

Ali Elkamel is a Professor of Chemical Engineering. He holds a BSc in Chemical Engineering and BSc in Mathematics from Colorado School of Mines, MSc in Chemical Engineering from the University of Colorado-Boulder, and PhD in Chemical Engineering from Purdue University – West Lafayette, Indiana. His specific research interests are in computer-aided modelling, optimization and simulation with applications to energy production planning, carbon management, sustainable operations and product design. Professor Elkamel is currently focusing on research projects related to energy systems, integration of renewable energy in process operations and energy production systems, and the utilization of data analytics (Digitalization), machine learning, and Artificial Intelligence (AI) to improve process and enterprise-wide efficiency and profitability.

Prof. Elkamel supervised over 90 graduate students (of which 35 are PhDs) and more than 30 post-doctoral fellows/research associates. Among his accomplishments are the Research Excellence Award, the Excellence in Graduate Supervision Award, the Outstanding Faculty Award, the Best teacher award, and the IEOM (Industrial engineering and Operations Management) Outstanding Service and Distinguished Educator Award. He has more than 280 journal articles, 141 proceedings, and 33 book chapters. He is also a co-author of four books; two recent books were published by Wiley and entitled *Planning of Refinery and Petrochemical Operations* and *Environmentally Conscious Fossil Energy Production*.

Ali Almansoori is Professor of Chemical Engineering at Khalifa University in Abu Dhabi. During his profession, Dr. Almansoori held several administrative positions including: the Coordinator of President's Duties, Dean of Engineering, and Chair and Deputy Chair of the Chemical Engineering Department. He also was the Interim Senior Vice President for Academic Affairs during the merge between PI, Masdar Institute, and Khalifa University of Science, Technology, and Research. His main research interest is in the area of Process Systems Engineering with the focus on energy systems design, simulation, modelling and optimization. He also conducts general research in the area of renewable energy and fuel cell technology with applications to the oil and gas industry. He has published numerous articles in renowned refereed journals and conference proceedings. He also delivered several presentations in international conferences and is the author of a few book chapters. Furthermore, he serves as a reviewer for reputable international journals in the area of energy and process systems.

Peter Douglas is the Associate Dean of Engineering (Undergraduate Studies) and a Professor of Chemical Engineering at the University of Waterloo. He was previously the Director of the University of Waterloo United Arab Emirates Campus in Dubai from 2009 to 2013, the Associate Dean of Engineering (Computing), and the Associate Dean of Engineering (Graduate Studies). Professor Douglas was a founding member of WISE the Waterloo Institute for Sustainable Energy at UWaterloo. His primary research area of interest is in the development and application of PSE technology to industrial processes including process modelling, simulation, control and optimization. He is currently working on simulation and optimization issues related to the mitigation and capture of carbon dioxide from large scale emitters. Professor Douglas has consulted on a world-wide basis for many clients and has worked in Canada, Australia, Malaysia, Thailand, the UAE. Additionally, he is a co-inventor of the Dryer Master online measurement and control systems for the food processing industry; such systems are finding widespread use in Canada, USA, Europe and Asia. In addition to his research work, Professor Douglas has co-authored more than 200 related research publications and has supervised more than 80 postgraduate students