Florence School of Banking and Finance

Smart Data Analytics for Banking and Finance

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

Theatre

4 - 6 February 2019

Programme

4 February

14.00 - 14.00	Welcome and presentation of the School, followed by a *Tour de table*
14.10 - 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
19.30	*Dinner in town at Restaurant Finisterrae, Piazza Santa Croce.*

5 February

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

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- 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	*Cocktail at the course venue*

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 - 12.50	**Session 8. Practice of Smart Data Analytics**

- Machine learning in Economics

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

12.50 - 13.00 Conclusions