<p style="text-align: center;">**Research output**</p>

Publications in international peer-reviewed scientific journals

- B. Hadji Misheva, D. Jaggi, J. Posth, T. Gramespacher, J. **Osterrieder**, Audience-dependent Explanations for AI-based Risk Management Tools: A Survey, Frontiers in Artificial Intelligence, 186, **2021**
- J.-A. Posth, P. Kotlarz, B. H. Misheva, J. **Osterrieder**, and P. Schwendner. The applicability of self-play algorithms to trading and forecasting financial markets. Frontiers in Artificial Intelligence, 4:57, **2021**.
- J. **Osterrieder**, D. Kucharczyk, S. Rudolf, and D. Wittwer. Neural networks and arbitrage in the Vix. Digital Finance, 2(1):97–115, **2020**.
- P. Giudici, R. Hochreiter, J. **Osterrieder**, J. Papenbrock, and P. Schwendner. AI and financial technology. Frontiers in Artificial Intelligence, 2:25, **2019**.
- J. **Osterrieder** and A. Barletta. Editorial on the Special Issue on Cryptocurrencies. Digital Finance 1, 1–4, **2019**.
- **Osterrieder**, Jörg; Chan, Stephen; Chu, Jeffrey; Nadarajah, Saralees (**2017**). A Statistical Analysis of Cryptocurrencies, Journal of Risk and Financial Management, 10, 12.
- **Osterrieder**, Jörg; Lorenz, Julian (**2017**). A Statistical Risk Assessment of Bitcoin and Its Extreme Tail Behaviour, Annals of Financial Economics, 10, 1.
- **Osterrieder**, Jörg; Lorenz, Julian; Strika, Martin (**2017**). Bitcoin and Cryptocurrencies - Not for the Faint-Hearted, International Finance and Banking, 4, 1.
- **Osterrieder**, Jörg (**2017**). The Statistics of Bitcoin and Cryptocurrencies, Advances in Economics, Business and Management Research, 26.
- **Osterrieder**, Jörg; Chu, Jeffrey; Chan, Stephen; Nadarajah, Saralees (**2017**). GARCH modelling of cryptocurrencies, Journal of Risk and Financial Management, 10 (4).

Oral contributions to international conferences

- July 11 - 16, 2022, Synthetic data generation via Generative Adversarial Networks for financial markets with a focus on tail properties, Mini-symposia on "Synthetic time series methods" at the SIAM Annual Meeting 2022, July 11-15
- May 5-6, 2022, Machine learning and artificial intelligence in Finance – with applications to optimal trading strategies, Technology, Innovation and Stability: New Directions in Finance, Zagreb, Croatia, Faculty of Economics and Business, University of Zagreb, Croatian Academy of Sciences and Arts and COST Action CA19130 FinAI - Fintech and Artificial Intelligence in Finance - Towards a Transparent Financial Industry
- **February 14 -17, 2022: Invited Keynote Speech, Bank for International Settlements, Irving Fisher Committee on Central Bank Statistisk, IFC workshop on "Data science in central banking: Applications and Tools, Fintech and Artificial Intelligence in Finance - An Overview**
- December 18, 2022: Generative Adversarial Networks for Finance, Invited talk, Bits and Blocks (Blockchain) Workshop 2021, American University of Sharjah, UAE
- **Oct 28, 2021: Leading the 2nd Annual Management Committee Meeting of the COST Action CA19130 Fintech and Artificial Intelligence in Finance, Bucharest University of Economic Studies; Local Organizers: Prof. Vasile Strat, Dean of the Bucharest Business School; Prof. Daniel Pele**
- Oct 28, 2021: Annual research conference of the COST Action CA19130 Fintech and Artificial Intelligence in Finance, Bucharest University of Economic Studies; Invited Speaker, Deep Generation of Financial Data
- Oct 15, 2021: European COST (Cooperation in Science and Technology) Action Fintech and Artificial Intelligence in Finance, Skopje, North Macedonia, Fintech and Artificial Intelligence in Finance - An Overview

- Sept 30, 2021: Digital Finance Journal (DFIN) online paper discussion, "Programmable Money: Next-Generation Blockchain-Based Conditional Payments" by Prof. Ingo Weber from the Technical University of Berlin and Prof. Mark Staples from CSIRO's Data61
- Sept 17, 2021: 7th annual Columbia-Bloomberg Machine Learning in Finance conference, Columbia University in the City of New York, Bloomberg and Columbia University, Generative Adversarial Networks and its Applications in Finance, joint work with Ali Hirsa, Columbia University
- Sept 13-17, 2021: Generative Adversarial Networks and some applications in Finance, Advances in Stochastic Analysis for Handling Risks in Finance and Insurance at the CIRM in Luminy (near Marseille), Invited Speaker, Centre International de Rencontres Mathématiques, CIRM Conference
- Sept 9, 2021: 6th European COST Conference on Artificial Intelligence in Industry and Finance, Invited Speaker, Deep Generation of Financial Data
- Sept 9, 2021: 6th European COST Conference on Artificial Intelligence in Industry and Finance, Invited Speaker, COST (European Cooperation in Science and Technology) Action Fintech and Artificial Intelligence in Finance - An overview
- Trustworthy AI in Europe: multiple perspectives, June 24, 2021, IEEE Portugal, Round table on multiple perspectives of the use of Artificial Intelligence in Europe (event, talk)
- The Impact of AI on Germany's Industry, June 8, 2021, Artificial intelligence for Finance - opportunities and challenges, Invited panel participant, EU Tech Chamber
- Swiss AI4Good – Building a Nexus between Research, Innovation & Society, May 26, 2021, European COST Action Fintech and Artificial Intelligence in Finance, Running a European research network on Artificial Intelligence during Corona-times, online.
- Fintech and Artificial Intelligence in Finance, 1st International Conference on Economics and FinTech, Athens, Greece, April 12, 2021, organized within the framework of the EU H2020 project Fintech no. 825215 (topic ICT-35-2018, Type of action: CSA) and the COST Action Fintech and AI in Finance (Action Chair: Joerg Osterrieder)
- Fintech and Artificial Intelligence in Finance - Towards a transparent financial industry, 23.10.2020, RegTech Workshop: Fintech Risk Management
- Training ML Models: Decision Trees and Random Forest, 27.10.2020, SupTech Training Sessions for the Central Bank of Hungary: Fintech risk management
- What is Artificial Intelligence? How is it transforming the financial ecosystem? 26.10.2020 SupTech Training Sessions for the Central Bank of Hungary: Fintech risk management
- Blockchain and Distributed Trust, October 1, 2020, Winlink Winterthur, Switzerland
- Bitcoin and Cryptocurrencies, Third International Conference on Mathematics and Statistics, American University of Sharjah, Feb. 2020
- Invited Research Stay at the American University of Sharjah (Feb. 2020)
- Research stay at the Ladislaus von Bortkiewicz Chair of Statistics, International Training Group "High-Dimensional Non-Stationary Time-Series", Nov. 26 - 30, 2018
- 2nd Berlin Conference, Crypto-Currencies in a Digital Economy, Nov. 29/30, Berlin, Session Chair "Markets, Bank and Finance", https://www.ccconf.org
- 2nd Berlin Conference, Crypto-Currencies in a Digital Economy, Nov. 29/30, Berlin, "Introducing Trust into Blockchain", https://www.ccconf.org
- 11th Conference on Computational and Financial Econometrics (CFE 2017), University of London, Dec. 16, 2017, "Trend-following strategies for currency markets"
- Crypto-Currencies in a Digital Economy, Einstein Center Digital Future, TU Berlin, Nov. 16, 2017, "Cryptocurrencies – Not for the faint-hearted"
- FinTech Innovation Conference, Zurich, Mar. 2017, "Cryptocurrencies and risk management"
- Fintech Workshop, London, Jan. 2017, "A unified standard for modelling financial contracts"
- Keynote Speaker International Conference on Economics and Finance, Hong Kong, Jan. 2017

Outreach activities

- Research workshop on Artificial Intelligence at the Hungarian Central Bank (March 2020)
- Research workshop on Big Data at the Hungarian Central Bank (June 2019)
- "Von Chatbots, Tradingrobotern und Versicherungsoptimierern", contribution to ZHAW Impact (2019)
- Academia-industry roundtable discussion: Big Data Analytics – FinTech Risk Management Tools (July 2019)
- Organization of Academia-Industry conferences:
    - 7th European COST Conference on AI in Finance (2022)
    - 6th European Conference on AI in Finance and Industry (2021)
    - 5th European Conference on AI in Finance and Industry (2020)
    - 4th European Conference on AI in Finance and Industry (2019), 30 speakers; 250 participants from Switzerland and 19 European countries
    - 3rd European COST Conference on AI in Finance and Industry (2018), 30 speakers; 260 participants from Switzerland and 16 European countries
    - 2nd European COST Conference on AI in Finance and Industry (2017), 20 speakers; 180 participants from within Switzerland and across Europe
- Many Academia-Industry research projects with knowledge transfer since 2017

General contributions to science

- **Action Chair of the European COST Action Fintech and Artificial Intelligence in Finance, a global network with 200+ researchers from 38 European countries and five international partner countries (since 2020)**
- Founder of the network on AI in Finance conference series on meetup with 4500 members
- Frequent (co-) organizer and member of the program committee for academic research conferences
- Regular press releases for the general public

Main achievements in the area of Artificial Intelligence

- Executive Board Member of a European project on Fintech, Blockchain and Artificial Intelligence with 22 European countries and 27 national supervisory authorities involved
- Member of the Management Committee of a European COST network on Mathematics and Industry
- Action Chair of a European research network on Fintech and Artificial Intelligence in Finance (200+ researchers from 43 countries)
- Director of Studies for an executive education course on "Blockchain, Big Data and Distributed Ledgers"
- Project leader for several research projects with the Finance industry on Blockchain
- Project leader for the SNSF project "Mathematics and Fintech – The next revolution in the digital transformation of the Finance industry" (2017 – 2020)
- Extensive research networks both on a national and international level, interdisciplinary with teams from business, law and engineering schools
- Contributor to a new research application for a European Industrial doctorate in "AI in Finance"
- Responsible for the Fintech Initiative of the School of Engineering
- Head of the organization committee of an annual (since 2017) conference on "Artificial Intelligence in Finance and Industry" (260 participants from 16 European countries)
- Head of the organization committee of an international research workshop on "Big Data Analytics"