



Krzysztof Malarz, D.Sc., Ph.D., M.Sc.
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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

February 29, 2024

1 Personal data

name: Krzysztof Piotr

surename: Malarz

date of birth: July 30, 1972

e-mail: malarz@agh.edu.pl



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:

topography self-deprecating strategy growth knowledge transfer interfaces scale-free networks social and economic systems random networks computer simulation roughness epitaxy small-world effect mass opinion structural balance Monte Carlo simulations opinion dynamics computer simulations Monte Carlo methods antiferromagnets chaos ageing sociophysics cellular automata morphology Barkhausen noise Game of Life surface structure phase transition Monte Carlo simulation complex systems ising model Monte Carlo percolation Gini coefficient Ising model Monte Carlo simulation evolving networks social networks Sznajd model epidemic organisations as complex systems anthropology critical exponents crowd social impact damage spreading

3 Career

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

2019/10– associate professor (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

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

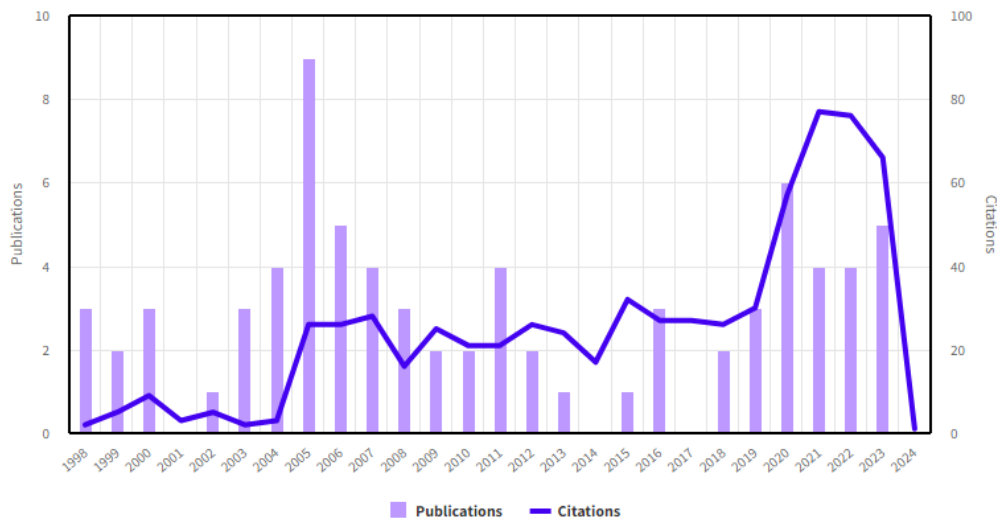
2019/10– member of the Scientific Discipline Board for Physical Sciences (AGH, Kraków)

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 more than 90 journal or conference papers in the field of physics and its interdisciplinary applications (see <http://home.agh.edu.pl/malarz/km.pdf> for the current list). Web of Science statistics: 76 publications, cited 678 times, H-index = 15.



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”)

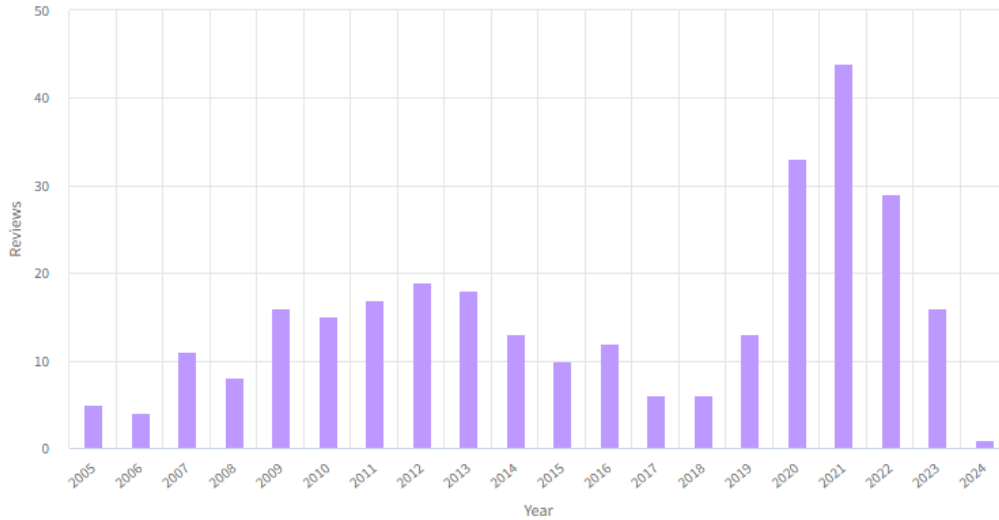
2013: guest editor of “Acta Physica Polonica A”

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: 290+ 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

- 2016–2024: 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, 2015–2024: 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**
- 2008–2023: 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– individual member of the **European Physical Society**

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

- member of the Home Audit Committee (2018–2025)
- 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

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 Teaching

2023/10– Mentor of “Computer Physics” field of study

6.1 Units

6.1.1 Ph.D. studies

2019– workshops on writing and preparation of scientific publications (workshops)

6.1.2 M.Sc. studies

2022– research activities (workshops)

2022– physics of complex systems (laboratory classes)

2021– computational sociology (workshops)

2016, 2020– master’s thesis seminar (seminar classes)

2001–2021, 2024– cellular automata (lectures, project classes)

6.1.3 B.Sc. studies

2015–2016, 2023: procedural programming (laboratory classes)

2014– edition and presentation of scientific text (lectures, seminar classes, laboratory classes)

2013–2017: selected topics in modern physics and chemistry (seminar classes)

2013–2015: statistics for engineers (auditorium classes, laboratory classes)

2006–2011: numerical methods for engineers (laboratory classes)

2001–2022: numerical methods (lectures, laboratory classes)

2001–2006: computational physics (laboratory classes)

1997–2005: physics (auditorium classes, laboratory classes)

6.2 Supervising

6.2.1 Ph.D. thesis

Marcin Rybak (2017, AGH, as auxiliary supervisor)

6.2.2 M.Sc. thesis

Maciej Dworak (2022), Szymon Biernacki (2021), Konrad Pasik & Marcin Miś (2021), Joanna Wańczyk (2019, supervisor at CERN: David Stickland), Kacper Biłko (2018, supervisor at CERN: Olivier Stein), Artur Wiśniowski (2018), Kamil Nowak (2017), Kamil Paradowski (2017), Paweł Fatyga (2017), Agnieszka Waryś (2017), Przemysław Bańcerowski (2017, Polish Physical Society Award), Rafał Socha (2017), Marcin Mentel (2013, supervisor at JINR: Grzegorz Kamiński), Piotr Pluciński (2013, supervisor at JINR: Grzegorz Kamiński), Bartłomiej Hnatio (2013, supervisor at JINR: Vratislav Chudoba), Józef Kapuściarz (2011), Marek Świerczek & Michał Ociepka (2011), Łukasz Kurzawski (2011), Tomasz Bierca (2009), Marek Prochera (2009), Jacek Mostowicz (2009), Piotr Kamysz (2007), Łukasz Gintowt (2007), Szymon Myalski (2006, Polish Nuclear Society Award), Mariusz Majewski (2006), Marcin Zborek (2006), Rafał Kosturek (2004)

6.3 Reviewing

6.3.1 Ph.D. dissertations

- Piotr Brzeski (2023, University of Wrocław)
- Łukasz G. Gajewski (2022, Warsaw Technical University, Warszawa)
- Michał Łeppek (2021, Warsaw Technical University, Warszawa)
- Joanna Linczuk (2021, Warsaw Technical University, Warszawa)
- Rafał Kowalski (2021, Institute of Nuclear Physics, Polish Academy of Sciences, Kraków)
- Jan B. Stepień (2021, Institute of Physical Chemistry, Polish Academy of Sciences, Warszawa)
- Piotr J. Górski (2020, Warsaw Technical University, Warszawa)

6.3.2 M.Sc. thesis

Adrianna Urbańska (2022), Daniel Szetela (2018), Bartosz Głowacki (2016), Mariusz Stefański (2013), Michał Ochman (2013), Michał Czeraszewicz (2012), Piotr Domagała (2011), Małgorzata Wiktorowicz (2006), Grzegorz Orłowski & Tomasz Tomczyk (2005), Jakub Czaplicki (2005), Tomasz Prus (2004), Piotr Kubiś (2004), Grzegorz Wąchocki (2004), Janusz Malinowski (2002), Krystian Piękoś (2001)

6.3.3 B.Sc. thesis

Adam Zagrajek (2022), Krzysztof Łakomy (2022), Mateusz Barnacki (2022), Dariusz Lesiecki (2022), Krzysztof G. Tondera (2022), Joanna Popieluch (2020), Mateusz Seweryn (2019), Piotr Chołody (2019), Artur Kawala (2019), Paula Palcowska (2019), Ernest Jęczmionek (2018), Hanna Walla (2016), Anna Wujek (2016), Maciej Jurkowski (2015), Mateusz Gawron (2015), Szymon Skoneczny (2012)

7 Honours and awards



2000, 2003, 2005–2009, 2012, 2017, 2020–2023: AGH Rector's award for research activities

2019, 2022, 2023: AGH Rector's award for organisational activities

2015, 2019–2021, 2023: 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