

Institute News

Candidates Announced for 2011 AIChE Election Petition Candidate Filings Due April 25

A IChE's Nominating Committee has announced the slate of candidates for the officer and director positions for 2012. In the coming months, *CEP* will publish profiles of all the candidates that describe each person's qualifications and platforms. Profiles of president-elect candidates will appear in the June issue, and candidates for director will be published in July. The president-elect will be elected to a three-year term, serving one year each as president-elect, president, and past-

president-elect will be elected to a three-year term, serving one year each as president-elect, president, and pastpresident. The directors are elected for three-year terms. Voting by paper and electronic proxy ballot will begin August 8 and end September 6. To keep up to date on this year's election, visit www.aiche.org/election.

For President-Elect

Ignacio E. Grossmann, Carnegie Mellon Univ.

Phillip R. Westmoreland, North Carolina State Univ.

For Director (four to be elected)

Dibakar "DB" Bhattacharyya, Univ. of Kentucky

Lorenz "Larry" T. Biegler, Carnegie Mellon Univ.

John Cirucci, Air Products and Chemicals, Inc.

John G. Ekerdt, Univ. of Texas at Austin

Jack Hipple, Innovation-TRIZ

Timothy "Tim" 0. Odi, Chevron Phillips Chemical Co.

Syamal K. Poddar, Poddar & Associates

Rosemarie D. Wesson, National Science Foundation Directorate for Engineering

Are You Interested in Running?

Members interested in running for the AIChE Board election or nominating another member can do so as a petition candidate.

Any Fellow, senior member, or 4-year member of the Institute who would like to run for president-elect, treasurer, or director can file as a petition candidate with the Office of the Secretary by April 25, 2011. Nominees for president-elect must have previously served as an AIChE officer or director.

Petition candidates must submit the support, in writing, of 100 or more Fellows, senior members, or members. This can be done by signing a petition or by e-mail. For more information on filing as a petition candidate, please contact election@aiche.org.

AIChE Board of Directors Election Guidelines

In order to keep campaigning on a high professional level and to maintain fairness to all candidates, the Institute will rely on the integrity of the candidates. The following are the election guidelines:

(1) Campaigns shall be reasonable in manner, inexpensive, personally oriented and financed by the candidates themselves (that is, not financed by any organization, company, university, or local section of AIChE).

(2) Campaign advertising will be limited to the candidate's personal statement presenting his/her qualifications and views as published in *CEP*, the standard campaign ad in *CEP*, and prescribed content on the AIChE web page. The web page or ad can provide an e-mail address of the candidate for more details on his/her positions, in order to foster a dialog between the candidate and the voting membership.

(3) Campaign committees of friends of the candidates may be formed, but all mailing costs are to be borne by individuals. E-mail contacts are permitted, but no address lists are to be provided by AIChE staff, local sections, or divisions.

(4) No local section, division, or committee shall be allowed to send out any candidate's campaign material in their official mailing, nor should they support or oppose any candidates.

(5) Electioneering at AIChE meetings shall be prohibited. This includes distribution and posting of campaign materials.

(6) Sitting Board members should not endorse candidates running for election.

The Board recognizes that it is not practical to develop a complete set of electioneering rules to police each candidate's professional vitality and integrity. The Board is convinced, however, that it can depend on the membership to enforce these regulations by voting only for candidates who observe them.

AIChE 2011 Election Timeline

April 25, 2011: Petition Candidate Cut-Off Date

August 8, 2011: Election Ballot Mail Date

September 6, 2011: Election Ballot Receipt Deadline

September 12, 2011: Tellers Committee Meeting

October 17, 2011: Election Results Announced at AIChE Annual Business Meeting in Minneapolis, MN

Neal Amundson — ChE Educator, Researcher and Leader *Par Excellence*

A n era that defined the birth and development of modern chemical engineering ended when Neal R. Amundson, Cullen Professor Emeritus of chemical and biomolecular engineering and professor of mathematics at the Univ. of Houston, passed away on Feb. 16, 2011, at the age of 95.

Amundson was a transformational figure, considered by many to be the most prominent and influential chemical engineering educator in the U.S. His contributions were both revolutionary and multifaceted, and included introducing science into a field that had been dominated by an empirical and qualitative approach.

Amundson charted an innovative course that led to the development of a science-based methodology guided by quantitative analysis. Starting in the 1950s, he repeatedly demonstrated the advantages of applying mathematical modeling and advanced solution techniques to understand and predict the behavior of complex chemical processes, including chemical reactors, separation systems, polymerization, coal combustion, and atmospheric science. This approach is now followed all over the world in education, research, and practice.

Amundson was appointed head of the Dept. of Chemical Engineering at the Univ. of Minnesota in 1949, and remained in that position until 1974, transforming the department through his research and the hiring of brilliant faculty who made outstanding contributions to the field. He had the vision to foresee that infusion of talent from other disciplines such as microbiology and chemistry could enrich chemical engineering education and research, and he was an early proponent of interdisciplinary research so common in universities today.

The Univ. of Minnesota recognized the magnitude of his contributions by naming the building housing the chemical engineering department Amundson Hall in 1979.

He joined the Univ. of Houston in 1977, and helped guide its chemical engineering department to prominence as well.

Amundson was also an influential and successful mentor, with many of the nearly 70 PhD students he guided achieving prominent positions in both academia and industry.

The author of more than 200 articles and five books, Amundson served as the U.S. editor of the journal *Chemical Engineering Science* from 1957 to 1972, and edited the



Prentice-Hall International Series in the Physical and Chemical Engineering Sciences from its inception in 1961 until 2000.

His professional leadership roles included chairing the National Research Council committee that prepared the 1988 report, *Frontiers in Chemical Engineering: Research Needs and Opportunities*, often referred to as "The Amundson Report." This report charted new directions for the profession, including expansion into fields such as materials science and bioengineering.

A Fellow of AIChE, Amundson received the Institute's Founders Award for Contributions to the Field of Chemical Engineering, the Warren K. Lewis Award for Chemical Engineering Education, and the William H. Walker Award for Contributions to Chemical Engineering Literature. He also received prestigious honors from the American Society of Engineering Education (ASEE) and the American Chemical Society (ACS). He was elected to the National Academy of Engineering (1970), the National Academy of Sciences (1992), and the American Academy of Arts and Sciences (1992). The International Symposium of Chemical Reaction Engineering (ISCRE) named an award in his honor to recognize a pioneer in the field, and made him the first recipient in 1996. He also received the NAE Founders Award (1990) and honorary doctorate degrees from the Univ. of Minnesota, Univ. of Notre Dame, Univ. of Pennsylvania, Univ. of Guadalajara, and Northwestern Univ.

Amundson was born on Jan. 10, 1916, in St. Paul, MN. He earned a BS (1937) and MS (1941) in chemical engineering, and a PhD in mathematics (1945), all from the Univ. of Minnesota. He is survived by his wife of 69 years, Shirley Dimond, three children, and their families. Among his hobbies was raising orchids, and at one time he held one of the largest private collections in the U.S.

A memorial event in Amundson's honor was held at the Univ. of Houston on March 14. Many former students and friends attended the event and reminisced about the tremendous influence "The Chief" had on their development as well as on the profession. A video of the event is available at http://chbe.egr.uh.edu.

This article was co-authored by two former PhD students of Neal Amundson at the Univ. of Minnesota: Arvind Varma (1972) and Dan Luss (1966).

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AIChE Introduces New Fellows

A tAIChE's Spring Meeting and Global Congress on Process Safety in Chicago, IL (Mar. 13–17), AIChE Fellows gathered to recognize some A to fitheir newly elected Fellow colleagues at the Fellows Breakfast on Mar. 15. Fellow candidates are nominated by their AIChE peers, and must have significant chemical engineering practice (generally 25 years) and been a member of AIChE for at least 10 years, with at least three years as a Senior member. More information about AIChE Fellows is available at www.aiche.org/About/OurMembers/fellow.aspx. Here are some of the recently elected Fellows. More will be introduced in future issues of *CEP*.



Victor A. Atiemo-Obeng has spent more than 30 years in process R&D and process engineering at The Dow Chemical Co. (Midland, MI), where he is currently a Dow Fellow in the Process Chemistry and Development Dept. An editor of the *Handbook* of Industrial Mixing (Wiley, 2004), his expertise in

mixing technology has led to many commercial processes. He is a longtime leader of AIChE's Mid Michigan Section, and he recently received the North American Mixing Forum Award for his contributions to mixing research and practice. He earned his BChE at the Catholic Univ. of America, and a PhD in chemical engineering from the Univ. of Wisconsin-Madison.



Robert N. D'Alessandro, P.E., is Director of Process Technology at Evonik Degussa Corp. (Theodore, AL). A licensed professional engineer in Alabama, he has been active in AIChE's Design Institute for Emergency Relief Systems (DIERS) and has authored many publications on emergency relief

systems. He chairs the multi-company committee that is preparing the 2nd Edition of AlChE's Center for Chemical Process Safety's (CCPS) *Guidelines for Pressure Relief and Effluent Handling Systems*, and he is on the editorial board of AlChE's *Process Safety Progress* journal. He earned a BS in chemistry from Fordham Univ., and a BS and MS in chemical engineering at Columbia Univ. and Manhattan College, respectively.



Karl V. Jacob is Research Scientist/Technical Leader in Engineering Sciences at The Dow Chemical Co. (Midland, MI). He is also founder of Dow Midland's Solids Processing Lab. For the last two decades, he has worked on a vast array of particle technology problems, with particular expertise in silo/hopper

design, powder mechanics, pneumatic conveying, particle engineering, and drying. He is a chemical engineering graduate of Case Western Reserve Univ. He was elected to AlChE's Board of Directors in 2010, and is a past chair of the Particle Technology Forum.



Žarko Olujic has 40 years of research and teaching experience in the former Yugoslavia, Germany, and the Netherlands. He joined the Delft Univ. of Technology in 1987, where he is an associate professor in the Process and Energy Laboratory. His research focuses on maximizing the energy

efficiency of distillation, with emphasis on internal heat integration

and expanding the application window of dividing-wall columns. His name is synonymous with large-scale experimentation related to the development and performance modeling of structured packings and packed column internals. He earned his BSc in petroleum technology, MSc in chemical engineering, and DSc in process engineering from the Univ. of Zagreb, Croatia.



Umit S. Ozkan, P.E., is a professor of chemical engineering at Ohio State Univ., where she began her academic career in 1985 after earning her PhD in chemical engineering at Iowa State Univ. Recognized for her research in heterogeneous catalysis with applications in energy and environmental

protection, she has edited seven books, written more than 150 papers, articles, and book chapters, and given hundreds of presentations and invited lectures in 25 countries. A licensed professional engineer in Ohio, she has held leadership roles in many professional organizations, including AIChE's Professional Development and Career Guidance committees and the Catalysis and Reaction Engineering Div.



Michael R. Poirier is a Senior Fellow Engineer at the Savannah River National Laboratory, where he works to develop new processes to treat wastes. He has been active in AIChE for many years, chairing the Professional Development Committee and the Career and Education Operating Council (CEOC), and

serving on the Education Services and Membership Committees, and on the ChemE On Demand Task Force. He earned a BS in chemical engineering from the Univ. of Notre Dame, and MS and PhD degrees in chemical engineering from the Univ. of Illinois.



Lehmon Bruce Wiggins, P.E., is a senior process engineer at Jacobs Engineering in Lakeland, FL, with more than 35 years' experience in the technical, safety, and environmental aspects of some of the world's largest phosphate fertilizer manufacturing facilities. He has expertise in process troubleshoot-

ing, project development and justification, economic analysis, HAZOP analysis, plant utilities, environmental controls, and wastewater treatment. His background includes feasibility studies, basic engineering, plant commissioning and start-up, and operator training. Since the 1980s, Wiggins has been a leader of AIChE's Central Florida Section. He earned his BS in chemical engineering from Georgia Tech and is a licensed professional engineer in Florida.



In Memoriam: Thomas Carmody, Founding Director of CCPS

Thomas W. Carmody, who established and served as the first director of AIChE's Center for Chemical Process Safety (CCPS), died on Feb. 9, 2011, at age 88.

Born in Springfield, MA, Carmody earned his BS in chemical engineering at the Massachusetts Institute of Technology and an MS at the Univ. of Delaware. He served as an officer in the U.S. Army during World War II, and after the war worked at Union Carbide for 38 years.

According to Scott Berger, the current executive director of CCPS, Carmody's early advocacy among his industry peers and AIChE colleagues in the weeks following the 1984 Bhopal disaster contributed to the initial idea to form the Center for Chemical Process Safety. Following his retirement from Union Carbide, Carmody joined the AIChE staff in 1985 as CCPS's first director. He remained in the role until 1993.

"Tom's passion for process safety, coupled with his organizational skills and a flair for marketing, set CCPS on the course for success and impact," says Berger. He notes that CCPS still follows Carmody's "playbook" for many of its activities, and that these practices have been



applied to the numerous AIChE technical centers formed since. "I will personally miss Tom's regular visits to make sure that CCPS continues to hold a steady course," he adds.

A resident of Amelia Island, FL, and Chappaqua, NY, Carmody is survived by his wife of 54 years, Mary (Jill) Keating Carmody, his four children, and their families.

In Memoriam: Klaus Timmerhaus, Former AIChE President

K laus D. Timmerhaus, a professor of chemical engineering at the Univ. of Colorado, Boulder, and AIChE's President in 1976, died Feb. 11, 2011, at age 86.

Born in Minneapolis, MN, Timmerhaus served in the U.S. Navy during World War II as a radar specialist, before earning three degrees in chemical engineering at the Univ. of Illinois. He joined the Univ. of Colorado (CU) faculty in 1953 as an assistant professor and became a full professor in 1961. At various times over a period of more than 42 years, he served CU as associate dean of engineering, director of the Engineering Research Center, acting chair of aerospace engineering, and chair of chemical engineering.

Timmerhaus wrote (with Max Peters) the widely used textbook *Plant Design and Economics for Chemical Engineers* — the first text developed for an undergraduate course in chemical engineering plant design. Now in its fifth edition, the book has sold over 100,000 copies. Among his contributions to the literature, Timmerhaus edited 24 volumes of *Advances in Cryogenic Engineering*, and co-edited 20 volumes in the *International Cryogenics Monograph* series. He also holds a patent in cryogenic technology.

Elected to the National Academy of Engineering in 1975, Timmerhaus received dozens of teaching and research honors throughout his career. The American Society for Engineering Education (ASEE) awarded him its George Westinghouse Award (for the nation's outstanding professor of engineering under the age of 45) in 1968. Other honors include the Samuel C. Collins Award for Outstanding Contributions to Cryogenic Technology, election to the Austrian Academy of Science, and election as a Diplomate of the American Academy of Environmental Engineers.

His teaching honors included: the Hazel Barnes Prize, CU's most prestigious award for an individual faculty member; the CU engineering college's Distinguished Engineering Alumnus Award; and the Stearns Award for Outstanding Service from



the CU-Boulder Alumni Association. He said that one of his favorite honors was one from his students, who gave "Dr. T" their "Meanest Professor" award.

A Fellow of AIChE, Timmerhaus received the Institute's Alpha Chi Sigma Award for Chemical Engineering Research (1968); Founders Award for Contributions to the Field of Chemical Engineering (1978); Warren K. Lewis Award for Chemical Engineering Education (1987); and the F. J. and Dorothy Van Antwerpen Award for Service to the Institute (1991). In 2008, AIChE named Timmerhaus one of the 100 Chemical Engineers of the Modern Era, recognizing his contributions to cryogenics science and practice.

Timmerhaus was an avid supporter of the CU track team, mirroring his own dedication to running and, in his later years, race walking. He claimed many titles in different age groups in the Senior Olympics.

Timmerhaus is survived by his wife of four months, Jan, and a daughter and her family. He was preceded in death by his wife of 50 years, Jean, in 2004.

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In Memoriam: Lyle Albright, Former AIChE Director

Lyle Frederick Albright, a former AIChE director and professor emeritus of chemical engineering at Purdue Univ., died on Dec. 27, 2010, in West Lafayette, IN. He was 89.

Born in Bay City, MI, Albright earned BS (1943), MS (1944) and PhD (1950) degrees in chemical engineering at the Univ. of Michigan. His early career included industrial practice at Dow Chemical Co. in Midland, MI, and at Colgate-Palmolive Co. in Jersey City, NJ, as well as work on the Manhattan Project for the production of plutonium at E. I. du Pont de Nemours and Co. in Hanford, WA.

Following a few years on the faculty at the Univ. of Oklahoma, he joined Purdue's School of Chemical Engineering in 1955. He was promoted to professor in 1958, and reached emeritus status in 1991. During his tenure at Purdue, Albright directed the research of more than 110 graduate students and eight post-doctoral individuals.

A Fellow of AIChE, Albright was an Institute member since 1948, and served on AIChE's Board of Directors from 1982 to 1984. He was also a long-time participant on AIChE's national Speakers Bureau, and an accreditation visitor to 10 chemical engineering schools. Among many honors, in 2003 Albright received AIChE's F. J. and Dorothy



Van Antwerpen Award for Service to the Institute.

Albright remained active at Purdue during his retirement, going to the university daily. He continued to publish regularly, and his scholarly contributions include more than 230 articles in archival journals and several books, including *Albright's Chemical Engineering Handbook*, published by Taylor and Frances in 2009.

Outside of engineering, Albright was a magician and a member of the International Brotherhood of Magicians since 1937. He enjoyed swimming, sailing, and gardening.

Albright was married for 58 years to Jeanette VanBelle, who died in 2008. He is survived by two daughters and their families.

AIChE Web Forum Will Handle the Hot Topics — Premiering Apr. 26

Beginning Apr. 26, a new AIChE Web Forum series will be devoted to discussing some of the field's hottest topics.

Each in-depth discussion will feature experts on one of today's most vital issues. AIChE members and nonmembers can participate from their desks, or join others in their company for group participation. AIChE members receive a significant price reduction over nonmembers.

Launching the Web Forum series will be a discussion on "Current Trends in Industrial Sustainability," scheduled for Tuesday, Apr. 26, 1:30–3:00 pm (EDT). Participants will include Dr. Subhas Sikdar (U.S. Environmental Protection Agency), Dr. Darlene Schuster (AIChE's Institute for Sustainability), and Dr. Helen Huiru Lou (Lamar Univ.). This Web Forum will explore current developments in the science and technology of sustainability from academic, industrial, and government perspectives.

Future Web Forum subjects include water (June 14), energy (Sept. 20), and quality by design (Dec. 13).

To join the discussions, go to www.aiche.org/webforum.

AIChE Members Elected to the National Academy of Engineering

Election to the National Academy of Engineering (NAE) is among the highest professional distinctions accorded an engineer. This year, the NAE elected the following AIChE members to its distinguished ranks:

Stuart L. Cooper, University Scholar Professor and chair of the department of chemical and biomolecular engineering, Ohio State Univ. — for contributions to polymer chemistry, biomedical polyurethanes, blood compatibility, and academic administration.

Christodoulos A. Floudas, Stephen C. Macaleer '63 Professor in engineering and applied science and professor of chemical and biological engineering, Princeton Univ. — for contributions to theory, methods, and applications of global optimization in process systems engineering, computational chemistry, and molecular biology.

Linda G. Griffith, professor of biological and mechanical engineering and director, Biotechnology Process Engineering Center, Massachusetts Institute of Technology — for contributions to 3D functional biomaterials, engineered hepatic tissues, and cell transplant devices.

Keith P. Johnston, M. C. (Bud) and Mary Beth Baird Endowed

Chair and professor of chemical engineering, Univ. of Texas at Austin — for advances in science and technology of particles and colloids used in drug delivery, biomedical imaging/therapy, microelectronics, and energy applications.

Henry Z. Kister, senior fellow and director of fractionation technology, Fluor Corp. — for leadership in distillation technology and for transforming distillation troubleshooting into an engineering science.

Mark J. Kushner, George I. Haddad Collegiate Professor and director, Michigan Institute for Plasma Science and Engineering, Univ. of Michigan, Ann Arbor — for contributions to low-temperature plasmas for semiconductors, optics, and thin-film manufacturing.

Cato T. Laurencin, Van Dusen Endowed Chair in Academic Medicine; distinguished professor of orthopaedic surgery and chemical, materials, and biomolecular engineering; dean, School of Medicine; and vice president for health affairs, Univ. of Connecticut, Farmington — for biomaterial science, drug delivery, and tissue engineering involving musculoskeletal systems, and for academic leadership.



Last Call for Nominations: Deadline for "Industry" Award Nominations Extended to April 15

A IChE's Awards Committee has extended the Anomination deadline for some of the Institute's major awards. April 15 will be the new nomination deadline for the following honors: the Corporate Innovation Award; the Engineering and Construction Award; the Industrial Research and Development Award; the Industry Leadership Award; the Lawrence B. Evans Award in Chemical Engineering Practice; the Process Operations Award; and the Sustainable Energy Award.

These and other Institute awards will be presented at the Oct. 2011 AIChE Annual Meeting in Minneapolis, MN. For descriptions of each award, along with nomination critera and submission instructions, visit www.aiche.org/About/ Awards/index.aspx. Questions about AIChE's award programs may be addressed to E-mail: awards@ aiche.org.

In Memoriam

Donald S. Arnold, 90, Bethany, OK* James L. Baird, 93, Waltham, MA* Samuel L. Bean, 85, Wilmington, DE Charles S. Brown, 85, Houston, TX Allan M. Edelman, 73, University Park, FL Paul J. Ellis, 75, Johnson City, TN Thomas N. Hooper, 80, Houston, TX Morris Kolodney, 99, Sarasota, FL Archie P. Miller, 80, Monroe, LA Francis E. Reese, 91, Jenkintown, PA* Edward Seltzer, 99, Larchmont, NY F. Thomas Quay, 78, Lincoln, CA M. Orhan Tarhan, 92, Rockville, MD Robert H. Webb, 81, La Mirada, CA

* AIChE Fellow

AIChE [®] Calendar	
P	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.)
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
SEPTEMBER 26–28, 2011	6th AIChE/SPE Joint Workshop — Challenges in Flow Assurance and Crude Oil Quality Omni-Houston Westside • Houston, TX
OCTOBER 6–7, 2011	AIChE Regional Process Technology Conference Moody Gardens Hotel • Galveston, TX
OCTOBER 16–21, 2011	2011 AIChE Annual Meeting Minneapolis Convention Center • Minneapolis, MN
	Scheduled Webinars
EC C	Register and view live and archived webinars at http://www.aiche.org/webinars/
APRIL 5, 2011 4:00–5:00 PM ET	Society for Biological Engineering (SBE) Webinar: Cybernetic Approach to Metabolic Modeling Presented by Dr. Doraiswami Ramkrishna (Free for SBE Members)
APRIL 6, 2011 2:00–3:00 PM ET	Tapping into the Chemisty of Beer and Brewing Presented by Dr. Charles Bamford
APRIL 13, 2011 2:00–3:00 PM ET	Introduction to Fluidized Bed Technology Presented by Dr. Karl V. Jacob and Dr. Ray Cocco
APRIL 20, 2011 2:00–3:00 PM ET	AIChE's Leadership Webinars: Chemical Engineering Essentials from Academic Authors – Session Six: Separations – What You Probably Did Not Learn as an Undergraduate Presented by Dr. Phillip C. Wankat
APRIL 27, 2011 2:00–3:00 PM ET	Introduction to Pinch Analysis Presented by Alan Rossiter
MAY 4, 2011 2:00–3:00 PM ET	Working Across Cultures Presented by Dr. John Hooker