

Seminar on Computer-Aided Process Intensification Techniques

Date and Time: November 30, 2019 at 11 am

Academic Council Building, BUET

Organized by the Department of Chemical Engineering, BUET, Dhaka, Bangladesh



Presented by
3rd M A Naser Chair

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Abstract

Chemicals based products and the processes that manufacture them play important roles in sustaining our society. Chemical, biochemical, petrochemical and related processes are characterized by either conversion of specific raw materials to desired chemicals or extraction of desired chemicals from specific raw materials. However, for both categories of processes, energy in different forms need to be supplied and the processes during operation have the potential to produce waste that may lead to negative environmental impacts and cause supply chain issues. Therefore, planet earth is facing challenges with respect to energy, water, food and environment, and significant improvements in process efficiencies of new and/or existing processes are needed. Process intensification (PI) has been identified as a means to achieve these improvements, while at the same time, to provide new innovative and more sustainable solutions. Therefore, PI as a topic has been attracting much attention from industry as well as academia. Also, process systems engineering (PSE) has been closely related to the developments within PI as recent developments and initiatives indicate. But what is PI, or, how can it be achieved? In this seminar, a broad view of PI is considered in terms of challenges that may be tackled and opportunities that may be addressed through computer-aided process intensification (CAPI) techniques.

Short bio-data: Dr. Rafiqul Gani retired at the end of 2017 as professor of systems design at the Department of Chemical & Biochemical Engineering, The Technical University of Denmark and the former head and co-founder of the Computer Aided Process Engineering Center (CAPEC). He has published 507 peer-reviewed journals-proceedings articles plus book chapters and delivered over 360 lectures, seminars and plenary/keynote lectures at international conferences, institutions and companies all over the world. Professor Gani is the ex-president of the EFCE (European Federation of Chemical Engineering, 2014-2017); He was awarded the AIChE (CAST Division) Computers in Chemical Engineering 2015 award in November 2015 and the EFCE Jacques Villiermaux Medal in 2019. Dr. Gani is the co-founder and CEO of the company "PSE for SPEED" providing innovative, accurate and consistent engineering solutions very fast to industrial clients. He is also a Distinguished (visiting) Professor at Zhejiang University, Tsinghua University in China and Texas A&M University in USA. His current research interests continue with the development and application of computer aided methods and tools for modelling, property estimation, process-product synthesis & design, and process-tools integration with emphasis on energy, sustainability and application of a systems approach.

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