AGENDA

**SUPTECH WORKSHOP II
ARTIFICIAL INTELLIGENCE,
MARKET RISK
AND ROBO-ADVISORY**

**9-10 MARCH 2020
Polish Financial Supervision Authority
Warsaw**

DAY I: 9 March 2020, 8:30 – 16.30

8.30 – 9.00	**Registration**
9.00 – 9.30	**Opening, introduction and information about the FIN-TECH project** Dr hab. Piotr Wójcik
10.00 – 11.00	**Artificial intelligence and its applications in finance** Dr hab. Piotr Wójcik
11.00 – 11.15	**Coffee break**
11.15 – 13.15	**Introduction to deep learning, types of neural networks (feed-forward, convolutional and recursive)** Dr hab. Piotr Wójcik
13.15 – 14.15	**Lunch break**
14.15 – 15.45	**Discussion of sample research conducted by representatives of the consortium implementing the project** Dr hab. Piotr Wójcik 1. **Giudici i in. (2019), Network models to improve robo-advisory portfolio management** 2. **Baumoehl (2019), Are cryptocurrencies connected to forex? A quantile cross-spectral approach** 3. **Arakelian (2019), Sovereign risk zones in Europe during and after the debt crisis**
15.45 - 16.30	**Discussion and closing of the first part of SUPTECH WORKSHOP II**

DAY II: 10 March 2020, 8:30 – 16.30

8.30 – 9.00	**Registration**

9.00 – 9.30

Explainable artificial intelligence – introduction and motivation
Dr Marcin Chlebus, dr Janusz Gajda

9.30 – 10.45

Global interpretation of the model: assessment of model quality (residual analysis), evaluation of the importance of variables (local methods, permutation methods), scenario analyzes of the "what if" type (Partial Dependence Plot, Accumulated Local Effects)
Dr Marcin Chlebus, dr Janusz Gajda

10.45 – 11.00	**Coffee break**

11.00 – 12.30

Local interpretation of the model: Local Surrogate (LIME), Shapley Values, SHAP (SHapley Additive exPlanations), BreakDown
Dr Marcin Chlebus, dr Janusz Gajda

12.30 – 13.30	**Lunch break**

13.30 – 16.00

Practical workshops using R:
- discussion of available tools for interpreting machine learning models
- a practical example based on the data used to build the PD scoring model (credit risk)
Dr Marcin Chlebus, dr Janusz Gajda

16.00 - 16.30

Discussion and closing of the second part of SUPTECH WORKSHOP

Link to the SUPTECH WORKSHOP II registration form