

Agenda

Training School-3 + CO2Valorize Meeting

Date: 23.09. – 26.09.2024
Venue: University of Padova
Host: Fabrizio Bezzo (fabrizio.bezzo@unipd.it)

Day-1, Monday, 23 Sep Training School-3

Time (GMT)	Presentations	Presenter	Audience
9:00 – 10:15	General Intro (icebreaker) DETOCS & CO2Valorize DCs (2min each / 1 slide)	Bezzo	DCs
10:15 – 12:30	Industry 4.0 and Machine Learning fundamentals Process understanding and troubleshooting through dimensionality reduction: Principal Component Analysis (PCA) Process monitoring, fault detection and diagnosis through PCA Industrial applications	Facco	DCs
14:00 – 17:00	Product quality estimation/classification, and product formulation and process design through Partial Least Squares (PLS) Industrial applications Hands-on-PC session	Facco	DCs

Day-2, Tuesday, 24 Sep Training School-3

Time (GMT)	Presentations	Presenter	Audience
09:00 – 12:00	Introduction to Supervised Learning: Regression vs. Classification Regularization approaches: Ridge Regression, LASSO, Elastic Net Tree-based approaches: Decision Trees and Random Forest Neural Networks and Deep Learning	Susto	DCs
14:00 – 17:00	Tree-based approaches for Anomaly Detection Hands-on-PC session on Anomaly Detection and Predictive Maintenance	Susto	DCs

Day-3, Wednesday, 25 Sep Training School-3

Time (GMT)	Presentations	Presenter	Audience
09:00 – 12:00	Why experiments? Introduction to Design of Experiments (DoE) Factorial and central composite designs Multi-linear regression (MLR) and response surface modelling	Facco	DCs
14:00 – 17:00	Industrial applications Hands-on-PC session	Facco	DCs

**Day-4, Thursday, 26 Sep
CO2Valorize Meeting**

Time (GMT)	Presentations	Presenter	Audience
09:00 – 12:00	DCs' presentations and discussion	Pinto	DCs, Supervisors

A DETOCS-CO2Valorize dinner will be organised on Wednesday 25th September in the evening.