

## Data Mining & Process Analytics Training Course April 10th 2008- Europarc Innovation Centre, Grimsby

Data mining and Process Analytics systems are powerful tools which can aid you in understanding the causes of process problems such as reduced yield and poor quality. They use advanced algorithms such as Principal Component Analysis to "mine" plant data. An example is the MS2 system which is now in use in over 20 sites. To help you get the best out of these complex algorithms and the wealth of tools available in MS2, training is essential and in response to requests from users, we are now able to provide this. A greater understanding of the general principles of data mining will also be included; the course will also be useful for people who are thinking about starting to use data mining techniques.. The course will cover the essential aspects of the MS2 system and will be provided by the following:

- **Alan Mason CEng FInstMC CChem MRSC CSci**, the founder of AJM Consulting and architect of MS2, who has a wide experience of the application of computing technologies to process manufacture.
- **James Pickard BSc (Hons)** the software engineer and mathematician who has developed much of the functionality of the latest release of MS2.

### AGENDA

09:30 - 10:00	<b>Registration and Coffee</b>
10.00 - 12:00	<ul style="list-style-type: none"> <li>• <b>Introduction to Process Analytics and Data Mining</b></li> <li>• <b>Importing Data</b> - single and multiple file import,</li> <li>• <b>Data Pre-screening</b> - Missing data, interpolation, bad sample isolation, non-numeric data</li> <li>• <b>Univariate analysis</b> - Trend plots, CUSUM charts, Shewhart Charts, Distribution Plots.</li> <li>• <b>Parallel Coordinate Visualisation</b></li> </ul>
12.00 - 13:00	<b>Lunch and open discussion</b>
13:00 - 16:30	<ul style="list-style-type: none"> <li>• <b>Principal Component Analysis</b> - Scree plots, contributions, loadings, score plots, data cluster analysis, Hotelling's T2, Q Statistic (Square Prediction Error), Multiway PCA</li> <li>• <b>Practical issues</b> - recognising bad data, choosing the right algorithm, multiple process faults and Manhattan significant change analysis, time shifting, time period comparison</li> </ul>

The cost of the course is £400 plus VAT. To book a place, please complete the form below and return it with a cheque for £470 made payable to AJM Consulting Services Ltd.

**RETURN BY POST, FAX BACK TO 01472 500307, CALL US ON 01472 500306 OR EMAIL [cathy.oswin@ajm.co.uk](mailto:cathy.oswin@ajm.co.uk)**

Please reserve me a place on this course.  I attach a cheque for £470  
(Payment must be received prior to April 10 to confirm a place on the course).

Name	E-mail
Company	Telephone
Address	Any special requirements (e.g. dietary)

