

Process Control Academy 2007 – 6th - 8th February 2007 Stockport, UK

Tuesday, 6 th February "Getting the Basics Right"	Wednesday, 7 th February "Turning Advanced Control into Applied Control"	Thursday, 8 th February "Condition Monitoring and Fault Detection"
9.00am The Elements of a Control System <ul style="list-style-type: none"> • Sensors, Actuators and Control Hardware • Process Control Terminology 	9.00am "Introduction to Model Predictive Control" Andy Clegg, ACTC	9.00am "Do you control your machinery, or does it control you?" – FMEA, Machinery Condition Monitoring and Root Cause Analysis Tom Murphy, The Reliability Team
9.45am The Process and Dynamics <ul style="list-style-type: none"> • How and where dynamics arise • Obtaining dynamics from plant tests 	9.45am Computer Based Exercise – "Basics of Model Predictive Control" (ACTC)	
10.30am Tea / Coffee	10.30am Tea / Coffee	10.30pm Tea / Coffee
10.50am Computer Based Exercise – "Obtaining Process Dynamics" (ACTC)	10.50am "MPC – a Useful but not Necessarily Optimal Tool" Harvey Dearden, TDSL	10.50am Condition Based Maintenance: Bridging the Gap Between Failure Prediction & Asset Management John Hartley, Emerson Process Management
11.35am Applying Control to the Processes <ul style="list-style-type: none"> • proportional, integral and derivative control • PID structures and parameterisation • Tuning Methods 	11.35am "Adaptive Predictive Expert Control Industrial Application" Ken Slaven, ADEX S.L.	11.35am "Process Monitoring and Data Visualisation Techniques" Keith Smith, Perceptive Engineering Ltd.
12.30pm Lunch	12.20pm Lunch	12.20pm Lunch
1.30pm Computer Based Exercise – "PID Tuning" (ACTC)	1.30pm Computer Based Exercise – "Adaptive Predictive Control" (ADEX S.L.)	1.30pm "Application of Principal Component Analysis (PCA) to Process Plant" Barry Lennox, Perceptive Engineering / University of Manchester
2.15pm What Makes Control Difficult <ul style="list-style-type: none"> • Deadtime, Lag, Disturbances, Interaction • Incorrect Tuning, Integrating Processes, Nonlinearities 		2.15pm Computer Based Exercise – "Using PCA" (Perceptive Engineering Ltd.)
3.00pm Tea / Coffee	2:30pm Tea / Coffee	3.15pm Tea / Coffee
3.15pm Enhanced Process Control <ul style="list-style-type: none"> • Ratio and split range control, averaging level control • Feed-forward compensation, cascade control • Smith Predictor for dead-time dominant processes 	2.50pm "Industrial Evolution of Nonlinear Predictive Control" Dr Paul Turner, Aspentech UK Ltd.	3.30pm "Advances in Plant-Wide Controller Performance Assessment" Nina Thornhill, University College, London
4.00pm Computer Based Exercise – "Enhanced Control"	3.50pm "A New Design Tool for Simple Nonlinear Controllers" Prof. Mike Grimble, ACTC	4.15pm Process Control Academy 2007 Review Andy Clegg, ACTC
4.45pm Close	4.40pm Close	4.30pm Close
	7.00pm Academy Dinner	