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Associate Professor of Computer Science and Data Science
Supervisor of the Data Science Curriculum

Faculty of Mathematics and Information Science, Warsaw University of Technology
ul. Koszykowa 75, 00-662 Warsaw, Poland, Room 550 (5th floor)

1 Highlights

- Researcher in Machine Learning, Data Aggregation, Fusion, and Modeling
 - Author of the fast & robust *Genie* clustering algorithm
 - Research interests: data fusion, clustering, supervised learning to aggregate data, plagiarism detection and software quality, sports analytics, science of science
 - Machine Learning / Data Analysis / Scientific Computing Software Developer (Python, C, C++, R, etc.)
 - Author and maintainer of *stringi* – one of the most downloaded R packages (>18M downloads)
 - Data Science, Machine Learning, Python, R, and C++ Tutor & Trainer
 - @ Warsaw University of Technology
 - @ Data Science Retreat, Berlin
 - Author of a textbook on Programming in R (in Polish)
 - Author of a textbook on Data Processing and Analysis in Python (in Polish)
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2 Scientific Degrees

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| 20.10.2017 | Systems Research Institute, Polish Academy of Sciences
Habilitation in Computer Science
<i>New Algorithms for Data Aggregation and Analysis: Construction, Properties, and Applications</i>
Keywords: clustering, data fusion, data aggregation, data analysis |
| 21.12.2011 | Systems Research Institute, Polish Academy of Sciences
PhD in Computer Science
<i>Aggregation Operators and Their Application in a Formal Model for a Quality Evaluation System of Scientific Research</i>
Keywords: decision support systems, informetrics, computational statistics, fuzzy integrals |
| 30.06.2008 | Faculty of Mathematics and Information Science, Warsaw University of Technology
MSc in Computer Science (with honors)
<i>A Simulation of Predator–Prey Behavior</i>
Keywords: artificial intelligence, neural networks, computer graphics |
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3 Employment History

- 01.04.2018 – Systems Research Institute, Polish Academy of Sciences
Associate Professor
- 01.01.2018 – Faculty of Mathematics and Information Science, Warsaw University of Technology
Associate Professor
Supervisor of the Data Science Curriculum
- 01.02.2012 – Systems Research Institute, Polish Academy of Sciences
31.03.2018 *Assistant Professor*
- 01.04.2012 – Faculty of Mathematics and Information Science, Warsaw University of Technology
31.12.2017 *Assistant Professor*
- 01.10.2008 – Faculty of Mathematics and Information Science, Warsaw University of Technology
– 29.02.2012 *Teaching & Research Assistant*
- 01.07.2008 – Systems Research Institute, Polish Academy of Sciences
– 31.01.2012 *Research Assistant*
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4 Scientific Activities

4.1 Scientific Interests

- Machine learning and data analysis algorithms (clustering, supervised learning to aggregate data, etc.),
- Complex data aggregation and fusion, prototype learning,
- Computational statistics, statistical software,
- Statistical and agent-based modeling (sports analytics, Stack Overflow, science of science).

4.2 Research Projects

1. The Czech Science Foundation (GAČR), research project 18-06915S, *New approaches to aggregation operators in analysis and processing of data*, University of Olomouc, Czechia, Partner Investigator (Chief Investigator: Prof. Radomír Halaš), years 2018–2020 (36 months).
2. National Science Centre (NCN), Poland, research project 2014/13/D/HS4/01700, *Construction and analysis of methods of information resources producers' quality management*, Systems Research Institute, Polish Academy of Sciences, Chief Investigator, years 2015–2017 (30 months).
3. Research subtask A4.1.2, Systems Research Institute, Polish Academy of sciences concerning the development and analysis of new machine learning and data aggregation methods – Coordinator (Co-investigators: Anna Cena, Barbara Żogała-Siudem); each year since 2014.

4.3 Scholarships & Awards

1. Ministry of Science and Higher Education, Poland, scholarship for outstanding young scientists (36 months), 2015.
2. Foundation for Polish Science (FNP), scholarship for young, talented researchers – START Program, 2013.
3. Warsaw University of Technology Rector's Award of the first degree for scientific achievements, 2012.
4. Warsaw University of Technology Rector's Award of the first degree for scientific achievements, 2010.
5. Ministry of Science and Higher Education, Poland, students' scholarship for outstanding scientific achievements, academic year 2007/2008.

4.4 Short-term Research Visits

- 17.07.2017 – Deakin University, Melbourne–Burwood, VIC, Australia
– 04.08.2017 School of Information Technology
Visiting Academic
supported by the SEBE Researcher in Residence Program 2017, Deakin University
- 13.04.2015 – University of Ostrava, Czechia
– 14.06.2015 Institute for Research and Applications of Fuzzy Modeling
Postdoctoral Research Fellow
supported by ESF EU, agreement UDA-POKL.04.01.01-00-051/10-00
- 01.03.2013 – Slovak University of Technology in Bratislava, Slovakia
– 30.06.2013 Department of Mathematics and Descriptive Geometry
Postdoctoral Research Fellow
supported by ESF EU, agreement UDA-POKL.04.01.01-00-051/10-00

4.5 Publications

Research Monographs

1. **Gagolewski M.**, *Data fusion: Theory, methods, and applications*, Institute of Computer Science, Polish Academy of Sciences, 2015, 290 pp., ISBN: 978-83-63159-20-7.

Textbooks

2. **Gagolewski M.**, Bartoszek M., Cena A., *Przetwarzanie i analiza danych w języku Python (Data processing & analysis in Python)*, Wydawnictwo Naukowe PWN, 2016, 369 pp., ISBN: 978-83-01-18940-2.
3. **Gagolewski M.**, *Programowanie w języku R. Analiza danych, obliczenia, symulacje (R programming: Data analysis, computing & simulation)*, Wydawnictwo Naukowe PWN, 2014, 1st ed. – 2014, 509 pp., ISBN: 978-83-01-17461-3; 2nd ed., revised and extended – 2016, 550 pp., ISBN: 978-83-01-18939-6.
4. Grzegorzewski P., **Gagolewski M.**, Bobecka-Wesołowska K., *Wnioskowanie statystyczne z wykorzystaniem środowiska R (Statistical inference with R)*, Politechnika Warszawska, 2014, 183 pp., ISBN: 978-83-93-72601-1.

Edited Volumes

5. Halaš R., **Gagolewski M.**, Mesiar R. (Eds.), *New Trends in Aggregation Theory (Advances in Intelligent Systems and Computing 981)*, Springer, 2019, 348 pp., ISBN: 978-3-030-19493-2.
6. Ferraro M.B., Giordani P., Vantaggi B., **Gagolewski M.**, Gil M.Á., Grzegorzewski P., Hryniewicz O. (Eds.), *Soft methods for data science (Advances in Intelligent Systems and Computing 456)*, Springer, 2017, 535 pp., ISBN: 978-3-319-42971-7.
7. Grzegorzewski P., **Gagolewski M.**, Hryniewicz O., Gil M.Á., (Eds.), *Strengthening links between data analysis and soft computing, (Advances in Intelligent Systems and Computing 315)*, Springer, 2015, 294 pp., ISBN: 978-3-319-10764-6.

Journal Articles

8. Beliakov G., **Gagolewski M.**, James S., Aggregation on ordinal scales with the Sugeno integral for biomedical applications, *Information Sciences* **501**, 2019, pp. 377–387. *IF 4.305*
9. Pérez-Fernández R., De Baets B., **Gagolewski M.**, A taxonomy of monotonicity properties for the aggregation of multidimensional data, *Information Fusion* **52**, 2019, pp. 322–334. *IF 6.639*
10. **Gagolewski M.**, James S., Beliakov G., Supervised learning to aggregate data with the Sugeno integral, *IEEE Transactions on Fuzzy Systems* **27**(4), 2019, pp. 810–815. *IF 8.415*
11. **Gagolewski M.**, Pérez-Fernández R., De Baets B., An inherent difficulty in the aggregation of multidimensional data, *IEEE Transactions on Fuzzy Systems*, 2019, to appear, doi:10.1109/TFUZZ.2019.2908135. *IF 8.415*

12. Geras A., Siudem G., **Gagolewski M.**, Should we introduce a dislike button for academic papers?, *Journal of the Association for Information Science and Technology*, 2019, to appear, doi:10.1002/ASI.24231. IF 2.835
13. Coroianu L., **Gagolewski M.**, Grzegorzewski P., Piecewise linear approximation of fuzzy numbers: Algorithms, arithmetic operations and stability of characteristics, *Soft Computing*, 2019, to appear, doi:10.1007/s00500-019-03800-2. IF 2.367
14. Lasek J., **Gagolewski M.**, The efficacy of league formats in ranking teams, *Statistical Modelling* **18**(5–6), 2018, pp. 411–435. IF 1.429
15. Beliakov G., **Gagolewski M.**, James S., Pace S., Pastorello N., Thilliez E., Vasa R., Measuring traffic congestion: An approach based on learning weighted inequality, spread and aggregation indices from comparison data, *Applied Soft Computing* **67**, 2018, pp. 910–919. IF 3.541
16. **Gagolewski M.**, Penalty-based aggregation of multidimensional data, *Fuzzy Sets and Systems* **325**, 2017, pp. 4–20. IF 2.098
17. Beliakov G., **Gagolewski M.**, James S., Penalty-based and other representations of economic inequality, *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems* **24**(Suppl. 1), 2016, pp. 1–23. IF 0.954
18. **Gagolewski M.**, Bartoszuk M., Cena A., Genie: A new, fast, and outlier-resistant hierarchical clustering algorithm, *Information Sciences* **363**, 2016, pp. 8–23. IF 4.038
19. Mesiar R., **Gagolewski M.**, H-index and other Sugeno integrals: Some defects and their compensation, *IEEE Transactions on Fuzzy Systems* **24**(6), 2016, pp. 1668–1672. IF 8.746
20. Lasek J., Szlavik Z., **Gagolewski M.**, Bhulai S., How to improve a team’s position in the FIFA ranking – A simulation study, *Journal of Applied Statistics* **43**(7), 2016, pp. 1349–1368. IF 0.417
21. Żogała-Siudem B., Siudem G., Cena A., **Gagolewski M.**, Agent-based model for the h-index – Exact solution, *European Physical Journal B* **89**:21, 2016. IF 1.345
22. **Gagolewski M.**, Spread measures and their relation to aggregation functions, *European Journal of Operational Research* **241**(2), 2015, pp. 469–477. IF 2.358
23. Cena A., **Gagolewski M.**, Mesiar R., Problems and challenges of information resources producers’ clustering, *Journal of Informetrics* **9**(2), 2015, pp. 273–284. IF 2.412
24. Cena A., **Gagolewski M.**, OM3: Ordered maxitive, minitive, and modular aggregation operators – axiomatic and probabilistic properties in an arity-monotonic setting, *Fuzzy Sets and Systems* **264**, 2015, pp. 138–159. IF 1.986
25. **Gagolewski M.**, Mesiar R., Monotone measures and universal integrals in a uniform framework for the scientific impact assessment problem, *Information Sciences* **263**, 2014, pp. 166–174. IF 4.038
26. **Gagolewski M.**, Scientific impact assessment cannot be fair, *Journal of Informetrics* **7**(4), 2013, pp. 792–802. IF 3.580
27. Coroianu L., **Gagolewski M.**, Grzegorzewski P., Nearest piecewise linear approximation of fuzzy numbers, *Fuzzy Sets and Systems* **233**, 2013, pp. 26–51. IF 1.880
28. **Gagolewski M.**, On the relationship between symmetric maxitive, minitive, and modular aggregation operators, *Information Sciences* **211**, 2013, pp. 170–180. IF 3.893
29. **Gagolewski M.**, Mesiar R., Aggregating different paper quality measures with a generalized *h*-index, *Journal of Informetrics* **6**(4), 2012, pp. 566–579. IF 4.153
30. **Gagolewski M.**, Grzegorzewski P., Possibilistic analysis of arity-monotonic aggregation operators and its relation to bibliometric impact assessment of individuals, *International Journal of Approximate Reasoning* **52**(9), 2011, pp. 1312–1324. IF 1.948
31. **Gagolewski M.**, Bibliometric impact assessment with R and the *CITAN* package, *Journal of Informetrics* **5**(4), 2011, pp. 678–692. IF 4.153
32. **Gagolewski M.**, Grzegorzewski P., A geometric approach to the construction of scientific impact indices, *Scientometrics* **81**(3), 2009, pp. 617–634. IF 2.167
33. Rowiński T., **Gagolewski M.**, Preferencje i postawy wobec pomocy online, *Studia Psychologica UKSW* **7**, 2007, pp. 195–210.

Papers in Edited Volumes and Proceedings

34. Coroianu L., **Gagolewski M.**, *Penalty-based data aggregation in real normed vector spaces*, In: Halaš R. et al. (Eds.), *New Trends in Aggregation Theory (Advances in Intelligent Systems and Computing 981)*, Springer, 2019, pp. 160–171.
35. Beliakov G., **Gagolewski M.**, James S., *Least median of squares (LMS) and least trimmed squares (LTS) fitting for the weighted arithmetic mean*, In: Medina J. et al. (Eds.), *Information Processing and Management of Uncertainty in Knowledge-Based Systems. Theory and Foundation (Communications in Computer and Information Science 854)*, Springer, 2018, pp. 367–378.
36. **Gagolewski M.**, James S., *Fitting symmetric fuzzy measures for discrete Sugeno integration*, In: Kacprzyk J. et al. (Eds.), *Advances in Fuzzy Logic and Technology (Advances in Intelligent Systems and Computing 642)*, Springer, 2018, pp. 104–116.
37. Bartoszuć M., **Gagolewski M.**, *Binary aggregation functions in software plagiarism detection*, In: *Proc. FUZZ-IEEE'17*, 2017, 8015582.
38. Cena A., **Gagolewski M.**, *OWA-based linkage and the Genie correction for hierarchical clustering*, In: *Proc. FUZZ-IEEE'17*, 2017, 8015652.
39. **Gagolewski M.**, Cena A., Bartoszuć M., *Hierarchical clustering via penalty-based aggregation and the Genie approach*, In: Torra V. et al. (Eds.), *Modeling Decisions for Artificial Intelligence (Lecture Notes in Artificial Intelligence 9880)*, Springer, 2016, pp. 191–202.
40. Bartoszuć M., Beliakov G., **Gagolewski M.**, James S., *Fitting aggregation functions to data: Part I – Linearization and regularization*, In: Carvalho J.P. et al. (Eds.), *Information Processing and Management of Uncertainty in Knowledge-Based Systems, Part II (Communications in Computer and Information Science 611)*, Springer, 2016, pp. 767–779.
41. Bartoszuć M., Beliakov G., **Gagolewski M.**, James S., *Fitting aggregation functions to data: Part II – Idempotization*, In: Carvalho J.P. et al. (Eds.), *Information Processing and Management of Uncertainty in Knowledge-Based Systems, Part II (Communications in Computer and Information Science 611)*, Springer, 2016, pp. 780–789.
42. Cena A., **Gagolewski M.**, *Fuzzy k -minpen clustering and k -nearest-minpen classification procedures incorporating generic distance-based penalty minimizers*, In: Carvalho J.P. et al. (Eds.), *Information Processing and Management of Uncertainty in Knowledge-Based Systems, Part II (Communications in Computer and Information Science 611)*, Springer, 2016, pp. 445–456.
43. Lasek J., **Gagolewski M.**, *The winning solution to the AAIA'15 Data Mining Competition: Tagging firefighter activities at a fire scene*, In: Ganzha M. et al. (Eds.), *Proc. FedCSIS'15*, IEEE, 2015, pp. 375–380.
44. Bartoszuć M., **Gagolewski M.**, *Detecting similarity of R functions via a fusion of multiple heuristic methods*, In: Alonso J.M. et al. (Eds.), *Proc. IFSA-EUSFLAT 2015*, Atlantis Press, 2015, pp. 484–491.
45. **Gagolewski M.**, *Normalized WD_p WAM and WD_p OWA spread measures*, In: Alonso J.M. et al. (Eds.), *Proc. IFSA-EUSFLAT 2015*, Atlantis Press, 2015, pp. 210–216.
46. Cena A., **Gagolewski M.**, *A k -means-like algorithm for informetric data clustering*, In: Alonso J.M. et al. (Eds.), *Proc. IFSA-EUSFLAT 2015*, Atlantis Press, 2015, pp. 536–543.
47. **Gagolewski M.**, Lasek J., *Learning experts' preferences from informetric data*, In: Alonso J.M. et al. (Eds.), *Proc. IFSA-EUSFLAT 2015*, Atlantis Press, 2015, pp. 484–491.
48. **Gagolewski M.**, *Some issues in aggregation of multidimensional data*, In: Baczyński M., De Baets B., Mesiar R. (Eds.), *Proc. 8th International Summer School on Aggregation Operators (AGOP 2015)*, University of Silesia, ISBN:978-83-8012-519-3, 2015, pp. 127–132.
49. Cena A., **Gagolewski M.**, *Aggregation and soft clustering of informetric data*, In: Baczyński M., De Baets B., Mesiar R. (Eds.), *Proc. 8th International Summer School on Aggregation Operators (AGOP 2015)*, University of Silesia, ISBN:978-83-8012-519-3, 2015, pp. 79–84.
50. **Gagolewski M.**, Lasek J., *The use of fuzzy relations in the assessment of information resources producers' performance*, In: Filev D. et al. (Eds.), *Proc. 7th IEEE International Conference Intelligent Systems IS'2014, Vol. 2: Tools, Architectures, Systems, Applications (Advances in Intelligent Systems and Computing 323)*, Springer, 2015, pp. 289–300.

51. **Gagolewski M.**, *Sugeno integral-based confidence intervals for the theoretical h-index*, In: Grzegorzewski P. et al. (Eds.), *Strengthening Links Between Data Analysis and Soft Computing (Advances in Intelligent Systems and Computing 315)*, Springer, 2015, pp. 233–240.
52. Lasek J., **Gagolewski M.**, *Estimation of tournament metrics for association football league formats*, In: *Selected problems in information technologies (Proc. ITRIA'15 vol. 2)*, Institute of Computer Science, Polish Academy of Sciences, 2015, pp. 67–78.
53. Cena A., **Gagolewski M.**, *Clustering and aggregation of informetric data sets*, In: *Computational methods in data analysis (Proc. ITRIA'15 vol. 1)*, Institute of Computer Science, Polish Academy of Sciences, 2015, pp. 5–26.
54. Bartoszek M., **Gagolewski M.**, *A fuzzy R code similarity detection algorithm*, In: Laurent A. et al. (Eds.), *Information Processing and Management of Uncertainty in Knowledge-Based Systems, Part III (Communications in Computer and Information Science 444)*, Springer, 2014, pp. 21–30.
55. Coroianu L., **Gagolewski M.**, Grzegorzewski P., Adbatabar Firozja M., Houлари T., *Piecewise linear approximation of fuzzy numbers preserving the support and core*, In: Laurent A. et al. (Eds.), *Information Processing and Management of Uncertainty in Knowledge-Based Systems, Part II (Communications in Computer and Information Science 443)*, Springer, 2014, pp. 244–254.
56. Cena A., **Gagolewski M.**, *OM3: Ordered maxitive, minitive, and modular aggregation operators – Part I: Axiomatic analysis under arity-dependence*, In: Bustince H. et al. (Eds.), *Aggregation Functions in Theory and in Practise (Advances in Intelligent Systems and Computing 228)*, Springer, 2013, pp. 93–103.
57. Cena A., **Gagolewski M.**, *OM3: Ordered maxitive, minitive, and modular aggregation operators – Part II: A simulation study*, In: Bustince H. et al. (Eds.), *Aggregation Functions in Theory and in Practise (Advances in Intelligent Systems and Computing 228)*, Springer, 2013, pp. 105–115.
58. **Gagolewski M.**, *Statistical hypothesis test for the difference between Hirsch indices of two Pareto-distributed random samples*, In: Kruse R. et al. (Eds.), *Synergies of Soft Computing and Statistics for Intelligent Data Analysis (Advances in Intelligent Systems and Computing 190)*, Springer, 2013, pp. 359–367.
59. **Gagolewski M.**, Dębski M., Nowakiewicz M., *Efficient algorithm for computing certain graph-based monotone integrals: The l_p -indices*, In: Mesiar R., Bacigal T. (Eds.), *Proc. Uncertainty Modelling*, 2013, STU Bratislava, ISBN:978-80-227-4067-8, 2013, pp. 17–23.
60. **Gagolewski M.**, *On the relation between effort-dominating and symmetric minitive aggregation operators*, In: Greco S. et al. (Eds.), *Advances in Computational Intelligence, Vol. III (Communications in Computer and Information Science 299)*, Springer, 2012, pp. 276–285.
61. Rowiński T., **Gagolewski M.**, *Internet a kryzys*, In: Jankowska M., Starzomska M. (Eds.), *Kryzys: Pułapka czy szansa?*, WN Akapit, 2011, pp. 211–224.
62. **Gagolewski M.**, Grzegorzewski P., *Axiomatic characterizations of (quasi-) L-statistics and S-statistics and the Producer Assessment Problem*, In: Galichet S. et al. (Eds.), *Proc. 7th conf. European Society for Fuzzy Logic and Technology EUSFLAT-LFA 2011*, Atlantis Press, 2011, pp. 53–58.
63. **Gagolewski M.**, Grzegorzewski P., *Metody i problemy naukometrii*, In: Rowiński T., Tadeusiewicz R. (Eds.), *Psychologia i informatyka. Synergia i kontradykcje*, Wyd. UKSW, Warszawa, 2010, pp. 103–125.
64. **Gagolewski M.**, Grzegorzewski P., *S-Statistics and their basic properties*, In: Borgelt C. et al. (Eds.), *Combining Soft Computing and Statistical Methods in Data Analysis (Advances in Intelligent and Soft Computing 77)*, Springer, 2010, pp. 281–288.
65. **Gagolewski M.**, Grzegorzewski P., *Ariety-monotonic extended aggregation operators*, In: Hüllermeier E., Kruse R., Hoffmann F. (Eds.), *Information Processing and Management of Uncertainty in Knowledge-Based Systems (Communications in Computer and Information Science 80)*, Springer, 2010, pp. 693–702.
66. **Gagolewski M.**, Grzegorzewski P., *O pewnym uogólnieniu indeksu Hirscha*, In: Kawalec P., Lipski P. (Eds.), *Kadry i infrastruktura nowoczesnej nauki: teoria i praktyka*, Vol. II, 1st International Conference on “Scientific Management”, Lublin, Poland, 20–22.11.2009, pp. 15–29.
67. **Gagolewski M.**, Grzegorzewski P., *Possible and necessary h-indices*, In: *Proc. IFSA World Congress and EUSFLAT Conference (IFSA/EUSFLAT 2009)*, Lisbon, Portugal, ISBN:978-989-95079-6-8, 2009, pp. 1691–1695.

4.6 Talks (Conferences, Seminars, etc.)

Invited Plenary Lectures and Tutorials

1. *Clustering on MSTs*, International Student Conference on Applied Mathematics and Informatics IS-CAMI' 18, Malenovice, Czechia, 10–13.05.2018.
2. *Stochastic properties of and agent-based models for the Hirsch index and other discrete Sugeno integrals*, 14th International Conference on Fuzzy Set Theory and Applications – FSTA 2018, Liptovský Ján, Slovakia, 02.02.2018.
3. *Aggregation of multidimensional data: A review*, 9th International Summer School on Aggregation Operators – AGOP 2017, Skövde, Sweden, 21.06.2017.
4. *Penalty-based fusion of complex data, computational aspects, and applications*, International Symposium on Aggregation and Structures – ISAS 2016, University of Luxembourg, 06.07.2016.

Other Invited

5. *R package stringi*, Text Analysis Developers' Workshop 2018, New York University, New York, NY, US, 20–21.04.2018.
6. *Algorytmy analizy skupień oparte na MST*, Studencka konferencja zastosowań matematyki DwuMIan' 18, Warsaw, Poland, 24.03.2018.
7. *R package stringi*, Text Analysis R Developers' Workshop 2017, London School of Economics, London, England, 21–22.04.2017.
8. *Genie: A new, fast, and outlier-resistant hierarchical clustering algorithm and its R interface*, European R Users Meeting, Poznań, Poland, 14.10.2016.
9. *Can the scientific assessment process be fair?*, Workshop on Research Evaluation, Free University of Bozen-Bolzano, Italy, 10.05.2013.

Seminars

10. *Aggregation of multidimensional data: A review*, School of Information Technology, Deakin University, Burwood, Victoria, Australia, 21.07.2017.
11. *Genie: Nowy, szybki i odporny algorytm analizy skupień*, Seminarium IBS PAN, Warszawa, Poland, 23.05.2017.
12. *Agregacja danych: Teoria, metody i zastosowania*, Wykład dla słuchaczy Studiów Doktoranckich IBS PAN, Warszawa, Poland, 05.03.2016.
13. $\wedge(R|ICU|i18n|regex)+\$, Seminarium Matematyczne Metody Informatyki, Instytut Matematyki, University of Silesia, Katowice, Poland, 20.04.2015.$
14. *Data aggregation from an algorithmic perspective*, IRAFM Seminar, University of Ostrava, Czechia, 04.06.2015.
15. *Indeks Hirscha i okolice*, Seminarium CeON, ICM UW, Warsaw, Poland, 12.03.2014.
16. *Scientific impact assessment – State of the art: Agregáčné funkcie: teória a aplikácie (Aggregation functions: theory and applications)*, Seminár z modelovania neurčitosti, Katedra matematiky a deskriptívnej geometrie, SvF STU, Bratislava, Slovakia, 17.04.2013.

Conference Talks

17. *Fitting symmetric fuzzy measures for discrete Sugeno integration*, 10th International Conference of EUSFLAT, Warsaw, Poland, 11–15.09.2017.
18. *Binary aggregation functions in software plagiarism detection*, IEEE International Conference on Fuzzy Systems (IEEE FUZZ' 17), Naples, Italy, 9–12.07.2017.
19. *Binary aggregation functions in software plagiarism detection*, 3rd International Symposium on Fuzzy Sets and Uncertainty Modeling (ISFS 2017), Rzeszów, Poland, 19–20.05.2017.

20. *Hierarchical clustering via penalty-based aggregation and the Genie approach*, 13th International Conference on Modeling Decisions for Artificial Intelligence (MDAI), Sant Julià de Lòria, Andorra, 20.09.2016.
21. *Fitting aggregation functions to data: Part I – Linearization and regularization*, 16th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU), Eindhoven, The Netherlands, 23.06.2016.
22. *Some issues in aggregation of multidimensional data*, 8th International Summer School on Aggregation Operators (AGOP), Katowice, Poland, 07.07.2015.
23. *Normalized WD_p WAM and WD_p OWA spread measures*, International Conference of IFSA/EUSFLAT 2015, Gijon, Spain, 02.07.2015.
24. *Sugeno integral-based confidence intervals for the theoretical h-index*, 7th International Conference on Soft Methods in Probability and Statistics (SMPS), Warsaw, Poland, 24.09.2014.
25. *OM3: Ordered maxitive, minitive, and modular aggregation operators – Part I: Axiomatic analysis under arity-dependence*, 7th International Summer School on Aggregation Operators (AGOP), Pamplona, Spain, 16–19.07.2013.
26. *Statistical hypothesis test for the difference between Hirsch indices of two Pareto-distributed random samples*, 6th International Conference on Soft Methods in Probability and Statistics (SMPS), Konstanz, Germany, 04–06.10.2012.
27. *On the relation between effort-dominating and symmetric minitive aggregation operators*, 14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU), Catania, Italy, 09–13.07.2012.
28. *Porównanie wybranych estymatorów teoretycznego indeksu Hirscha*, XXXVII Konferencja Statystyka Matematyczna, Wisła, Poland, 05–09.12.2011.
29. *Axiomatic characterizations of (quasi-) L-statistics and S-statistics and the Producer Assessment Problem*, 7th International Conference of EUSFLAT/LFA, Aix-Les-Bains, France, 18–22.07.2011.
30. *Podstawowe właściwości S-statystyk*, XXXVI Konferencja Statystyka Matematyczna, Wisła, Poland, 06–10.12.2010.
31. *S-Statistics and their basic properties*, 5th International Conference on Soft Methods in Probability and Statistics (SMPS), Oviedo, Spain, 28.09–01.10.2010.
32. *Ariety-monotonic extended aggregation operators*, 13th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU), Dortmund, Germany, 28.06–02.07.2010.
33. *Uogólniony indeks Hirscha a dwupróbkowe testy dla rodziny rozkładów Pareto II rodzaju*, XXXV Konferencja Statystyka Matematyczna, Wisła, Poland, 07–11.12.2009.
34. *O pewnym uogólnieniu indeksu Hirscha*, 1st International Conference on “Scientific Management”, Lublin, Poland, 20–22.11.2009.
35. *Possible and necessary h-indices*, 6th International Conference of IFSA/EUSFLAT, Lisbon, Portugal, 20–24.07.2009.

4.7 PhD Students

I was the supervisor of the following PhD students:

1. Maciej Bartoszek, PhD (cum laude), 2018;
A Source Code Similarity Assessment System for Functional Programming Languages Based on Machine Learning and Data Aggregation Methods (in Polish);
2. Anna Cena, PhD, 2018;
Adaptive Hierarchical Clustering Algorithms Based on Data Aggregation Methods (in Polish).
3. Jan Lasek, PhD, 2019;
New Data-Driven Rating Systems for Association Football.

I am an advisor of the following PhD students (work ongoing):

4. Agnieszka Geras, MSc (co-advisor: Grzegorz Siudem, PhD).

5 Reviewing and Other Academic Activities

- Member of the Scientific Council, Systems Research Institute, Polish Academy of Sciences (2011–2014, 2015–2018, and 2019–2022).
- Member of the Faculty Council, Faculty of Mathematics and Information Science, Warsaw University of Technology (since 2017).
- Head of the “MADAM – Methods for Analysis of Data: Algorithms and Modeling” research group (within the Faculty’s new Data Science Center) (since 2017) – <http://madam.mini.pw.edu.pl/>.
- Scientific program committee member for:
 1. 10th International Summer School on Aggregation Operators (AGOP 2019), Olomouc, Czechia,
 2. 11th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT 2019), Prague, Czechia,
 3. 2nd International Symposium on Aggregation and Structures (ISAS 2018), Valladolid, Spain,
 4. 3rd Conference on Information Technology, Systems Research and Computational Physics (IT-SRCP’18), Cracow, Poland,
 5. 17th World Congress of International Fuzzy Systems Association and 9th International Conference on Soft Computing and Intelligent Systems (IFSA/SCIS 2017), Otsu, Japan,
 6. 1st International Symposium on Aggregation and Structures (ISAS 2016), Luxembourg,
 7. 16th World Congress of the International Fuzzy Systems Association and 9th Conference of the European Society for Fuzzy Logic and Technology (IFSA/EUSFLAT 2015), Gijon, Spain.
- Special session organizer at:
 1. 10th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT 2017), Warsaw, Poland – Special Session *Algorithms for Data Aggregation and Fusion*,
 2. 16th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU 2016), Eindhoven, The Netherlands – Special Session *Computational Aspects of Data Aggregation and Complex Data Fusion*.
- Organizing committee member/chair for:
 1. 10th International Summer School on Aggregation Operators (AGOP 2019), Olomouc, Czechia – Conference Chairperson,
 2. 10th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT 2017), Warsaw, Poland – Stream on Data Analysis Coordinator,
 3. 8th International Conference Soft Methods in Probability and Statistics (SMPS 2016), Rome, Italy,
 4. 8th International Summer School on Aggregation Operators (AGOP 2015), Katowice, Poland,

5. 7th International Conference Soft Methods in Probability and Statistics – SMPS 2014, Warsaw, Poland,
 6. 37th Conference *Statystyka Matematyczna – Wiśła 2011*, Poland.
- Reviewer of research project proposals for:
 1. Fondo Nacional de Desarrollo Científico y Tecnológico (FONDECYT; The National Fund for Scientific and Technological Development), Chile; 2017 (1).
 - Reviewer of PhD theses:
 1. Jana Borzová; Faculty of Science, P. J. Šafárik University in Košice, Slovakia; 2018,
 2. Hossein Yazdani; Faculty of Electronics, Wrocław University of Science and Technology, Poland; 2018.
 - Peer-reviewer for the following international journals (172 reviews written):
 1. *ACM Transactions on Mathematical Software* (3),
 2. *Afrika Mathematica* (1),
 3. *Computational and Applied Mathematics* (1),
 4. *Control and Cybernetics* (1),
 5. *Data Mining and Knowledge Discovery* (3),
 6. *Demonstratio Mathematica* (1),
 7. *European Journal of Operational Research* (12),
 8. *Foundations of Computing and Decision Sciences* (1),
 9. *Fundamenta Informaticae* (1),
 10. *Fuzzy Optimization and Decision Making* (1),
 11. *Fuzzy Sets and Systems* (26),
 12. *Group Decision and Negotiation* (1),
 13. *IEEE Access* (1),
 14. *IEEE Transactions on Fuzzy Systems* (39),
 15. *Information Fusion* (5),
 16. *Information Sciences* (30),
 17. *International Journal of Applied Mathematics and Computer Science* (1),
 18. *International Journal of Approximate Reasoning* (4),
 19. *International Journal of Computational Intelligence Systems* (2),
 20. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems* (3),
 21. *Journal of Applied Analysis* (1),
 22. *Journal of Engineering Education* (1),
 23. *Journal of Informetrics* (4),
 24. *Journal of Intelligent and Fuzzy Systems* (3),
 25. *Journal of the Association for Information Science and Technology* (7),
 26. *Knowledge-Based Systems* (1),
 27. *Mathematical Problems in Engineering* (1),
 28. *Pervasive and Mobile Computing* (1),
 29. *RUDN Journal of Mathematics, Information Sciences and Physics* (1),
 30. *Scientometrics* (14),
 31. *Soft Computing* (1),

and international conferences (40 reviews written; IFSA/EUSFLAT 2009, IPMU 2010, IPMU 2012, SMPS 2014, EUSFLAT 2015, IPMU 2016, ISAS 2016, SMPS 2016, EUSFLAT 2017, IFSA/SCIS 2017, EUSFLAT 2019).
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6 Teaching-Related Activities

6.1 Faculty of Mathematics and Information Science, WUT

- Supervisor of the Data Science Curriculum (a.k.a. Dean's Proxy for Data Science Studies), Faculty of Mathematics and Information Science, Warsaw University of Technology (since 2018); key responsibilities:
 - managing, assessing, and synchronizing all data science programs,
 - handling undergraduate and graduate students' admissions,
 - coordinating students' transfers, providing advice regarding degree requirements and exchange programs (such as within the Erasmus framework),
 - counseling students with regards to their academic goals and how to meet them
- Vice-chairman of the Curriculum Committee for Data Science (Polish: *Inżynieria i analiza danych*), Faculty of Mathematics and Information Science, Warsaw University of Technology (since 2016); key responsibilities: molding, developing, and implementing a new degree in Data Science.
- Member of the Curriculum Committee for Mathematics and Data Analysis, Faculty of Mathematics and Information Science, Warsaw University of Technology (since 2019); key responsibilities: supervising the development and implementation of computer science-related courses.
- Initiator and Supervisor of the *Data Science* students' association, Warsaw University of Technology (since 2014).
- Warsaw University of Technology Rector's Award of the third degree for teaching achievements, 2017.
- Warsaw University of Technology Rector's Award of the third degree for teaching achievements, 2015.
- Courses:

2018–	Structured Data Processing
2017–	Introduction to Programming and Data Processing
2016–	Data Processing in R and Python
2015–	Data Processing and Analysis in Python
2012–	Programming and Data Analysis in R
2010–2016	Algorithms and Introduction to Programming
2014	Advanced R Programming
2009–2012	Mathematical Statistics I
2008–2013	Computer Statistics
2010–2011	Programming in x86 Assembler
2008–2011	Algorithms and Data Structures II
2007–2011	Object-oriented Programming in C++

- Scientific supervisor of 14 BSc and MSc theses in Mathematics and Computer Science (23 students):

2017/2018	<i>14. Konstrukcja systemu rekomendacyjnego dla danych muzycznych</i> (<i>A Music Recommendation System</i>) FMIS WUT, Mathematics, MSc
2016/2017	<i>13. Implementacja systemu generowania dynamicznych raportów opartych na jądrach Jupyter</i> (<i>Dynamic Report Generation based on Jupyter Kernels</i>) FMIS WUT, Computer Science, MSc
2015/2016	<i>12. Automatyczna kategoryzacja tematyczna tekstów przy użyciu metryk w przestrzeni ciągów znaków</i> (<i>Text clustering based on string metrics</i>) FMIS WUT, Mathematics, MSc

- 2015/2016 11. *Mobilny asystent komiwojażera oparty na platformie Salesforce i Google API*
(*Mobile salesman assistant based on the Salesforce platform and Google API*)
FMIS WUT, Computer Science, MSc
- 2014/2015 10. *Konstrukcja systemu rekomendacyjnego opartego na automatycznym modelowaniu tematyki danych tekstowych przy użyciu metody LDA*
(*A text topic modeling-based recommender system utilizing the Latent Dirichlet Allocation method*)
FMIS WUT, Mathematics, MSc
- 2014/2015 9. *New methods for calculating optimal safety stocks at Procter&Gamble*
FMIS WUT, Mathematics, MSc
- 2014/2015 8. *Agregacja informacji na temat pakietów dla środowiska R – interfejs WWW*
(*Aggregation of data on R packages – a Web interface*)
FMIS WUT, Computer Science, BSc
- 2013/2014 7. *Ciągła integracja w inżynierii oprogramowania*
(*Continuous integration in software engineering*)
FMIS WUT, Computer Science, MSc
- 2012/2013 6. *Podstawowe działania w logice rozmytej: t-normy, t-konormy, negacje i implikacje rozmyte*
(*Basic fuzzy logic operations: t-norms, t-conorms, fuzzy negations and implications*)
FMIS WUT, Mathematics, BSc
- 2012/2013 5. *Cyfrowe przetwarzanie sygnałów audio na przykładzie implementacji efektów gitarowych*
(*Digital audio processing: Implementing guitar effects*)
FMIS WUT, Computer Science, BSc
- 2010/2011 4. *Badania kwestionariuszowe w naukach społecznych – moduł dla systemu Drupal*
(*A Drupal module for conducting questionnaire surveys in the Social Sciences*)
FMIS WUT, Computer Science, BSc
- 2010/2011 3. *Drupal and R for Research in the Social Sciences*
FMIS WUT, Computer Science, BSc
- 2010/2011 2. *Implementacja gry Blokus*
(*An implementation of the Blokus game*)
FMIS WUT, Computer Science, BSc
- 2009/2010 1. *Naukometryczne wskaźniki na poziomie indywidualnym oparte na analizie cytowań*
(*Citation-based bibliometric impact indices*)
FMIS WUT, Computer Science, BSc

6.2 Center for Advanced Studies, Warsaw University of Technology

- Courses:

2018 Python for Data Processing and Analysis

6.3 Institute of Computer Science, Polish Academy of Sciences

- Courses:

2014–2015 Advanced Data Analysis Software Development in R
(e-learning course, Interdisciplinary PhD studies program
– 3 batches)

6.4 Warsaw School of Information Technology

- Courses:

2009–2011 Statistical Decision Support Methods

2008–2010 Probability and Statistics

6.5 Short Courses and Other Teaching Activities

- Courses:

04.2019	NumPy, Pandas, TensorFlow, Advanced Python	Data Science Retreat, Berlin (Batch 18)
01.2019	NumPy, Pandas, TensorFlow, Advanced Python	Data Science Retreat, Berlin (Batch 17)
09.2018	NumPy, Pandas, TensorFlow, Advanced Python	Data Science Retreat, Berlin (Batch 16)
07.2018	NumPy, Pandas, TensorFlow, Advanced Python	Data Science Retreat, Berlin (Batch 15)
05.2018	NumPy, Pandas, TensorFlow, Advanced Python	Data Science Retreat, Berlin (Batch 14)
02.2018	NumPy, Pandas, TensorFlow, Advanced Python	Data Science Retreat, Berlin (Batch 13)
09.2017	NumPy, Pandas, TensorFlow, Advanced Python	Data Science Retreat, Berlin (Batch 12)
06.2017	NumPy, Pandas, TensorFlow, Advanced Python	Data Science Retreat, Berlin (Batch 11)
05.2017	NumPy, Pandas, TensorFlow, Advanced Python	Data Science Retreat, Berlin (Batch 10)
01.2017	NumPy, Pandas, TensorFlow, Advanced Python	Data Science Retreat, Berlin (Batch 09)
09.2016	Advanced Python, Data Structures and Algorithms for Data Science	Data Science Retreat, Berlin (Batch 08)
05.2016	Deep dive into R, Speeding up R and Python, Data Structures and Algorithms for Data Science	Data Science Retreat, Berlin (Batch 07)
02.2016	Speeding up R and Python, Data Structures and Algorithms for Data Science	Data Science Retreat, Berlin (Batch 06)
10.2015	Deep dive into R, Speeding up R and Python	Data Science Retreat, Berlin (Batch 05)
06.2015	Intro to R, Advanced R, Rcpp	Data Science Retreat, Berlin (Batch 04)
06.2015	String processing, Good Development Practices in R, Rcpp	GfK, Berlin
06.2015	Intro to R for Researchers	IRAFM, Ostrava
02.2015	Intro to R, Advanced R, Rcpp	Data Science Retreat, Berlin (Batch 03)
08.2014	Intro to R, Advanced R	Data Science Retreat, Berlin (Batch 02)
07.2014	Rcpp	Data Science Retreat, Berlin (Batch 01)
02.2014	Introduction to Data Analysis with R	Business Analytics, WUT
10.2013	Introduction to R	Business Analytics, WUT

7 Open Source Software Development

- Google *Summer of Code 2016* – Mentor;
Project: *RE2 Regular Expressions in R*;
Student: Qin Wenfeng.
- Author of open source Python packages:

1. *genieclust* (<https://pypi.org/project/genieclust/>).

- Author of open source R packages:

1. *stringi* (<http://cran.r-project.org/package=stringi>)
– one of the most often downloaded R packages (over 18M downloads),
2. *genie* (<http://cran.r-project.org/package=genie>),
3. *FuzzyNumbers* (<http://cran.r-project.org/package=FuzzyNumbers>),
4. *agop* (<http://cran.r-project.org/package=agop>),
5. *CITAN* (<http://cran.r-project.org/package=CITAN>),
6. *TurtleGraphics* (<http://cran.r-project.org/package=TurtleGraphics>).