



Institute News

AIChE Announces New Fellows

Fellow candidates are nominated by their peers, and must have significant chemical engineering practice (generally 25 years) and have been a member of AIChE for at least 10 years, with at least three years as a senior member. Here are some of the recently elected Fellows. More Fellows will be introduced in future issues of *CEP*.



Donald G. Baird is the Alexander F. Giacco Professor of Chemical Engineering at Virginia Tech, where he co-directs the Center for Composite Materials and Structures. His research focuses on the application of non-Newtonian fluid mechanics to the processing of polymers

and polymer composites. Prior to joining Virginia Tech in 1978, he worked for Monsanto in the area of high-performance fibers. He has received numerous international honors. In addition to his more than 300 publications and six patents, he is the primary author of the textbook *Polymer Processing: Principles and Design*.



Thomas J. Flynn is Technical Consultant at the Babcock & Wilcox Research Center, where he develops technologies for pulverized-coal burners, wet and dry scrubbers, fluidized-bed combustors, fuel processors for fuel cells, advanced control systems based on nonlinear signal analysis and chaos theory, and, most recently, new CO₂-friendly energy conversion systems. He has 38 publications and seven patents. He has been active in AIChE's Akron Section and helped establish AIChE's webinar series. He also serves on the industrial advisory committee at the Univ. of Akron and on the Ohio Coal Research Consortium.



Joel R. Fried is Professor and Chair of the Dept. of Chemical Engineering at the Univ. of Louisville. His research applies computational chemistry and molecular simulations to the study of the transport of ions and small molecules in polymeric, biological, and biomimetic membranes. His textbooks include *Polymer Science and Technology* and the forthcoming *Computational Chemistry and Molecular Simulation*. He has also taught at the Univ. of Cincinnati, held the Wright Brothers Institute Endowed Chair in Nanomaterials at the Univ. of Dayton, and served as chair of chemical and biomedical engineering at Florida State Univ.



Trung Van Nguyen is Professor of Chemical and Petroleum Engineering at the Univ. of Kansas, where his research focuses on catalyst and electrode materials, transport and interfacial phenomena in fuel cells and batteries, and mathematical modeling of electrochemical systems.

He previously gained technical experience at Bell Labs and Duracell, and was associate director of the Center for Electrochemical Engineering at Texas A&M Univ. He recently served as the first director of the Energy for Sustainability Program at the U.S. National Science Foundation. He is a founder of two fuel cell start-up companies.



Sotiris E. Pratsinis is Professor of Process Engineering and Materials Science at ETH Zurich, Switzerland, where he established the Particle Technology Laboratory. He has published more than 350 articles and holds 21 patents, many of which have been licensed to industry

and contributed to the creation of spin-off companies. His early career included teaching at the Univ. of Cincinnati, and he has held visiting professorships at the Univ. of Queensland, TU Delft, the Univ. of Karlsruhe, the Univ. of California, Berkeley, the Harvard School of Public Health, and the Univ. of Duisburg-Essen.



John Super, P.E., is President of Cobroko Solutions LLC, where he consults in scaleup and commercialization of new technologies. He previously spent 28 years at DuPont, where he was Engineering Fellow and worked on synthetic fiber intermediates, tetrahydrofuran technology, just-in-time fluorosulfonic acid technology, processes for nylon intermediates, and new neoprene monomer processes. He taught engineering evaluations inside DuPont and at Drexel Univ., and served on the Delaware Coastal Zone Industrial Control Board. Active in AIChE's South Texas Section, he is also involved in AIChE meeting programming on the local and global levels.

FAN IS SELECTED AIChE's 67TH INSTITUTE LECTURER

Liang-Shih Fan, Distinguished University Professor and the C. John Easton Professor in the Dept. of Chemical and Biomolecular Engineering at the Ohio State Univ., will deliver AIChE's 67th Institute Lecture. He will present his talk, entitled "Metal Oxide Reaction Engineering and Particle Technology Science: A Gateway to Novel Energy Conversion Systems," on Wednesday, Nov. 11, 2015, at AIChE's Annual Meeting in Salt Lake City, UT. In his address, Fan will describe the general properties of metal oxide materials for emerging technology applications, including novel chemical looping platforms that employ metal oxide composite particles as oxygen carriers to produce hydrogen, syngas, chemicals, and liquid fuels from carbonaceous feedstocks.

Fan is being cited for his groundbreaking inventions of next-generation, clean, carbonaceous chemical-looping energy-conversion processes for CO₂ emission control and chemicals production, and his invention of the electrical capacitance volume tomography (ECVT) technology used worldwide for multiphase flow imaging.



Fan, who serves as director of Ohio State's Clean Energy Research Laboratory, is an international authority in the fields of particle science and technology and fossil energy conversion systems. The U.S. Dept. of Energy (DOE) and its National Energy Technology Laboratory (NETL) are using Fan's ECVT technology for imaging their pilot-scale circulating fluidized-bed reactor system, while NASA is using it for imaging a trickle-bed reactor for space missions.

Fan's books have helped shape education in particle science and technology. His recent book, *Chemical Looping Systems for Fossil Energy Conversion* (AIChE/Wiley, 2010), has been widely adopted by researchers and practitioners worldwide.

A Fellow of AIChE, Fan is also a member of the U.S. National Academy of Engineering, the Australian Academy of Technological Sciences and Engineering, the Chinese Academy of Engineering, and the Mexican Academy of Sciences. He earned his PhD in chemical engineering at West Virginia Univ.

WISE Interns Complete DC Assignment

This summer, three chemical engineering students explored the interface between engineering and public policy as AIChE's 2015 WISE (Washington Internships for Students of Engineering) interns.

Kathleen Wu (Yale Univ.), Jill Schoburg (Iowa State Univ.), and Jami Summey-Rice (Univ. of Houston) spent two months in Washington, DC, contributing to discussions on how engineers impact society. As part of the program, which ran from May 31 to Aug. 1, the students prepared and delivered original research papers on public policy topics based on what they learned in their intern roles.

Wu discussed her work in a paper entitled "Bridging the Financial Gap for Carbon Capture and Storage." Schoburg studied genetically modified organisms, documented in her paper "To Label or Not Label: Addressing America's Genetically Modified Organism Policy." Summey-Rice examined the economics and sustainability benefits of high-speed rail transit in "Get on Board: High-Speed Rail Policy to Incentivize Growth and Technologies."

The WISE interns, along with interns sponsored by other engineering organizations, presented their work on Capitol Hill. The interns' research is published online in the Sept. 2015 edition of the *WISE Journal of Engineering and*

Public Policy, available at www.wise-intern.org/journal.

The WISE program selects undergraduate engineering students to conduct research on public policy issues during the summer in Washington, DC. The students learn about the interactions between the engineering community and the government in matters of public policy, and see how engineers can contribute to decision-making on complex technological matters.

The deadline for 2016 WISE internship applications is Dec. 31, 2015. For details, visit <http://www.wise-intern.org>.



▲ AIChE sends undergraduates to Washington, DC, each summer as part of the Washington Internships for Students of Engineering (WISE) program. This year's interns were (from left): Kathleen Wu, Yale Univ.; Jill Schoburg, Iowa State Univ.; and Jami Summey-Rice, Univ. of Houston.



Conferences

Thanks to today's technology, AIChE can offer its members many new ways to learn and connect — virtually, and year round. As a member, you are always just one click away from finding technical information and receiving advice from your peers. Yet, in spite of these online conveniences, face-to-face connections remain crucial as you build your network and make career contacts.

Each year, AIChE offers the chemical engineering community many opportunities to meet in-person at conferences, now held in locations all over the world. Programming is carefully planned so you can learn and share expertise, and take valuable strategies back to your job. As a benefit of AIChE membership, your conference registration fee is significantly lower than the fee for nonmembers. In addition to technical education and professional development, these conferences provide many networking events, dinners, receptions, and other gatherings where you can mingle with other chemical engineers in a less-structured setting.

In the fall, AIChE's conference schedule is highlighted by the Annual Meeting, which covers a wide range of topics relevant to cutting-edge research, new technologies, and emerging growth areas in chemical engineering. This year's event will be in Salt Lake City, UT, Nov. 8–13. (See the article on pp. 49–51 for more information.) In the spring, the latest technical breakthroughs are presented at the Spring Meeting and Global Congress on Process Safety (GCPS), where an array of topics relevant to the needs of industry are covered. The 2016 Spring Meeting and 12th GCPS will be held Apr. 10–14 in Houston, TX.

In addition to these long-established major events, the roster of specialty conferences hosted by AIChE and its technology groups continues to expand — in subject matter, frequency, scale, and global influence. Fall 2015 features a slate of international events covering topics that include process safety, process technology, metabolic engineering, industrial biotechnology, carbon management, and more. Many of these events are listed on p. 60.

AIChE encourages you to maximize your membership experience by participating in conferences. For a complete list of conference and events, please visit www.aiche.org/conferences. If you have questions about your membership benefits, contact James Abel, Membership Associate, at 646-495-1384 or jamea@aiiche.org.

AIChE Election Opens September 8

The July issue of *CEP* featured position statements of president-elect, secretary, and director candidates for the 2016 AIChE Board. The slate of candidates is listed below, and the candidates' platforms are available on the web at www.aiche.org/election.

Paper ballots were mailed to all AIChE Fellows, Senior Members, and Members on Aug. 24. Voting, including electronic proxy voting, will commence on Sept. 8. All paper ballots and electronic proxies must be received by Oct. 12, 2015.

Election results will be announced in November at AIChE's Annual Meeting in Salt Lake City, UT, and in the December issue of *CEP*. If you have questions about the election, contact election@aiiche.org.

For President-Elect

T. Bond Calloway, *Savannah River National Laboratory*
Wendy Young Reed, *Chemstations, Inc.*

For Secretary

Freeman E. Self, *Bechtel*
Rosemarie M. Wesson, *City College of New York*

For Director (four to be elected)

Heriberto Cabezas, *U.S. Environmental Protection Agency*
Gregory T. Frank, *Amgen*
Zenaida O. Gephardt, *Rowan Univ.*
Meagan E. Lewis, *UOP, A Honeywell Company*
Timothy O. Odi, *Chevron Phillips Chemical Co.*
Joseph B. Powell, *Shell*
Edward M. Trujillo, *Univ. of Utah*
Ranil Wickramasinghe, *Univ. of Arkansas*

In Memoriam

Julius H. Bochinski, 93, Silver Spring, MD
Emory D. Champney, Jr., 92, Wilmington, DE
Rafael J. Garcia 81, Haymarket, VA
Vincent N. Hurd, 94, Lisle, IL
Joel Markowitz, 78, Fair Lawn, NJ
Bernard N. Nicolaisen, 94, Overland Park, KS
Clarence W. Shonnard, 95, Vergennes, VT
Hal C. Spohn, 90, Vancouver, WA
R. C. (Joe) Updegrove, 90, Texas City, TX