AIChE Chicago Section

September Newsletter

Chicago Section

www.aiche.org/Chicago

September 2015

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AIChE Chicago

September Meeting

From biomass to biopharmaceuticals; from fracking to farming

Dr. Ranil Wickramasinghe
University of Arkansas



Location: Five Roses Pub

Date: Wednesday, September 9, 2015

Address: 5509 Park Place, Rosemount, IL

Cost: AIChE Global and Local Section Member: \$40

AIChE Global Member: \$45

Non-Member: \$50 Students: \$10

Unemployed/Retired: \$15

Register Here:

http://www.cvent.com/d/3rqt7z/4W

Agenda

5:30—6:30	Registration and social hour with cash ba
6:30 - 7:30	Dinner
7:30 - 7:45	Announcements
7:45 - 8:45	Technical Presentation

Chair's Corner

As the days get shorter, the nights a little colder and we see the school buses back on the roads, we know that Summer is coming to end and Fall is right around the corner. This means that our summer break is over and our local section starts its programming for the 2015 - 2016 year. I am honored to be the chair of the section and look forward to the I have some big shoes to fill. vear ahead. Azita Ahmadzadeh did an excellent job leading our section last year and I would like to thank her for all of her efforts. I am fortunate to have the majority of the officers from our 2014 - 2015 year staying on for another year so I also thank them for their service.

I have been involved with AIChE since my undergraduate days at the University of Illinois at Chicago (UIC) where I was an active member of the student chapter. After hiring on with UOP and after a few years of traveling, I settled down and got involved with the Chicago local section thanks to Dennis O'Brien. I have been involved with various activities including serving as the general arrangements co-chair for the 2011 MRC.

The student outreach is one of the greatest strengths of our local section. We have a very active K – 12 outreach program and Young Professionals group. I was privileged to serve as an Industry Mentor (along with a number of members from our section) for the Chemical Engineering Senior Design at UIC. During the course of various classes where I served in this function, I noticed what a difference we made in helping to prepare these students for their roles in industry. It is activities like this which show what a difference this sec-

tion makes while promoting the profession of chemical engineering.

My goals for this year are simple:



- Grow our volunteer base This section is run by people volunteering their time. We need people willing to help run our section so that we can continue to maintain and grow the progress that our section has made throughout the years.
- 2) Communications Look to identify the best means to communicate with our members.
- Continue to providing programming and activities to insure that our section meets the needs of our chemical engineers to be, young professionals and seasoned professionals.

Our programming committee has done an excellent job of getting speakers with interesting topics for our monthly meetings. Our 2016 MRC planning committee is ramping up their activities and working on putting together an excellent conference in March 2016. I look forward to this coming year and hope that you take advantage of what the Chicago Local Section has to offer.

Adam Kanyuh

AIChE Chicago Section Chair

UOP – A Honeywell Company

September Meeting Information

From biomass to biopharmaceuticals; from fracking to farming What are membrane separations and why are they important for future separations applications?

Abstract:

As chemical engineers perhaps the best known membrane based separation process is reverse osmosis for desalination of salt water to produce drinking water. However membranes find many other applications including

- cleaning produced water from fracking operations
- · treating water from farming operations
- catalytic membranes for biomass hydrolysis
- purification of pharmaceuticals and biopharmaceuticals,
- removing endocrine disruptors from wastewater
- blood oxygenation
- kidney dialysis
- membrane chromatography

Membrane separations are commercially attractive for the following reasons.

- They often cost less to operate
- They are environmentally benign
- They are easy to scale up
- They fill niche applications

As the drive to develop more sustainable manufacturing processes increases, many new membrane based processes are being developed. The aims of this presentation are threefold.

- (a) Highlight the great breadth of commercialized membrane based separation processes.
- (b) Introduce some potential new membrane based separation processes e.g. for treating hydraulic fracturing flow back waters; producing fuels and chemicals from biomass
- (c) Highlight some of the challenges facing designers of new membranes for future separations.

Speaker's Bio:

Ranil Wickramasinghe has been active in AIChE for many years. He is a past-Chair and a current mem-

ber of the Career and Education Operating Council (CEOC). He was the Meeting Program Chair of the 2014 Annual Meeting in San Francisco which was the largest annual meeting to date. He was very active in the Boston Local Section holding many positions in-



cluding vice-president of the section and was on the General Arrangements Committee of the last AlChE summer meeting. He is a member of the AlChE Licensing and Professional Development Committee, and is a member Chemical Exam Committee of the National Council of Examiners for Engineering and Surveying (NCEES), the committee that writes questions for the Chemical Engineering PE Exam. He has also served on the Board of Directors of the North American Membrane Society.

Ranil Wickramasinghe's research interests are in membrane science and technology. Typical unit operations include: microfiltration, ultrafiltration, virus filtration, nanofiltration, membrane extraction etc. His group is actively developing responsive membranes which change their physical properties in response to changed environmental conditions. A second research focus is the development of catalytic membranes for biomass hydrolysis by grafting catalytic groups to the membrane surface.

Prof Wickramasinghe, obtained his Bachelor's and Master's degrees from the University of Melbourne, Australia, and PhD in chemical engineering from the University of Minnesota, all in Chemical Engineering. He is a licensed chemical engineer. He worked for 5 years in the biotechnology/biomedical industry in the Boston area before joining the Department of Chemical Engineering at Colorado State University. He joined the Department of Chemical Engineering at the University of Arkansas in 2011 where he holds the Ross E Martin Chair in Emerging Technologies. He has published over 120 peer reviewed journal articles, several book chapters and is co-editor of a book on responsive membrane and materials. In addition his research has led to several patents.

To Register:

http://www.cvent.com/d/3rqt7z/4W

Congratulation to 2015-2016 Officers

Chair: Adam Kanyuh



Chair Elect: Tom King



Treasurer: Patrick Shannon



Secretary: Jarad Champion



Co-Vice Chair Meeting Program:

Jesse Calderon



Co-Vice Chair Meeting Program:

Mike Toraason



Director at Large: Steven Wozniak

Director at Large: Dan Rusinak

Director at Large: Ellen Kloppenborg



Congratulation to 2014-2015 Chicago Section's Award Winners

Chicago Section Scholarship Winner:

Recipient: Olha Zvarych, IIT



McCormick Award Winners: Recipient: Redmond "Red" Lhota

University: Northwestern University



Recipient: Vincent Errichiello

University: University of Illinois Chicago



Recipient: Jaya Parulekar

University: Illinois Institute of Technology



2015 Poster Session Competition Winners

Undergraduate

1st Place – "Decrypting the Tau Phosphorylation ":Code" of Alzheimer's Diseases"

Author: Matthew Amrofell, Northwestern University,



2nd Place – "Hybrid Renewable Energy and Combined Cycle Natural Gas Processing Plant"

Authors: Adam Lewis, Andrew Lui, Louis Schwartz, Ryan Neris, Jessica Shoukry, UIC



Graduate

Winner: "Bulk Transition Metal Sulfide Catalysts for Ethylene Carbonylation",

Author: Rachel Watson, Northwestern University



CALL FOR CONTRIBUTIONS



2016 AIChE Midwest Regional Conference Chicago, IL – March 3-4, 2016 Hosted by Illinois Institute of Technology Organized by Chicago Local Section of AIChE

"Call for Contributions" is <u>now open!</u>
Submission deadline is <u>October 30, 2015</u>

For submission details, please see www.tinyurl.com/Submit2MRC2016

Contributions encouraged in the following areas:

- Biomedical and Pharmaceutical Engineering
- Catalysis and Reaction Engineering •
- Energy and Sustainability
- Environmental Engineering
- Fluid Properties, Fluid Dynamics and Transport Phenomena
- Process Engineering and Optimization
- Process Safety / Occupational Health
- Refining and Petrochemical Processing

Keynote and Plenary Speakers:

	Knalii Amine	Jeffery Hubbell	Christopher Burcham	
	Distinguished Fellow,	Institute for Molecular	Senor Engineering Re-	
	Argonne National Labor-	Engineering,	search Advisor,	
	atory	University of Chicago	Eli Lilly and Company	
Shakeel Kadri			Lorenz Biegler	
	Shakeel Kadri	Linda Broadbelt	Lorenz Biegler	
	Shakeel Kadri Executive Director, AIChE		Lorenz Biegler Professor and Chair,	
		Professor and Chair,		

For additional information on keynote and plenary speakers see

 $\frac{http://www.aiche.org/chicago-midwest-regional-conference}{conference}$

For submission questions? Contact the Programming Chair at chmielewski@iit.edu

Why Renew Your AIChE Membership?

Renew your membership now to keep learning and growing. Stay Connected to 40,000+ international members who take advantage of:



- Subscription to AIChE's flagship publication: CEP*
- Education—Access to e-learning courses and instructor-led training, offering Continuing Educations
 Units and PDHs
- Access to CareerEngineer—a comprehensive job site tailored to chemical engineers
- Access to the AIChE eLibrary—a wealth of information from Knovel Life Sciences and the McGraw-Hill AccessEngineering Library collections

View COMPLETE benefits

AIChE Chicago has a new look!

We are pleased to reveal our newly website for AIChE Chicago. Feel free to Take a Peek.

We hope you will visit the new website at our new address, www.aiche.org/Chicago and while you are there, let us know what you think! We know there is still work to do, and in the coming months, we hope to continue improving the site so that it best serves how we communicate with you.



Thank you for being part of AIChE Chicago!

www.aiche.org/Chicago

AICHE Chicago is now on Facebook and LinkedIn!



Like us on Facebook <u>www.facebook.com/AIChEChicagoSection</u>



Join our group on LinkedIn!

In Memory of Dr. J. Peter Clark

Dr. J. Peter Clark passed away June 4. Dr. Clark earned his PhD in Chemical Engineering from the University of California at Berkley. He was an AIChE Fellow. Over the years, Peter gave a number of presentations to the Chicago Section – most recently last September. He also chaired sessions for the AICHE Chicago Section Symposium and the Midwest Regional Conference. Dr. Clark was a past-recipient of the Thiele Award for service to the profession. Dr Clark was also active in the Institute of Food Technologists and wrote a column for IFT's Food Technology journal.

With his customary generosity and spirit of service, Peter donated his body to Rush Medical School. He was a friend, boss, coworker, humanitarian, and pro-



fessional colleague to many in the Chicago Section. He will truly be missed.

In lieu of flowers the family asks that donations be made to the Oak Park-River Forest Food Pantry where Peter served on the board for many years.

ERNEST W. THIELE AWARD

The Ernest W. Thiele award is sponsored by BP and recognizes the outstanding contributions to our profession by a Midwest region chemical engineer. This award was established by the AIChE Chicago Section and is presented annually to a Midwest region AIChE member. This internationally recognized award consists of an engraved plaque and \$1000 honorarium presented at our sectional meeting.

Nomination forms and additional information can be obtained from the Thiele Committee Chair. Completed nominations are due to the committee chair no later than *April 1, 2016*

One of the highest honors a distinguished chemical engineer can receive is our Chicago Section Thiele award. Please consider nominating a deserving engineer for this prestigious award.

Jim Simnick

BP Amoco Complex, J-8

150 W. Warrenville Road, Naperville, IL 60566

Ph 630-420-5936, fax 630-420-4832

email: james.simnick@bp.com

Link to Memorial
Tributes (National
Academy of Engineering) about
Ernest W. Thiele



Emester Thick

2016 AIChE Board of Director Election

Dear Members.

It's election season and time for you to decide who will be on the Board for 2016! Online voting will be open Tuesday, September 8 at http://www.societyelection.com/SocietyEl ection/AlChE/index.asp. Paper ballots for the election of AIChE's 2016 President-Elect, Secretary, and Directors were mailed to you on Monday, August 24.

Profiles of the candidates for this year's election are available at this newsletter and at http://www.aiche.org/about/governance/elect ions/2015-board-directors-election. Here you will find the candidates' bios and platform statements that outline their view for AIChE. Additionally, we've asked the candidates to answer a few questions to get to know them bet-Their responses will be on ChEnected, one each week, starting September 8. The deadline to receive your vote is October 12, 2015, 11:59 p.m. EDT.

In order to be eligible to vote, you must be an active member and have paid your dues for 2015. If you choose to participate in the election online, you will need your Member ID, which will serve as your Personal Identification Number. If you have any questions regarding your member information, please contact the AIChE Member Service Center toll-free at 800.242.4363 (U.S.) or visit www.aiche.org/ phone (outside U.S.) to obtain your country's number, or emailcustomerservice@aiche.org.



Slate of Candidates

For President-Elect

T. Bond Calloway

Savannah River National

Laboratory

Wendy Young Reed

Chemstations

For Secretary

Freeman Self

Bechtel Group

Rosemarie Wesson

National Science Founda-

tion (NSF)

For Director

Heriberto Cabezas

U.S. Environmental Protection Agency (EPA)

Gregory T. Frank

Amgen

Zenaida Otero Gephardt

Rowan University

Meagan Lewis

UOP

Timothy O. Odi

Chevron Phillips Chemical

Joseph B. Powell

Shell

Edward M. Trujillo

University of Utah

Ranil Wickramasinghe

University of Arkansas

For President-Elect

T. Bond Calloway



Bond Calloway is an Associate Laboratory Director at the Savannah River National Laboratory, where he leads a team of scientists and engineers conducting energy research. He has more than 30 years of industrial experience in research and development, design, construction, and operation of nuclear/chemical plants. Bond was elected to the AIChE Board of Directors (2011–2013). He was the co-chair of the 2009 AIChE Annual Meeting and the 2014 Natural Gas workshop. Bond currently serves on the AIChE Center for Energy Initiatives Board; the Environmental Progress & Sustainable Energy Journal Editorial Board; the Chemical Engineering Progress (CEP) Editorial Board; the Public Affairs and Information Committee; and as a director of the Nuclear Engineering

Div. and the Savannah River Local Section. He also served on AlChE's Research and New Technology Committee (2008–2013), including two years as chair; on the Chemical Engineering Technology Operating Council (2008–2012); on the Executive Board of the Program Committee (2009–2010); and on the Nuclear Engineering Div. Executive Committee (2004–present), including three years as chair. Bond received AlChE's Herb Epstein Award (2008) and Robert E. Wilson Award (2014); the U.S. Dept. of Energy Sustainability Award (2011); and an R&D 100 Award for contributions in engineering and energy research (2001). A graduate of Auburn Univ. and a Fellow of AlChE, Bond has authored 50 papers on various aspects of energy research and manufacturing.

Statement:

Positioning AIChE for Future Trends in Research, Technology, and Manufacturing: At no other time in the past 30 years have the government, academia, and industry found common purpose with the codevelopment of new manufacturing technologies that strengthen our country's competitive advantage. My top priorities are positioning AIChE to foster the development of new manufacturing technologies and partnerships through the following initiatives.

- Advancing manufacturing's societal and economic impacts by fostering AIChE's and the chemical industry's participation in the development and startup of national manufacturing institutes aimed at spurring growth in the chemicals industry. Two chemical manufacturing R&D institutes will be started by the U.S. government, and I will position AIChE and its membership for a leadership role to build widespread recognition of their benefits.
- Strengthening participation in AIChE by developing regional networks of local sections, industry, and academic institutions for collaboration that will enhance our members' interconnectivity and provide a platform for delivering targeted member services based upon regional needs.
- Position AIChE to become a technology leader and sounding board for industry, state, and federal government for technology issues that have a broad societal impact.

For President-Elect

Wendy Young Reed



Wendy Young Reed is Business Development Manager for Chemstations, providing process simulation software solutions through the CHEMCAD suite of products. Her previous experience includes working with technology developers and users in a broad range of industries, including chemical and pharmaceutical manufacturing, refining, and water treatment. Since earning her BS in chemical engineering from Texas A&M Univ., she has demonstrated commitment to AIChE by supporting local sections (founding the Young Professionals Group in the South Texas Section), chairing AIChE's Membership Committee, and donating annually to the Foundation. She has worked with colleagues across industry, academia, and government through her past service as chair of the Young Professionals Advisory Board (now Young Professionals Committee), on the Board of Directors (2007–2009), and currently as Director of the Chemical Engineering Technology Operating Council (CTOC). Wendy advanced AIChE's leadership in addressing global challenges as a founding co-chair of AIChE's Water Initiative (now the

International Society for Water Solutions). She was the Co-MPC for the 2015 AIChE Spring Meeting.

Statement:

I believe our world is a better place because of chemical engineers. We help solve the world's grand challenges through the way we're taught to approach problems. Our systems-thinking approach to problem solving is why I believe we should be at the forefront of sustainability efforts worldwide. One essential component of any sustainable process is safety. AIChE should expand upon our leadership in process safety to share both sustainability and safety learnings in developing regions. As President, I would help promote AIChE's upcoming launch of the Credential for Sustainability Professionals as an important step toward making this a reality.

Our profession continually changes due to emerging technologies and increasing diversity of its membership. Our job descriptions, geographic locations, genders, or years of experience may differ, but AIChE can help us maintain our identity as chemical engineers by addressing our needs for professional development, networking, and maintaining technical competency throughout all phases of our careers and family lives. AIChE's Young Professionals Committee and Women's Workplace Retention and Re-entry Initiative are two examples of focused efforts in this area. As President, I would work to strengthen coordination among AIChE's entities to facilitate these types of efforts by reviewing current practices, identifying areas for improvement, and guiding establishment of new processes where needed.

I'm honored by the opportunity to work with you to impact our world and profession. Please contact me at wendy.young.reed@gmail.com or www.linkedin.com/in/wendy.youngreed/ with thoughts or questions.

For Secretary

Freeman Self



Freeman Self is a Bechtel Group Distinguished Engineer and a process engineer at Bechtel Oil, Gas & Chemicals specializing in process safety. AIChE has been his professional home for more than 30 years. Committed to local sections, he chaired AIChE Past-President Otis Shelton's Blue Ribbon Task Force on Local Sections, which won the AIChE Gary Leach Award. He has served the South Texas Section (STS) in many positions. As Chair in 1987, he led STS as it resumed its annual regional conferences and spun-off the Balcones Fault Subsection. An AIChE Fellow, Freeman has served on AIChE's Board of Directors (2011–2013); the Finance Committee; as treasurer of the Fuels and Petrochemicals Div.; and is a past chair of the Career and Education Operating Council (CEOC), which provides direction for local sections, student chapters, and career and educational programs. He supports the AIChE Academy as a webinar advisory editor. He is also an original mem-

ber and past chair of Prairie View A&M Univ.'s Chemical Engineering Advisory Board. Freeman received a BChE from Georgia Tech, an MSChE from Rice Univ., and an MBA from the Univ. of Houston.

Statement:

I will continue to advocate for real value for our members. I invite all members to join me in advancing AIChE as the chemical engineer's professional home. As Secretary, I will focus on:

- growing the offerings of the AIChE Academy. Chemical engineers want access via the web and in person —
 to a wide range of technical information and professional support.
- enlarging AIChE's Leadership Development Program. Leadership opportunities are a primary benefit of membership. The program provides personal growth opportunities and leadership training.
- advancing networking opportunities, including ChEnected and other social media.
- adding more regional conferences (such as the successful STS conference), virtual meetings, and local sections (international and domestic) to provide convenient forums for networking and professional development.
- increasing the number of sections developing Young Professional groups. Young professionals contribute dynamic ideas and leadership that sustain AIChE.
- supporting Industry Technology Groups to address challenges in energy, sustainability, and the environment.
 AIChE has the expertise to successfully advance solutions to these problems.
- strengthening career resources and tools, such as Virtual Career Fairs.
- expanding new sources of revenue, such as corporate and public partnerships, grants, and technology consulting. AIChE's new Peer Review initiative is an example of the latter.

I would appreciate your vote and support as we lead AIChE through the next decade. Please feel free to contact me at murphyself@gmail.com.

For Secretary

Rosemarie Wesson



Rose Wesson is Program Director of the Chemical and Biological Separations program at the National Science Foundation (NSF), and an adjunct chemical engineering professor at the Univ. of Maryland, College Park. Prior to joining NSF, Rose was a senior research leader in Dow Chemical Co.'s Corporate Materials Science R&D. Rose received her BS in chemical engineering from MIT, and her MS and PhD, both in chemical engineering, from the Univ. of Michigan. Rose is a registered Professional Engineer. Prior to joining Dow, she was a chemical engineering faculty member at Louisiana State Univ. Rose has been an active member of AIChE since 1988. Some of her AIChE leadership experiences include service on AIChE's Board of Directors (2012–2015) and as treasurer of the Management Div. (2007–2011). She has been the AIChE Coordinator of the Washington Internships for Students in Engineering (WISE) program since 2010, and is an AIChE Fellow.

Statement:

Over the years, the Institute has grown and changed. However, one constant remains — we must continue to amplify the interest and excitement in chemical engineering by attracting and retaining young people in the profession. If elected as AIChE Secretary, my first priority will be to continue to attract and retain students and young professionals to and in the Institute, and to work to promote interactions between students, young and mid-career professionals, and AIChE Fellows.

As an NSF Program Director in the Small Business Innovation Research program, I saw the personal and societal benefit of entrepreneurship. Young people innovate and create new ways of thinking and doing. Academicians and mid-career industrial professionals have experience and knowledge that allow continued innovation and entrepreneurship. As Secretary, I will promote and encourage entrepreneurial education throughout AIChE.

During my recent tenure on the AIChE Board of Directors, I chaired an eleven-member Task Force to examine the governance processes of the Institute. The Task Force made several recommendations for improved governance. As Secretary, I look forward to being a part of the continued improvement of the governance processes of the Institute.

Finally, during my years at The Dow Chemical Co., I recognized the importance of safety education throughout the chemicals industry. This is another area in which AIChE continues to play a significant role, impacting students working as interns, young and mid-career professionals, as well as Fellows. As Secretary, I will continue to promote increased safety education.

If you'd like to discuss any of these ideas, my email is rdwesson@aol.com. I'd appreciate your vote for AIChE Secretary. Thank you for your consideration.

Heriberto Cabezas



Herb Cabezas is the Senior Science Advisor to the Sustainable Technology Div. at the U.S. Environmental Protection Agency (EPA), where he has been the Acting Director of the Sustainable Technology Div. (2008–2010) and Chief of the Sustainable Environments Branch (2000–2008). He is also Associate Professor of Computer Science and Systems Technology at the Univ. of Pannonia, Hungary. He co-founded the Trans-Atlantic Research and Development Interchange on Sustainability (TARDIS), and was a U.S. Embassy Science Fellow in Zagreb, Croatia (2014). He earned his BS degree at New Jersey Institute of Technology, and his MS and PhD at the Univ. of Florida, all in chemical engineering. He is also a decorated U.S. Navy veteran of the Vietnam Conflict, an AIChE Fellow, and has been recognized with the EPA Science Achieve-

ment Award in Engineering (1989); NJIT's Distinguished Alumni Achievement Award (2007); AlChE's Research Excellence Award in Sustainable Engineering (2011); and the Environmental Div.'s Lawrence K. Cecil Award in Environmental Chemical Engineering (2013). He is a past chair of the Environmental Div.

Statement:

It is a high honor to be nominated for AIChE Director. Chemical engineering is possibly the most versatile profession in the world. Chemical engineers are productively employed in chemical manufacturing, biological engineering, and even banking and finance. We seem willing to attack almost any problem anywhere with the traditional, practical, and disciplined problem-solving approach of our profession. In the 21st century, this is important because we live in an increasingly complex world where challenges abound. We have 7+ billion human beings to provide for, and we have to provide while living on one planet and preserving our freedoms and free enterprise. These are tall challenges, and solutions can only come from disciplined problem-solvers like chemical engineers. Hence, my mission, and the reason I have accepted the nomination, is to serve the profession guided by these three principles:

- 1. AIChE must continue to be the prime professional home of chemical engineers across the globe, regardless of their particular business or place of employment.
- 2. AIChE must promote and maintain the core knowledge and identity that has allowed chemical engineering to become a versatile profession. Our way of thinking and outlook are important.
- 3. AIChE must manage the increasing professional diversity of its membership while preserving the core knowledge, identity, and cohesion of the profession. We cannot forget who we are.

Finally, I am a lifelong AIChE member. If elected, I will devote all of my efforts to the best interests of the profession guided by the aforementioned principles.

I would be happy to discuss any issues pertaining to the AIChE. Feel free to write me athcabezas@fuse.net.

Gregory T. Frank



Gregory Frank is Principal Engineer at Amgen, with responsibility for managing process engineering and technology development. Greg's industrial career includes developing and commercializing synthetic and biologic pharmaceuticals and specialty chemicals at Amgen, Promega, and Merck. His experience spans research through senior leadership as director of engineering, EH&S, and regulatory compliance. Greg is active in nonprofit organizations, including service as Board Chairman of American Tall Ship Institute, whose mission is at-risk youth intervention through science and technology education; and as Founding Chairman of Goals for Life, which provides resources to underprivileged youth in developing nations. Greg regularly publishes his work, is an AIChE Fellow, and a Link Foundation Fellowship recipient. He continues to receive Amgen corporate-level awards for technological and operational

achievements. Greg received his PhD and undergraduate chemical engineering degrees from Stevens Institute of Technology, and a Masters' degree from the Univ. of Delaware.

Statement:

Our profession is uniquely positioned to take on a wide range of challenges in the areas of energy, chemicals, food, health, education, materials, and bioengineering. Our responsibility is to advance research, development, and manufacturing technologies in an ethical, sustainable, and safe manner. If elected to the Board, I will focus on the following priorities:

- Ensuring that we sustain the fundamental curriculum essential to all ChemEs, even as we meet challenges and opportunities in nontraditional areas through academic preparation and research. This objective can be advanced through partnerships such as the recent AIChE-NSF Industry-Academia Workshop.
- Promoting lifelong learning and membership value by embracing new tools and technologies to deliver advanced products and services to members where we live and work each day. These include the AIChE Academy, on-demand content, training, and other online and regional events.
- Identifying and developing effective leaders at all stages of their careers, thereby benefiting both the long-term health of AIChE and the individuals by advancing critical career skills.
- Promoting new growth and leadership opportunities for young professionals, even as we continue to build on our existing experience and strengths.

AlChE has provided me with many leadership opportunities: Spring Meeting Co-MPC; Pharmaceutical Discovery, Development, and Manufacturing Forum Chair; over 20 years of programming leadership, including developing major topical conferences; and leadership of the Food, Pharmaceutical, and Bioengineering Div. These opportunities benefited me both personally and professionally, and I'd like to continue to give back to AlChE. If elected, my commitment is to continue enhancing AlChE's value for members of our profession.

Zenaida Otero Gephardt



Zenaida Otero Gephardt, PhD, PE, is an associate professor of chemical engineering at Rowan Univ., where she has served as Director and Associate Dean of Engineering. Prior to joining Rowan, she was a research engineer at the DuPont Co. Zenaida is a Fellow of AlChE, past chair of the Societal Impact Operating Council (SIOC), and a past chair and current Board member of the Delaware Valley Section. She is immediate Past Vice President for Accreditation of the Latin American and Caribbean Consortium of Engineering Institutions. Zenaida was a recipient of the Lindback Excellence in Teaching Award and the Excellence in Student Advising Award at Rowan Univ., and has received Best Paper and Best Poster awards from the International Div. and Chemical Engineering Div. of the American Society for Engineering Ed-

ucation (ASEE). She serves on the Editorial Board of Formación Universitaria in Chile, is a registered Professional Engineer in Delaware, and conducts workshops and consults in experimental design and data analysis for the chemical and pharmaceutical industries.

Statement:

Chemical engineers today are significant contributors to a wide range of industries, from petroleum to food and pharmaceuticals, and we navigate in a global technical and business environment. This makes us uniquely qualified to identify opportunities and shape the technology and society of the future. However, the public, including many students and guidance counselors, is generally not familiar with what engineers do or their significant contributions to society. AIChE has an opportunity to serve its members and the profession as the critical link between academia, industry, and the community to promote technical excellence, societal responsibility, diversity, and inclusion, and to communicate the value and significant contributions of chemical engineers to society. As a Board member, I will strive to:

- strengthen AIChE local sections and their connections with the Operating Councils by supporting their K–12 and AIChE student chapter outreach activities
- enhance and strengthen diversity and inclusion throughout the Institute and the profession by supporting the diversity and inclusion initiatives and the industry/Institute partnerships currently underway, as well as the development of new efforts
- strengthen and enhance globalization efforts throughout the Institute
- increase membership through outreach, especially to graduating students transitioning into the profession, and to other young professionals
- increase the value AIChE brings to its members and the profession by supporting the AIChE Academy; Industry Technology Groups and Centers; the work and collaboration among AIChE Operating Councils; and collaborations with other professional organizations.

Meagan Lewis



Meagan Lewis is a Product Line Manager in the Catalyst, Adsorbents, and Specialties group at UOP, a Honeywell Co. She works closely with UOP's manufacturing plants, sales team, and development groups to ensure on-time delivery and quality products for the olefins, detergents, and SPA product lines. Meagan joined UOP in 2008, and has held roles in project management and field service for the Technical Services group. Meagan received her BS in chemical engineering from the Univ. of Illinois at Urbana-Champaign, and her MBA from Loyola Univ., Chicago, where she graduated with honors.

During her professional career, Meagan has been a very active member of AIChE and has held several leadership roles on the global and local levels. Most recently, Meagan was the Meeting Program Co-Chair for AIChE's 2014 Spring Meeting in New Orleans. At that same meeting, she

received AIChE's 2014 Herb Epstein Award for Technical Programming in recognition of the work she did to expand the Young Professionals Committee's technical programming and collaboration within the Institute. Other roles that Meagan held include: treasurer of the Young Professionals Committee (YPC); chair of the YPC Technical and Social Programming subcommittee; and service on the AIChE Chicago Section's YPC Membership and Programming committees. Meagan is also a member of the Fuels and Petrochemicals Div.

Statement:

The chemical engineering world is lucky to be filled with experienced and knowledgeable experts who have solved many of the world's challenges. Unfortunately, many of those expert engineers are closing in on retirement age, and it is well known that there is a bi-modal distribution of age in our profession and in AIChE membership. It is critical that we work to minimize the gap in expertise and inspire the next generation of engineering professionals. Additionally, we need to continue to capture the interests of young professional and mid-career engineers to bridge the gap of knowledge. As a director of AIChE, I plan to motivate current and potential chemical engineers by:

- building upon the AIChE brand to recruit members worldwide, particularly where local sections are not available
- identifying and aligning the Institute's objectives with the professional needs and communication styles
 of mid-career and young professional engineers
- promoting modern methods of knowledge transfer between less-experienced engineers and the experts in our profession
- continuing efforts to inspire K–12 students to pursue careers in engineering.

I feel extremely honored by the opportunities that I have been given through my AIChE involvement. I welcome your questions or further discussion via email atmeagan.lewis@honeywell.com.

Timothy O. Odi



Tim Odi is an Engineering Fellow at Chevron Phillips Chemical Co., and a Fellow of AlChE. His work involves modeling and process engineering support of olefin and polyolefin manufacturing technologies. He originally joined Phillips Petroleum in 1997, having previously worked for Dow Chemical. He is an active member of AlChE's South Texas Section and a member of the Fuels and Petrochemicals Div. and the Computing and Systems Technology Div. He has also served AlChE as: chair of the Societal Impact Operating Council (SIOC, 2009); chair of the Minority Affairs Committee (MAC, 2013); and treasurer of MAC (2005–2006). SIOC grew into a greater asset for the Institute under his leadership, with strong outreach (K–12, Engineers without Borders) and reporting entities (Government Relations Committee, MAC, Women's Initiatives Committee) for educating the public on societal needs on behalf of AlChE. Tim received his BSChE from the Univ. of Lagos, Nigeria, and an MS and PhD in chemical engineering from Northwestern Univ. He is a

registered Professional Engineer in Louisiana.

Statement:

This is an exciting time for the chemical engineering profession. The abundance of shale gas fueling expansion of the chemical industry due to cheaper feedstock and energy, opportunities in biotechnology, nanotechnology, and renewable energy, and advances in modeling for safer design and operation of processes are all reasons for optimism. With these opportunities come challenges for AIChE to grow in membership, while meeting the diverse interests and expectations of chemical engineers engaged in all fields. If elected as director, I will focus on the following issues to further strengthen AIChE to meet these challenges:

- increasing awareness and engagement of AIChE in the oil and energy sector, renewable energy, chemicals, and biomaterials, while encouraging participation by members in all fields
- promoting member recruitment and retention, promoting seamless transition from student to professional membership, and working with the Young Professionals Committee to address the needs of young professionals
- making local sections more relevant for members, including formation and support of virtual sections, domestic and international
- fostering global outreach of AIChE through partnerships with international organizations for the benefit of members
- supporting strategies for positioning AIChE to play leading roles in the emerging fields of the profession
- supporting K-12 initiatives and scholarship programs to provide a pipeline of future chemical engineers
- supporting AIChE's diversity initiatives for full participation and career success of all members.

I welcome the opportunity to discuss with readers my ideas about growing and strengthening the Institute: odito@cpchem.com.

Joseph B. Powell



Joe Powell is an AIChE Fellow and Shell's Chief Scientist – Chemical Engineering. In 1988, he joined the Process Development Dept. at Shell Technology Center in Houston, TX, where he has led major R&D programs in new chemical processes, biofuels, and enhanced oil recovery, as well as a "Hunters" innovation group. Joe has been granted more than 55 patents (with another 60+ patents pending) and has received several awards, including AIChE's A. D. Little Award for Chemical Engineering Innovation (1998); an R&D 100 Award and American Chemical Society Team Innovation Award (2000); the Univ. of Wisconsin's College of Engineering Distinguished Achievement Award (2009); and AIChE's Process Development Div. Service Award (2012). He is co-editor and chapter author for the book Sustainable Development in the Process Industries: Cases and Impact (John Wiley & Sons, 2010). He serves on the National Academy Board on Chemical Sciences and Technology, and on the editorial committee of the Annual Review of Chemical and Biological Engi-

neering. Joe obtained a PhD in chemical engineering from the Univ. of Wisconsin-Madison, following a BS in chemical engineering from the Univ. of Virginia.

Statement:

I joined AIChE as an undergraduate, and the networking, sharing of best practices, and professional growth in ChE science and technology were instrumental in my eventual promotion to Chief Scientist. I have been honored to serve AIChE as a Process Development Div. program chair and co-chair (10 years+); Spring Meeting program chair and co-chair; member of the Program Committee and Chemical Engineering Technology Operating Council (CTOC); Pilot Plants area chair; and in numerous topical chair positions. As an AIChE Board member, I would strive to make AIChE the best it can be in serving global member needs for networking, continuing professional education, and growth throughout a career, and help ensure that ChE education remains grounded in the core principles of the profession as it expands into new fields such as bio and nanotechnology. AIChE should be a compelling value proposition for chemical engineers of all ages and disciplines, reflected by increasing membership and participation. As a profession, we face significant challenges in providing future energy and chemicals in a safe and sustainable manner with responsible stewardship, for a growing global stakeholder population with diverse needs. AIChE's meetings and conferences — global and local — together with an enhanced web presence and cutting-edge publications, can provide the mechanisms for chemical engineers to connect, learn, keep abreast of change, and find solutions to the most compelling problems of our time. If elected director, I would openly solicit and act upon your input for how AIChE can better serve your needs. Contact: JBPChE@gmail.com.

Edward M. Trujillo



Ed Trujillo is an associate professor of chemical engineering at the Univ. of Utah and has served as Assistant Dean for Minority Affairs in the College of Engineering. His ChE degrees are from the Univ. of Arizona (BS), California Institute of Technology (MS), and the Univ. of Utah (PhD). His research interests include acid mine drainage, biosorption of heavy metals, and multilayered growth of mammalian cells. Prior to joining the Univ. of Utah in 1984, he was a PhD research engineer at Marathon Oil Co., where he conducted research and field studies on enhanced oil recovery techniques. He is an AIChE Fellow, was named AIChE's Outstanding Student Chapter Advisor (2008), and has served as chair of two AIChE local sections: Rocky Mountain and Great Salt Lake. He has also served AIChE as chair of the Career and Education Operating Council (CEOC), chair of the Student Chapters Committee, Founding Chair and member of the International Student Chapters Committee, and on the International Committee.

Statement:

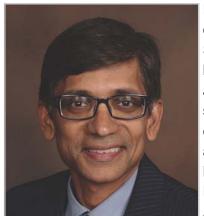
Chemical engineering is a very broad discipline, encompassing many areas of interest. These interests affect all of society, and it is important that chemical engineers are educated in, and trained using, the latest technologies. Not only must chemical engineers be technically competent, but they also must be aware of the social implications of their profession and their obligations to the public and society. AIChE can become the avenue for this. Through its conferences, programs, and online resources, the Institute is a leading resource for chemical engineers. As companies become more international, we must recognize the challenge of working with other cultures and populations and continue to improve services to all our members, both domestically and internationally. This can only happen through a coordinated effort from the Board of Directors, the staff, and, most importantly, the many volunteers that devote their time and expertise to these goals.

As an AIChE Board member, I would expand my own efforts to:

- reach out internationally to students and professionals, enhancing AIChE as the global home of chemical engineers
- support and develop K-12 initiatives to make students aware of the great opportunities available in chemical engineering, particularly addressing women and underrepresented groups in the U.S., as well as international students
- promote AIChE's member benefits, particularly the resources available through the AIChE Academy for lifelong learning
- make AIChE ever more relevant to our professional members by listening to their needs and identifying programs that meet those needs.

I have been a member of AIChE for more than 40 years and feel that the Institute has been an important part of my professional career. It would be an honor to serve as an AIChE director.

Ranil Wickramasinghe



Ranil Wickramasinghe holds the Ross E. Martin Chair in Emerging Technologies at the Univ. of Arkansas. Prior to this, he was a professor at Colorado State Univ., specializing in developing membrane separation processes. He has worked in industry, with international experience in China, Germany, Japan, and Singapore. He has published more than 130 journal articles, and several book chapters and patents. His research has led to extensive collaborations with industry, academia, and government in highly multidisciplinary areas. Ranil obtained his chemical engineering degrees from the Univ. of Melbourne (BS, MS) and the Univ. of Minnesota (PhD). He is a licensed Professional Engineer and an AIChE Fellow. Ranil's major contributions to AIChE over the last 25 years include: Program Chair for the 2013 San Fran-

cisco Annual Meeting (AlChE's largest Annual Meeting); chair of the Career and Education Operating Council; programming chair for membrane separations; AlChE's representative to the P.E. Exam Committee (15 years); and vice chair of the Boston Local Section.

Statement:

As a director, my aim is to strengthen AIChE's recognition as the global representative of chemical engineers. The challenge is to make sure that AIChE represents the varied interests of chemical engineers. I will use my international background and training to ensure that AIChE provides you, our members, with real value.

- Active local sections (U.S. and overseas) are critical to growing the membership of AIChE. I will ensure that we strengthen U.S. sections and develop vibrant international sections.
- Programming at AIChE's major and co-sponsored meetings must serve the interests of our members.
 I will work with the Program Committee to ensure that we meet the needs of an increasingly international membership.
- Operating Councils (OCs) are the vehicle for implementation of AIChE's strategic goals. Industry
 Technology Groups (ITGs) ensure that we meet the needs of members working in different arenas. I will
 work with the OCs and ITGs to ensure that your interests are represented as we increase our global
 presence.
- As AIChE establishes international student chapters, it is essential that we serve the professional needs of members throughout their careers. I will work with the Young Professionals Committee, International Committee, and OCs to retain these students as professional members.
- I will work to publicize the AIChE Academy and its outstanding educational programs.

I am honored to run for AIChE director, and appreciate your support in order to establish AIChE as the global home of chemical engineers. Please contact me at<u>ranil.wickramasinghe@uark.edu</u> if you have suggestions or would like to discuss issues facing AIChE.

Upcoming AIChE Conferences, Meetings and Webinars

Chicago Section Monthly Meeting				
September 9, 2015	Rosemont, IL			
October 13, 2015	Chicago, IL			
November 18, 2015	Oak Brook, IL			
March 3-4,2016	8th Midwest Regional Conference, IIT, Chicago			
	AIChE Conferences			
September 10, 2015	Virtual Career Fair—Jobseekers			
September 16-18, 2015	4th Conference on Constrained-Based Reconstruction and Analysis, Heidelberg, Germany			
September 22-24, 2015	3rd CCPS China Conference on Process Safety, Ningbo, China			
September 28-29, 2015	European Workshop on Process Safety, Nice, France			
September 28-29, 2015	Technology Challenges & Opportunities in Commercializing Industrial Biotechnology, San Diego, CA			
October 1-2, 2015	7th Southwest Process Technology Conference, Galveston, TX			
November 3-5, 2015	2nd CCPS Global Summit on Process Safety, Kuala Lumpur, Malaysia			
November 8-13, 2015	2015 AIChE Annual Meeting, Salt Lake City, UT			
November 16-17, 2015	Water Efficiency in Downstream Refinary, Petrochemical and Chemical Processing, Sugar Land, TX			

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We are on the web www.aiche.org/Chicago

We want you for AIChE-Chicago!

We need your help!

How many opportunities can you find to learn project management, delegation and leadership skills for free? Becoming an officer in the Chicago Section of AIChE is such an opportunity. While you're learning new skills, your local network grows. Just about all of us are either undergoing a career change, contemplating a career change, or are wondering if our career will be changed for us. Volunteering with AIChE is a way to add skills and accomplishments to your resume.

aichechicago@gmail.com

http://www.aiche.org/community/sites/local-sections/ chicago/announcements/volunteerism

Submitting Articles to AIChE Columns

We welcome email submissions for our monthly newsletter. Commercial announcements are subject to the fee schedule below. News stories, editorials, technical or career related non-commercial contributions are always welcome with no charge. We consider job postings, announcements of for-fee training courses, expositions, conferences as commercial. Categorization of announcements is at the sole discretion of the Chicago AlChE Board of Directors. Chicago AlChE may publicize activities of interest to our members by cooperating professional societies and other non-profits without charge.

AICHE Publicity Committee	Academic (non-AICHE)		Company		Recruiters	
Fees	Per Month	Per Year	Per Month	Per Year	Per Month	Per Year
Advertisements (3X3)	100	450	150	675	N/A	N/A
Half-Page (~7"x 4.5")	280	1260	420	1890	N/A	N/A
Job Posting (Size?)	50	225	100	450	250	N/A
Special Sizing	Contact Publicity Committee aichechicago@gmail.com					

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