

## ŻYCIORYS

### prof. dr hab. inż. Szymon Jaroszewicz

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#### Edukacja, zatrudnienie

2020	Tytuł profesora
2020–2023	Sekretarz Naukowy Komitetu Informatyki PAN
2019 –	Kierownik Zespołu Analizy i Modelowania Statystycznego w Instytucie Podstaw Informatyki, Polskiej Akademii Nauk
2010 –	Instytut Podstaw Informatyki, Polska Akademia Nauk, profesor nadzwyczajny
2010	Habilitacja, Instytut Podstaw Informatyki, PAN
2006 – 2018	Instytut Łączności, profesor nadzwyczajny
2004 – 2009	Politechnika Szczecińska, adiunkt
2003	Doktorat, University of Massachusetts w Bostonie. Tytuł pracy: “Information Theoretical and Combinatorial Methods in Data Mining”
1999 – 2003	Studia doktoranckie, kierunek informatyka, University of Massachusetts w Bostonie
1998 – 1999	stypendium Fulbrighta
1998	Dyplom: magister inżynier informatyk, Instytut Informatyki Politechniki Szczecińskiej
1993 – 1998	Studia magisterskie, Politechnika Szczecińska, kierunek informatyka

#### Stypendia, nagrody, wyróżnienia

2007	Nagroda za najlepszy referat na 11th European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD)
2005	Stypendium dla młodych naukowców Fundacji na Rzecz Nauki Polskiej
2000	Stypendium im. Randall G. Malbone na wydziale matematyki i informatyki University of Massachusetts w Bostonie
1998	Stypendium Fulbrighta na rok akademicki 1998/99: praca naukowa na University of Massachusetts w Bostonie
1997, 1996	Stypendia Ministra Edukacji Narodowej za wybitne osiągnięcia naukowe na lata akademickie 1996/97 i 1997/98

#### Granty

##### Kierownictwo:

2011	„Modelowanie rnicowe dla potrzeb bada marketingowych i biomedycznych” grant MNiSW/NCN nr. N N516 414938
2010	„PaCal – biblioteka do obliczeń arytmetycznych na zmiennych losowych” grant MNiSW/NCN nr. N N516 068537
2002	Grant wewnętrzny na University of Massachusetts w Bostonie

## Udział:

- |      |  |
|------|--|
| 2019 | „Budowa zintegrowanego systemu statystyki cen detalicznych”<br>grant NCBiR w programie „Gospostrateg”  |
| 2102 | „Mechanizmy rekomendacji wirtualnych zespołów dla realizacji<br>złożonych zadań wymagających otwartej współpracy”, grant<br>NCN nr 2012/05/B/ST6/03364 |
| 2010 | „Inżynieria Internetu Przyszłości”, POIG 01.01.02-00-045/09-00   |

## Działalność organizacyjna

- Członek Kolegium Redaktorskiego czasopism Data Mining and Knowledge Discovery (od 2009), Machine Learning oraz Fundamenta Informaticae
- Sekretarz Komitetu Informatyki PAN, członek Prezydium Komitetu (kadencja 2020–2023)
- członek Zespołu specjalistycznego do spraw projektów zgłoszonych do programu pod nazwą „Diametowy Grant” przy Ministerstwie Nauki i Szkolnictwa Wyższego (10.02.2012–31.12.2014)
- członek Zespołu interdyscyplinarnego do spraw projektów zgłoszonych do programu pod nazwą „Iuventus Plus” przy Ministerstwie Nauki i Szkolnictwa Wyższego (21.11.2011–31.12.2014)
- Członek komitetów programowych najważniejszych konferencji z dziedziny data mining: KDD '14 '17 '18 '19 '20 '21, IJCAI '15 '18 '19 '20 '21 (senior PC), ICDM '08 '10 '11 '12 '13 '16, ECML/PKDD '06 '07 '08 '09 '11 '13 '14 '15 '16 '17 '18 '19 '21, ECML/PKDD Journal Track '19 '20 '21, CIKM '08 '09 '10 '17 '18 '20, SIAM DM '17 '18 '19 '20 '21, PAKDD '06 '07 '08 '09 '11 '12 '19, ISMIS '17, ACM SAC (Data Mining Track) '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18 '19 '20 '21, KDIR '09 '10 '11 '12 '13 '14
- Recenzent czasopism: Data Mining and Knowledge Discovery, ACM Transactions on Database Systems, IEEE Transactions on Knowledge and Data Engineering, Data and Knowledge Engineering, IEEE Transactions on Information Theory, Transactions on Rough Sets, Knowledge and Information Systems, IEEE Transactions on Neural Networks and Learning Systems i innych

## Współpraca naukowa związana z Data Mining

- Data-mining atrybutów numerycznych, współpraca z B. Goethalsem i T. Caldersem z Uniwersytetu Antwerpskiego
- Algorytmy oparte na próbkowaniu, współpraca z prof. T. Schefferem z Uniwersytetu Humboldta w Berlinie

## Informacje dodatkowe

- **Języki:** angielski (bardzo dobra znajomość), francuski, niemiecki (podstawowa znajomość)

## Lista publikacji

- [1] B. Żogała-Siudem and S. Jaroszewicz. Fast stepwise regression based on multidimensional indexes. *Information Sciences*, 549:288–309, 2021.

- [2] R. M. Gubela, S. Lessmann, and S. Jaroszewicz. Response transformation and profit decomposition for revenue uplift modeling. *European Journal of Operational Research*, 283(2):647–661, 2020.
- [3] Krzysztof Rudaś and Szymon Jaroszewicz. Shrinkage estimators for uplift regression. In *Proc. of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD'19)*, Wrzburg, Germany, Sep 2019.
- [4] Krzysztof Rudaś and Szymon Jaroszewicz. Linear regression for uplift modeling. *Data Mining and Knowledge Discovery*, 32(5):1275–1305, Sep 2018.
- [5] Oskar Jarczyk, Szymon Jaroszewicz, Adam Wierzbicki, Kamil Pawlak, and Michal Jankowski-Lorek. Surgical teams on github: Modeling performance of github project development processes. *Information and Software Technology*, 100:32–46, 2018.
- [6] M. Sołtys and S. Jaroszewicz. Boosting algorithms for uplift modeling. *CoRR*, abs/1807.07909, 2018. arXiv preprint.
- [7] L. Zaniewicz and S. Jaroszewicz. Lp-support vector machines for uplift modeling. *Knowledge and Information Systems*, 53(1):269–296, Oct 2017.
- [8] S. Jaroszewicz. Uplift modeling. In C. Sammut and G. Webb, editors, *Encyclopedia of Machine Learning and Data Mining*, pages 1304–1309. Springer US, Boston, MA, 2017.
- [9] M. Jankowski-Lorek, S. Jaroszewicz, Ł. Ostrowski, and A. Wierzbicki. Verifying social network models of wikipedia knowledge community. *Information Sciences*, 339:158–174, 2016.
- [10] S. Jaroszewicz and L. Zaniewicz. Székely regularization for uplift modeling. In S. Matwin and J. Mielniczuk, editors, *Challenges in Computational Statistics and Data Mining*, pages 135–154. Springer International Publishing, Cham, 2016.
- [11] M. Sołtys, S. Jaroszewicz, and P. Rzepakowski. Ensemble methods for uplift modeling. *Data Mining and Knowledge Discovery*, 29(6):1531–1559, Nov 2015.
- [12] L. Wyrwicz, S. Jaroszewicz, P. Rzepakowski, and K. Bujko. Uplift modeling in selection of patients to either radiotherapy or radiochemotherapy in resectable rectal cancer: reassessment of data from the phase 3 study. *Annals of Oncology*, 26(suppl\_4):iv107, 2015. conference abstract.
- [13] S. Jaroszewicz and P. Rzepakowski. Uplift modeling with survival data. In *ACM SIGKDD Workshop on Health Informatics (HI-KDD'14)*, New York City, USA, August 2014.
- [14] M. Korzeń and Szymon Jaroszewicz. PaCAL: A python package for arithmetic computations with random variables. *Journal of Statistical Software*, 57(10), 5 2014.
- [15] O. Jarczyk, B. Gruszka, S. Jaroszewicz, L. Bukowski, and A. Wierzbicki. Github projects. Quality analysis of open-source software. In *Proc. of the 6th International Conference on Social Informatics (SocInfo'14)*, pages 80–94, Barcelona, Spain, November 2014. **Best paper nominee.**

- [16] B. Żogała-Siudem and S. Jaroszewicz. Fast stepwise regression on Linked Data. In *Proc. of the 1st Workshop on Linked Data for Knowledge Discovery (LD4KD) co-located with ECML/PKDD'14*, pages 17–26, Nancy, France, September 2014.
- [17] L. Zaniewicz and S. Jaroszewicz. Support vector machines for uplift modeling. In *The First IEEE ICDM Workshop on Causal Discovery (CD 2013)*, Dallas, Texas, December 2013.
- [18] L. Bukowski, M. Jankowski-Lorek, S. Jaroszewicz, and M. Sydow. What makes a good team of Wikipedia editors? A preliminary statistical analysis. In *Proc. of the 5th International Conference on Social Informatics (SocInfo'14)*, pages 14–28, Kyoto, Japan, November 2013.
- [19] M. Korzeń, S. Jaroszewicz, and P. Klęsk. Logistic regression with weight grouping priors. *Computational Statistics & Data Analysis*, 64:281–298, August 2013.
- [20] P. Rzepakowski and S. Jaroszewicz. Decision trees for uplift modeling with single and multiple treatments. *Knowledge and Information Systems*, 32:303–327, August 2012.
- [21] M. Jaśkowski and S. Jaroszewicz. Uplift modeling for clinical trial data. In *ICML 2012 Workshop on Machine Learning for Clinical Data Analysis*, Edinburgh, Scotland, June 2012.
- [22] P. Rzepakowski and S. Jaroszewicz. Uplift modeling in direct marketing. *Journal of Telecommunications and Information Technology*, 2:43–50, 2012.
- [23] S. Jaroszewicz and M. Korzeń. Arithmetic operations on independent random variables: A numerical approach. *SIAM Journal on Scientific Computing*, 34:A1241–A1265, 2012.
- [24] P. Rzepakowski and S. Jaroszewicz. Decision trees for uplift modeling. In *Proc. of the 10th International Conference on Data Mining (ICDM)*, pages 441–450, Sydney, Australia, December 2010.
- [25] S. Jaroszewicz. Using interesting sequences to interactively build hidden markov models. *Data Mining and Knowledge Discovery*, 21(1):186–220, 2010.
- [26] S. Jaroszewicz. Discovering interesting patterns in numerical data with background knowledge. In Y.S. Koh and N. Rountree, editors, *Rare Association Rule Mining and Knowledge Discovery: Technologies for Infrequent and Critical Event Detection*, pages 118–130. IGI Global, 2010.
- [27] S. Jaroszewicz, T. Scheffer, and D.A. Simovici. Scalable pattern mining with bayesian networks as background knowledge. *Data Mining and Knowledge Discovery*, 18(1):56–100, 2009.
- [28] S. Jaroszewicz. Interactive HMM construction based on interesting sequences. In *Proc. of Local Patterns to Global Models (LeGo'08) Workshop at the 12th European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD'08)*, pages 82–91, Antwerp, Belgium, 2008.
- [29] S. Jaroszewicz. Minimum variance associations — discovering relationships in numerical data. In *The Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, pages 172–183, Osaka, Japan, 2008.

- [30] T. Calders and S. Jaroszewicz. Efficient auc optimization for classification. In *11th European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD'07)*, pages 42–53, Warsaw, Poland, 2007. **Best paper award.**
- [31] S. Jaroszewicz, L. Ivantysynova, and T. Scheffer. Schema matching on streams with accuracy guarantees. *Intelligent Data Analysis*, 12(3):253–270, 2008.
- [32] S. Jaroszewicz and M. Korzeń. Approximating representations for large numerical databases. In *7th SIAM International Conference on Data Mining (SDM'07)*, pages 521–526, Minneapolis, MN, 2007.
- [33] S. Jaroszewicz, L. Ivantysynova, and T. Scheffer. Accurate schema matching on streams. In *4th International Workshop on Knowledge Discovery from Data Streams at the 10th European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD'06)*, pages 3–12, 2006.
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- [35] S. Jaroszewicz. Polynomial association rules with applications to logistic regression. In *Proc. of the 12th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD'06)*, 2006.
- [36] S. Jaroszewicz and M. Korzeń. Comparison of information theoretical measures for reduct finding. In *Proc. of the 8th International Conference on Artificial Intelligence and Soft Computing (ICAISC'06)*, LNAI 4029, pages 518–527, Zakopane, June 2006. Springer-Verlag.
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- [42] M. Korzeń and S. Jaroszewicz. Finding reducts without building the discernibility matrix. In *Proceedings of the Fifth International Conference on Intelligent Systems Design and Applications (ISDA'05)*, pages 450–455, Wrocław, Poland, 2005.

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- [45] Szymon Jaroszewicz and Dan Simovici. Interestingness of frequent itemsets using bayesian networks as background knowledge. In *10th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD 2004)*, pages 178–186, Seattle, WA, August 2004.
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- [47] Szymon Jaroszewicz. *Information Theoretical and Combinatorial Methods in Data Mining*. PhD thesis, University of Massachusetts Boston, December 2003.
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- [53] D. A. Simovici and S. Jaroszewicz. An axiomatization of partition entropy. *IEEE Transactions on Information Theory*, 48(7):2138–2142, July 2002.
- [54] S. Jaroszewicz and D. A. Simovici. A general measure of rule interestingness. In *5th European Conference on Principles of Data Mining and Knowledge Discovery (PKDD 2001)*, pages 253–265, 2001.
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- [56] D. A. Simovici and S. Jaroszewicz. On information-theoretical aspects of relational databases. In C. Calude and G. Paun, editors, *Finite versus Infinite*. Springer Verlag, London, 2000.

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- [58] S.Jaroszewicz. Minimization of incompletely specified multiple-valued functions in reed-muller domain. In *Proc. of the 19th International Scientific Symposium for Students and Young Research Employees*, pages 121–126, Zielona Góra, Poland, 1997. (in Polish).
- [59] S.Jaroszewicz, V.Shmerko, and S.Yanushkevich. Exact irredundant searching for a minimal reed-muller expansion for an incompletely specified mvl function. In *Proc. of the International Conference on Application of Computer Systems*, pages 65–74, Szczecin, Poland, 1996.
- [60] A.D.Zakrevskij, S.N.Yanushkevich, and S.Jaroszewicz. Minimization of reed-muller expansions for systems of incompletely specified mvl functions. In *Proc. of the International Conference on Methods and Models in Automatics and Robotics (MMAR'96)*, pages 1085–1090, Międzyzdroje, Poland, 1996.