



A Process Systems Engineering Approach for Managing the Complexity in Chemical Product-Process Design

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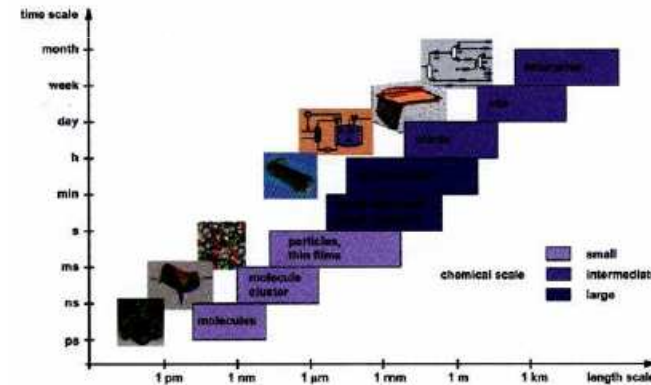
Anfiteatro do Complexo Interdisciplinar

Instituto Superior Técnico

Seminar abstract:

Chemical product-process design consists of finding the identity of the candidate chemical product, designing the process that can sustainably manufacture it and verifying the performance of the product during application. These are complex problems, which involve several distinct features: *Multi-scale*, *Multidiscipline* and *Computer-aided techniques*. *Use of a systems approach that can efficiently manage the complexity therefore becomes desirable. The principal idea here is to decompose a complex problem into a set of sub-problems that are easier to solve and to identify those that can be solved through model-based solution approaches.*

The lecture will present the main concepts, the use of these concepts in a model based framework to manage the complexity together with illustrative examples highlighting the application of the model-based framework.



Rafiqul Gani is professor of systems design at the Technical University of Denmark and the director of Computer Aided Process Engineering Center (CAPEC). He has more than 150 reviewed publications and delivered over 200 lectures, seminars and plenary/keynote lectures at international conferences, institutions and companies all over the world. Professor Gani is editor-in-chief of Computers and Chemical Engineering journal and the series editor for the Elsevier CACE book series.