

# EU Fin-Tech Horizon2020 FINAL WORKSHOP RISK MANAGEMENT OF FINANCIAL TECHNOLOGIES ONLINE MEETING

JUNE 18, 2021 | H 9.00-18.30 (UTC/GMT +2)  
HUMBOLDT UNIVERSITY  
BERLIN, GERMANY

## DEVELOPING MODELS FOR FINTECH RISK MANAGEMENT

The 'FIN-TECH Horizon 2020' is a project to develop a European knowledge exchange platform for risk management solutions. This event is the final event of a series of 6 RegTech events, more than 70 Suptech events and 6 Research workshops.

The project team strongly believes that a common European approach can help close the gap between technical capacity and regulatory burden. This event offers three keynote speakers from academia, industry as well as regulatory areas and serves as a forum for interdisciplinary discussion and the exchange of ideas on Risk management of three innovative FinTech applications: P2P lending, Financial Automation and Blockchain technology and.

## REGISTRATION

[Register for free here](#)

Visit us at  
[www.fintech-ho2020.eu](http://www.fintech-ho2020.eu)

[Zoom link](#)

\*\*\* This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 825215 (topic ICT-35-2018, Type of action: CSA). The content reflects only the author's view and the Commission is not responsible for any use that may be made of the information it contains.\*\*\*

# AGENDA

June 18<sup>th</sup>, 2021

09:00 – 18:30

Zoom link

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<b>09:00 – 19:15</b>	<b>Registration and Sound Check</b>
<b>09:15 – 09:30</b>	<b>Welcome &amp; introduction  </b> Wolfgang Karl Härdle, Humboldt Universität zu Berlin
<b>09:30 – 10:00</b>	<b>Summary of FIN-TECH Project Results </b> Paolo Giudici, Project Coordinator, University of Pavia
<b>10:00 – 10:40</b>	<b>Statistical Learning for Individualised Asset Allocation  </b> Yingying Li, Head of FinTech Thrust, Hong Kong University of Science and Technology
<b>10:40 – 11:00</b>	<b>Coffee break</b>
<b>11:00 – 12:00</b>	<b>Panel discussion - Big Data Analytics, Peer-to-Peer Lending and Credit Risk</b> Updates of use-cases   B. Hadji Misheva, T. Leach, A. Agosto Moderator: Paolo Giudici
<b>12:00 – 13:00</b>	<b>Lunch Break</b>
<b>13:00 – 13:30</b>	<b>Fintech risk management: the international view  </b> Ashraf Khan, International Monetary Fund
<b>13:30 – 14:00</b>	<b>Coffee break</b>
<b>14:00 – 15:00</b>	<b>Panel discussion - AI, Financial Automation and Market Risk</b> Updates of use-cases   J. Papenbrock, P. Pagnotoni, M. Hillebrand) Moderator: Tomaso Aste
<b>15:00 – 15:20</b>	<b>Coffee break</b>

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**15:20 – 16:00**

## **PrimeMatch: Privacy Preserving Inventory Matching |**

Antigoni Polychroniadou, Cryptography Research Lead, AI  
Research JP Morgan

**16:00 – 17:00**

## **Panel discussion - Regulation & Cryptocurrency on the Blockchain**

Updates of use-cases: W. Härdle, T. Leach, D. Pele, J. Arroyo,  
A. Toma, E. Raffinetti

Moderator: Peter Schwendner

**17:00 – 17:30**

## **EC Project Officer presentation |**

Lakavicius Rapolas, European Commission HO-2020

**17:30 – 18:30**

## **Internal Management Board Meeting**

# SPEAKERS



**WOLFGANG KARL HÄRDLE** attained his Dr. rer. nat. in Mathematics at Universität Heidelberg and became 1989 professor in Université de Louvain, B. He is Ladislaus von Bortkiewicz Professor of Statistics at Humboldt-Universität zu Berlin and the director of the Sino German Graduate School (洪堡大学 + 厦门大学) IRTG1792 on "High dimensional non stationary time series analysis". He also serves as head of the joint BRC Blockchain Research Center (with U Zürich). He is guest professor at WISE, Xiamen U, SMU, Singapore, Charles U, Prague CZ., and Yushan scholar (玉山学者) at NYCU, TW

His research focuses on data sciences, modern statistics and innovative finance. He has published over 30 books and more than 300 papers in top statistical, econometrics and finance journals. He is highly ranked and cited on Google Scholar, REPEC and SSRN. He has professional experience in financial engineering, SMART (Specific, Measurable, Achievable, Relevant, Timely) data analytics, machine learning and cryptocurrency markets. He has created a financial risk meter, FRM [hu.berlin/frm](http://hu.berlin/frm), a cryptocurrency index, CRIX [thecrix.de](http://thecrix.de), and hosts the knowledge server [www.quantlet.com](http://www.quantlet.com). His web page is: [hu.berlin/wkh](http://hu.berlin/wkh)



**PAOLO GIUDICI**, Professor of Statistics at the University of Pavia, where he teaches Risk Management and Financial Data Science. Supervisor of about 190 Master's students and 20 Phd students, currently working as academic researchers or data scientists, in the financial sector and in IT/consulting companies. Member of the board of the PhD in Sustainable Development and Climate Change. Author of several scientific publications. The publications have appeared in leading scientific journals in Statistics, Artificial Intelligence and Finance such as: Journal of the Royal Statistical Society Series B, Journal of Business and Economics Statistics, Biometrika, Expert systems with applications, Machine Learning, Journal of Financial Stability, Journal of Banking and Finance, Finance Research Letters.

Coordinator of 12 funded scientific projects, among which the European Horizon2020 projects "PERISCOPE: Pan-European response to the impacts of covid-19 and future pandemics and epidemics (2020-2023)" and "FIN-TECH: Financial supervision and Technological compliance" (2019-2021).

Editor of "Artificial Intelligence in Finance", Frontiers. Associate Editor of "Digital Finance", Springer; and of "Risks", MDPI. Member of the National committee for the career progression of statistics professors (ASN 2018-2021).

# SPEAKERS



**Branka Hadji-Misheva**, researcher at ZHAW Zurich University of Applied Sciences, working on AI applications in finance, XAI methods, network models and fintech risk management. She holds a PhD in Economics and Management of Technology with a specific focus on network models as they apply to the operation and performance of P2P lending platforms, from the University of Pavia, Italy. At her position at ZHAW, she leads several research and innovation projects on Artificial Intelligence and Machine Learning for Credit Risk Management. She is a research author of 10 papers in the field of credit risk modeling, graph theory, predictive performance of scoring models, lead behavior in crypto markets and explainable AI models for credit risk management.



**THOMAS LEACH** PhD student at the University of Pavia in the Department of Engineering, he holds a Master in Macroeconomic Policy and Financial Markets from the Barcelona Graduate School of Economics. Prior to starting the PhD he worked on blockchain and digital payments at the European Central Bank and R3. His research is primarily focused on FinTech, in particular, digital money and central bank digital currencies, as well as cyber and operational risk.



**DANIEL TRAIAN PELE** graduated Mathematics and got his Master in Stochastic Processes and Theoretical Statistics at the University of Bucharest. He got his Ph.D. in Statistics and habilitation in Statistics at the Bucharest University of Economic Studies. He currently serves as a Professor at the Department of Statistics and Econometrics, the Bucharest University of Economic Studies, Romania. He is author of scientific publications in internationally refereed journals. The corresponding research profile is that of a data scientist, focused on statistical modelling of financial markets.

He was a postdoctoral researcher at ICMA Centre, Reading University, United Kingdom and a Guest Researcher at Research Data Center from Department of Statistics, Humboldt University from Berlin and International Research Training Group 1792 "High Dimensional Nonstationary Time Series", Humboldt University from Berlin (2018, 2019). He is the co-founder of SAS Centre of Excellence in the Bucharest University of Economic Studies (2009), aiming to use SAS as a platform for analytics with applications in economy and finance. He is also a World Bank and European Investment Bank consultant in Romania and he taught courses of Statistics, Econometrics and SAS for the employees of the Romanian National Bank (BNR), National Statistical Institute (INS) and other financial institutions.

# SPEAKERS



**JAVIER ARROYO**, Associate Professor at Universidad Complutense de Madrid. Received the PhD degree in computer science from Universidad Pontificia Comillas, in 2008. Since 2013, he has been an Associate Professor with the Department of Software Engineering and Artificial Intelligence, Universidad Complutense de Madrid (UCM), and a Researcher with the Instituto de Tecnología del Conocimiento. His research interests include time series forecasting and machine learning applied to different domains and real- life problems. He is currently the PI of a national research project on Decentralized Autonomous Organizations in the blockchain and of the H2020 Fin-Tech project at UCM.



**JOCHEN PAPENBROCK**, executive board member of the EU Horizon2020 project FIN-TECH and Founder of the FinTech startup Firamis.

Based in Frankfurt, Germany, Jochen has spent the last 15 years in various roles on the topic of AI in Financial Services, as a thought leader, implementer, researcher and ecosystem shaper.

He is a financial data scientist and received his degree and PhD from the Karlsruhe Institute of Technology (KIT). As a consultant, entrepreneur and researcher he worked with well-known asset managers, banks, insurance companies and central banks. He is a manager at NVIDIA and works with partners, communities, and developers in financial services in Europe and also in some global teams.

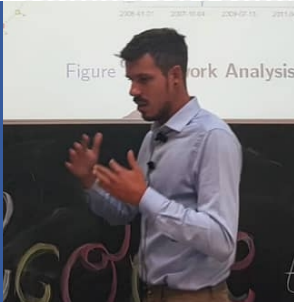
Jochen is also a project leader in GAIA-X and specialty chief co-editor at Frontiers 'AI in Finance'. He has published on AI and quantitative finance in Journal of Financial Data Science, Journal of Investment Strategies, Financial Markets and Portfolio Management, Quantitative Finance, Applied Financial Economics, Frontiers Journal of AI in Finance and Journal of Network Theory in Finance.

LinkedIn profile: <https://www.linkedin.com/in/jochenpapenbrock/>



**ANCA MIRELA TOMA** is a Research fellow at the University of Pavia, Department of Economics and Management. She is also a PhD fellow in Applied Economics and Management at the University of Bergamo. Currently, she works on textual and statistical analysis models applied to fintech risk management.

# SPEAKERS



**PAOLO PAGNOTONI** is Research Fellow in Statistics at the Department of Economics and Management of the University of Pavia. Previously Research Fellow at the Department of Management, Economics and Industrial Engineering of Politecnico di Milano, he holds a B.Sc. in Business Administration (University of Milan-Bicocca, Italy), a M.Sc. in Economics, Finance and International Integration (University of Pavia, Italy), a M.Sc. in European Economics (University of Tuebingen, Germany) and he is Ph.D. Candidate in Applied Economics and Management (University of Bergamo, Italy).

He has published in several national and international peer-reviewed journals. His main research interests cover the application of statistical methods and time series econometrics for the investigation of:

- a) interconnectedness, contagion and spillover mechanisms arising in financial markets, financial systems and fintech
- b) the socioeconomic and financial impacts of exogenous shocks, with particular reference to natural disasters and the COVID-19 pandemic.



**Martin Hillebrand** is a Senior Analyst at the European Stability Mechanism where he monitors capital markets and develops analytic solutions for the Funding and Investor Relations business. Prior to joining the ESM, he worked as Quantitative Analyst in the Trading & Derivatives Department of Sal. Oppenheim and as Risk Analyst at both Deutsche Bank and German Finance Agency (Deutsche Finanzagentur).

He holds a PhD in Mathematics from the University of Oldenburg. In 2008, he received the Professional Risk Managers International Association (PRMIA) "Award for New Frontiers in Risk Management" for an outstanding research paper. His current research focuses on capital market dynamics, investor behaviour, sustainable finance and digitalisation.

Martin is member of the Fintech Advisory Committee of the International Capital Markets Association (ICMA) and lecturer at Frankfurt University of Applied Sciences.

# SPEAKERS



**PETER SCHWENDNER**, Professor and head of the Institute of Wealth & Asset Management at Zurich University of Applied Sciences, School of Management and Law, Switzerland. His interests are financial markets, asset management and machine learning applications. Peter collected 15 years of work experience in the financial industry as an MD and head of quantitative research at Sal. Oppenheim and as a partner at Fortinbras Asset Management. He holds the CFA charter and FRM certification.

With the European Stability Mechanism (ESM), he has been developing analytics for primary and secondary bond markets and tools for optimizing the issuance process. Currently, he is working on transparent quantitative strategies and evidence-based sustainable investing in joint projects with industry and academic partners.

Peter is an associate editor at Digital Finance and Frontiers in Artificial Intelligence in Finance. Within the European COST Action «Fintech and AI in Finance», he leads the working group «Transparency into Investment Product Performance for Clients».



**YINGYING LI**, Professor at the Department of Information System, Business Statistics and Operations Management (ISOM) and the Department of Finance at Hong Kong University of Science and Technology (HKUST). Before joining HKUST, Dr. Li also held positions as lecturer and postdoctoral fellow at the Bendheim Center for Finance and the Operations Research and Financial Engineering department at Princeton University. Dr. Li received her Ph. D in Statistics from the University of Chicago.

Dr. Li's research focuses on high-dimensional and/or high-frequency financial data, volatility estimation and prediction, market microstructure, large portfolio optimization, individualized financial decision making, etc. Dr. Li has published on top journals in statistics, finance and economics, such as *Econometrica*, *Review of Financial Studies*, *Journal of Financial Economics*, *Annals of Statistics*, *Journal of American Statistical Association*, *Journal of Econometrics*.

Dr. Li is an elected fellow of the Society for Financial Econometrics (SoFiE), and NSFC Excellent Young Scientist (EYS Hong Kong and Macau). She is an associate editor for the *Journal of Econometrics*, *Journal of Business & Economic Statistics* and *Journal of Financial Econometrics*; and serves as a council member for the Society for Financial Econometrics.



# SPEAKERS



**ASHRAF KHAN** is a Senior Financial Sector Expert at the Monetary and Capital Markets Department of the IMF. He leads MCM's work on central bank governance, transparency, risk management, and cash currency management. He also contributes to the Fund's work on fintech, and Islamic Finance, and manages the IMF's Central Bank Legislation Database.

Before joining the IMF, Ashraf worked as Head of the Governance and Accounting Department at the Central Bank of the Netherlands, as WTO Trade Policy Advisor at the Dutch Ministry of Economic Affairs, and as a corporate lawyer with CMS Derks Star Busmann.

He holds a Master of Dutch Private Law, and a Master of International Law from the Vrije Universiteit of Amsterdam, as well as a Master of Philosophy from Jawaharhal Nehru University, New Delhi.

Ashraf is a founding Board Member of the Duisenberg School of Finance, Amsterdam, and has published numerous articles on governance, risk management, fintech and central bank digital currencies. His [latest paper](#) (with co-author Majid Malaika) covers the links between central bank risk management, fintech, and cybersecurity.



**ANTIGONI POLYCHRONIADOU** is Cryptography research lead at J.P. Morgan AI research. Antigoni is a postdoctoral researcher in the Computer Science Department at Cornell University, hosted by Rafael Pass and Elaine Shi. She completed her Ph.D. at Aarhus University under the supervision of Ivan Damgård and holds an M.S. in mathematics of cryptography and communications from Royal Holloway University of London, supervised by Kenny Paterson. She interned at IDC Herzliya hosted by Alon Rosen; the Technion hosted by Yuval Ishai; University of California, Berkeley, hosted by Sanjam Garg; and IBM Research Thomas J. Watson Research Center hosted by Tal Rabin and was a short-term postdoctoral fellow at Rochester University hosted by Muthu Venkatasubramaniam.

Polychroniadou explores one of the core questions in cryptography: How quickly can secure computation be performed? She identified efficiency limitations and constructed protocols with strict security guarantees and optimal complexities, measured in rounds of interaction, number of communicated bits and computational overhead. Her current focus is on the design of secure computation protocols that allow distributed computer systems to perform complex computations on confidential data while preserving the privacy of the information. Applications of such systems include distributed ledgers as in blockchain technologies, HIPAA-compliant medical or genomic-data mining and machine learning on encrypted data.

# ABOUT THE EU GRANT

FinTech (Financial Technology) means "technology-enabled financial innovation." There is a strong need to improve the competitiveness of European FinTech, creating a common regulatory approach across all countries. This can help encourage innovations in banks and in B2B FinTech companies, in the application of big data, artificial intelligence and blockchain technologies, while authorities and researchers assess their risks .

Europe has a broad mosaic of regulatory landscapes and technological innovations in finance. Regulators must move quickly and make important decisions about emerging scientific and business opportunities, without stifling their economic potential.

The Fin-Tech project, under the EU's Horizon2020 funding scheme, aimed to create a European FinTech risk management hub. To this end, it has developed ready-to-use FinTech risk management models which will be dynamically updated and aligned with best research and practice.

The project included training to national regulators (suptech) and to European fintech hubs (regtech) by a group of independent experts that have leading research expertise in the measurement of the risks that arise from the application of big data, artificial intelligence and blockchain technologies and, specifically, of those arising from innovative payments, peer to peer lending and financial robo-advisory.

The project has started on January 1st, 2019 and lasted until June 2021. The activities of the project included 6 research workshops with international regulators, 48 hours of suptech workshops for each national supervisor and 6 regtech workshops for Fintechs and innovative banks.

Financial institutions were the ultimate validator of the proposed FinTech risk management solutions, as the project involved the risk management functions of a selected group of banks in writing a final assessment of the project's output (FinTech risk management models).

This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 825215



The Pavia University team (above); the project partners (below)



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[www.fintech-ho2020.eu](http://www.fintech-ho2020.eu)

or contact us at  
[info@fintech-ho2020.eu](mailto:info@fintech-ho2020.eu)