Imperial College London

UCL

Centre for Process Systems Engineering

PSE@ResearchDayUK

Tuesday 27 June 2017, 08:30 - 16:30

Opening Lecture
"Process Integration: A Perspective"
Professor Robin Smith
Centre for Process Integration, University of Manchester

Lecture Theatre 1, Department of Chemical Engineering (ACEX 250)
Poster Presentations in the Design Rooms,
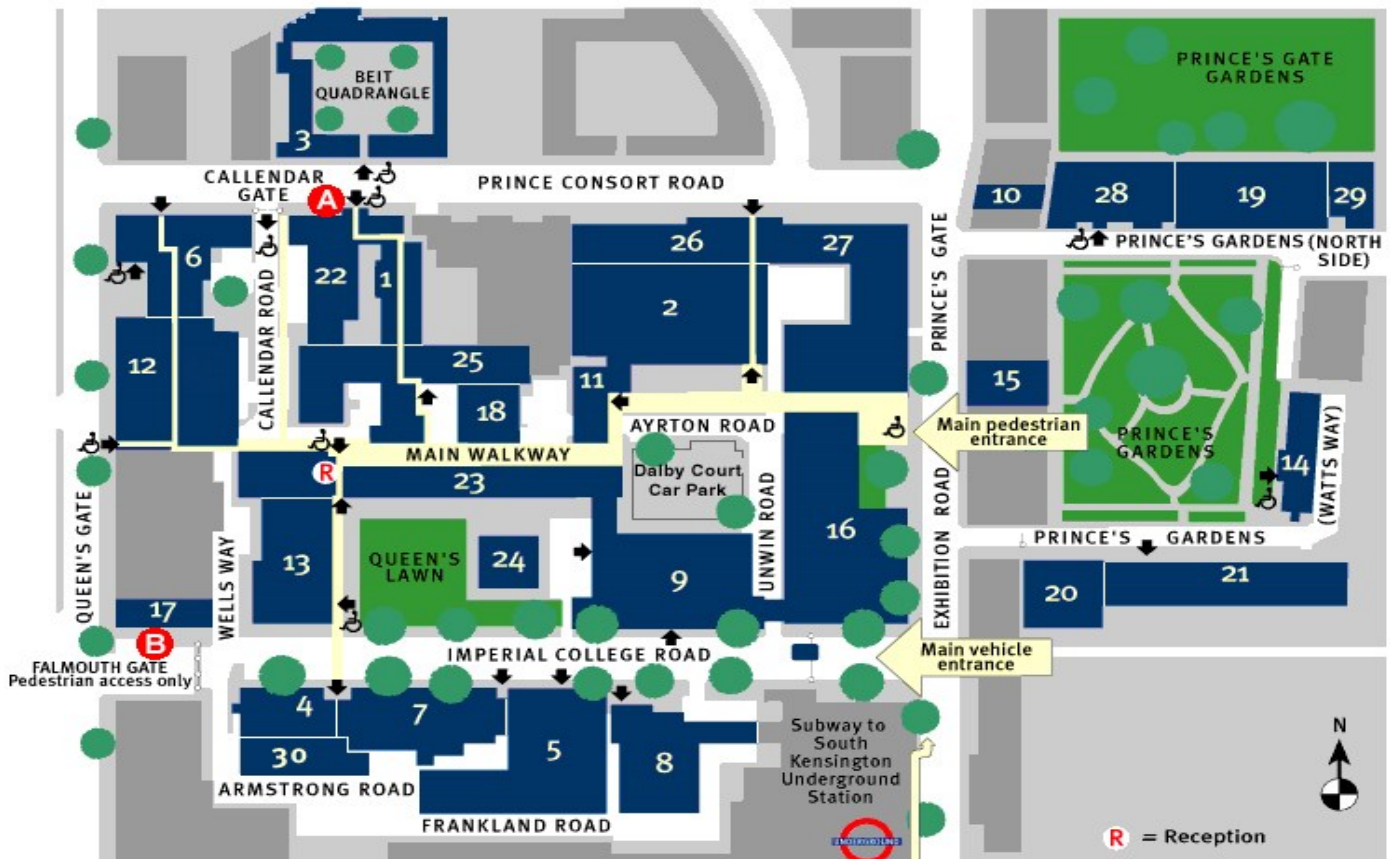Department of Chemical Engineering (ACEX 306-312)

2017 Programme

08.30   *Registration – Refreshments* served

09.00   **Welcome** by Professor Claire S. Adjiman, Director of CPSE (LT1 Auditorium)

09.10   **Opening Lecture** by Professor Robin Smith, Centre for Process Integration, University of Manchester, "***Process Integration: A Perspective***"

Oral Session 1 (LT1 Auditorium)

10.00   Duncan Leeson, *"Preliminary Multicomponent Distillation Process Design",* Imperial College London

10.20   Samir A. Diab, *"Systematic Antisolvent Selection for Diphenhydramine Crystallisation in Continuous Pharmaceutical Manufacturing",* University of Edinburgh

10.40   Marco Quaglio, *"Model-Based Design of Experiments for Parameter Precision Under Structural Model Uncertainty",* University College London

11.00   *Coffee Break – Refreshments served*

Oral Session 2 (LT1 Auditorium)

11.30   Vassilis M. Charitopoulos, *"Towards Exact Multi-Setpoint Explicit Controllers for Enterprise Wide Optimisation",* University College London

11.50   Nur Izyan Zulkafli, *"Rolling Horizon Condition-Based Planning of Production and Utility Systems in Process Industries Under Performance Degradation and Process Uncertainties",* Cranfield University

12.10   Gonzalo M. Figueroa-Torres, "*From Microalgal Biomass to Biofuels Production – A Combined Experimental and Computational Study",* University of Manchester

12.30   Ven Chian Quek, *"Towards Model-Based Optimization of Membrane Contractors for Natural Gas Sweetening",* Imperial College London

12:50   Juan Daniel Sebastia-Saez, *"A Novel Power Unit Concept Using Concentrated Solar Power and Desert Sand as Energy Storage Medium",* University of Surrey

13.10   *Lunch Break*

Poster Session (Design Rooms)

P1.   Adrian Aguirre, *"Medium-Term Planning and Scheduling Approach in Multiproduct Multistage Continuous Processes with Parallel Units",* Imperial College London

P2.   Sakhr Alhuthali, *"Multi-Stage Population Balance Model to Understand the Dynamics of Fed-Batch CHO Cell Culture",* Imperial College London

P3. Davide Bascone, *"Design of Multi Component Liquid-Liquid Extraction in Small Channels for Spent Nuclear Fuel Reprocessing",* University College London

P4. Raul Calvo-Serrano, *"Predicting the Cradle-To-Gate Environmental Impact of Chemicals from Molecular Descriptors and Thermodynamic Properties Via Mixed-Integer Programming",* Imperial College London

P5. Christina Gatsiou, *"Improving Lattice Energy Calculations in Crystal Structure Prediction Using Experimental Data",* Imperial College London

P6. Lucian Gomoescu, *"Bayesian Inference in Chemical Engineering",* Imperial College London

P7. Andrés González Garay, *"Production of Propylene Glycol from Biodiesel Glycerol: A Techno-Economic and Environmental Assessment Under Uncertainty",* Imperial College London

P8. António Lima Grilo, *"Mathematical Modelling of Upstream mAB Production: Cell Cycle, Metabolism and Apoptosis",* Imperial College London

P9. Clara Heuberger, *"Go Now or Wait and See? - Optimal Investment Timing in National Power Systems",* Imperial College London

P10. Erin Johnson, *"Greening Britain's Gas: Biomethane & Hydrogen for Heating Buildings",* Imperial College London

P11. Georgia Kouyialis, *"Heuristics with Performance Guarantees for the Minimum Number of Matches in Heat Recovery Networks",* Imperial College London

P12. Phantisa Limleamthong, *"Rigorous Analysis of Pareto Fronts Via Bilevel Optimization: Application to the Redesign of the More Sustainable UK Electricity Mix",* Imperial College London

P13. Elli Makrydaki, *"Designing an Artificial Golgi Reactor",* Imperial College London

P14. Govind Menon, *"Understanding Modularity and Compartmentalization in Cell Signalling and Biochemical Networks - Systems Analysis to Eucidate Key Ingredients of Cellular Information Processing",* Imperial College London

P15. Ernie Che Mid, *"Fault Detection Using Multiparametric Programming for Nonlinear Process Systems",* University College London

P16. Arun Pankajakshan, *"A Robust Model-Based Experimental Design Approach Towards Modelling Reaction Kinetics of Au Catalysed HMF Oxidation Under Parameter Uncertainty",* University College London

P17. Remigijus Paulavičius, *"BASBL: Branch-And-Sandwich BiLevel Solver",* Imperial College London

P18. Javier Silvente, "Scenario Tree Reduction for Optimal Operation of Microgrids Under Uncertainty", University College London

P19. Muxin Sun, *"Robust Multi-Parametric Control of Continuous-Time Linear Dynamic Systems",* Imperial College London

15.30 *Announcement of Prize Winners – Refreshments* served

16.00 *Close*

Centre for Process Systems Engineering

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A: Centre for Process Systems Engineering
B: 170 Queen's Gate
1: Dept of Chemical Eng
23: Sherfield Building

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Poster Presentations in the Design Rooms,
Department of Chemical Engineering (ACEX 306-312)
(Department of Chemical Engineering is marked 1 on the map)