

dr Piotr Przymus

ASSISTANT PROFESSOR

Faculty of Mathematics and Computer Science, Nicolaus Copernicus University, Chopina 12/18, 87-100 Toruń, Poland

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Education

Univeristy of Warsaw and Nicolaus Copernicus University

Joint PhD studies

PHD IN COMPUTER SCIENCE

2008 – 2014

- Thesis title: Query Optimization in Heterogeneous CPU/GPU Environment for Time Series Databases.
- Advisor: prof. K. Stencel, stencel@mimuw.edu.pl
- Co-Advisor: dr K. Kaczmarek, k.kaczmarek@mini.pw.edu.pl

Nicolaus Copernicus University

M.Sc. studies

M.SC. IN COMPUTER SCIENCE

2003 – 2008

- Emphasis: database systems
- Advisor: dr P. Wiśniewski, pikonrad@mat.umk.pl

Research Interests

Machine learning and Data mining

- classification, regression, clustering, pattern recognition systems, inpainting, generative models
- artificial neural networks, deep learning, with special emphasis on time series

Database systems

NoSQL, relational, object, time series

HPC and scalable computations

GPGPU computing, MapReduce

Other

computer networking, computer security

Experience

Faculty of Mathematics and Computer Science, Nicolaus Copernicus University

Toruń, Poland

ASSISTANT PROFESOR

October 2017 – now

Aix-Marseille University

Marseille, Aix-en-Provence, France

POSTDOC

August 2016 – August 2017

Faculty of Mathematics and Computer Science, Nicolaus Copernicus University

Toruń, Poland

ASSISTANT

November 2013 – October 2017

IV Liceum Ogólnokształcące im. Tadeusza Kościuszki

Toruń, Poland

INFORMATION TECHNOLOGY TEACHER IN A SPECIAL „UNIVERSITY CLASS”

September 2014 – August 2015

Turbine Asset Management

Toruń, Poland

RESEARCHER, TEAM LEADER

February 2011 – July 2012

Almatics Sp. z o.o.

Toruń, Poland

SOFTWARE DEVELOPER

December 2010 – February 2011

Neko Service

Toruń, Poland

SOFTWARE DEVELOPER

July 2007 – December 2010

7bulls.com

Toruń, Poland

SOFTWARE DEVELOPER

June 2006 – July 2007

Honours, Awards and Scholarship

2018	Rector individual award (third degree) for research and scientific achievements , Nicolaus Copernicus University	<i>Toruń, Poland</i>
2014	Best Poster Award , PUMPS 2014 – Programming and Tuning Massively Parallel	<i>Barcelona, Spain</i>
2013	Scientific scholarship ”Krok w przyszłość” , Kuyavian-Pomeranian Voivodeship Marshall Scholarship for Ph.D. students, V edition	<i>Toruń, Poland</i>
2013	Pro-quality scientific scholarship , Nicolaus Copernicus University	<i>Toruń, Poland</i>
2012	Pro-quality scholarship , Nicolaus Copernicus University	<i>Toruń, Poland</i>
2011	Best Paper Award , Future Generation Information Technology	<i>Jeju, South Korea</i>

Publications, posters and other

Publications

- [1] Mikołaj Fejzer, Piotr Przymus, and Krzysztof Stencel. Profile based recommendation of code reviewers. *Journal of Intelligent Information Systems*, pages 1–23, 2017.
- [2] Youssef Hmamouche, Piotr Przymus, Lotfi Lakhal, and Alain Casali. Finding relevant multivariate models for multi-plant photovoltaic energy forecasting. In *Proceedings of the ECML/PKDD Discovery Challenges co-located with European Conference on Machine Learning - Principle and Practice of Knowledge Discovery in Database (ECML PKDD 2017)*, Skopje, Macedonia, September 18, 2017., 2017.
- [3] Youssef Hmamouche, Piotr Przymus, Lotfi Lakhal, and Alain Casali. Improving multivariate time series forecasting with random walks with restarts on causality graphs. In *IEEE International Conference on Data Mining Workshops, ICDM Workshops 2017, November 18-21, 2017, New Orleans USA.*, pages 924–931, 2017.
- [4] Krzysztof Kaczmarski and Piotr Przymus. Fixed length lightweight compression for gpu revised. *Journal of Parallel and Distributed Computing*, 107:19–36, 2017.
- [5] Krzysztof Kaczmarski, Piotr Przymus, and Paweł Rzążewski. Improving high-performance gpu graph traversal with compression. In *New Trends in Database and Information Systems II*, pages 201–214. Springer, 2015.
- [6] Piotr Przymus. *Query Optimization in Heterogeneous CPU/GPU Environment for Time Series Databases*. PhD thesis, University of Warsaw, Faculty of Mathematics, Informatics and Mechanics, 2014.
- [7] Piotr Przymus, Aleksandra Boniewicz, Marta Burzańska, and Krzysztof Stencel. Recursive query facilities in relational databases: a survey. In *Database Theory and Application, Bio-Science and Bio-Technology*, pages 89–99. Springer, 2010.
- [8] Piotr Przymus and Krzysztof Kaczmarski. Improving efficiency of data intensive applications on GPU using lightweight compression. In *On the Move to Meaningful Internet Systems: OTM 2012 Workshops, Lecture Notes in Computer Science*, volume 7567, pages 3–12. Springer Berlin Heidelberg, 2012.
- [9] Piotr Przymus and Krzysztof Kaczmarski. Dynamic compression strategy for time series database using GPU. In *New Trends in Databases and Information Systems. 17th East-European Conference on Advances in Databases and Information Systems September 1–4, 2013, Genoa, Italy, 2013*.
- [10] Piotr Przymus and Krzysztof Kaczmarski. Time series queries processing with GPU support. In *New Trends in Databases and Information Systems. 17th East-European Conference on Advances in Databases and Information Systems September 1–4, 2013, Genoa, Italy, 2013*.
- [11] Piotr Przymus and Krzysztof Kaczmarski. Compression planner for time series database with gpu support. In *Transactions on Large-Scale Data-and Knowledge-Centered Systems XV*, pages 36–63. Springer, 2014.
- [12] Piotr Przymus, Krzysztof Kaczmarski, and Krzysztof Stencel. A bi-objective optimization framework for heterogeneous CPU/GPU query plans. In *CS&P 2013 Concurrency, Specification and Programming*. Proceedings of the 22nd International Workshop on Concurrency, Specification and Programming, 2013.
- [13] Piotr Przymus, Krzysztof Kaczmarski, and Krzysztof Stencel. A bi-objective optimization framework for heterogeneous CPU/GPU query plans. *Fundam. Inform.*, 135(4):483–501, 2014. Extended version of previous article.
- [14] Piotr Przymus, Krzysztof Rykaczewski, and Ryszard Wiśniewski. Application of wavelets and kernel methods to detection and extraction of behaviours of freshwater mussels. *Future Generation Information Technology*, pages 43–54, 2011. Best Paper Award of Future Generation Information Technology, Jeju Island, South Korea, 2011.
- [15] Piotr Przymus, Krzysztof Rykaczewski, and Ryszard Wiśniewski. Zebra mussels' behaviour detection, extraction and classification using wavelets and kernel methods. *Future Generation Computer Systems*, 33(0):81–89, 2014. Extended version of previous article.

Posters and other

- [16] Paweł Rzążewski Piotr Przymus, Krzysztof Kaczmarek. Lightweight compression algorithms for database systems supported by gpu devices. Poster at: Programming and Tuning Massively Parallel Systems summer school (PUMPS), Barcelona, 2014. Best Poster Award of PUMPS 2014.
- [17] Piotr Przymus and Krzysztof Kaczmarek. Improving efficiency of data intensive applications on GPU using lightweight compression. Poster at: On the Move to Meaningful Internet Systems Academy, 2012.
- [18] Piotr Przymus and Krzysztof Rykaczewski. Extraction and detection of freshwater mussels behaviours, using wavelets and kernel methods. Poster at: European Conference on Mathematical and Theoretical Biology, 2011.
- [19] Piotr Przymus and Krzysztof Rykaczewski. Recurrence plot analysis of time series derived from observations of Dreissena polymorpha. Poster at: European Conference on Mathematical and Theoretical Biology, 2011.

Conferences

SCIENTIFIC CONFERENCES

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|------|--|-------------------------------------|
| 2017 | GPU Technology Conference GTC 2017 , presentation | <i>Silicon Valey, USA</i> |
| 2017 | JSL , presentation | <i>ISLE S/LA SORGUE,
France</i> |
| 2016 | Entrepôts de Données et l'Analyse en ligne EDA 2016 , presentation | <i>Aix, France</i> |
| 2014 | ADBIS, GID, 18th East-Europ. Conf. on Adva. in Databases and Infor. Sys. , presentation | <i>Ohrid, Macedonia</i> |
| 2013 | ADBIS, GID, 17th East-Europ. Conf. on Adva. in Databases and Infor. Sys. , presentation | <i>Genua, Italy</i> |
| 2013 | Forum Informatyki Teoretycznej , presentation | <i>Toruń, Poland</i> |
| 2013 | Concurrency, Specification, and Programming (CS&P) , presentation | <i>Warsaw, Poland</i> |
| 2012 | On the Move to Meaningful Internet Systems , presentation, poster | <i>Rome, Italy</i> |
| 2011 | European Conference on Mathematical and Theoretical Biology (ECMTB) , 2 posters | <i>Kraków, Poland</i> |
| 2011 | 2nd Gretl Conference , | <i>Toruń, Poland</i> |
| 2010 | Festyn naukowy FOLCO 2010 Toruń , | <i>Toruń, Poland</i> |
| 2010 | MASYW 2010 , presentation | <i>Tleń nad Wda</i> |
| 2009 | Bioinformatics in Toruń (BIT09) , | <i>Toruń, Poland</i> |
| 2009 | Informatyka, Badania i Zastosowania , | <i>Kazimierz Dolny</i> |
| 2009 | XXIII Forum Informatyki Teoretycznej , presentation | <i>Zakopane, Poland</i> |
| 2008 | Informatyka, Badania i Zastosowania , | <i>Kazimierz Dolny</i> |

WORKSHOPS, SCHOOLS AND SPECIALISTIC CONFERENCES

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| 2015 | PyCon PL 2015 , presentation | <i>Ossa, Poland</i> |
| 2014 | PyCon PL 2014 , presentation, przeprowadzone warsztaty | <i>Szczyrk, Poland</i> |
| 2014 | Europython 2014 , presentation | <i>Berlin, Germany</i> |
| 2014 | PUMPS 2014 – Programming and Tuning Massively Parallel , poster | <i>Barcelona, Spain</i> |
| 2014 | Intel Xeon Phi Workshop , | <i>Łódź, Poland</i> |
| 2013 | PyCon PL 2013 , presentation | <i>Szczyrk, Poland</i> |
| 2012 | InfoShare 2012 , | <i>Gdańsk, Poland</i> |
| 2011 | PyCon PL'11 , presentation | <i>Mąchocice k/Kielc,
Poland</i> |
| 2009 | Summer School on Dynamical Systems , | <i>Göttingen, Germany</i> |
| 2009 | PyConPL'09 , | <i>Ustroń, Poland</i> |
| 2009 | Forum obiektowych baz danych , 2 presentations | <i>Zbiczno, Poland</i> |

Other activities

- 2016 **Petri Nets 2016 i ACS D 2016**, Organizing committee
- 2011 **Committee for study programs for computer science**, PhD Students representative
- 2009 **PhD student council**,