Imperial College London

Centre for Process Systems Engineering
2016 Seminar Series: The Next Generation

UCL

Sustainable process design of renewable based power and fuels

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Abstract:

Society is in search for more sustainable energy and fuel production to reduce our dependence on fossil based resources. As a result biomass, wind and solar energy have emerged as the main renewable sources of chemicals, fuels and power. However, the production of novel chemicals or the comparison among various routes for the production of power, fuels and chemicals involves a number of challenges related to the efficiency of the processes and their operation. In particular water and energy consumption and the sustainability of the processes are the main issues to be addressed. Over the presentation, we will discuss on the use of wind, solar and biomass as source for various fuels, chemicals and for power as well as the relative water efficiency and sustainability of the processes aiming at selecting among the sources of energy, the energy carrier and the production process that allows a more sustainable development.

Bio:

Dr Mariano Martin is currently assistant professor of Chemical Engineering at the University of Salamanca, already positively evaluated as Associate Professor by the Ministry of Science. Dr. Martin received his BSc + MSc in chemical engineering at the University of Salamanca in 2003 receiving the Accesit Mapfre Award. He obtained a FPU predoctoral fellowship from the Ministry of Science to carry out his PhD. He graduated in 2008 with honors and was recipient of the Outstanding PhD award from the University of Salamanca. On defending his PhD dissertation, Dr Martin joined Procter and Gamble, Newcastle Technical Centre, for a postdoctoral appointment at Modeling and Simulation, working with Prof. York, Zayeed and Dr. Elizabeth Alam, for which he received the P&G award for his contributions to modeling and simulation within P&G. After more than a year, he accepted a Fulbright postdoctoral position at Carnegie Mellon University to work under the supervision of Prof. Grossmann. Almost two years later, a position was opened at the level of assistant professor at his Hometown University of Salamanca which he holds nowadays working on renewable based process design and optimization and sustainable product design.
He is senior member of the AIChE. He is editor of Latin American Applied Research, Journal of Advanced Chemical Engineering, Frontiers In process and energy Systems and Energy Research Journal, apart from serving as referee of numerous journals and national and international research proposals. He has also been visiting professor at the Universities of Leeds and Birmingham, UK, Universidad de Concepción, Chile, and University of Maribor (Slovenia) and has been selected twice as best prof. in chemical engineering by the students at senior level, 2013 and 2015.
For more details visit: https://diarium.usal.es/marianom3

11 May 2016, 4PM
CPSE Seminar room, RODH C615

C O G
computational optimisation group

CPSE Seminar room, RODH C615, Roderic Hill Bldg, Chemical Engineering department, Imperial College London, London SW7 2AZ
This event is free and open to the public. No registration is required.
Reception drinks after the seminar in CPSE Common room (top floor Roderic Hill Bldg).

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