

The Golden Triangle – Design of Experiments, Chemometrics & Automation for GC/LC/MS

Life Science's 2-Day Workshop

Tuesday 19th – Wednesday 20th June 2018

Location

The Hotel Felix

Whitehouse Lane, Huntingdon Road, Girton, Cambridge, CB3 0LX

IMPORTANT: You will need to bring a laptop computer with trial versions of JMP and Maestro software pre-installed (we will help with this). If this is a problem, Anatune has a limited number of laptops that will be available on the day (first-come, first-served). If you need to borrow one, please let us know at time of booking.

Agenda

Day 1 – Design of Experiments (DoE)

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| 09:30 | Registration and Coffee |
| 10:00 | Welcome and Introduction |
| 10:30 | Introduction to automation and the automation mind-set |
| 11:00 | Learn More with Design of Experiments – Phil Kay, Analytical Consultant, JMP |
| 11:30 | Automation and Data-Driven Modelling for Biosystems Engineering – Thomas Howard, Senior Lecturer, University of Newcastle |
| 12:00 | Lunch |
| 13:00 | Examples of DoE with automation |
| 13:30 | Group working sessions: Automating sample preparation methods <ul style="list-style-type: none">○ Rummy! – the GERSTEL hardware configuration game○ Programming methods using GERSTEL Maestro○ Using PrepSequences Applying DoE to your method <ul style="list-style-type: none">○ DESCRIBE – define factors/ranges/response/goal○ DESIGN – choose design and set up experimental matrix in JMP○ FIT – use the dataset to create the model in JMP○ PREDICT – discuss the results |
| 15:30 | Visit to Anatune – lab tour and Agilent 7250 GC/Q-TOF launch |

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Day 2 - Chemometrics

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| 09:30 | Tea/Coffee |
| 10:00 | Introduction to Chemometrics workflow for unknown analysis |
| 10:30 | Data Analysis Tools for Chemometrics – <i>Bryan White, GC and GCMS Product Specialist, Agilent Technologies</i> |
| 11:00 | Big Volume versus Small Volume versus Automation for Lipid Extraction – <i>Hannah Florance, Mass Spectrometrist, University of Edinburgh</i> |
| 11:30 | Examples of Chemometrics with automation |
| 12:00 | Lunch |
| 13:00 | Group working session: The Chemometrics approach using data sets provided <ul style="list-style-type: none">○ Data deconvolution and library search○ Data evaluation using Mass Profiler Professional○ Semi-quantitation using Mass Hunter Qual and Quant |
| 15:00 | Discussion: Q&A <i>Tea/Coffee served</i> |
| 16:00 | End |