

## 1 Scientific Degrees

- 20.10.2017      Systems Research Institute, Polish Academy of Sciences  
**Habilitation in computer science**  
*New algorithms for data aggregation and analysis: construction, properties, and applications*  
Submitted for review: 11.2016
- 21.12.2011      Systems Research Institute, Polish Academy of Sciences  
**Ph.D. in computer science**  
*Aggregation operators and their application in a formal model for a quality evaluation system of scientific research*  
Submitted for review: 06.2011
- 30.06.2008      Faculty of Mathematics and Information Science, Warsaw University of Technology  
**M.Sc. in computer science** (with honors)  
*Simulation of predator–prey behavior*
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## 2 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*
- 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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## 3 Scientific Activities

### 3.1 Scientific Interests

- Complex data aggregation and fusion, prototype learning,
- Machine learning, data analysis and mining algorithms,
- Computational statistics, statistical software.

### 3.2 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, co-investigator (principal 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, principal investigator, years 2015–2017 (30 months).
3. Research task A4.1.2, Systems Research Institute, Polish Academy of sciences, *Data aggregation algorithms – theory and applications* (2014), *New algorithms for data aggregation and fusion* (2015), *Algorithms for data aggregation and fusion – theory and applications in decision making* (2016), *Construction and investigation of new methods for data aggregation and analysis* (2017), *Data aggregation methods in cluster analysis* (2018) — principal investigator.

### 3.3 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.

### 3.4 Short-term Research Visits

- 17.07.2017 – Deakin University, Burwood, Victoria, 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

### 3.5 Publications

#### Research Monographs

1. **Gagolewski M.**, *Data fusion: Theory, methods, and applications*, Institute of Computer Science, Polish Academy of Sciences, 2015, pp. 290, 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, pp. 369, 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, pp. 509, ISBN: 978-83-01-17461-3; 2nd ed., revised and extended – 2016, pp. 550, ISBN: 978-83-01-18939-6.
4. Grzegorzewski P., **Gagolewski M.**, Bobecka-Wesołowska K., *Wnioskowanie statystyczne z wykorzystaniem środowiska R (Statistical inference with R)*, Biuro ds. Projektu „Program Rozwojowy Politechniki Warszawskiej”, 2014, pp. 183, ISBN: 978-83-93-72601-1.

## Edited Volumes

5. 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, pp. 535, ISBN: 978-3-319-42971-7.
6. 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, pp. 294, ISBN: 978-3-319-10764-6.

## Journal Articles

7. Lasek J., **Gagolewski M.**, The efficacy of league formats in ranking teams, *Statistical Modelling*, 2018, IF 1.429, doi:10.1177/1471082X18798426, in press.
8. 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
9. **Gagolewski M.**, Penalty-based aggregation of multidimensional data, *Fuzzy Sets and Systems* **325**, 2017, pp. 4–20. IF 2.098
10. 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
11. **Gagolewski M.**, Bartoszek M., Cena A., Genie: A new, fast, and outlier-resistant hierarchical clustering algorithm, *Information Sciences* **363**, 2016, pp. 8–23. IF 4.038
12. 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
13. 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
14. 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
15. **Gagolewski M.**, Spread measures and their relation to aggregation functions, *European Journal of Operational Research* **241**(2), 2015, pp. 469–477. IF 2.358
16. 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
17. 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
18. **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
19. **Gagolewski M.**, Scientific impact assessment cannot be fair, *Journal of Informetrics* **7**(4), 2013, pp. 792–802. IF 3.580
20. 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
21. **Gagolewski M.**, On the relationship between symmetric maxitive, minitive, and modular aggregation operators, *Information Sciences* **211**, 2013, pp. 170–180. IF 3.893
22. **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
23. **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
24. **Gagolewski M.**, Bibliometric impact assessment with R and the *CITAN* package, *Journal of Informetrics* **5**(4), 2011, pp. 678–692. IF 4.153

25. **Gagolewski M.**, Grzegorzewski P., A geometric approach to the construction of scientific impact indices, *IF 2.167*  
*Scientometrics* **81**(3), 2009, pp. 617–634.

#### Papers in Edited Volumes and Proceedings

26. 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.
27. **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.
28. Bartoszuk M., **Gagolewski M.**, *Binary aggregation functions in software plagiarism detection*, In: *Proc. FUZZ-IEEE'17*, 2017, 8015582.
29. Cena A., **Gagolewski M.**, *OWA-based linkage and the Genie correction for hierarchical clustering*, In: *Proc. FUZZ-IEEE'17*, 2017, 8015652.
30. **Gagolewski M.**, Cena A., Bartoszuk 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.
31. Bartoszuk 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.
32. Bartoszuk 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.
33. 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.
34. 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.
35. Bartoszuk 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.
36. **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.
37. 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.
38. **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.
39. **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.
40. 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.
41. **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.

42. **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.
43. 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.
44. Coroianu L., **Gagolewski M.**, Grzegorzewski P., Adabitarbar Firozja M., Houliari 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.
45. 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.
46. 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.
47. **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.
48. **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.
49. **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.
50. **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.
51. **Gagolewski M.**, Grzegorzewski P., *Arity-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.
52. **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.

#### Other Peer-Reviewed Papers

53. 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.
54. 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.
55. **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.
56. Rowiński T., **Gagolewski M.**, *Internet a kryzys*, In: Jankowska M., Starzomska M. (Eds.), *Kryzys: Pułapka czy szansa?*, WN Akapit, 2011, pp. 211–224.
57. **Gagolewski M.**, Grzegorzewski P., *Metody i problemy naukometrii*, In: Rowiński T., Tadeusiewicz R. (Eds.), *Psychologia i informatyka. Synergia i kontradycje*, Wyd. UKSW, Warszawa, 2010, pp. 103–125.

58. **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.
59. Rowiński T., **Gagolewski M.**, Preferencje i postawy wobec pomocy online, *Studia Psychologica UKSW* 7, 2007, pp. 195–210.

### 3.6 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, Gijón, 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. *Arity-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.

### 3.7 Ph.D. Students

I was the supervisor of the following Ph.D. students:

1. Maciej Bartoszuk, Ph.D. (cum laude);  
*A source code similarity assessment system for functional programming languages based on machine learning and data aggregation methods* (in Polish)

I am the supervisor of the following Ph.D. students (work ongoing):

1. Anna Cena, M.Sc.;  
*Adaptive hierarchical clustering algorithms based on data aggregation methods* (in Polish),
2. Jan Lasek, M.Sc.;  
*New data-driven rating systems for association football.*

I am an adviser of the following Ph.D. students:

1. Agnieszka Geras, M.Sc.
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## 4 Reviewing and Other Academic Activities

- Member of the Scientific Council, Systems Research Institute, Polish Academy of Sciences (elected twice, 2011–2014 and 2015–2018).
- Member of the Faculty Council, Faculty of Mathematics and Information Science, Warsaw University of Technology (since 2017).
- Seminar “MADAM – Methods for Analysis of Data: Algorithms and Modeling” – Organizer (since 2017) – <http://madam.mini.pw.edu.pl/>.
- Scientific program committee member for:
  1. 11th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT 2019), Prague, Czechia,
  2. 2nd International Symposium on Aggregation and Structures (ISAS 2018), Valladolid, Spain,
  3. 3rd Conference on Information Technology, Systems Research and Computational Physics (IT-SRCP'18), Cracow, Poland,
  4. 17th World Congress of International Fuzzy Systems Association and 9th International Conference on Soft Computing and Intelligent Systems (IFSA/SCIS 2017), Otsu, Japan,
  5. 1st International Symposium on Aggregation and Structures (ISAS 2016), Luxembourg,
  6. 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 for:
  1. 10th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT 2017), Warsaw, Poland – Stream on Data Analysis Coordinator,
  2. 8th International Conference Soft Methods in Probability and Statistics (SMPS 2016), Rome, Italy,
  3. 8th International Summer School on Aggregation Operators (AGOP 2015), Katowice, Poland,
  4. 7th International Conference Soft Methods in Probability and Statistics – SMPS 2014, Warsaw, Poland,



5. 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 Ph.D. 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 (154 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* (10),
8. *Foundations of Computing and Decision Sciences* (1),
9. *Fuzzy Optimization and Decision Making* (1),
10. *Fuzzy Sets and Systems* (20),
11. *Group Decision and Negotiation* (1),
12. *IEEE Access* (1),
13. *IEEE Transactions on Fuzzy Systems* (35),
14. *Information Fusion* (3),
15. *Information Sciences* (30),
16. *International Journal of Approximate Reasoning* (4),
17. *International Journal of Computational Intelligence Systems* (2),
18. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems* (3),
19. *Journal of Applied Analysis* (1),
20. *Journal of Engineering Education* (1),
21. *Journal of Informetrics* (2),
22. *Journal of Intelligent and Fuzzy Systems* (3),
23. *Journal of the American Society for Information Science and Technology* (7),
24. *Knowledge-Based Systems* (1),
25. *Mathematical Problems in Engineering* (1),
26. *Pervasive and Mobile Computing* (1),
27. *RUDN Journal of Mathematics, Information Sciences and Physics* (1),
28. *Scientometrics* (14),
29. *Soft Computing* (1),

and international conferences (37 reviews written; IFSA/EUSFLAT 2009, IPMU 2010, IPMU 2012, SMPS 2014, EUSFLAT 2015, IPMU 2016, ISAS 2016, SMPS 2016, EUSFLAT 2017, IFSA/SCIS 2017).

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## 5 Teaching Activities

### 5.1 Faculty of Mathematics and Information Science, WUT

- Vice-chairman of the Program Commission for the Data Science (Polish: *Inżynieria i analiza danych*) curriculum, Faculty of Mathematics and Information Science, Warsaw University of Technology (since 2016).
- Dean's Proxy (Supervisor) for Data Science Studies, FMIS WUT (since 2018).

- Scientific 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 B.Sc. and M.Sc. 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, M.Sc.
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, M.Sc.
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, M.Sc.
2015/2016	<i>11. Mobilny asystent komiwojażera oparty na platformie Salesforce i Google API</i> ( <i>Mobile salesman assistant based on the Salesforce platform and Google API</i> ) FMIS WUT, Computer Science, M.Sc.
2014/2015	<i>10. Konstrukcja systemu rekomendacyjnego opartego na automatycznym modelowaniu tematyki danych tekstowych przy użyciu metody LDA</i> ( <i>A text topic modeling-based recommender system utilizing the Latent Dirichlet Allocation method</i> ) FMIS WUT, Mathematics, M.Sc.
2014/2015	<i>9. New methods for calculating optimal safety stocks at Procter&amp;Gamble</i> FMIS WUT, Mathematics, M.Sc.
2014/2015	<i>8. Agregacja informacji na temat pakietów dla środowiska R – interfejs WWW</i> ( <i>Aggregation of data on R packages – a Web interface</i> ) FMIS WUT, Computer Science, B.Sc.
2013/2014	<i>7. Ciągła integracja w inżynierii oprogramowania</i> ( <i>Continuous integration in software engineering</i> ) FMIS WUT, Computer Science, M.Sc.
2012/2013	<i>6. Podstawowe działania w logice rozmytej: t-normy, t-konormy, negacje i implikacje rozmyte</i> ( <i>Basic fuzzy logic operations: t-norms, t-conorms, fuzzy negations and implications</i> ) FMIS WUT, Mathematics, B.Sc.
2012/2013	<i>5. Cyfrowe przetwarzanie sygnałów audio na przykładzie implementacji efektów gitarowych</i> ( <i>Digital audio processing: Implementing guitar effects</i> ) FMIS WUT, Computer Science, B.Sc.

- 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, B.Sc.
- 2010/2011 3. *Drupal and R for Research in the Social Sciences*  
FMIS WUT, Computer Science, B.Sc.
- 2010/2011 2. *Implementacja gry Blokus*  
(*An implementation of the Blokus game*)  
FMIS WUT, Computer Science, B.Sc.
- 2009/2010 1. *Naukometryczne wskaźniki na poziomie indywidualnym oparte na analizie cytowań*  
(*Citation-based bibliometric impact indices*)  
FMIS WUT, Computer Science, B.Sc.

## 5.2 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)

## 5.3 Warsaw School of Information Technology

- Courses:

- 2009–2011 Statistical Decision Support Methods  
2008–2010 Probability and Statistics

## 5.4 Short Courses and Other Teaching Activities

- Courses:

- |         |   |   |
|---------|---|---|
| 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                 |

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## 6 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 14M 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>).