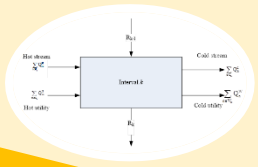
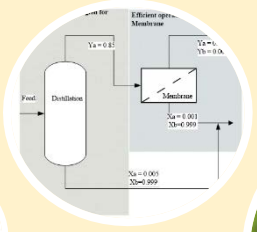
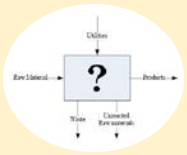
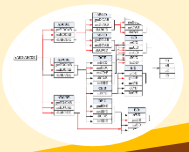
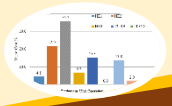





SUSTAINABLE PROCESS SYNTHESIS-DESIGN & ANALYSIS

INNOVATIVE SOLULTIONS TOWARDS SUSTAINABLE DEVELOPMENT

About Workshop

The workshop introduces the 3-stage methodology for process synthesis-design and innovation of both chemical and biochemical processes. Tools developed for generation of process alternatives are covered in detail. The workshops also cover methods to design different unit operations quickly and efficiently. Process analysis tools used to identify process bottlenecks and innovation strategies to improve the process further and drive towards achieving sustainable solutions.

How Will I Benefit?

- Quickly identify numerous feasible process alternatives and quickly evaluate them.
- Design novel and sustainable processes and be among the first to commercialize it.
- Apply computer-aided methods.
- Analysis tools to identify process bottlenecks.
- Application of innovative solution strategies to develop sustainable solutions.
- Application of computer-aided tools.

Workshop Program

DAY 1

8.30 - 9.00	Registration and welcome
9.00 - 10.30	Introduction : The new synthesis/design problem 3 Stage framework of achieving sustainability
10.30 - 11.00	Break
11.00 - 12.30	Stage 1: Process synthesis 1. Process groups based method for generation of alternatives 2. Superstructure based optimization method for generation of alternatives 3. Introduction to computer-aided tools of process synthesis
12.30 - 13.30	Lunch break
13.30 - 15.00	Stage 2: Design & Analysis 1. Detailed design for rigorous process simulation 2. Apply process analysis tools (Sustainability, LCA, Economic) 3. Identification of process hotspots
15.00 - 15.30	Break
15.30 - 16.30	Case studies & tutorial exercise (Benzene, Biodiesel & CO_2 utilization)

DAY 2

9.00 - 10.30	Stage 3 : Process Innovation 1. Simultaneous process and heat exchanger network optimization
10.30 - 11.00	Break
11.00 - 12.30	2.Hybrid separations 3.Phenomena based process intensification
12.30 - 13.30	Lunch break
13.30 - 15.00	Sustainable process synthesis-design and analysis case studies
15.00 - 15.30	Break
15.30 - 16.30	Important issues & topics Participants related problems

2-DAY WORKSHOP & TRAINING-COURSE

20 – 21 JULY 2017

9.00 – 16.30

BANGKOK

* Place at the workshop will be reserved on a first-come-first served basis. Please confirm participation as soon as possible.

For more information: http://www.pseforspeed.com/

PSE for SPEED Company Ltd.

Process System Engineering for Sustainable Product Process Engineering, Evaluation and Design
294/65 RK Office ParkRomklao Rd., Ladkrabang
Bangkok, Thailand 10520
Tel: (+66)2-184-9719

INNOVATIVE SOLULTIONS TOWARDS SUSTAINABLE DEVELOPMENT

SPEAKER

Dr. ANJAN KUMAR TULA

Anjan Tula is a Postdoctoral Researcher at the Department of Chemical Engineering, Auburn University and the Head of Process Engineering Division of the PSE for SPEED (Sustainable Product Process Engineering, Evaluation and Design) company. His main area of expertise is in development of computer-aided methods for process synthesis and innovation. Anjan has a doctorate degree in chemical engineering from Technical University of Denmark and prior to that he has 3-year's work experience in General Electric as process engineer. As a part of his PhD he has developed computer-aided method and tool for systematic process synthesis-design & analysis of chemical and biochemical processes. His works has been awarded and widely accepted and published in several international conferences and journals.

SPEAKER

PROF MARIO R. EDEN

Dr. Mario Eden is the Department Chair and Joe T. & Billie Carole McMillan Professor in the Department of Chemical Engineering at Auburn University. His main areas of expertise include process design, integration and optimization, as well as molecular synthesis and product design. His group focuses on the development of systematic methodologies for process and product synthesis, design, integration, and optimization. He has published 2 edited books and 115 refereed papers/book chapters and contributed 361 presentations at national/international meetings, including 53 invited lectures/seminars. He has been an active member of the process systems engineering community for more than 15 years. He is a co-founder of the PSE for SPEED (Sustainable Product Process Engineering, Evaluation and Design) company.

SPEAKER

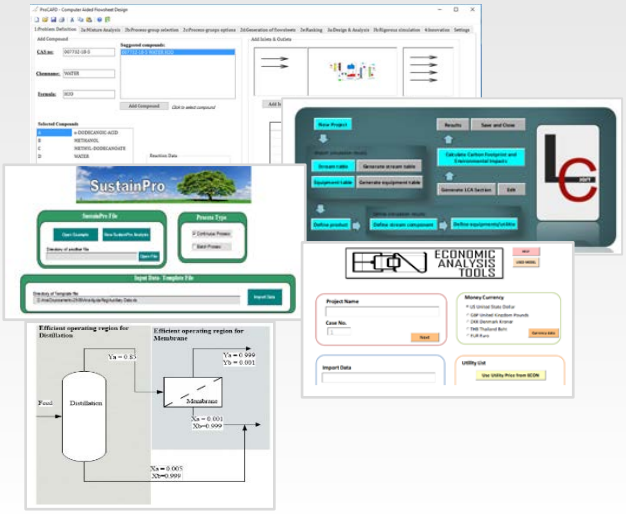
PROF RAFIQUL GANI

Prof. Rafiqul Gani is professor of system design at the Department of Chemical and Biochemical Engineering, The Technical University of Denmark and the former head and co-founder of the Computer Aided Process Engineering Center (CAPEC). His current research interests include development of computer aided methods and tools for modelling, property estimation, process-product synthesis & design, and process-tools integration. He has published 406 peer-reviewed journal-proceedings articles and book chapters, and, delivered over 350 lectures, seminars and plenary/keynote lectures at international conferences, institutions and companies all over the world. Professor Gani is the president of the EFCE (European Federation of Chemical Engineering), elected for a second term 2016-2018; a Fellow of the AIChE and also a Fellow of IChemE. He is a co-founder and the CEO of the PSE for SPEED (Sustainable Product Process Engineering, Evaluation and Design) company.

Who Should Attend?

- Process Engineer
- Chemical Engineer
- Process Technology
- R&D Teams
- Consultant
- Researcher
- Chemist
- Professor/Lecturer
- Students working in the area of process synthesis, design development

Computer-aided tools



List of Publications

- A.K. Tula. *Computer-aided Sustainable Process Synthesis-Design and Analysis*. PhD-thesis, Technical University of Denmark, Lyngby, Denmark. (2016)
- A.K.Tula, B.Bridgette, N. Garg, K.Camarda, R. Gani. *Sustainable Process design & analysis of hybrid separations*. Computers & Chemical Engineering, 39 (2017): 61-94
- A.K. Tula, M. R. Eden, and R. Gani, 2015, *Process synthesis, design and analysis using a process group contribution method*, Computers. Chem. Eng., 81, 245-259.
- D.K. Babi, J. Holtbruegge, P. Lutze, A. Gorak, J.M. Woodley, R. Gani,. 2015. *Sustainable Process Synthesis-Intensification*. Comput. Chem. Eng., 81: 218–44.
- A.Carvalho, H.M. Matos, R.Gani, 2013 *SustainPro - A tool for systematic process analysis, generation and evaluation of sustainable design alternatives*, Comput. Chem. Eng., 50, 8-27

REGISTRATION

PLEASE CONFIRM PARTICIPATION BY EMAIL: rgani@pseforspeed.com

REGISTRATION FEE

10000 BAHT PER PERSON (50% DISCOUNT FOR ACADEMIA)

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