

M. Nazmul Karim

Texas A&M University

Professor M. Nazmul (Naz) Karim is the Michael O'Connor Chair II and the Head of the Artie McFerrin Department of Chemical Engineering at Texas A & M University (TAMU). He received his BS degree in Chemical Engineering from Bangladesh University of Engineering and Technology, and his MSc and PhD degrees from the University of Manchester, UK. He has been a professor chemical engineering at Colorado State University for over twenty years. He also held the Whitacre Endowed Chair, and served as the Department Chair of Chemical Engineering at Texas Tech University (TTU) for eight years before joining TAMU. Dr. Karim has been a distinguished visiting professor at many international universities, e.g. Technical University of Denmark (Chemical Engineering), Osaka University (ICBioTech), University of New Castle upon Tyne, UK (Chemical Engineering), etc. An expert in bioprocess control and biofuels, Dr. Karim has spent over thirty years researching various aspects of renewable energy production, emphasizing the utilization of lignocellulosic raw materials. His research encompasses metabolic engineering to process optimization methods to develop the economically and technically feasible alternatives for biofuels production. He uses modern technologies such as CRISPR/Cas9 to genetically engineer new generation of microorganisms to produce higher titers of bio-products. His recent research has focused on diverse research topics, including development of a novel membrane separation technique for separating flu virus, and development of methodologies for diabetes treatment using model-based embedded control system, and studying leak detection in gas (and water) pipelines and fault detection in chemical plants using nonlinear estimation methods. He has published over 100 refereed journal papers, and given over 250 technical, keynote and plenary talks, nationally and internationally. He is currently a PI or a Co-PI of several major grants from various agencies. Dr. Karim was a Director of the F& PD (Fuels and Petrochemical Division) of AIChE (American Institute of Chemical Engineers) for three years, 2010-2013. For over 35 years he has been involved in AIChE as a presenter, session chair and co-chair, and session organizer. He was the Programing Co-chair of the F & PD sessions for fall of 2015. Dr. Karim is a Fellow of the AIChE. He is a member of ACS (American Chemical Society) and SIMB (Society of Industrial Microbiology and Biotechnology).

Dr. Karim is an excellent classroom instructor, in 2004-2005 he received the Best Teacher Award from Colorado State University in recognition of his contribution to teaching.

Professor Karim has a long history of serving as a Department Chair or a Head of Chemical Engineering and making a difference in the departments he has served. He left CSU in the fall of 2004 after serving 23 years there at all ranks to become the Chair of Chemical Engineering at Texas Tech University (TTU), where he served for 8 years as the Department Chair. He recruited ~ 50% of the faculty in the Department from 2004-2012. In the fall of 2012, he joined as the Head of the Artie McFerrin Department of Chemical Engineering at Texas A & M University (TAMU). He also serves as the Head of the Chemical Engineering Program at TAMU- Qatar. Dr. Karim recruited 11 tenured/tenure-track faculty in the last three years. He also hired 3 non-tenure track faculty during this time. The research expenditure of the Department has grown steadily during his watch; in 2015, the total research award in Chemical Engineering was \$15.6M. The Departmental faculty publishes over 6-8 journal papers per year per faculty. Dr. Karim is very much involved in fund raising for the Department. In the last four years, he was involved in raising over \$10M for various purposes, e.g. scholarships, graduate fellowships. Faculty Fellowship, Endowed Professor, and Endowed Chair, and research building/space. He was able to recruit two world famous professors (an NAE member, and a Royal Academy Member) to Texas A & M University with the assistance from the Chancellor's Research Initiative program. Professor Karim believes in excellence in education and inclusiveness in all aspects of the academic endeavor. He believes in creating partnerships with various constituencies in order to achieve goals of an institution.