Introduction

CAMO is a pioneer in the field of Multivariate data analysis software products and solutions. A recognized name in the multivariate software domain, CAMO software solutions help clients understand the knowledge hidden inside the data.

CAMO endeavors to provide professional training and applications development in Multivariate Statistical Analysis in Chemometrics, Spectroscopy, Experimental Design, Optimization and Formulations and Sensory Analysis, across the globe.

Online workshops and public courses are taught throughout the year, bringing you the practical knowledge necessary to conduct research and interpret analyses, on a daily basis.

Expand your knowledge in the field of Multivariate Data Analysis. CAMO multivariate courses offer you the right opportunity!

Why CAMO Chemometrics & Multivariate Analysis training?

Tailored to meet the needs of professionals and students, each course is designed around real-world industry applications of chemometrics and multivariate analytical methods, with practical skills building and intensive, hands-on training using The Unscrambler® software.

Carefully selected course exercises and application examples provide students with, high-impact Theory-to-Skills Building knowledge transfer, enabling deep learning and lasting proficiency in applications development.

CAMO Training courses are taught by leading experts in the fields of Multivariate Data Analysis and Applications Development for Chemometrics, Spectroscopy and/or Process Analytical Technology Solutions.

Who should participate in this program?

The courses have been designed for individuals:

- Involved in Consumer Insights, R&D, Product Development, Process Optimization, Quality Control & Monitoring, Technical Services Group
- Working with Spectroscopic instruments (NIR, FTIR, UV, UV/VIS, NMR, DAS, Raman, Mass Spectroscopy) Chromatography instruments (LC, CE, GC, HPLC), and other sources of chemometric & sensory data as part of their laboratory, R&D, quality control or production processes
- Likely to use these instruments or work with sensory data, in the near future
Course Overview

Chemometrics, is an important tool for the application of many technologies, including Near IR spectroscopy. Near IR spectroscopy has become an important tool for quality control, at line and on line analysis, in a variety of industries.

This three-day class is a hands-on course that will teach participants how to use chemometrics to solve practical problems. The course will assume no previous statistical or chemometrics experience, but will accommodate advanced topics for seasoned practitioners as well. The application of chemometrics to Near IR spectroscopy will be highlighted; as will the application of multivariate statistics for industrial applications. Numerous real world data sets will be examined during the course.

Students are encouraged to bring their own data for analysis, applications development and group discussion. The course will use The Unscrambler® software package, which is a powerful, easy to use platform for chemometric analysis. Software and computers are provided.

Course Details

Venue : CAMO Smart Education Center - Woodbridge, NJ
Date : July 20-22, 2005
Course Title : Introduction to Multivariate Data Analysis and Statistics (Chemometrics & Spectroscopic Applications)

- Introduction to Statistics
- Introduction to The Unscrambler®
- Analysis of Variance
- Linear Regression
- Design of Experiments
- Principal Components Analysis
- Spectral Pre-processing
- Qualitative Identification
- Multiple Linear Regression
- Partial Least Squares
- On-line predictor and classifiers (OLUP and OLUC)
- The Optimizer
- DOE for PAT and Process Validation
- Summary

Advanced topics to be determined by class interest including:
(e.g. advanced DOEs, validation, FDA guidance on Process Analytical Technology, Qualification of software including 21 cfr part 11, Classification, SIMCA, 3 way PLS)

The Instructors

Dr. Frederick H. Long has been doing analytical spectroscopy professionally for over fifteen years. He established Spectroscopic Solutions in the summer of 2001. Spectroscopic Solutions, provides consulting and training in the areas of process analytical technology, spectroscopy, and statistics for regulated and non regulated industries. Dr. Long has published over forty peer-reviewed publications in areas of spectroscopy, including Raman and NIR spectroscopy, ultra-fast and non-linear phenomena and the optics of human tissue. He received his S.B. and S.M. in Physics, from the Massachusetts Institute of Technology and a Ph.D. in Chemical Physics, from Columbia University.

Dr. Dongsheng Bu is a Chemometrician, Spectroscopy expert and Statistician, with over 10 years experience. Prior to joining CAMO, Dr. Dongsheng Bu worked for Argose (a Medical device company) as a Senior Scientist. He has also worked as an Engineer for Shanghai Institute of Ceramics Chinese Academy of Science. Dr. Bu has 16 published papers and presentations, and has 2 patents in the areas of chemometrics algorithm development. He obtained his Ph.D. in Analytical Chemistry from University of Rhode Island, in 2000. He received his BS in Chemical Physics from East China University of Chemical Technology.

Contact Information

For further information on the Training courses and to register yourself for the course, contact us at:

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