

Curriculum Vitae

Marcin Magdziarz

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Personal data

- Place of birth: Wrocław, Poland
- Citizenship: Polish citizen
- Martial status: Married

Education/Degrees

- 2020 – Title of Professor conferred by the President of Poland
- 2011 – Habilitation in mathematics with honors. Wrocław University of Technology, Institute of Mathematics and Computer Science.
- 2007 – Ph.D. in mathematics with honors in mathematics, Ph.D. thesis: “The dependence structure of the solutions of the fractional equations with alpha-stable noise”. Supervisor: Prof. A. Weron.
- 2004-2007 – Ph.D. studies in mathematics, Wrocław University of Technology, Institute of Mathematics and Computer Science.
- 2004 – M.Sc. in mathematics with honors, M.Sc. thesis: “Fractional differential equations with random noise and their applications to the modeling of term structure”. Supervisor: Prof. A. Weron.
- 1999-2004 – M.Sc. studies in mathematics, Wrocław University of Technology, Faculty of Basic Problems of Technology.

Professional

- 2020-present – **Dean** of the Faculty of Pure and Applied Mathematics, Wrocław University of Science and Technology, Poland
- 2020-present – **Full Professor**, Faculty of Pure and Applied Mathematics, Wrocław University of Science and Technology, Poland
- 2016-2020 – **Chair** of the Department of Applied Mathematics, Faculty of Pure and Applied Mathematics, Wrocław University of Science and Technology, Poland
- 2013-present – **Executive director**, Hugo Steinhaus Center, Wrocław University of Technology.
- 2012-2020 – **Associate Professor**, Institute of Mathematics and Computer Science, Wrocław University of Technology.
- 2008-2012 – **Assistant Professor**, Institute of Mathematics and Computer Science, Wrocław University of Technology.
- 2007-2008 – **Assistant**, Institute of Mathematics and Computer Science, Wrocław University of Technology.

Awards, Honors

- Invitation to the “Fractional Differential Equations” programme at the Isaac Newton Institute, Cambridge, England, 2022 r.
- Member of the Committee of Complex Systems, Polish Academy of Arts and Sciences, 2021 -
- Humboldt Fellowship, renewed 2021, Potsdam University, Germany.

- Member of the Senate of the Wrocław University of Science and Technology, Poland, 2020 -
- Member of the Mathematical Committee of Polish Academy of Science, 2016 –
- Humboldt Fellowship, renewed 2019, Potsdam University, Germany.
- Scholarship from the Minister of Science and High Education for outstanding young scientists, 2014-2017.
- Scholarship of the Rector of Wrocław University of Technology for scientific achievements, 2014.
- Prime Minister's of Poland Award for habilitation, 2012.
- Humboldt Fellowship, 2011-2012, Dresden, Germany
- Dionizy Smolenski Award for scientific achievements, WUT 2012.
- Rectors of WUT Award for scientific achievements, 2011.
- Scholarship from the Minister of Science and High Education for outstanding young scientists, 2010-2013
- Scholarship from "Polityka" magazine for outstanding young scientists, 2009.
- Scholarship for young scientists from European Union within European Social Funds, 2009.
- Prime Minister's of Poland Award for Ph.D. thesis, 2008.
- Domestic Grant for Young Scientists from the Foundation for Polish Science, awarded twice in 2008 and 2009.
- Rector of WUT Award for Ph.D. thesis, 2007.
- Scholarship from European Union Structural Funds for the best Ph.D. students at Wrocław University of Technology, 2005-2007.
- Award of the Rector of Wrocław University of Technology for scientific results, 2004.
- Laureate of the Best Alumnus Contest at Wrocław University of Technology, 2004.
- Dean's Award for Scientific Results. Awarded twice in 2003 and 2004.
- Member of the Council of the Faculty of Basic Problems of Technology, Wrocław University of Technology, 2003.

Conferences

- *Jubilee Congress for the 100th anniversary of the Polish Math. Society Krakow, Poland 2019. **Invited Talk**, title of the talk "Lamperti transformation - cure for ergodicity breaking"*
- *Workshop on Stable Processes and Related Topics, Wrocław, Poland 2018. **Invited Talk**, title of the talk "Lamperti transformation - cure for ergodicity breaking".*
- *Venice meeting on Fluctuations in small complex systems IV, Venice, Italy, 2018. **Invited Talk**, title of the talk "Lamperti transformation - cure for ergodicity breaking".*
- *International workshop "Fractional PDEs: Theory, Algorithms and Applications", ICERM, Brown University, USA, 2018. **Invited Talk**, title of the talk "Modeling of fractional dynamics using Levy walks - recent advances".*
- *29 Marian Smoluchowski Symposium on Statistical Physics, Zakopane, September 2016. **Invited Talk**, title of the talk "Explicit densities of Levy walks".*
- *International Conference - Quantifying Complex Transport with Lévy Walks, Bad Honnef, 2016, **Invited Talk**, title of the talk "Asymptotic limit and explicit densities of multidimensional Lévy walks".*
- *43 Zjazd Fizyków Polskich (43rd Congress of Polish Physicists), Kielce 2015. **Invited Talk**, title of the talk "Własności asymptotyczne i weryfikacja statystyczna procesów anomalnej dyfuzji" („Asymptotic properties and statistical verification of anomalous diffusion processes").*
- *Multi-ITN STRIKE and WWCSC Mini-Workshop in Stochastic Computing and Optimization, Würzburg, Germany, September 2014. **Invited Talk**, title of the talk "Fractional Fokker-Planck equations - properties and applications".*

- *7th International Conference on Levy Processes*, **Invited Talk**, Wroclaw, July 2013. Title of the talk “Ergodicity and mixing of anomalous diffusion processes”.
- *German–Polish Joint Conference on Probability Theory and Mathematical Statistics*, Torun, June 2013. Title of the talk “Detecting ergodicity and mixing in experimental data”.
- *25-th Marian Smoluchowski Symposium on Statistical Physics*, **Invited Talk**, Krakow, September 2012. Title of the talk “Ergodicity and mixing of anomalous diffusion processes”.
- *8th World Congress in Probability and Statistics*, **Invited Talk**, July 9-14, 2012. Title of the talk “Ergodicity and mixing of some classes of anomalous diffusion processes”.
- *International Workshop on Continuous-Time Random Walks and Levy flights*. Dresden 2012. Title of the talk “Ergodic properties of some classes of anomalous diffusion processes”.
- *International Conference on Statistical Physics*, Cyprus 2011. **Invited talk**, title “Ergodic properties of anomalous diffusion”.
- *International Conference „Weak Chaos, Infinite Ergodic Theory, and Anomalous Dynamics”*, Dresden 2011. Title of the talk “Ergodic properties of anomalous diffusion processes”.
- *Marian Smoluchowski Symposium on Statistical Physics*, Zakopane 2011. J. Gajda, M. Magdziarz, J. Ślęzak „Tempered stable distributions in modeling of anomalous diffusion”. Poster session
- *INFORMS 2010 Annual Meeting*, Austin, USA. **Invited talk**, title “Detecting origins of anomalous diffusion. P-variation test and its applications.”.
- *28th European Meeting of Statisticians*, Pireus, Greece, 2010. **Invited talk**, title “Stochastic representations of anomalous diffusion processes and their applications”.
- XI Conference on Probability, Będlewo, Poland, 2010. **Invited talk**, title „Stochastic representation and other properties of subdiffusion processes”.
- *Choice and Calibration of Models of Natural Phenomena*, Berlin, Germany, 2009. **Invited talk**, title „Stochastic representations of subdiffusion and their applications”.
- *Anomalous Diffusion. Theory and Applications*, Wrocław, Poland, 2009. Title “Langevin picture of subdiffusion with applications”.
- *XXVIII International Seminar on Stability Problems for Stochastic Models*, Zakopane, Poland, 2009. Title „Stochastic analysis of subdiffusion processes”.
- *Valuetools, Third International Conference on Performance Evaluation Methodologies and Tools*, Athens, Greece, 2008. **Invited talk**, title „ Stochastic Representations of Anomalous Diffusion Processes – Subordination Approach”.
- *Marian Smoluchowski Symposium on Statistical Physics* , Zakopane, Poland, 2008. Title „Equivalence of the fractional Fokker-Planck and subordinated Langevin equations”.
- *Modelling anomalous diffusion and relaxation. From single molecules to the flight of the albatross*, Jerusalem, Israel, 2008. Joint talk with prof. A. Weron, title „A subordination approach to modelling of subdiffusion in space-time-dependent force fields beyond the fractional Fokker-Planck equation ”.
- *Marian Smoluchowski Symposium on Statistical Physics* , Zakopane, Poland, 2007. Joint talk with prof. A. Weron, title „Competition between subdiffusion and Levy flights”.
- *Applied Probability Society of INFORMS Conference*, Eindhoven, Holand, 2007. **Invited talk**, title „Fractional Fokker-Planck dynamics: Stochastic representation and computer simulation”.
- II General AMaMeF Conference and Banach Center Conference ”Advances in Mathematics of Finance”, Będlewo, 2007. Joint talk with prof. A. Weron, title „Fractional Fokker-Planck equation and its applications to Finance and insurance”.
- *Marian Smoluchowski Symposium on Statistical Physics* , Zakopane, Poland 2006. Poster session.
- *Marian Smoluchowski Symposium on Statistical Physics* , Zakopane, Poland, 2005. Poster session.

- *Marian Smoluchowski Symposium on Statistical Physics*, Kraków, Poland, 2004. Poster session.

Grants

- NCN (National Science Center) Sonata Bis Grant “Probabilistic, numerical and statistical analysis of sub- and superdiffusion processes”, Wrocław University of Science and Technology, 2020-2023, **Principal Investigator**
- NCN (National Science Center) Harmonia Grant “Generalized Langevin equations and fractional dynamics”, Wrocław University of Science and Technology, 2016-2018, **Principal Investigator**
- NCN Beethoven Grant „Mathematical and Physical modeling of Single Particle Tracking - Big Data approach”, Wrocław University of Science and Technology, 2018-2020, **Investigator**
- Ministry of Science and High Education Iuventus Plus grant: „Twierdzenia graniczne oraz własności asymptotyczne dla procesów anomalnej dyfuzji” (Limit theorems and asymptotic properties for anomalous diffusion processes), Wrocław University of Science and Technology, 2015-2017, **Principal Investigator**
- NCN Maestro grant „Anomalous dynamics of physical and biological complex systems – stochastic modeling and statistical identification” WUT, 2013-2017, **investigator.**
- Ministry of Science and High Education Iuventus Plus grant: „Równania Langevina dla procesów anomalnej dyfuzji” (Langevin equations for anomalous diffusion processes), WUT., 2012-2013, **Principal Investigator**
- Ministry of Science and High Education Iuventus Plus grant: „Rozkłady temperowane stabilne w modelowaniu procesów subdyfuzji” (Tempered stable processes in the modelling of subdiffusion), WUT., 2011-2012, **Principal Investigator**
- Ministry of Science and High Education research grant no NN 201417639: "Procesy anomalnej dyfuzji. Teoria oraz zastosowania" (Anomalous diffusion processes. Theory and Applications), PWr., WUT., 2010-2013, **Principal Investigator.**
- European Union research grant no POIG.01.03.01-02-002/08 'Czujniki i sensory do pomiarów czynników stanowiących zagrożenia w środowisku - modelowanie i monitoring zagrożeń' (Sensors of environmental hazard – modeling and risk monitoring) PWr., 2008-2012, **investigator**
- Project 'Analiza czynników ryzyka oraz opracowanie założeń optymalnej struktury umożliwiającej efektywne zarządzanie ryzykiem' (Analysis of the risk factors and the optimal company structure for effective management), BOT Górnictwo i Energetyka S.A., Łódź, 2005-2006, **investigator**
- KBN (Scientific Studies Committee) grant 'Metody matematyczne w analizie rynków i instrumentów finansowych w Polsce' (Mathematical methods in the analysis of financial markets and instruments), PWr, 2001-2004, **investigator**

Visits to other scientific institutions

- Potsdam University, Germany, visit as part of the Humboldt Fellowship, 2021.
- Potsdam University, Germany, visit as part of the Humboldt Fellowship 2019.
- Basque Center for Applied Mathematics, Bilbao, Spain, march 2017
- Potsdam University, Germany, August 2013.
- Humboldt University Berlin, Germany, January 2012.
- Technische Universität München, Germany, December 2011.
- Bar Ilan University, Israel, June 2012.
- TU Dresden, Humboldt Fellowship 2011-2012.
- British Antarctic Survey, Cambridge, England, November 2008.
- Tel Aviv University, Israel, March 2007.

- Technische Universität München, Germany, 2007.
- 21st ECMI Modelling Week, Institut National des Sciences Appliquees, Rouen, France, August 2007.

Reviewing for

- Mathematical Reviews.
- Polish Mathematical Society.
Scientific Journals: Stochastic Processes and their Applications, Stochastic Analysis and Applications, Stochastics, Probability and Mathematical Statistics, Journal of Applied Probability, Journal of Theoretical Probability, Journal of Mathematical Analysis and Applications, Mathematical Modelling of Natural Phenomena, Communications in Nonlinear Science and Numerical Simulation, Statistics and Probability Letters, Mathematical Methods in the Applied Sciences, IEEE Transactions on Information Theory, Physical Review Letters, Physical Review E, Physica A, Physics Letters A, Journal of Chemical Physics, Europhysics Letters, Technical Transactions, Acta Physica Polonica, Journal of Physics A: Math. Theor., Annals of Physics...

Supervisor of PhD students

1. Dr inż. Janusz Gajda, WUT, Ph.D. title awarded on 4th March 2014.
Title of the thesis: Modeling of anomalous diffusion processes using tempered stable distributions.
2. Dr Tomasz Zórawik, WUT, Ph.D. title awarded on 18th May 2018 with honors.
Title of the thesis: Asymptotic properties of correlated continuous-time random walks.
3. Dr Jakub Slezak, WUT, Ph.D. title awarded on 18th May 2018 with honors.
Title of the thesis: Langevin equation and fractional dynamics.
4. Grzegorz Krzyzanowski, WUT, Ph.D. title conferment procedure opened on 18th May 2018. Proposed title of the thesis: Fractional models and their applications in finance

Participation in PhD and habilitation procedures

1. Dr Marek Tomasz Malinowski, University of Zielona Góra, member of the committee – 2014.
2. Dr Anna Kuczmazewska, Lublin University of Technology, member of the committee – 2017.
3. Dr Paweł Przybyłowicz, AGH Kraków, reviewer – 2018.
4. Reviewer of 9 doctoral dissertations.

Teaching activities

- Lectures, Classes Seminars and Labs taught at WUT: Stochastic modeling (L,C), Computer Simulation (L,Lab), Computer Simulations of Stochastic Processes (L,Lab), Economathematics (L,C), Calculus 1 and 2 (C), Financial Engineering (L,C), Monte Carlo methods (L,Lab), Algebra (C), Numerical methods (Lab), Mathematical Packages (Lab), IT methods in mathematics (Lab), Mathematics (L,C), Computer Simulations for Random Phenomena (L,Lab), introduction to simulation. Monte Carlo method (L,Lab), Diploma Seminar.
- Supervision of tens of diploma theses at WUT.