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AGH University of Kraków
Faculty of Physics and Applied Computer Science
Department of Applied Informatics and Computational Physics
Complex Systems Group

Curriculum vitae

April 1, 2025

1 Personal data

name: Krzysztof Piotr

surename: Malarz

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2 Professional qualifications

2016: D.Sc. in physics: complex systems, theoretical and computer physics (AGH University of Kraków), habilitation entitled: “The construction and use of distance matrix to study the topological properties of complex networks”

2000: Ph.D. in physics: theoretical and computer physics (AGH University of Kraków), dissertation entitled: “Study of surface growth by means of computer simulations”

1996: M.Sc. in technical physics: computer physics (AGH University of Kraków), thesis entitled: “Calculations of spin waves resonance positions in thin magnetic films for non-uniform magnetization distribution”

keywords:

Monte Carlo ising model surface structure evolving networks antiferromagnets chaos structural balance mass opinion cellular automata computer simulation morphology economic systems minimax catastrophe ageing Monte Carlo methods epidemic anisotropy social systems sociophysics Game of Life complex systems percolation random networks critical exponents digraphs computer simulations opinion dynamics social impact epitaxy Monte Carlo simulations phase transition roughness knowledge transfer topography Ising model crowd anthropology Zipf's law small world effect Barkhausen noise

3 Career

2024/11– head of Department of Applied Informatics and Computational Physics (Faculty of Physics and Applied Computer Science, AGH, Kraków)

2019/10– associate professor (Faculty of Physics and Applied Computer Science, AGH, Kraków)

2020/09–2024/08: deputy dean for education (Faculty of Physics and Applied Computer Science, AGH, Kraków)

2016/09–2020/08: deputy dean for education (Faculty of Physics and Applied Computer Science, AGH, Kraków)

2008/09–2012/08: deputy dean for students affairs (Faculty of Physics and Applied Computer Science, AGH, Kraków)

2005/09–2008/08: deputy dean for students affairs (Faculty of Physics and Applied Computer Science, AGH, Kraków)

2001/10–2019/09: assistant professor (Faculty of Physics and Applied Computer Science, AGH, Kraków)

2000/10–2001/09: teaching assistant (Faculty of Physics and Nuclear Techniques, AGH, Kraków)

3.1 Career related

2024/11: visiting professor (Department of Computer Science and Engineering, University of Calcutta, Kolkata, India)

2024/11– member of the University Team for the Quality of Education (AGH, Kraków)

2024/11– chairman of the Education Quality Council for Mathematics, Chemistry and Physics (AGH, Kraków)

2024/10– member of the Student Disciplinary Appeal Committee (AGH, Kraków)

2024/04– chairman of the 14th District Electoral College (AGH, Kraków)

2020/04– member of the University Electoral College (AGH, Kraków)

2019/10– member of the Advisory Council at Faculty of Physics and Applied Computer Science (AGH, Kraków)

2019/10– member of the Scientific Discipline Board for Physical Sciences (AGH, Kraków)

2011/12–2016/12: member of the Group for Sciences and Engineering to assess applications for funds for statutory activity (Ministry of Science and Higher Education, Warszawa)

2002/09–2012/08 and 2016/09–2019/09: member of the Scientific Council at Faculty of Physics and Applied Computer Science (AGH, Kraków)

3.1.1 Author of papers

Author of 100 journal or conference papers in the field of physics and its interdisciplinary applications (see https://home.agh.edu.pl/malarz/km_papers.pdf for the current list). Web of Science Core Collection metrics: 81 publications, cited 780 times, H-index = 16.

3.1.2 Editor for scientific journals

Web of Science statistics: 100+ verified editors records.

2022/09– editor of “Plos One” (sections: “Complexity and networks”; “Physics and astronomy—Statistical physics”; “Sociology”)

2015/01– senior editor of “Open Physics”

2023: guest editor of “Entropy” (special issue: “Modern trends in sociophysics”)

2022: guest editor of “Entropy” (special issue: “Entropy and social physics”)

2014/04–2014/12: senior editor of “Central European Journal of Physics”

2013/01–2016/07: editor of “International Journal of Statistical Mechanics”

2013/12–2016/07: editor of “The Scientific World Journal” (section: “Computer science”)

2013: guest editor of “Acta Physica Polonica A”

2006/12–2014/03: managing editor of “Central European Journal of Physics”

2006: guest editor of “Acta Physica Polonica B”

3.1.3 Referee for scientific journals

Web of Science statistics: 320+ verified peer reviews.

2020– Journal of Physics A: Mathematical and Theoretical
2020– Physical Review Research
2020– Entropy
2019– Journal of Statistical Mechanics: Theory and Experiment
2019– Scientific Reports
2019– European Journal of Physics
2017– EPL (Europhysics Letters)
2015– Frontiers in Physics
2015– International Journal of Modern Physics B (10+ reviews)
2013– Modern Physics Letters B (10+ reviews)
2012– Journal of Artificial Societies and Social Simulation
2012– Physical Review X
2012– Physica D: Nonlinear Physics
2012– Computer Physics Communications
2012– Journal of Artificial Societies and Social Simulation
2009– The European Physical Journal B
2008– International Journal of Modern Physics C
2007– Physica A: Statistical Mechanics and its Applications (140+ reviews)
2006– Physical Review Letters
2005– Physical Review E (70+ reviews)

3.1.4 Member of conferences' committees

2016– member of the Program Committee of the 1st (Rome, IT), 2nd (Porto, PT), 3rd (Funchal, PT), 4th (Heraklion, GR), 5th (On-line), 6th (On-line), 7th (On-line), 8th (Prague, CZ) and 9th (Angres, FR) **International Conference on Complexity, Future Information Systems and Risk**

2009, 2015– member of the Program Committee of the 1st (Wrocław, PL), the 4th (Kraków, PL), 5th (Lublin, PL), 6th (Białystok, PL), 7th (Gdańsk, PL) and 8th (Białystok, PL) **Workshop on Complex Collective Systems**

2008– member of the Advisory Committee of the 4th (Kolymbari, GR), 5th (Ayia Napa, CY), 6th (Rhodes, GR), 7th (Corfu, GR) and 8th (Chania, GR) **$\Sigma\Phi$ International Conference in Statistical Physics**

2021: chairman of the Organizing Committee of the **11th Polish Seminar on Econo- and Sociophysics** (On-line)

2018: member of the Organizing Committee of the **43rd Conferences of the Middle European Cooperation in Statistical Physics** (Kraków, PL)

2016: member of the International Program Committee of the Duke Forest Conference (Durham, North Carolina, USA)

2005–2011: member of the Scientific Council of the 2nd–8th (Siedlce, PL) Polish Conference on Computer Games Engineering

2009: member of the Organizing Committee of the **40th Congresses of Polish Physicists** (Kraków, PL)

2004, 2006, 2008: member of the Organizing Committee of the 5th–7th (Kraków, PL) Festival of Physics

2006: member of the Organizing Committee of the **2nd Polish Seminar on Econo- and Sociophysics** (Kraków, PL)

2005: secretary of the Organizing Committee of the World Year of Physics (Małopolska Region, PL)

2002, 2004: member of the Organizing Committee of the 4th and 5th (Kraków, PL) Polish Contest on Demonstration Experiment in Physics

4 Memberships

2018– member of **Complex Systems Society**

2007– member of the **European Physical Society**

1998– member of the **Polish Physical Society**

- member of the Home Audit Committee (since 2018)
- delegate to the Delegates Meetings in Bydgoszcz (2021), Wrocław (2017), Kielce (2015), Lublin (2011), Kraków (2009), Warszawa (2005), Gdańsk (2003), Toruń (2001) and Białystok (1999)
- secretary of Kraków Branch Council (2003–2007)
- member of Kraków Branch Council (1999–2009, 2016–2017)
- member of the Audit Committee for Kraków Branch (2014–2015)
- member of the Audit Committee for Section of Physics in Economy and Social Sciences (2009–2016)

5 Short leaves

2024/11: University of Calcutta, Department of Computer Science and Engineering (Kolkata, IN)

2019/11: Warsaw Technical University, Faculty of Physics (Warszawa, PL)

2004/05, 2012/02, 2018/12: Joint Institute for Nuclear Research (Dubna, RU)

1998/03, 1999/12, 2006/07: University of Cologne, Institute of Theoretical Physics (Köln, DE)

2004/09: Jožef Stefan Institute, Department of Theoretical Physics (Ljubljana, SI)

2000/08, 2002/09, 2004/08: Summer School on Computing Techniques in Physics (Třešt', CZ)

2004/07: Université Pierre et Marie Curie (Paris, FR)

1995/06: Deutsches Elektronen-Synchrotron (Hamburg, DE)

1995/03: European Synchrotron Radiation Facility (Grenoble, FR)

6 Honours and awards



2000, 2003, 2005–2009, 2012, 2017, 2020–2024: AGH Rector's award for research activities

2019, 2022–2024: AGH Rector's award for organisational activities

2015, 2019–2021, 2023, 2024: AGH Rector's award for teaching activities

2019: Medal of the 100th Anniversary of the Polish Physical Society

2013: Bronze Cross of Merit (President of the Republic of Poland)

2007: Medal of the Committee of National Education (Minister of National Education, Poland)

1996: AGH Rector's award for the best graduated students