Keynote and Plenary Speakers

Thursday, March 3, 2016

Khalil Amine
Distinguished Fellow, *Argonne National Laboratory*

Shakeel Kadri
Executive Director, *AIChE Center for Chemical Process Safety*

Linda Broadbelt
Professor and Chair, *Northwestern University*

Jeffery Hubbell
Professor of Molecular Engineering, Innovation & Enterprise, *University of Chicago*

Friday, March 4, 2016

Corey Correnti
Senior Vice President, *BP*
(Retired 2015)

Christopher Burcham
Senior Engineering Research Advisor, *Eli Lilly and Company*

Lorenz Biegler
Professor and Head, *Carnegie Mellon University*

Manu Vora
President, *Business Excellence Inc.*

Speaker Biographies

Thursday Morning Keynote: 8:15 AM Thursday, March 3, 2016

Khalil Amine, *Distinguished Fellow, Argonne National Laboratory*

Biographical Sketch: *Dr. Khalil Amine is an Argonne Distinguished Fellow and the Manager of the Advanced Battery Technology programs at Argonne National Laboratory, where he is responsible for directing the research and development of advanced materials and battery systems for HEV, PHEV, EV, and satellite, military and medical applications. Dr. Amine currently serves a member of the U.S. National Research Consul, US Academy of Sciences on battery related technologies. He also a distinguished visiting professor at Peking University, Beijing Institute of Technology and Hanyang University. Dr. Khalil serves as the president of IMLB and the international lithium battery association, and is also the editor of the journal of Nano-Energy*

Among his many awards, Dr. Khalil is a 2003 recipient of Scientific America's Top Worldwide Research 50 Research Award, a 2008 University of Chicago distinguished performance award, a 2009 recipient of the US Federal Laboratory Award for Excellence in Technology Transfer, 2013 DOE Vehicle technologies office award and is the five-time recipient of the R&D 100 Award, which is considered as the Oscar of technology and innovation. In addition, he was recently awarded the ECS battery technology award and the international battery association award. Dr. Amine holds or has filed over 140 patents and patent applications and has over 367 publications. From 1998-2008, Dr. Amine was the most cited scientist in the world in the field of battery technology.

Thursday Afternoon Plenary Session I: 12:45 PM Thursday, March 3, 2016

Shakeel Kadri, *Executive Director, Center for Chemical Process Safety*

Biographical Sketch: *Shakeel Kadri was named the Executive Director of the AIChE Center for Chemical Process Safety (CCPS) in 2015. Previous to this role, Shakeel spent 36 years at Air Products and Chemicals, Inc. Most recently he was Director of Global Process Safety and Risk Management, where he was instrumental in building a global process safety team and played a key role in raising the company's process safety risk awareness. Previous to this role, Shakeel served Air Products as global manager, process safety; manager and global leader, process safety; and global quality manager for engineering, manager of process engineering, among other safety, operations and engineering assignments of increasing responsibility.*

Shakeel is a Fellow of both CCPS and AIChE and has served on process safety committees of the American Chemistry Council, the American Petroleum Institute, the Mary Kay O'Connor Process Safety Center, the International Council of Chemicals Associations, the Compressed Gas Association, the European Industrial Gases and Association, and the American Fuel and Petrochemical Manufacturers Association. He has authored a wide variety of publications, conference papers and a patent. Shakeel earned his bachelor's degree in chemical engineering at the Dharmsinh Desai Institute of Technology of Gujarat University in India, his master's degree in chemical engineering at the Illinois Institute of Technology, Chicago, and an MBA at La Salle University, Philadelphia.

Thursday Afternoon Plenary Session II: 12:45 PM Thursday, March 3, 2016

Linda Broadbelt, *Professor and Chair, Northwestern University*

Biographical Sketch: *Linda Broadbelt is Sarah Rebecca Roland Professor in and Chair of the Department of Chemical and Biological Engineering University at Northwestern University. Her research and teaching interests are in the areas of multiscale modeling, complex kinetics modeling, environmental catalysis, novel biochemical pathways, and polymerization/depolymerization kinetics. She is currently the Vice Chair of the Catalysis and Reaction Engineering Division of AIChE, and also previously served on the Executive Board of the National Program Committee of AIChE. She was also appointed to the Scientific Organizing Committee for the 21st and 19th International Symposium on Chemical Reaction Engineering and served on the Science Advisory Committee of the Gulf Coast Hazardous Substance Research Center. She is currently an Associate Editor for Industrial & Engineering Chemistry Research.*

Her honors include selection as the AIChE Women's Initiative Committee Mentorship Excellence Award winner, a Fellow of the American Association for the Advancement of Science, a Fulbright Distinguished Scholar Award, a CAREER Award from the National Science Foundation, a McCormick Excellence Award, appointment to the Defense Science Study Group of the Institute for Defense Analyses, and selection as the Ernest W. Thiele Lecturer at the University of Notre Dame and the Allan P. Colburn Lecturer at the University of Delaware. Linda received her B.S. in chemical engineering from The Ohio State University and graduated summa cum laude. She completed her Ph.D. in chemical engineering at the University of Delaware in 1994 where she was a Du Pont Teaching Fellow in Engineering, a National Science Foundation Graduate Fellow, and a DuPont PhD in Engineering Fellow.

Thursday Dinner Keynote: 7:30 PM Thursday, March 3, 2016

Jeffery Hubbell*, Institute for Molecular Engineering, University of Chicago*

Biographical Sketch: *Jeffery Hubbell is the Barry L. MacLean Professor of Molecular Engineering Innovation and Enterprise in the Institute for Molecular Engineering at the University of Chicago. His research focuses on the design of biomaterials to assemble in such a way that they can stimulate the immune systems to fight infection or malignancy, or turn off some aspects of the immune system to address auto-immune diseases such as type-1 diabetes. Hubbell has coined the term "immuno-modulatory materials" to describe this newly emerging field of research. Based on his research, Hubbell has founded three companies: Kuros Biosurgery, Anokion, and Focal, Inc.*

Hubbell received his bachelor's degree from Kansas State University in 1982, and his PhD from Rice University in 1986, both in chemical engineering. His academic career began at University of Texas and California Institute of Technology. As a professor of biomedical engineering at the Swiss Federal Institute of Technology (ETH) he served as director of the Institute for Biomedical Engineering. Prior to his move to the University of Chicago, Hubbell served as founding director of the Institute of Bioengineering at the École Polytechnique Fédérale de Lusanne (EPFL).

In addition to membership in the National Academy of Engineering, Hubbell is the former president of the Society for Biomaterials. Hubbell is an elected fellow of Biomaterials Science and Engineering, of the American Association for the Advancement of Science, and of the American Institute of Medical and Biological Engineering. Earlier in his career, Hubbell received the W.J. Kolff Award for Outstanding Research from the American Society of Artificial Internal Organs, the Outstanding Dow Young Faculty Award from the American Society of Engineering Education, and the National Science Foundation's Presidential Young Investigator Award.

Friday Morning Keynote: 8:15 AM Friday, March 4, 2016

Corey Correnti*, Senior Vice-President, BP (retired, 2015)*

Biographical Sketch: Prior to retiring in 2015, Corey held several senior leadership roles at BP. Most recently, Corey was Senior Vice President of Marketing, Sales and Supply where he led the refining crude supply as well as the product supply, sales, and marketing for BP's East of Rockies region. Corey started his career in refining engineering with Amoco in 1985 and later worked in various refining operations management roles. He subsequently led the long term refining planning group which was focused on clean fuels strategies and long term capital support. Corey also worked in BP Chemicals as Global Business Manager for Aromatics, COO for BP's U.S. Product Supply and Trading Operations and Chief of Staff for BP's CFO Office. Corey was President of BP's Supply and Marketing business for the U.S. East and Gulf Coasts and later was head of Supply and Strategy for the East of Rockies Fuels Value Chain. His career has included postings in both the U.K. and U.S. Corey has served as Chair of the American Petroleum Institute's Marketing Subcommittee and BP's Executive Sponsor to the University of Illinois. Corey holds a BS degree in Chemical Engineering from the University of Illinois and an MBA from the University of Chicago. He lives in the Chicago area with his wife Debbie and has one son.

Friday Afternoon Plenary Session I: 12:45 PM Friday, March 4, 2016

Christopher Burcham*, Eli Lilly and Company*

Biographical Sketch: Dr. Christopher Burcham is a Senior Engineering Research Advisor at Eli Lilly and Company, and leads the Particle Design Laboratory in the Small Molecule Design and Development department within Product Research and Development. This group is responsible for the design and development of batch and continuous crystallization processes for all small molecule drug substances currently in development. He is also responsible for spray drying process development for the production of solid dispersions.

Chris received a PhD from Princeton University in 1998, and a BS from the University of Illinois in 1992, both in Chemical Engineering. His career started in Corporate R&D at The Dow Chemical Company transferring later to the Formulation Development group at Dow AgroSciences. In 2002, Chris joined Eli Lilly. Prior to leading the Particle Design Lab, he led the development of chemical processes for a number of late stage molecules.

Chris currently serves on a number of academic Industrial Advisory Boards. He is very active in AIChE, serving regularly as session chair at the annual meeting since 2004, and now Area Chair for Section 2B, Crystallization and Evaporation. He is also a member of the planning committee for the Association of Crystallization Technology.

Friday Afternoon Plenary Session II: 12:45 PM Friday, March 4, 2016

Lorenz T. Biegler, *Professor and Head, Carnegie Mellon University*

Biographical Sketch: *Lorenz T. (Larry) Biegler is currently the Bayer University Professor and Head of Chemical Engineering at Carnegie Mellon University. His research interests lie in computer aided process engineering (CAPE) and include flowsheet optimization, optimization of systems of differential and algebraic equations, reactor network synthesis and algorithms for constrained nonlinear process control. He obtained MS and PhD degrees from the University of Wisconsin and his BS degree from the Illinois Institute of Technology, all in chemical engineering.*

Prof. Biegler has been an institute fellow at the National Energy Technology Lab, a visiting scholar at Northwestern University and Lehigh University, a scientist-in-residence at Argonne and Sandia National Labs, a Distinguished Faculty Visitor at the University of Alberta, a Chang Jiang scholar at Zhejiang University, a Gambrinus Fellow at the University of Dortmund, a Fulbright Fellow at the University of Heidelberg, a Distinguished Jubilee Lecturer at IIT-Bombay and the Hougen Visiting Professor at the University of Wisconsin. He is an author on over 300 archival publications and two books. He has edited 11 volumes and given numerous invited presentations at national and international conferences.

He is the recipient of numerous awards including the Lewis Award, McAfee Award (Pittsburgh Section) and the Computers in Chemical Engineering Award, all given by AIChE, Curtis McGraw Research Award and CACHE Computing Award, given by ASEE, the INFORMS Computing Prize, the Presidential Young Investigator Award from the National Science Foundation, and an honorary doctorate in engineering sciences (Dr.-Ing. e.h.) from the Technical University of Berlin. He is a Fellow of AIChE and SIAM, and a member of ACS, the Mathematical Optimization Society and the National Academy of Engineering.

Closing Keynote: 5:45 PM Friday, March 4, 2016

Manu Vora, *President, Business Excellence, Inc.*

Biographical Sketch: *Manu Vora is President of Business Excellence, Inc., a global management consulting service firm. He has over 40 years of leadership experience in telecommunications and chemical processing industries. His areas of expertise include customer satisfaction, continuous process improvement, leadership development, employee engagement, operational performance, problem solving, benchmarking, organizational assessment using quality management models, and diversity management. He is an American Society for Quality (ASQ) Fellow and Certified Quality Engineer (CQE).*

Manu holds an M.B.A. with Marketing Management from Keller Graduate School of Management in Chicago, M.S. & Ph.D. in Chemical Engineering from Illinois Institute of Technology in Chicago, and B.S. in Chemical Engineering from Indian Institute of Technology, Banaras Hindu University in India. From 1993 to 2005, as an Adjunct Professor he taught "Quality Management" and "Supply Chain Management" in the MBA Program at the Stuart School of Business at Illinois Institute of Technology in Chicago. Currently Manu is an Adjunct Faculty at the School of Professional Studies, Northwestern University in Evanston where he teaches "Quality Assurance Project Management". He has taught Operations Management courses globally for over 22 years. He is affiliated with over 50 educational institutes world-wide. Manu has taught ASQ Certified Quality Engineer (CQE) preparation classes at AT&T Bell Laboratories to create 89 CQEs.

Manu has made over 500 presentations in the area of business excellence and quality management around the world in Caribbean & Central America (Costa Rica, Dominican Republic, Mexico and Nicaragua), Europe (Ireland, Italy), Far East (India - Bangalore, Chennai, Delhi, Mumbai, Mysore & Pune; Korea; and Thailand), Latin America (Chile, Peru), Middle East (Abu Dhabi, Dubai, Muscat, & Sharjah), and USA. Over the last two years, he has imparted life-long transferable soft skills and quality management knowledge to well over 100,000 students, faculty, and professionals in India using Google Hangouts and Webinars.

Manu is very active in community and civic service. Since 1989, he is serving as the Founding Director and President of the Blind Foundation for India (BFI). Since 1991, BFI has raised over $4 Million to perform 125,000 free cataract operations, donated 115 mobile vans for conducting eye camps and distributed 10,000 Braille kits to blind children and helped over a million visually impacted people in India. Additionally over 750,000 school- going children' had their eyesight examined and received necessary interventions. For his social service he received "2010 U. S. President's Volunteer Service Award" and "2011 Ellis Island Medal of Honor". ASQ has bestowed on him five medals - Distinguished Service Medal, Grant Medal, Hutchens Medal, Ishikawa Medal, and Lancaster Medal.