



Seminar Announcement

Benchmark Simulation Models and Virtual Laboratories for Bio-manufacturing Processes



By: **Dr. Seyed Soheil Mansouri**

Assistant Professor, Technical University of Denmark (DTU)

Abstract:

In this lecture, challenges, advantages and an approach for developing benchmark simulation models and virtual laboratories for bio-manufacturing processes will be elaborated. A bio-pharmaceutical production process of an API, lovastatin, is developed through a systematic process synthesis and design approach, and then modelled, implemented and simulated. In course of model implementation, the experience from the real world processes from BIOPRO project is brought into the context. BIOPRO is a large Danish academia-industry cluster to foster process improvement for bio-manufacturing process (www.biopro.nu). The developed simulation is intended to be used as benchmark process model as it captures the generic process dynamics of a bio-pharmaceutical process, and as such, it is well suited to use as a test problem to evaluate different processing scenarios, optimization approaches and control strategies in presence of uncertainty. Furthermore, an example of developing a virtual laboratory for fermentation processes will be shown which its application is for operator training and education.

شنبه ۲۱ اردیبهشت ماه ۱۳۹۸

ساعت ۱۲ الی ۱۳

سالن سبز دانشکده مهندسی شیمی و نفت دانشگاه صنعتی شریف

Speaker's bio sketch:

Dr. Seyed Soheil Mansouri is an Assistant Professor in the Department of Chemical and Biochemical Engineering at the Technical University of Denmark (DTU) and affiliate faculty at Sino-Danish Center for Education and Research in Beijing, China. He received his PhD (2016) and MSc (2013) in chemical and biochemical engineering both from DTU. His current research is primarily focused on developing systematic methods and tools for synthesis, design, control and optimization of chemical and bio-pharmaceutical processes with an aim to achieve more sustainable production and consumption. He is a senior member of American Institute of Chemical Engineers (AIChE) and a Danish delegate to Computer Aided Process Engineering (CAPE) Working Party of European Federation of Chemical Engineers (EFCE).

