Mateusz Wiliński

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EDUCATION

Scuola Normale Superiore di Pisa — **Pisa, Italy**
*Postdoc in the **Quantitative Finance** Research Group* — Now

University of Warsaw — **Warsaw, Poland**
*PhD in **Physics** at the Faculty of Physics* — Oct 2017

*Master of **Physics** in the College of Inter-Faculty Individual Studies in Mathematics and Natural Science* — Oct 2013

*Master of **Applied Mathematics** in the College of Inter-Faculty Individual Studies in Mathematics and Natural Science* — Oct 2011

Batory High School — **Warsaw, Poland**
Mathematics, Physics and IT profile — Sep 2003 – Sep 2006

PUBLICATIONS

Statistical mechanics of coevolving spin system
Tomasz Raducha, Tomasz Gubiec, Mateusz Wiliński
arXiv preprint arXiv:1707.09495 2017.

Complex Correlation Approach for High Frequency Financial Data
Mateusz Wiliński, Yuichi Ikeda, Hideaki Aoyama
arXiv preprint arXiv:1706.06355, 2017.

Can banks default overnight? Modeling endogenous contagion on O/N interbank market
Paweł Smaga, Mateusz Wiliński, Piotr Ochnicki, Piotr Arendarski, Tomasz Gubiec
arXiv preprint arXiv:1603.05142, 2016.

Dynamic bifurcations on financial markets
Marzena Kozłowska, Mateusz Denys, Mateusz Wiliński, Grzegorz Link, Tomasz Gubiec, Tomasz R. Werner, Ryszard Kutner, Zbigniew R. Struzik
Chaos, Solitons & Fractals, Volume 88, Pages 126–142, 2016.

An Analysis of Price Impact Functions of Individual Trades on the London Stock Exchange
Mateusz Wiliński, Wei Cui, Anthony Brabazon, Philip Hamill
Quantitative Finance, Volume: 15, pages: 1727–1735, 2015.

Intra-day variability of the stock market activity versus stationarity of the financial time series
Tomasz Gubiec, Mateusz Wiliński
Physica A: Statistical Mechanics and its Applications, Volume: 432, pages: 216–221, 2015.

Temporal condensation and dynamic λ-transition within the complex network: an application to real-life market evolution
Mateusz Wiliński, Bartłomiej Szewczak, Tomasz Gubiec, Ryszard Kutner, Zbigniew R. Struzik
The European Physical Journal B. Volume: 88.2, pages: 1–15, 2015.

Structural and topological phase transitions on the German Stock Exchange
Mateusz Wiliński, Adam Sienkiewicz, Tomasz Gubiec, Ryszard Kutner, Zbigniew R. Struzik
Physica A: Statistical Mechanics and its Applications. Volume: 392, pages: 5963–5973, 2013.

Birkhoff normalization, bifurcation of Hamiltonian systems and Deprit formula
Weronika Barwicz, Mateusz Wiliński, Henryk Żołądek
Journal of Fixed Point Theory and Applications. Volume 13.2, pages: 587–610, 2013.

CONFERENCES

International Conference on Statistical Physics: SigmaPhi 2017 — **Corfu, Greece**
Talk during a parallel session — Jul 2017

Econophysics Colloquium 2017 — **Warsaw, Poland**
Talk during a parallel session + Poster during a poster session — Jul 2017

Crossroads in Complex Systems — **Palma de Mallorca, Spain**
Poster during a poster session — Jun 2017

Young Researchers at the Crossroads — **Palma de Mallorca, Spain**
Talk during a plenary session — Jun 2017

Symposium of Interdisciplinary Physics of Socio-Economic Sciences 2017 — **Warsaw, Poland**
Talk during a plenary session – awarded 1st best talk — Mar 2017

Conference on Complex Systems 2016 — **Amsterdam, Netherlands**
Talk during a parallel session — Sep 2016

NetSci-X 2016 — **Wrocław, Poland**
Poster during a poster session — Jan 2016

8th Symposium on Physics in Economy and Social Sciences — **Rzeszów, Poland**
Poster during a poster session — Nov 2015

Econophysics Colloquium 2015 — **Prague, Czech Republic**
Talk during a parallel session — Sep 2015

Social Modeling and Simulations + Econophysics Colloquium 2014 — **Kobe, Japan**
Talk during a parallel session — Nov 2014

International Conference on Econophysics 2014 — **Shanghai, China**
Talk during a parallel session — Jun 2014

7th Symposium on Physics in Economy and Social Sciences — **Lublin, Poland**
Talk during a parallel session — May 2014

Computational Intelligence for Financial Engineering and Economics 2014 — **London, UK**
Talk during a parallel session – awarded 3rd best paper — Mar 2014

Science. Polish Perspectives 2013 — **Cambridge, UK**
Poster during a poster session — Nov 2013

5th Warsaw School of Statistical Physics — **Kazimierz Dolny, Poland**
Poster during a poster session — Jun 2013

3rd European Student Business Innovation Conference — **Warsaw, Poland**
Talk during a parallel session — May 2013

PROJECTS & GRANTS

PRELUDIUM Grant from National Science Centre — **Warsaw, Poland**
Research grant for talented young scientists — Aug 2016 – Sep 2017
Principal Investigator of a project concentrated on filtering correlation based graphs.

INTER Grant from Foundation for Polish Science — **Warsaw, Poland**
Research grant for studies in the subject of Systemic Risk — Feb 2015 – Nov 2015
Junior researcher in the "Physics of Polish Banking System" project.

Clustering and causalities in the market — **Kyoto, Japan**
Scientific Summer Project at Kyoto University — Aug 2015 – Sep 2015
Intern on a summer project with Econophysics group at Kyoto University.

Financial Computing Scientific Association — **Warsaw, Poland**
Students Scientific Association at University of Warsaw — Sep 2014 – Sep 2015
The president of the association.

OPUS Grant from National Science Centre — **Warsaw, Poland**
Science grant for studies in the subject of Mechanics and Dynamical Systems — Mar 2013 – Feb 2016
Researcher in a prestigious project on mathematical physics.

Analysis of London Stock Exchange Order Book data — **Dublin, Ireland**
Scientific Summer Project at University College Dublin — Jul 2013 – Aug 2013
Intern on a project focused on analyzing order book data from London Stock Exchange.

Portfolio Selecting System — **Warsaw, Poland**
Cooperation project between UCL and University of Warsaw — Oct 2011 – Dec 2012
Researcher on a project focused on creating a platform that gathered financial data and selected stable portfolios for basket trading.

INDUSTRY EXPERIENCE

TradeLink — **Warsaw, Poland**
Quant Researcher — Sep 2016 – Jul 2017

WealthArc — **Warsaw, Poland**
Quant Analyst — Jun 2016 – Aug 2016

Goldman Sachs — **London, UK**
Summer Strats Associate — Jun 2015 – Jul 2015

AdPilot — **Warsaw, Poland**
Data Scientist — Nov 2014 – Jan 2014

Goldman Sachs — **London, UK**
Summer Strats Associate — Jun 2014 – Aug 2014

Volatech Advisors — **Warsaw, Poland**
Quant Analyst — Aug 2012 – Jun 2013

Ernst & Young - Financial Risk Management, IT Risk Assurance — **Warsaw, Poland**
Intern — Aug 2010 – May 2011

AWARDS

- Talk **"Why is simple statistics not enough? Inverse structural Epps effect in the stock market"** awarded 1st price for the best presentation during the **Symposium of Interdisciplinary Physics of Socio-Economic Sciences 2017**.
- Talk **"An Analysis of Price Impact Functions of Individual Trades on the London Stock Exchange"** awarded 3rd price for the best presentation during the **Computational Intelligence for Financial Engineering and Economics 2014** conference.
- Master thesis **"Intra-day variability of the stock market activity and stationarity of the financial time series"** awarded the best econophysics thesis in 2013 by **Polish Physical Society**.

POPULAR SCIENCE ACTIVITIES

Warsaw Science Festival — **Warsaw, Poland**
Workshop: "Network Game: lost in a network" — Sep 2017

Ochota Campus Open Days — **Warsaw, Poland**
Workshop: "Epidemics spreading from a physicist perspective?" — Apr 2017

Ochota Campus Open Days — **Warsaw, Poland**
Lecture: "Why are physicists so arrogant, and why do they think they now everything?" — Apr 2016

Warsaw Science Festival — **Warsaw, Poland**
Lecture: "World entangled in networks" — Sep 2014

Foundation for Gifted Youth — **Warsaw, Poland**
Workshop: "Small- and ultra-small-world networks" — Mar 2014

OTHER INFORMATION

Referee: Journal of Statistical Mechanics: Theory and Experiment; Physica A; PlosOne; International Journal of Modern Physics B; Acta Physica Polonica B; Operations Research and Decisions
Teaching: Statistics; Introduction to Econophysics; Introduction to Complex Networks
Organizing Committee: Econophysics Colloquium 2017

SKILLS, ACTIVITIES & INTERESTS

Scientific Interests: Complex Networks; Stochastic Processes; Econophysics
Technical Skills: Python; R; Mathematica; MATLAB; C/C++; SQL; TeX/LaTeX
Languages: Fluent in English; Learning Italian
Activities: Volleyball; Boxing; Brazilian Jiu-Jitsu