

Full Day Short Course

F02. Chemometrics

Content

1. Introduction to chemometrics
Data representation, from data matrices matrix to the multivariate space
2. Exploratory data analysis
PCA and bilinear modeling. Other projection methods.
Clustering
3. Predictive modeling
Multivariate regression (MLR, PCR and PLS) and classification (PLS-DA and SIMCA)
4. Validation of chemometric models
5. Integrating information from multiple blocks of data through data fusion (hints)

Details

Instructor	Prof. Federico Marini Sapienza University, Rome, Italy.
Date	27 August 2023
Time	9:00 h–16:30 h
Duration	6 h plus coffee break
Format	Frontal Teaching and Practical Work Oral Examination
Location	CICG Geneva
Fees	200 CHF (delegate) 120 CHF (student)
Included	Coffee break, lunch

Instructor



Prof. F. Marini

Universities (Copenhagen, Stellenbosch, Silesia, Lille).

Federico Marini received his MSc (2000) and PhD (2004) from Sapienza University of Rome. He is currently full professor of Analytical Chemistry at Sapienza University of Rome. In 2006, he was awarded the Young Researcher Prize from Italian Chemical Society and in 2012 he won the Chemometrics and Intelligent Laboratory Systems Award “for his achievements in chemometrics”. He has been visiting researcher at various

His research activity is focused on all aspects of chemometrics, ranging from the application of existing methods to real world problems in different fields to the design and development of novel algorithms. He is author of more than 240 papers in international journals, and he edited and co-authored the book *Chemometrics in food chemistry* (Elsevier). He is Editor of *Chemometrics and Intelligent Laboratory Systems* and *Frontiers in Analytical Science* and member of the Editorial boards of *Analytica Chimica Acta*, *J. of Chemometrics*, *J. of NIR Spectroscopy*, *J. of Spectral Imaging and Food Chemistry* and he serves as Associate Editor for *Chemometrics in Wiley’s Encyclopedia of Analytical Chemistry*. He has been the coordinator of the Chemometric group of the Italian Chemical Society and is currently the leader of the Chemometric study group of DAC-EuChemS.