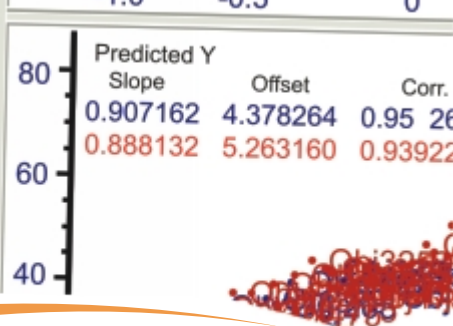
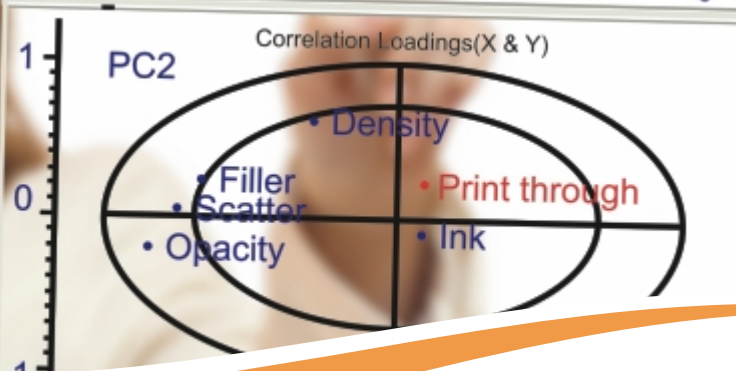
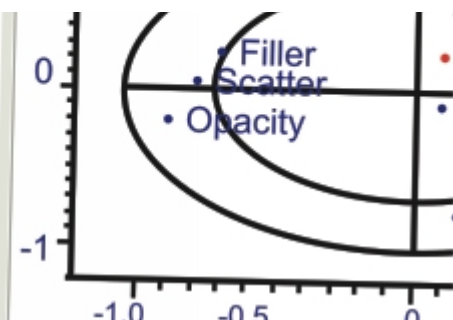
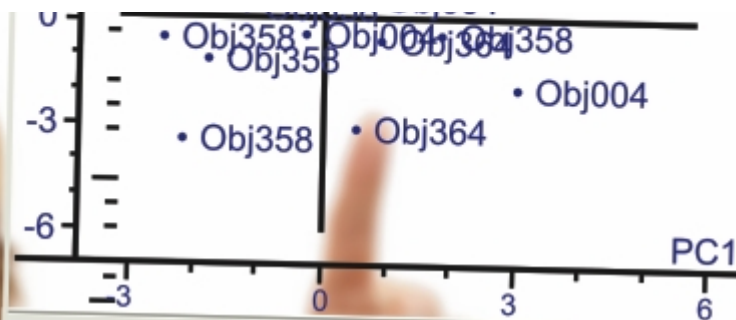


# Training on Multivariate Data Analysis

October 05-07, 2010

Woodbridge, NJ



Register Now 

## Course overview

This 3 day course is an amalgamation of CAMO's popular Level-1 and Level-2 courses. Day-1 is devoted on to refreshing the topics of a basic (Level-1) course and then advancing towards Level-2 for the rest of the two days. Thus it is a comprehensive and ideal course for anyone seeking training and improvement in their multivariate data analysis skills.

The main objectives of this amalgamated course are:

- ▶ Providing a comprehensive course to brush up basic skills as well as to address advanced topics
- ▶ Providing experiences with real-world industry applications and MVDA related problems
- ▶ Carefully selected exercises and application examples with Theory-to-Skills hands-on experience.
- ▶ Interpret complex data quickly and confidently using the most modern multivariate techniques (includes non mathematical approach).
- ▶ Enhancing skills with model diagnostics and model improvement

## Who should participate in this program?

The World is Multivariate and as a result MVDA of complex data sets is practiced in almost all types of manufacturing sectors and research based institution. Scientists, Engineers, Statisticians, Spectroscopists, Chemometricians and others involved in the following disciplines or functions will benefit from MVDA training:

- ▶ Involved with Pharmaceutical, Food & Beverages, Chemical and Energy (Oil & Gas) manufacturing and R&D center
- ▶ Product Development: People involved with formulations, sensory analysis, market research, Analytical R&D, Process R&D
- ▶ Process Optimization: People involved with optimizing manufacturing process by measuring and controlling critical parameters
- ▶ QA, QC: People involved with measuring and controlling quality of product

No prior knowledge of The Unscrambler® is required to attend our courses.

# Training on Multivariate Data Analysis

## Course Details

### Day 1

- ▶ Data collection, import and preparation
- ▶ Principles of projection methods: PCA
- ▶ Outliers in PCA
- ▶ Overview of Regression Methods

### Day 2

- ▶ Regression Methods
- ▶ Data preprocessing - derivatives, scatter correction, etc.
- ▶ Outliers in Regression
- ▶ Validate and interpret a PLS regression model
- ▶ Prediction
- ▶ Steps and rules in multivariate modeling

### Day 3

- ▶ Review of Regression
- ▶ Wavelength Selection
- ▶ Classification: SIMCA and PLS-DA
- ▶ Multivariate Curve Resolution (MCR)
- ▶ On-line analysis with Unscrambler models

October 05-07, 2010  
Woodbridge, NJ

Register Now 



## Katherine Bakeev

Chief Scientist, CAMO Software

Course Instructor

Katherine graduated from Case Western Reserve University, followed with a Ph.D., Polymer Science and Engineering, University of Massachusetts, Amherst. She was awarded her masters in Technology Management from Stevens Institute of Technology.

Katherine's expertise is in the development and implementation of spectroscopic solutions for on-line measurement in manufacturing (PAT, near-infrared and UV-vis spectroscopy) for various industries. Katherine's knowledge and experience includes pharmaceutical drug development, chemical development processes and manufacturing. Much of her work has involved NIR and FTIR for the development and implementation of real-time monitoring applications for manufacturing.

Course fee : \$ 1850 / Participant

10%  
Discount



Maintenance  
Program

learn  
more 

### Venue

CAMO Software Inc.  
One Woodbridge Center, Suite 319  
Woodbridge, NJ 07095 [ view map ]

Day 1 10:00 – 17:00

Day 2 09:00 – 17:00

Day 3 09:00 – 17:00

### General Terms

- ▶ The course fees includes lunch, tea / coffee, course material and 30-days trial installation of [The Unscrambler®](#)
- ▶ The number of seats for the course is limited to 6
- ▶ Participants are required to bring their own laptop, organize transport to / from training venue and accommodation at their own cost. Feel free to [contact](#) the account manager for assistance
- ▶ Deadline for registrations: 2 weeks before the course start

### Payments

- ▶ Credit Card / Purchase Order / Check

### Cancellation

- ▶ Cancellations up to 1 week prior the course start date, will be refunded with 50% of the registration fee. After this limit, registration fee will not be refunded.

### Substitution

- ▶ The course participants may be substituted or join a later training provided that CAMO is notified.

## contact

John Chartier

[jchartier@camo.com](mailto:jchartier@camo.com)



### CAMO Software

NORWAY : Nedre Vollgate 8, N-0158, Oslo Tel: (47) 223 963 00 Fax: (47) 223 963 22

USA : One Woodbridge Center, Suite 319, Woodbridge, NJ 07095 Tel: (732) 726 9200 Fax: (973) 556 1229

INDIA : 14 & 15, Krishna Reddy Colony, Domlur Layout, Bangalore - 560 071 Tel: (91) 80 4125 4242 Fax: (91) 80 4125 4181

AUSTRALIA : PO Box 97, St Peters, NSW, 2044 Tel: (612) 9516 3306 Fax: (612) 9516 2934

JAPAN : Yokohama MBC Bldg, 6F-A, 2-23 Ota-cho Naka-ku Yokohama, Kanagawa, 231-0011 Tel: (81) 50-5532-9450 Fax: (81) 45-872-4554

**CAMO**

[www.camo.com](http://www.camo.com)

