# Paweł Fiedor

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## Vocational Experience

- **European Systemic Risk Board Secretariat, European Central Bank** — **Frankfurt, Germany**
  *Research Analyst* — *09/2017 – ongoing*
  - Leading two research projects on the structure and incentives in central clearing of derivatives;
  - Leading the policy analysis of central clearing based on transaction-level data on derivative contracts;
  - Drafting policy reports and research papers relevant to systemic risk analysis;
  - Performing analytical and technical work on risk indicators for central counterparties;
  - Advising and coordinating the ESRB input within the international work on system-wide stress testing;
  - Member of the EIOPA Project Group on Operationalisation of the Crisis and Management Handbook.
- **European Systemic Risk Board Secretariat, European Central Bank** — **Frankfurt, Germany**
  *PhD Trainee* — *09/2016 – 08/2017*
  - Organisation and support of the work of the Advisory Scientific Committee;
  - Organisation and support of the work of the Insurance Expert Group;
  - Leading two research projects on the structure and incentives in central clearing of derivatives;
  - Leading the policy analysis of central clearing based on transaction-level data on derivative contracts;
  - Performing analytical and technical work on risk indicators for central counterparties;
  - Drafting policy reports and research papers relevant to systemic risk analysis;
  - Leading the editorial duties for the ESRB Working Paper Series;
  - Leading the analytical work determining liquidity of euro-denominated swap and bond markets;
  - Member of the EIOPA Project Group on Operationalisation of the Crisis and Management Handbook.
- **University of Cape Town** — **Cape Town, South Africa**
  *Postdoctoral Research Fellow* — *07/2015 – 08/2016*
  - Research in financial economics (structural models of the financial system with heterogeneous agents);
  - Development of scientific software packages for financial economics;
  - Mentoring PhD students.
- **International Fund Services, State Street** — **Kraków, Poland**
  *Associate, Hedge Fund Administration* — *01/2011 – 06/2015*
  - Administration of a major US hedge fund ( $16bn NAV);
  - Liaising with multiple broker dealers to facilitate post-trade operations;
  - Conducting daily cash settlements and market value reconciliations including pricing;
  - Supporting external audits;
  - Training junior staff.
- **Comarch S.A.** — **Kraków, Poland**
  *Analyst, Internship* — *07/2009 – 09/2009*
  - Leading the analysis of the public sector IT needs in Poland, including the 2009-2012 EU subsidies.

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## Education

- **Cracow University of Economics** — **Kraków, Poland**
  *PhD in Economics – financial economics* — *2011 – 2015*
- **Cracow University of Economics** — **Kraków, Poland**
  *MSc in Econometrics* — *2005 – 2010*

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## Professional Associacions

- **Polish Economic Society** **Member**

- **Royal Economic Society** **Member**

- **IEEE** **Member**

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## Reviewer / Referee

- **Physica A (Elsevier)** **Impact factor: 2.243**
- **Sustainability (MDPI)** **Impact factor: 1.789**
- **Entropy (MDPI)** **Impact factor: 1.743**
- **Physics Letters A (Elsevier)** **Impact factor: 1.626**
- **Complexity (Wiley)** **Impact factor: 1.333**
- **Acta Physica Polonica A** **Impact factor: 0.604**
- **Algorithmic Finance (IOPress)** **Impact factor: 0.500**
- **South African Journal of Economics (Wiley)** **Impact factor: 0.286**
- **Studies in Nonlinear Dynamics & Econometrics** **Impact factor: 0.276**
- **Journal of Risk and Financial Management (MDPI)**
- **Economic Research Southern Africa**
- **Ekonomia (University of Warsaw)**

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## Grants

- **Microsoft Azure Research Award CRM:0518970** **Microsoft**
  *Grant for computational agent-based modelling of financial systems for systemic risk analyses* *USD 20,000*

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## Policy Publications

- ESRB, *Regulatory risk-free yield curve properties and macroprudential consequences*, ESRB Reports, August 2017.

- Paweł Fiedor, Sarah Lapschies, Lucia Országhová, *Networks of counterparties in the centrally cleared EU-wide interest rate derivatives market*, ESRB Working Paper Series 54, September 2017.

- Paweł Fiedor, Sarah Lapschies, Lucia Országhová, *Networks of counterparties in the centrally cleared EU-wide interest rate derivatives market*, National Bank of Slovakia Working Paper Series 7, September 2017.

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## Peer-Reviewed Publications

- **Journals**
  P. Fiedor, *Structural Sustainability of the Polish Trade System*, Acta Physica Polonica A, 129(5), 1004-1007, 2016.
  P. Fiedor, *Partial Mutual Information Analysis of Financial Networks*, Acta Physica Polonica A, 127(3), 863-867, 2015.
  P. Fiedor, *Mutual Information-Based Hierarchies on Warsaw's Stock Exchange*, Acta Physica Polonica A, 127(3A), 33-37, 2015.
  P. Fiedor, *Multiscale Analysis of the Predictability of Stock Returns*, Risks, 3(2), 219-233, 2015.
  P. Fiedor, *Granger-Causal Non-Linear Financial Networks*, Journal of Network Theory in Finance, 1(2), 1-30, 2015.
  T. You, P. Fiedor, A. Hołda, *Network Analysis of the Shanghai Stock Exchange Based on Partial Mutual Information*, Journal of Risk & Financial Management, 8(2), 266-284, 2015.

P. Fiedor, *Analysis of the Time Evolution of Non-Linear Financial Networks*, Acta Universitatis Lodziensis Folia Oeconomica 3 (314), 69-81, 2015.
P. Fiedor, *The Social Dynamics of the Peter Principle*, Journal of Engineering Science and Technology Review 8(1), 56-60, 2015.
P. Fiedor, *Networks in financial markets based on the mutual information rate*, Physical Review E 89, 052801, 2014.
P. Fiedor, *Information-theoretic approach to lead-lag effect on financial markets*, European Physical Journal B 87 (8), 168, 2014.
P. Fiedor, *Sector strength and efficiency on developed and emerging financial markets*, Physica A 413, 180-188, 2014.
P. Fiedor, A. Hołda, *A firm's perspective on econophysics-based currency risk analysis*, Financial Sciences, 4(21), 92-107, 2014.
P. Fiedor, *Financial Crises and the Future of the Real Economy*, Journal of Economics, Business and Management 2(2), 147-151, 2014.
P. Fiedor, *Refutation of the Economic Constant Hypothesis*, Cracow Review of Economics and Management 920, 22-32, 2013.

- **Book chapters**
  P. Fiedor, *Noise-robustness of Networks in Financial Markets*, [in:] D. Kosiorowski, M. Snarska (eds.), KNOWLEDGE - ECONOMY - SOCIETY, Cracow University of Economics Foundation, 2016.
  P. Fiedor, *The Economics of Consulting for SME*, [in:] M. Ćwiklicki, M. Jabłoński & V. Potocan (eds.), Management Consulting for Business and Public Administration, Cracow University of Economics Foundation, 2012.
  P. Fiedor, *Taylor and 21st century consulting*, [in:] M. Ćwiklicki, M. Jabłoński & V. Potocan (eds.), Management Consulting for Business and Public Administration, Cracow University of Economics Foundation, 2012.
- **Conference proceedings**
  P. Fiedor, *Maximum Entropy Production Principle for Stock Returns*, Proceedings of the Computational Intelligence for Financial Engineering and Economics Conference 2015, pp. 695-702, London, 2015.
  P. Fiedor, *Frequency Effects on Predictability of Stock Returns*, Proceedings of the Computational Intelligence for Financial Engineering and Economics Conference 2014, pp. 247-254, London, 2014.
  P. Fiedor, *Job Evaluation for Knowledge-Based Organizations*, Proceedings of of the 14th European Conference on Knowledge Management, pp. 860-867, Kaunas, 2013.

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## Invited Talks

- **Faculty of Computer Science and Management, Wrocław University of Technology** — **Wrocław, Poland**
  *Information-theoretic approach to stock returns predictability on WSE* — *10th March 2015*
- **Faculty of Management, Cracow University of Economics** — **Kraków, Poland**
  *Econophysics-based maximum entropy principle for financial markets* — *13th November 2014*
- **Faculty of Physics, University of Warsaw** — **Warsaw, Poland**
  *Asymmetry and nonlinearity in the network analysis of financial markets* — *25th February 2014*

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## Academic Conference Talks

- **15th International Conference CREDIT 2017** — **Venice, Italy**
  *Networks of counterparties in the centrally cleared EU-wide interest rate derivatives market* — *28-29th September 2017*
- **2017 RiskLab/BoF/ESRB Conference on Systemic Risk Analytics** — **Helsinki, Finland**
  *Networks of counterparties in the centrally cleared EU-wide interest rate derivatives market* — *28-30th June 2017*
- **INET Oxford-UCT workshop on Agent-Based Modelling for Systemic Stress Testing** — **Oxford, UK**
  *Thoughts on System-Wide Stress Testing* — *9-10th March 2017*
- **Computational Intelligence for Financial Engineering and Economics Conference** — **Cape Town, RSA**
  *Maximum Entropy Production Principle for Stock Returns* — *8-10th December 2015*
- **8th Symposium Physics in Economics and Social Science** — **Rzeszów, Poland**
  *Structural Sustainability of the Polish Trade System* — *4-6th November 2015*
- **Financial Risk & Network Theory 2015** — **Cambridge, UK**
  *Structural Sustainability of the Global Supply System* — *9th September 2015*
- **7th International Scientific Conference Faculty of Management CUE** — **Kraków, Poland**
  *Noise-Robustness of Networks in Financial Markets* — *25th May 2015*
- **Multivariate Statistical Analysis MSA 2014** — **Łódź, Poland**
  *Analysis of the Time Evolution of Non-Linear Financial Networks* — *18th November 2014*

- **7th Symposium Physics in Economics and Social Science** **Lublin, Poland**
  *Mutual information-based hierarchies on Warsaw's stock exchange* *14th May 2014*
- **Computational Intelligence for Financial Engineering and Economics Conference** **London, UK**
  *Frequency Effects on Predictability of Stock Returns* *27th March 2014*
- **2nd International Conference on Econophysics** **Kavala, Greece**
  *The Social Dynamics of the Peter Principle* *13th September 2013*
- **14th European Conference on Knowledge Management - ECKM 2013** **Kaunas, Lithuania**
  *Job Evaluation for Knowledge-Based Organizations* *6th September 2013*
- **3rd International Conference on Financial Management and Economics - ICFME 2013** **Barcelona, Spain**
  *Financial crises and the future of the real economy* *10th August 2013*
- **II International Scientific Conference *Towards Professional Consulting*** **Kraków, Poland**
  *The Economics of Consulting for SME* *18th October 2012*
- **II International Scientific Conference *Towards Professional Consulting*** **Kraków, Poland**
  *F. Taylor and 21st century consulting* *18th October 2012*

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## Languages

- **Polish** **Native**
- **English** **Business English, C2 (CPE)**
- **German** **B2**
- **French** **B1**
- **Mandarin** **A2**

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## Core Technical Skills

- **Operation Systems** Windows, Linux - advanced user-level
- **Office software** LaTeX, MS/Open Office, MS Project, MS Visio
- **Statistical software** R, Matlab, Stata, Scipy
- **Programming** C++, Python, Netlogo, SQL

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## Scientific Software Developed

- **Black Rhino** `https://github.com/cogeorg/blackrhino`
- **ABM template** `https://github.com/cogeorg/abm_template`

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## References

- **Francesco Mazzaferro** Head of European Systemic Risk Board Secretariat
- **Dr. Co-Pierre Georg** Senior Lecturer, University of Cape Town
- **Prof. Dr. Artur Hołda** Professor, Cracow University of Economics

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