Florence School of Banking and Finance

Smart Data Analytics for Banking and Finance

Instructor: **Wolfgang Karl Härdle** | Humboldt University

Theatre

Badia Fiesolana, Via dei Roccettini, 9 - San Domenico di Fiesole

4 - 6 February 2019

Programme

4 February

14.00 - 15.30 **Session 1. What do we see?**

- Basic concepts, Data Management
- Structuring Data elements
- 'Fitting an Elephant with 4 params'

15.30 - 16.00 *Coffee break*

16.00 - 17.30 **Session 2. Data Analysis**

- LDA Latent Dirichlet Analysis
- Sentiment extraction
- DTM Dynamic Topic Modeling

17.30 *Social activities outside the EUI (TBD)*

5 February

09.30 - 11.00 **Session 3. Modern Data Analysis – Part 1**

- Scagnostics
- Cluster Analysis and Classification

- CRIX a CRypto currency IndeX

11.00 - 11.30 *Coffee break*

11.30 - 13.00 **Session 4. Modern Data Analytics – Part 2**

- R and Python tools for text mining
- text mining in Quantitative Finance
- TEDAS Tail Event Driven Asset Allocation

13.00 - 14.00 *Lunch*

14.00 - 15.30 **Session 5. Smart Data Analytics – Part 1**

- Network Centrality, Herding effects
- TENAR Tail Event driven Network AutoRegression
- DYTEC DYnamic Tail Event Curves

15.30 - 16.00 *Coffee break*

16.00 - 17.15 **Session 6. Smart Data Analytics – Part 2**

- Financial Risk Meter
- DDI Networks Topology
- Q3 D3 LSA

17.15 *Social activities outside the EUI (TBD)*

6 February

09.30 - 11.00 **Session 7. Very Smart Data Analytics**

- Bayes and Fraud detection
- Options on cryptos
- Adaptive weight clustering

11.00 - 11.30 *Coffee break*

11.30 - 13.00 **Session 8. Practice of Smart Data Analytics**

- Machine learning in Economics
- Deep Learning of Forecasts
- Complexity in Banking, Scores and Networks

13.00 - 14.00	*Lunch*