

## SUPTECH WORKSHOP I

Fin – Tech HO2020 project

**November 21-22, 2019**  
**Venue: The Congress Centre**  
**of the Czech National Bank**  
**Room U3**  
**Senovážné náměstí 30**  
**Prague**

### Day 1

<b>8.30 – 9.00</b>	<b>Registration</b>
<b>9.00 – 9.30</b>	<b>Opening. Robo-advisors in investment and wealth management</b>   Oleg Deev
<b>9.30 – 11.30</b>	<b>Background Session I – Introduction to modern portfolio theory</b> Profit maximization and risk minimization in asset portfolios (with hands-on coding examples in R) Network-based asset allocation strategies   Tomáš Výrost
<b>11.30 – 12.30</b>	Lunch break
<b>12.30 – 13.00</b>	<b>Background Session II – Measures of statistical association for network analysis</b>   Tomáš Výrost
<b>13.00 – 14.00</b>	<b>Case study II: Convergence and divergence in European bond correlations</b>   Oleg Deev
<b>14.00 – 15.00</b>	<b>Case study IV: Are cryptocurrencies connected to forex? A quintile cross-spectral approach</b>   Tomáš Výrost
<b>15.00 – 15.30</b>	<b>Background Session III – Information filtering in networks</b>   Oleg Deev
<b>15.30 – 16.30</b>	<b>Case study I: Market structure discovery with clique forests</b>   Oleg Deev

## Day 2

<b>09.00 – 10.30</b>	<b>Case study V: Network models to improve robot advisory portfolio management</b>   Tomáš Výrost
<b>10.30 – 11.00</b>	Coffee break
<b>11.00 – 12.30</b>	<b>Neural networks in asset management and portfolio optimization</b>   Tomáš Výrost
<b>12.30 – 13.00</b>	<b>Discussion and feedback</b>   Tomáš Výrost, Oleg Deev

*This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 825215 (Topic: ICT-35-2018 Type of action: CSA). All material presented here reflects only the authors' view. The European Commission is not responsible for any use that may be made of the information it contains.*

**January 30, 2020**

**Venue: The Congress Centre  
of the Czech National Bank  
Room U2  
Senovážné náměstí 30  
Prague**

### TEXT MINING WITH MACHINE LEARNING

<b>8.30 – 9.00</b>	<b>Registration</b>
<b>9.00 – 10.30</b>	<b>Opening. Introduction to text mining with machine learning</b>   František Dařena
<b>10.30 – 11.30</b>	<b>Background Session I – Preparing texts for analysis</b>   František Dařena
<b>11.30 – 12.30</b>	Lunch break
<b>12.30 – 13.00</b>	<b>Coding Session I – Preparing texts for analysis</b>   František Dařena, Oleg Deev
<b>13.00 – 14.00</b>	<b>Background Session II – Classification of text documents</b>   František Dařena
<b>14.00 – 15.00</b>	<b>Coding Session II – Classification of bank customer complaints</b>   František Dařena, Oleg Deev
<b>15.00 – 16.00</b>	<b>Background Session III – Clustering text documents</b>   František Dařena
<b>16.00 – 17.00</b>	<b>Coding Session III – Finding topics in bank customer complaints</b>   František Dařena, Oleg Deev

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