

KRZYSZTOF DEMBCZYŃSKI

Curriculum Vitae



Office Address Politechnika Poznańska (Poznan University of Technology – PUT)
Instytut Informatyki (Institute of Computing Science)
ul. Piotrowo 2, 60-965 Poznań, Poland

Phone +48 61 665 2936

E-mail kdembczynski@cs.put.poznan.pl

Homepage <http://www.cs.put.poznan.pl/kdembczynski>

Research interests

Machine learning with a particular focus on extreme classification, multi-label classification, structured output prediction, and preference learning

Personal information

Date and Place of Birth February 10, 1977, Poznań, Poland

Citizenship Polish

Sex Male

Marital status Married to Katarzyna Habersack (since, July 23, 2005)

Children Marianna (September 17, 2006) and Hanna (July 21, 2009)

Employment

2011–present Assistant Professor in the Faculty of Computing at PUT

2016–2018 Head of Data Science in Roq.ad (www.roq.ad)

2009–2011 Postdoctoral Researcher in the Knowledge Engineering & Bioinformatics (KEBI) Lab at Philipps Universität Marburg

2001–2009 Research Assistant and Lecturer in the Laboratory of Intelligent Decision Support Systems at PUT

Scientific degrees and education

May 29, 2018 Habilitation obtained from Faculty of Computing at PUT

March 31, 2009 Ph.D. degree with honors obtained from Faculty of Computing Science and Management at PUT

1996–2001 Bachelor and Master studies in Computer Science at PUT

1992–1996 Secondary School, Adam Mickiewicz Lyceum No. 8 in Poznań

Skills

Languages Polish (native), English (fluent), German (fluent)

Programming Java, C++, SQL, Python, Scala, Spark

Grants and projects

2014–2017	Project leader in a research project granted by Narodowe Centrum Nauki (NCN, National Science Centre), “Consistent and scalable algorithms for structured output prediction”
2012–2014	Project leader in a research project granted by Fundacja na rzecz Nauki Polskiej (NCN, Foundation for Polish Science), “Collective Learning and Inference in Multi-Target Prediction Problems”
2011–2013	Internal grant for young scientists of the Faculty of Computing at PUT, “Beyond standard machine learning problems”
2013	Project leader in an R&D project with Orange Labs, “Algorithms for Adaptive Learning Solution for SLU”
2011–2012	Participant in an R&D project supported by Polish Agency for Enterprise Development (PARP), “Open platform for on-line navigation”
02/2009–06/2009	Project leader in a research project for NaviExpert, a GPS navigation company, “Prediction of Travel Times in a Traffic Communication Network”
01/2008–08/2008	Microsoft Research grant in the Beyond Search program (with Wojciech Kotłowski and Dawid Weiss)

Scholarships and awards

2017	Medal of the Polish National Education Commission
2012–2014	Laureate of FNP in the HomingPlus Programme, Poland
2011–2013	Scholarship for Outstanding Polish Young Scientists, Poland
11/2015	Best Paper Award (Surrogate regret bounds for generalized classification performance metrics, Kotłowski, W., Dembczyński, K.) at Asian Conference on Machine Learning (ACML) 2015, Hong Kong
08/2012	Best Paper Award (An Analysis of chaining in multi-label classification, Dembczyński, K., Waegeman, W., Hüllermeier, E.) at European Conference on Artificial Intelligence (ECAI) 2012, Montpellier, France
2012	The co-authored article “On label dependence and loss minimization in multi-label classification” (with Waegeman, W., Cheng, W., Hüllermeier, E., published in <i>Machine Learning</i> 88, 5-45) has been selected as a notable paper in computing in 2012 by ACM Computing Reviews
08/2012	2nd prize in the JRS 2012 Data Mining Competition: Topical Classification of Biomedical Research Papers (with Weiwei Cheng, Eyke Hüllermeier, Adrian Jaroszewicz, and Willem Waegeman), Chengdu, China
10/2008	Team Award for the research in the area of intelligent decision support systems granted by the Rector of PUT
09/2007	1st prize in the ECML/PKDD Discovery Challenge 2007 (with Wojciech Kotłowski and Marcin Sydow), Warsaw, Poland
10/2003–09/2004	Stipend under subsidy 11/2001 of FNP granted to Professor Roman Słowiński
06/2002–08/2002	Participant in the Young Scientist Summer Program in International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria
10/1999–07/2000	DAAD (Deutscher Akademischer Austauschdienst) Scholarship for studying (2 semesters) at Brandenburg University of Technology (BTU) in Cottbus, Germany

Scientific activities

<i>Invited lectures and talks</i>	<p>Lecture on “Learning with a large number of labels” during the Pre-doc Summer School on Learning Systems at ETH Zürich, 2017, Zürich, Switzerland</p> <p>“Extreme Zero-Shot Learning” at Theoretical Foundations of Machine Learning 2017, Kraków, Poland</p> <p>Lecture on “Extreme Classification: Machine Learning with Millions of Labels” in a series of open lectures on “Multivariate statistical methods for engineering” at Adam Mickiewicz University, Poznań, Poland</p> <p>“Extreme Multi-Label Classification” at the XIX International Conference on Systems Science 2016, Wrocław, Poland</p> <p>Lecture on “Extreme classification: Machine learning with extremely large output spaces” at Paderborn University, 2016, Paderborn, Germany</p> <p>“Decision-theoretic Approach to Multi-label Classification” at Theoretical Foundations of Machine Learning 2015, Bedlowo, Poland</p> <p>“Klasyfikacja z milionami etykiet” at Scientific Seminar on “Big Data: przetwarzanie i eksploracja” 2016, Poznań, Poland</p> <p>“F-measure maximization for thresholding a ranking” at the Dagstuhl Seminar on Preference Learning, Dagstuhl, Germany</p> <p>A series of lectures on “Decision-theoretic machine learning” (with Wojciech Kotłowski) at the Summer School organized by the Institute of Computer Science of the Polish Academy of Sciences, 2014, Mikołajki, Poland</p> <p>“Surrogate loss functions for preference learning” at From Decision Analysis to Preference Learning (DA2PL) Workshop 2014, Paris, France</p> <p>“Multi-label classification” at the 2nd meeting of the Polish Special Interest Group on Machine Learning (Polish-SIGML) 2013, Warszawa, Poland</p> <p>“Ranking Problems, Task Losses and their Surrogates” at From Decision Analysis to Preference Learning (DA2PL) Workshop 2012, Mons, Belgium</p>
<i>Tutorials</i>	<p>Tutorial on Extreme Multi-label Classification for Large-scale Text Mining (with Rohit Babbar), European Conference on Information Retrieval 2018, Grenoble, France</p> <p>Invited tutorial on Multi-Target Prediction Problems, Discovery Sciences/Algorithmic Learning Theory 2013, Singapore</p> <p>Tutorial on Multi-Target Prediction Problems (with Willem Waegeman and Eyke Hüllermeier), International Conference on Machine Learning 2013, Atlanta, USA</p>
<i>Short research visits</i>	<p>Philipps Universität Marburg (2011,2012,2014), Paderborn University (2015, 2016), Ghent University (2012,2014), Université Paris-Dauphine (2005)</p>
<i>Organization of scientific events</i>	<p>Co-organizer (with Manik Varma, Marius Kloft, Thorsten Joachims and Samy Bengio) of the Dagstuhl Seminar on Extreme Classification, 2018</p> <p>Co-organizer (with Akshay Soni, Aasish Pappu, and Robert Busa-Fekete) of the Extreme Multi-Label Classification for Social Media Workshop at the Web Conference 2018, Lyon, France</p> <p>Co-organizer (with Manik Varma and Marius Kloft) of the Extreme Classification Workshop at Neural Information Processing Systems 2017, Long Beach, USA</p> <p>Co-organizer (with Willem Waegeman, Salvatore Greco and Roman Słowiński) of the Preference Learning stream at European Conference on Operational Research (2012, 2013, 2014, 2015, 2016)</p> <p>Co-organizer (with Willem Waegeman, Grigorios Tsoumakas, Tapio Pahikkala, Antti Airola, Giorgio Valentini, Massih-Reza Amini) of the International Workshop on Multi-Target Prediction at European Conference on Machine Learning and Principles and Practice of Knowledge Discovery (2015, 2014)</p>
<i>Memberships</i>	<p>International Machine Learning Society (IMLS)</p>

Reviewing

<i>Reviewer for conferences</i>	International Joint Conference on Artificial Intelligence (IJCAI) (Senior PC), AAAI Conference on Artificial Intelligence (AAAI), Neural Information Processing Systems (NIPS), International Conference on Machine Learning (ICML), International Conference on Artificial Intelligence and Statistics (AISTATS), Knowledge Discovery and Data Mining (KDD), European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD), European Conference on Artificial Intelligence (ECAI), Asian Conference on Machine Learning (ACML)
<i>Reviewer for journals</i>	Machine Learning Journal (editorial board), Journal of Machine Learning Research, Data Mining and Knowledge Discovery, Neural Computation, ACM Transactions on Knowledge Discovery from Data, IEEE Pattern Analysis and Machine Intelligence, IEEE Knowledge and Data Engineering, IEEE Neural Networks and Learning Systems, Information Sciences, European Journal of Operational Research, Fuzzy Sets and Systems, European Journal of Operational Research, Neurocomputing, Pattern Recognition, Artificial Intelligence Journal, European Journal on Decision Processes
<i>Reviewer for research organizations</i>	The Netherlands Organisation for Scientific Research (NWO), National Research Centre Poland (NCN), Foundation for Polish Science (FNP)
<i>Reviewer of PhD theses</i>	Cheng Li, currently, <i>Conditional Bernoulli Mixtures for Multi-label Classification</i> , Northeastern University, Boston, USA Jinseok Nam, 2018, <i>Multi-label Text Classification with Neural Networks</i> , Technische Universität Darmstadt, Darmstadt, Germany Jan Verwaeren, 2014, <i>Mathematical optimization methods for the analysis of compositional data: subset selection, unmixing and prediction</i> , Ghent University, Ghent, Belgium Ali Fallah Tehrani, 2014, <i>Learning nonlinear monotone classifiers using the Choquet integral</i> , Marburg University, Marburg, Germany
<i>Supervisor of PhD theses</i>	Kalina Jasinska, currently, Poznan University of Technology, Poznań, Poland Marek Wydmuch, currently, Poznan University of Technology, Poznań, Poland

Published papers

<i>At top conferences</i>	International Conference on Machine Learning (ICML) 2017, 2016, 2013, 2012, 2011, 2010, 2008, Neural Information Processing Systems (NIPS) 2018, 2015, 2011, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD) 2016, 2011, 2010, 2007, Asian Conference on Machine Learning (ACML) 2015, European Conference on Artificial Intelligence (ECAI) 2012, IEEE International Conference on Multimedia and Expo (ICME) 2017
<i>In top journals</i>	Journal of Machine Learning Research (2014), Machine Learning Journal (2016, 2012, 2012), Data Mining and Knowledge Discovery (2016, 2010), Information Sciences (2014, 2008), Fundamenta Informaticae (2009, 2008), European Journal of Operational Research (2009), BMC Medical Research Methodology (2011)
<i>Number of citations</i>	372 (Web of Science), 2079 (Google Scholar)
<i>H-index</i>	10 (Web of Science), 24 (Google Scholar)