directors for "business as usual" decisions–the actions taken by the Board of Directors will determine the future of our Institute. Dale believes that three critical characteristics are required of Directors during this time: to listen to you as members, to obtain the information required to make informed decisions, and to be stewards for the needs and interests of chemical engineers.

The decisions that will be made must consider different interests, and there will be difficult choices. Important concerns and questions that our Board of Directors must address include:

- Inclusion: How do we effectively serve chemical engineers who are applying their skills in many diverse areas? How do we structure the Institute to respond to these needs?
- Finances: The need for fiscal stewardship of our Institute's resources has never been greater. What activities are no longer cost effective? What is our approach to partnering with others?
- Employment: These are difficult times for new and recent graduates looking for jobs. How does the Institute best serve new, as well as seasoned, chemical engineers as they seek employment?
- Membership: What strategies should we use to capture and retain members from all areas of the practice of chemical engineering?
- Relationship with other Professional Organizations: How do we effectively work together to meet mutual needs and interests?

An AIChE Fellow, Dale has been active in the Institute for more than 30 years. His service reflects a breadth of professional interests, and an understanding of different areas within the Institute. Recent service has included:

- Chair, National Program Committee Executive Board: 1994
- Charter Member, creation team for the Particle Technology Forum: 1991-92
- Director, Fuels and Petrochemicals Division: 1999-2001
- Chair, Government Relations Committee: 2000-2002
- National Program Meeting Chair: 1991

Recognition of Dale's technical and professional service is illustrated by the Pittsburgh Local Section awarding him the McAfee Award in recognition of his contributions to the profession and the community.

Dale's career has primarily been in industry, and includes technical and financial responsibility for research and development, business planning, and a commercial business. He is currently employed as a senior advisory engineer for Science Applications International, Inc. (SAIC).

Dale's degrees in chemical engineering were earned at Oklahoma State University (B.Sc.) and Carnegie-Mellon University (Ph.D.).

2004 Election—Candidates for Director

George Liebermann

Background

My active involvement in AIChE began in 1992, when I chaired my first session at an AIChE meeting. I served as chair of the Pilot Plant programming area (12a) from 1994 to 1996. With an enthusiastic and committed team, the scope of programming was extended to cover other areas, and I was elected the founding Chair (1997-1999) of the Process Development Group (Group 12), now the Process Development Division. Presently, I am the First Vice Chair of the Executive Board of the National Program Committee.

I joined the Xerox Research Centre of Canada in 1981, where I have held several positions, including that of manager of process engineering (1986-1999). I was appointed to my current position of senior engineering fellow in the fall of 2001. During my years at Xerox I have worked mostly in the development, scale-up, pilot planting, and technology transfer to manufacturing of toner polymers and additives, as well as photoactive organic materials. I have authored or coauthored more than 30 patents at Xerox, covering many materials, which have found applications in Xerox printers and copiers. In 1997, I received the highest award the company grants to an individual, the Xerox President's Award.

I received my Ph.D. in chemical engineering from the Polytechnic Institute in Timisoara, Romania. I started my career in the chemical industry at the Petrochemical Plant Solventul, in Timisoara as a research and development engineer. After a short stint at Hydrophilics in Haifa, Israel, I spent several years at Uniroyal Chemical, in Elmira, Ontario, Canada, as process development engineer.

Statement

If elected as a Director of the Board of AIChE, I would like to address the following:

- Contribute to the positive resolution of the current financial difficulties of the Institute.
- Make the activities of the Institute more relevant for industry members through refocused conferences and targeted activities.
- Promote activities for students and recent graduates in order to bring a strong youth component to the Institute.
- Take concrete actions to promote stronger interactions between academia and industry.
- Engage major corporations and prestigious universities in proactive interactions with AIChE.
- Promote collaboration with other chemical engineering societies (e.g., in the Americas and Europe).

Kimberly L. Ogden

What does it mean to be a member of the American Institute of Chemical Engineers today? We all must ask this question ourselves as members. Times are tough for the Institute. However, not having an Institute for such a distinguished profession is unthinkable.

So what do we do? The biggest issue in my mind is retention of members. We need to work together as a team to tackle the hard problems, maybe starting with one member (or previous member) at a time to:

- Determine the "value-added" of the Institute;
- Transition student members to "life-long" members;
- Combine volunteer resources of the local sections and National to work more effectively together as opposed to sometimes acting as "separate AIChE societies";
- Work with industry to encourage supporting employees who are Institute volunteers, and encourage membership of all employees; and
- Continue to improve meetings by including sessions of interest for both industrial and academic members.

These are the goals I will strive to achieve. I realize they are not simple ones. As for my background, I first became involved in AIChE as a student at the University of Pennsylvania, where I was a student officer and organized a Regional Student Conference. As a graduate student at the University of Colorado, I was an officer for two years in the Rocky Mountain Local Section. As a faculty member at the University of Arizona, my AIChE involvement is at both the local and national levels. Locally, I often serve as the Student Chapter Advisor, and have recently come full circle by helping the students with a Regional Conference. Nationally, I was a member of the Student Chapters Committee Executive Board for four years, and a Director of the Food, Pharmaceutical and Bioengineering Division for three years. Currently, I continue to be a member of the Student Chapters Committee, chair a variety of sessions at meetings, and serve on the Career and Education Operating Council.

I do feel that, together, we can reinvigorate our society. We are a diverse set of individuals with a common devotion to using chemistry, biology, physics, and mathematics to improve the society in which we live. We will draw on the strength of all of our members as we move forward together.

2004 Election—Candidates for Director

Gary K. Patterson

I, Gary K. Patterson, am professor emeritus of chemical engineering at the University of Missouri-Rolla (UMR). AIChE has been an invaluable influence and resource during my professional career since 1960, when I first joined the local section in Baton Rouge, Louisiana. My company at the time actively supported my participation.

I believe that this grassroots aspect of AIChE needs to be strengthened in this time of declining membership and financial difficulty. Most sections serve only a small fraction of the chemical engineers in their area. We must actively solicit companies to encourage Local Section AIChE membership, and encourage sections to host programs that inspire members to participate.

Both section and National meeting programs and publications should be organized to carefully balance the needs of the many who do traditional chemical engineering and management work, with the needs of those pushing the boundaries of new technologies.

Besides the grassroots efforts outlined above, some very difficult management decisions must be made to solve AIChE's financial problems. My service on the Board will be to help revitalize the Institute.

My career started out industrial, then turned academic. I have worked for three companies and three government laboratories (one in Germany) gaining diverse experience. After earning an M.S.E. at the University of Michigan, followed by a doctorate in chemical engineering at the UMR in 1966, I began teaching and research at that university. From 1984 to 1990, I served as department head of the Chemical Engineering Department of the University of Arizona. I then returned to the UMR as Associate Dean of Engineering for six years. I retired as Professor of Chemical Engineering in 2000.

My service in AIChE has gradually escalated over the years. I have been active in programming (15 sessions chaired) and committee membership and leadership. I have been a member of the Research Committee (Chair, Industry-Academic Interaction Subcommittee); National Program Committee Area 1b (Vice Chair and Chair), and Area 3a (now the North American Mixing Forum); ASEE Chemical Engineering Division (Director, Chair); Education and Accreditation Committee (current Chair); and the 21st Century Campaign Steering Committee. I have been a Fellow since 1994. I have been an ABET program evaluator since 1988, a commissioner on the ABET Engineering Accreditation Commission, and an international evaluator. I have been active in the Baton Rouge, Louisiana, and St. Louis, Missouri, Local Sections of AIChE.

Professionally, I have served as Associate Editor of the *Experiments in Fluids Journal*, and I have served on the boards of directors for two not-for-profit corporations.

Nicholas Triantafillou

While serving the needs of chemical engineers working in traditional industries is a given, AIChE also needs to strengthen its relevance to those employed in industries outside the chemical and petrochemical arena. By some accounts, 50% of new chemical engineering graduates find jobs in diverse industries; last year 28% went to work in the electronics industry. This is happening as a result of consolidations and downsizing of petrochemical companies, as well as the appreciation and need for the skills and abilities of chemical engineers by diverse companies. To maintain its position of leadership, AIChE must prove valuable to all chemical engineers, regardless of industry or job function.

We have an opportunity to re-engage colleagues who have moved on because they do not appreciate how AIChE can benefit their careers. AIChE can serve this silent but significant pool of engineers by providing forums for them to expand their technical skills, and opportunities to develop strong personal contacts. AIChE can organize, alone or in collaboration with other organizations, groups focused on the needs of new industries. AIChE can also work with universities to increase emphasis on non-traditional industries. This would lead to stronger ties between AIChE and leading semiconductor and biotech companies, for example. But first, AIChE has to clearly articulate how it can benefit engineers (and their employers) in diverse industries, while it continues to build on the core areas that help define the essence of the chemical engineering profession.

Nicholas Triantafillou received a B.S. from the University of Illinois (U-C), a Ph.D. in Chemical Engineering from the University of Delaware, and has completed the Wharton Management Program. He began his professional career in 1992 as a process development engineer with ARCO Chemical. In 1995, he joined ARCO's technical economics team and the planning organization where he supported the development of operating and strategic plans. After joining Lyondell in 1998, Nicholas became involved in a broad range of M&A activities. He joined Intel's new business incubator group in 2000, where he led the finance activities for multiple startup businesses. He was actively involved in the development and review of a broad range of business plans in areas including optical, wireless, enterprise software, and network devices. He presently works in the finance group, supporting Intel's Communication Group. Nicholas will contribute to AIChE by bringing forward a new perspective that will help the Institute reach a broader population of chemical engineers.

Is U.S. Engineering Leadership in Jeopardy?

ACT study suggests high school graduates not interested, not prepared, not motivated

According to a report recently released by ACT, a declining pool of qualified engineering students may threaten America's position as a world leader in engineering. The report, prepared by the nonprofit educational organization's Office of Policy Research, and entitled "Maintaining a Strong Engineering Workforce," reveals that, among the more than 1.1 million seniors in the class of 2002 who took the ACT Assessment college entrance and placement exam, fewer than 6% planned to study any field of engineering in college. The number had reached a high of nearly 9% in 1992.

Findings regarding potential engineering majors (PEMs) were based on 12 years of data obtained from roughly 750,000 students in graduating high school classes of 1991 to 2002 who took the ACT Assessment, and who indicated plans to study engineering as a major in college.

The study found that the percentage of PEMs who have taken a college preparatory program in high school has decreased. "Among potential engineering majors in the class of 2002, one out of 10 had taken no more than basic mathematics courses in high school, and just over half had taken calculus," clarifies Richard J. Noeth, director of ACT's Office of Policy Research and report co-author. "In addition, the number of potential engineering majors in the top quarter of their high school graduating class has been on the decline, as has the average ACT composite score earned by these students."

The diversity of the future U.S. engineering workforce is also in question, as indicated by a decline in the number of females and racial/ethnic minority students interested in the engineering field. "Despite a more than 40% increase in the overall number of female test-takers since 1991, only 18% of the planned engineering majors in 2002 were female," says Noeth. Those females, however, had higher GPAs and ACT scores and were more likely to have taken advanced math and science coursework than their male counterparts.

The report's authors made a number of recommendations to help address the potential crisis in the engineering workforce, including providing college-geared science and math courses during middle school; encouraging professional engineering organizations to inform students and parents about engineering careers; and working with policymakers to implement programs that foster student interest in, and preparation for, engineering careers.

The full report can be accessed and downloaded at http://www.act.org/research/policy/pdf/engineer.pdf.

ChemEs Take Top Honors from NJIT, Tau Beta Pi

Rocco Ciccolini, an AIChE student member and recent chemical engineering graduate of the New Jersey Institute of Technology (NJIT), was named the Outstanding Senior of the Year by the school's Newark College of Engineering (NCE). Also named NCE Outstanding Senior ChE, the award caps Ciccolini's inspiring and very unexpected march towards academic achievement, which continues next fall when he starts graduate study in chemical engineering at MIT.

"Coming from north Newark," Ciccolini said, "the ability to graduate with honors from NJIT and pursue a graduate degree at MIT indicates that, regardless of financial background and stereotypical surroundings, the combination of hard work, dedication, and the aspiration for academic dignity opens doors to opportunities that usually seem unattainable." Ciccolini entered NJIT through the Educational Opportunity Program (EOP), which provides educational support to academically and economically disadvantaged students. He is the first member of his family to attend college.

"NJIT can be very proud of Rocco," said Robert Barat, Ph.D., an associate professor of chemical engineering who supervised Ciccolini's undergraduate research project on using modern laser technology to build a device for observing and determining flow patterns. The project became the topic of a paper that Barat and Ciccolini recently presented at the 2003 American Society of Engineering Education conference.

Asked how he was able to achieve so much, especially coming from humble origins, Ciccolini said it was "a result of the continued support of my parents and loved ones. In addition, I felt that it was almost mandatory to complete each course with the attitude that there is no other grade available than an A."

AIChE members from across the country were also front and center among Tau Beta Pi's recent honorees. The engineering honor society selected Monica C.R. Branco of Villanova University, Kyle B. Guice of Louisiana Tech University, and Scott A. Roberts of the University of Kansas, as three of the 38 engineering juniors named 2003-2004 Tau Beta Pi Scholars. Each will receive a cash award of $2,000 for their senior year of study.

Tau Beta Pi also awarded 35 fellowships for graduate study, carrying a stipend of $10,000. That group includes two AIChE student members from the class of 2003: Stephanie J. Culler of the University of California, San Diego, and Bradley D. Olsen of Massachusetts Institute of Technology.

Obituaries

H. Aubrey Clay*, 92
Bartlesville, OK
Richard F. Cole, 87
New Orleans, LA
Thoren P. Cook*, 83
Anaheim, CA
William C. Coonrod, 69
Georgetown, TX
Hampton G. Corneil, 89
Kansas City, MO
George M. Drake, Jr., 71
Circleville, OH
Gaylan Fleming, 28
Houston, TX
Donald Glassman, 76
Pittsburgh, PA
George C. Gross, 89
Waynesboro, VA
Greg A. Hendricks, 29
Ridgecrest, CA
Betty Humphries, 71
Klamath Falls, OR
James G. Hunter, 88
Quincy, IL
H. Penberthy, 87
Seattle, WA
Carroll R. Reiss, 87
Calabasas, CA
William Shuster*, 86
Troy, NY
** Indicates Fellow status*

A Letter to our Members

This is the second in a series of regular updates from AIChE's Board of Directors regarding its next steps in the life of the Institute.

AIChE®

June 16, 2003

Dear Colleague,

I am happy to report that we have taken necessary steps that assure the Institute's financial solvency. Based on thousands of member comments, AIChE's Board of Directors has begun implementing a plan to refocus on AIChE's core values: technical conferences, career and student services, *CEP* and other technical publications, and member insurance and financial services.

This plan includes a further reduction in staff of 50%, sublease of the New York space and greater volunteer participation. This need for greater volunteer participation will translate into unique opportunities for much broader involvement and leadership development. Members with a particular interest or expertise will be getting involved in areas previously handled by staff.

We are aggressively pursuing opportunities to reduce our real estate. For over a year we have had 100% of our New York real estate on the market. Currently, we are negotiating an offer for 75% of this space. We continue to look for the lowest cost real estate solution for the Institute. These transactions will require additional investments and financial support from corporations and members.

As I have written before, the AIChE Board has been exploring possible mergers, alliances, and joint ventures with other societies. We continue to explore these possibilities as suggested by many of our members. Our paramount objective is to retain AIChE's independence and identity. Whether or not we eventually entertain such an arrangement, we must first assure the Institute's solvency.

To summarize, our actions will:

- Stabilize AIChE's finances
- Continue viability of our professional home
- Focus on core activities from our professional society
- Provide new, broader volunteer leadership opportunities
- Call for greater commitment from all of us

The suggestions and comments from AIChE members from all over the world have proven extremely valuable to the Board of Directors. Your commitment over the past few months has been inspiring and our success depends upon it!

I will continue to communicate with you through letters like this and through www.aiche.org/changes, and invite your further comments and suggestions at changes@aiche.org. Thank you for your continued support of AIChE.

Sincerely,

Dianne Dorland, PhD, PE
2003 AIChE President