

CURRICULUM VITÆ

Personal Information

Name and surname	Michał Pilipczuk
Date and place of birth	June 25 th , 1988, Warsaw, Poland
Citizenship	Polish
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Research interests	parameterized complexity, moderately exponential-time algorithms, kernelization, logic in computer science

Education

2011 — 2013	PhD Studies in Theoretical Computer Science under supervision of prof. Fedor V. Fomin, University of Bergen, Norway. PhD thesis defended in November 2013.
2006 — 2013	Double Degree Program in Computer Science and Mathematics, Faculty of Mathematics, Informatics and Mechanics, University of Warsaw, Poland. Master thesis in computer science defended with honours in June 2011, and master thesis in mathematics defended in April 2013.
2003 — 2006	XIV Secondary School in Warsaw, mathematical-experimental program

Academic career

since October 2015	Assistant professor (<i>pol.</i> adiunkt) at the Institute of Informatics at the Faculty of Mathematics, Informatics, and Mechanics of the University of Warsaw, Poland.
2014 — 2015	Postdoc of Warsaw Centre of Mathematics and Computer Science, affiliated with the Institute of Informatics, Faculty of Mathematics, Informatics, and Mechanics of the University of Warsaw, Poland.
2011 — 2014	<i>Stipendiat</i> (doctoral research fellow, a PhD position) at the Institute of Informatics of the University of Bergen, Norway, working under the supervision of prof. Fedor Fomin.

Theses

Tournaments and Optimality: New Results in Parameterized Complexity,

PhD thesis in computer science, prepared under supervision of prof. Fedor V. Fomin and defended in November 2013 at the University of Bergen;

Comparing Randić index with other graph parameters,

master thesis in mathematics, prepared under supervision of dr hab. Łukasz Kowalik and defended in April 2013 at the University of Warsaw;

Problems parameterized by treewidth tractable in single exponential time: a logical approach,

master thesis in computer science, prepared under supervision of prof. Mikołaj Bojańczyk and defended with honours in June 2011 at the University of Warsaw;

Leadership and participation in grants

since Oct 2016	Research partner in POLONEZ grant “Algorithmic Structure Theory for Sparse Graphs”, led by dr Sebastian Siebertz and funded by the National Science Center of Poland from the Horizon 2020 programme funds, Marie Skłodowska-Curie actions.
since Oct 2014	Principal investigator of SONATA grant “Optimality in Parameterized Complexity”, funded by the National Science Center of Poland. Total amount of funding: 386 320 PLN (around 90 000 EUR).
2011 — 2014	<i>Stipendiat</i> (doctoral research fellow, a PhD position) in the ERC Advanced Investigator Project “Rigorous Theory of Preprocessing”, led by prof. Fedor V. Fomin.

Scientific awards and stipends

2016	ERCIM Cor Baayen Award 2016. Prize awarded annually to one promising young researcher in computer science and applied mathematics.
2016	Best Paper Award at the 11 th International Symposium on Parameterized and Exact Computation, IPEC 2016, for paper <i>Cutwidth: obstructions and algorithmic aspects</i> , co-authored by Archontia C. Giannopoulou, Jean-Florent Raymond, Dimitrios M. Thilikos, and Marcin Wrochna
2016	START stipend granted by the Foundation for Polish Science (FNP), awarded with a distinguishment for the highest ranked applications.
2015	Witold Lipski Prize for the best young researchers working in computer science in Poland.
2015	Stipend of the Ministry of Science and Higher Education of the Republic of Poland for outstanding young researchers, awarded for three years.
2015	START stipend granted by the Foundation for Polish Science (FNP), awarded with a distinguishment for the highest ranked applications.
2014	Nomination to International Banach Prize, an award for the best doctoral thesis in mathematical sciences, awarded annually by the Polish Mathematical Society and company Ericpol.
2014	Meltzer Prize for Young Researchers (Meltzerprisen for yngre forskere), awarded for the achievements in 2013. Prize of value 100 000 NOK awarded annually by the University of Bergen to two young researchers working at this university among all the disciplines.
2012	Best Student Paper Award at 38 th International Workshop on Graph-Theoretic Concepts in Computer Science, WG 2012, for paper <i>On Group Feedback Vertex Set parameterized by the size of the cutset</i> , co-authored by Marek Cygan and Marcin Pilipczuk.
2010	Stipend awarded by the University of Warsaw and company ATM for participation in the world finals of ACM International Collegiate Programming Contest.
2007, 2008, 2009, 2010	Stipend of the Polish Ministry of Science and Higher Education for exceptional scientific achievements (stipendium Ministra Nauki i Szkolnictwa Wyższego za osiągnięcia w nauce).

Organization and invited participation in scientific events

Jun 2016	Co-organizer (with Marek Cygan and Marcin Pilipczuk) of sessions on parameterized complexity during SIAM Conference on Discrete Mathematics 2016. Atlanta, USA.
Mar 2016	Lecturer at the ELC School on Parameterized Algorithms. Osaka, Japan.
Apr 2015	Lecturing a mini-course on parameterized complexity at Insitute of Informatics, University of Wrocław, Poland.
Aug 2014	Organizer and lecturer at the International School on Parameterized Algorithms. Będlewo, Poland.

Invited talks

- May 2016 Invited talk *Bidimensionality and beyond: parameterized algorithm design on planar graphs* at the joint seminar “Methods for Discrete Structures” of Theoretical Computer Science research groups in Berlin. Berlin, Germany.
- Jan 2016 Invited talk *On tree-like graphs* at the Polish Forum of Theoretical Computer Science (FIT 2016). Warsaw, Poland.
- Jun 2015 Invited talk *Kernelization algorithms on sparse graph classes* at the 5th Workshop on Kernels. Nordfjordeid, Norway.
- Feb 2015 Invited talk *New results on computing tree decompositions of graphs* at the ELC/B01 Workshop on Parameterized Algorithms. Tokyo, Japan.
- Dec 2014 Invited talks *Algorithmic Lower Bounds based on ETH and SETH* and *Graph Isomorphism is FPT Parameterized by Treewidth* at workshop *Exact Algorithms and Lower Bounds*, preceding conference 34th Foundations of Software Technology and Theoretical Computer Science, FSTTCS 2014. Delhi, India.
- Sep 2012 Invited tutorial *Lower bounds for polynomial kernelization* at the 7th International Symposium on Parameterized and Exact Computation, IPEC 2012. Ljubljana, Slovenia.

Community service

Supervised PhD students: Marcin Wrochna (since 2014)

Program Committee member of:

- 50th Annual ACM Symposium on the Theory of Computing, STOC 2018.
- 12th International Symposium on Parameterized and Exact Computation, IPEC 2017.
- 24th Annual European Symposium on Algorithms, ESA 2016; track A (design and analysis).
- 42nd International Workshop on Graph-Theoretic Concepts in Computer Science, WG 2016.
- 42nd International Colloquium on Automata, Languages, and Programming, ICALP 2015; track A (algorithms, complexity, and games).
- 9th International Workshop on Algorithms and Computation, WALCOM 2015.
- 34th Foundations of Software Technology and Theoretical Computer Science, FSTTCS 2014.

Refereed for:

Conferences FOCS, STOC, LICS, SODA, ICALP, STACS, IPCO, CSL, APPROX-RANDOM, ESA, FSTTCS, ISAAC, WG, MFCS, CSR, CIAC, IPEC

Journals JCTA, JCTB, JCSS, SIDMA, ToCS, Algorithmica, TCS, DAM, IPL

Others Polish Information Processing Society competition for the best master theses in computer science

Languages

Polish native
English fluent (CAE in 2003, CPE in 2005),
Norwegian advanced (grade A in NOR-U3 test)
German notions
Russian notions

Achievements in olympiads and championships

2011	7 th place in the second category at the 21 st Vojtěch Jarník International Mathematical Competition (Ostrava, Czech Republic)
2010	Second prize at the 17 th International Mathematical Competition (Blagoevgrad, Bulgaria)
2010	7 th place in the second category at the 20 th Vojtěch Jarník International Mathematical Competition (Ostrava, Czech Republic)
2010	Silver medal (8 th place) at the World Finals of the ACM International Collegiate Programming Contest (Harbin, China)
2009	First place at the ACM ICPC Central Europe Regional Contest, CERC 2009 (Wrocław, Poland)
2009	9 th place at the 14 th Collegiate Championship of Poland in Team Programming (Poznań, Poland)
2009	Second prize at the 16 th International Mathematical Competition (Budapest, Hungary)
2009	First place in the second category at the 19 th Vojtěch Jarník International Mathematical Competition (Ostrava, Czech Republic)
2008	19 th place at the ACM ICPC Central Europe Regional Contest, CERC 2008 (Wrocław, Poland)
2008	Second place at the 13 th Collegiate Championship of Poland in Team Programming (Poznań, Poland)
2008	First prize at the 15 th International Mathematical Competition (Blagoevgrad, Bulgaria)
2008	First place in the first category at the 18 th Vojtěch Jarník International Mathematical Competition (Ostrava, Czech Republic)
2007	First prize at the 14 th International Mathematical Competition (Blagoevgrad, Bulgaria)
2006	9 th place at the ACM ICPC Central Europe Regional Contest, CERC 2006 (Budapest, Hungary)
2006	6 th place at the 11 th Collegiate Championship of Poland in Team Programming (Poznań, Poland)
2006	Silver medal at the 18 th International Olympiad in Informatics (Merida, Mexico)
2006	Silver medal at the 47 th International Mathematical Olympiad (Ljubljana, Slovenia)
2006	Bronze medal at the 13 th Central European Olympiad in Informatics (Vrsar, Croatia)
2005	Bronze medal at the 46 th International Mathematical Olympiad (Merida, Mexico)
2004	Gold medal at the 45 th International Mathematical Olympiad (Athens, Greece)
2003	Third place at the 26 th Austrian-Polish Mathematical Competition (Graz, Austria)

Professional activities in olympiads and championships

since 2016	Chairman of the Problem Selection Committee of the Polish Mathematical Olympiad
2016	Leader of the Polish team for the 57 th International Mathematical Olympiad (Hong Kong)
2016	Leader of the Polish team for the 5 th European Girls' Mathematical Olympiad (Buşteni, Romania)
2015	Leader of the Polish team for the 56 th International Mathematical Olympiad (Chiang Mai, Thailand)
2015	Leader of the Polish team for the 4 th European Girls' Mathematical Olympiad (Minsk, Belarus)
since 2014	Member of the Polish Mathematical Olympiad Committee and of the Problem Selection Committee (again)
2014	Head of the Jury of the Nordic Collegiate Programming Contest, NCPC 2014 (together with Lukáš Poláček, KTH)
2014	Leader of the Polish team for the 55 th International Mathematical Olympiad (Cape Town, South Africa)
2013	Member of the Jury of the Nordic Collegiate Programming Contest, NCPC 2013
2013	Leader of the Polish team for the 54 th International Mathematical Olympiad (Santa Marta, Colombia)
2012	Member of the Jury of the Nordic Collegiate Programming Contest, NCPC 2012
2012	Leader of the Polish team for the 1 st European Girls' Mathematical Olympiad (Cambridge, UK)
2011	Coaching teams from the University of Bergen at the ACM ICPC Northwestern European Regional Contest, NWERC 2011 (Bremen, Germany)
2011	Deputy leader of the Polish team for the 52 nd International Mathematical Olympiad (Amsterdam, Netherlands)
2011	Leader of the Polish team for the competition <i>Romanian Master in Mathematics</i> (Bucharest, Romania)
2010	Deputy leader of the Polish team for the 51 st International Mathematical Olympiad (Astana, Kazakhstan)
2009 – 2011	Member of the Polish Mathematical Olympiad Committee and of the Problem Selection Committee
2008	Deputy leader of the Polish team for the 49 th International Mathematical Olympiad (Madrid, Spain)
2007 – 2009	Informal member of the Problem Selection Committee of the Polish Mathematical Olympiad
2007 – 2012	Member of the Jury and contributor to the problem sets at the Polish Olympiad in Informatics

PUBLICATIONS

For journal publications that had a preliminary conference version, the latter one is given under **Conf.**

Books

- [1] Marek Cygan, Fedor V. Fomin, Łukasz Kowalik, Daniel Lokshantov, Dániel Marx, Marcin Pilipczuk, Michał Pilipczuk, Saket Saurabh,
Parameterized Algorithms,
Springer, 2015

Articles in journals

- [2] Marthe Bonamy, Łukasz Kowalik, Michał Pilipczuk, Arkadiusz Socała,
Linear kernels for outbranching problems in sparse digraphs,
Algorithmica, 2016
Conf.: Proceedings of the 10th International Symposium on Parameterized and Exact Computation, IPEC 2015
Volume 43 of LIPIcs, Schloß Dagstuhl — Leibniz-Zentrum für Informatik, 2016
Note: Article published so far electronically as *Online First*
- [3] Marek Cygan, Marcin Pilipczuk, Michał Pilipczuk, Erik Jan van Leeuwen, Marcin Wrochna,
Polynomial kernelization for removing induced claws and diamonds,
Theory of Computing Systems, 2016
Conf.: Proceedings of the 41st International Workshop on Graph-Theoretic Concepts in Computer Science, WG 2015
Volume 9224 of Lecture Notes in Computer Science (LNCS), Springer, 2016
Note: Article published so far electronically as *Online First*
- [4] Rajesh Chitnis, Marek Cygan, MohammadTaghi Hajiaghayi, Marcin Pilipczuk, Michał Pilipczuk,
Designing FPT algorithms for cut problems using randomized contractions,
SIAM Journal on Computing 45(4), pp. 1171–1229, 2016
Conf.: Proceedings of the 53rd Annual IEEE Symposium on Foundations of Computer Science, FOCS 2012
- [5] Michał Pilipczuk, Szymon Toruńczyk,
On ultralimits of sparse graph classes,
Electronic Journal of Combinatorics 23(2): P2.32, 2016
- [6] Daniel Lokshantov, Marcin Pilipczuk, Michał Pilipczuk, Saket Saurabh,
Fixed-parameter tractable canonization and isomorphism test for graphs of bounded treewidth,
SIAM Journal on Computing 46(1): 161–189, SIAM, 2017
Conf.: Proceedings of the 55th Annual IEEE Symposium on Foundations of Computer Science, FOCS 2014
- [7] Hans L. Bodlaender, Pål Grønås Drange, Markus Sortland Dregi, Fedor V. Fomin, Daniel Lokshantov, Michał Pilipczuk,
An $O(c^k n)$ 5-approximation algorithm for treewidth,
SIAM Journal on Computing 45(2): 317–378, SIAM, 2016
Conf.: Proceedings of the 54th Annual IEEE Symposium on Foundations of Computer Science, FOCS 2013
- [8] Tatjana V. Abramovskaya, Fedor V. Fomin, Petr A. Golovach, Michał Pilipczuk,
How to hunt an invisible rabbit on a graph,
European Journal of Combinatorics 52, pp. 12–26, Elsevier 2016
- [9] Marek Cygan, Marcin Pilipczuk, Michał Pilipczuk,
Known algorithms for Edge Clique Cover are probably optimal,
SIAM Journal on Computing 45(1): 67–83, SIAM, 2016
Conf.: Proceedings of the 24th Annual ACM-SIAM Symposium on Discrete Algorithms, SODA 2013

- [10] Marek Cygan, Marcin Pilipczuk, Michał Pilipczuk,
On Group Feedback Vertex Set parameterized by the size of the cutset,
 Algorithmica 74(2), pp. 630–642, Springer, 2016
Conf.: Proceedings of the 38th International Workshop on Graph-Theoretic Concepts in Computer Science, WG 2012
 Volume 7551 of Lecture Notes in Computer Science (LNCS), Springer, 2012
- [11] Ivan Bliznets, Fedor V. Fomin, Marcin Pilipczuk, Michał Pilipczuk,
A subexponential parameterized algorithm for Proper Interval Completion,
 SIAM Journal on Discrete Mathematics 29(4), pp. 1961–1987, SIAM, 2015
Conf.: Proceedings of the 22nd Annual European Symposium on Algorithms, ESA 2014
 Volume 8737 of Lecture Notes in Computer Science (LNCS), Springer, 2014
- [12] Stefan Kratsch, Marcin Pilipczuk, Michał Pilipczuk, Magnus Wahlström,
Fixed-parameter tractability of Multicut in directed acyclic graphs,
 SIAM Journal on Discrete Mathematics 29(1), pp. 122–144, SIAM, 2015
Conf.: Proceedings of the 39th International Colloquium on Automata, Languages, and Programming, ICALP 2012
 Volume 7391 of Lecture Notes in Computer Science (LNCS), Springer, 2012
- [13] Ivan Bliznets, Fedor V. Fomin, Michał Pilipczuk, Yngve Villanger,
Largest chordal and interval subgraphs faster than 2^n ,
 Algorithmica 76(2), pp. 569–594, Springer, 2016
Conf.: Proceedings of the 21st Annual European Symposium on Algorithms, ESA 2013
 Volume 8125 of Lecture Notes in Computer Science (LNCS), Springer, 2013
- [14] Pål Grønås Drange, Fedor V. Fomin, Michał Pilipczuk, Yngve Villanger,
Exploring subexponential parameterized complexity of completion problems,
 ACM Transactions on Computation Theory 7(4):14, ACM, 2015
Conf.: Proceedings of the 31st International Symposium on Theoretical Aspects of Computer Science, STACS 2014
 Volume 25 of LIPIcs, Schloß Dagstuhl — Leibniz-Zentrum für Informatik, 2014
- [15] Fedor V. Fomin, Petr A. Golovach, Jesper Nederlof, Michał Pilipczuk,
Minimizing Rosenthal potential in multicast games,
 Theory of Computing Systems 57(1), pp. 81–96, Springer, 2015
Conf.: Proceedings of the 39th International Colloquium on Automata, Languages, and Programming, ICALP 2012
 Volume 7392 of Lecture Notes in Computer Science (LNCS), Springer, 2012
- [16] Fedor V. Fomin, Archontia C. Giannopoulou, Michał Pilipczuk,
Computing tree-depth faster than 2^n ,
 Algorithmica 73(1), pp. 202–216, Springer, 2015
Conf.: Proceedings of the 8th International Symposium on Parameterized and Exact Computation, IPEC 2013
 Volume 8246 of Lecture Notes in Computer Science (LNCS), Springer, 2013
- [17] Marek Cygan, Marcin Pilipczuk, Michał Pilipczuk, Jakub Onufry Wojtaszczyk,
Sitting closer to friends than enemies, revisited,
 Theory of Computing Systems 56(2), pp. 394–405, Springer, 2015
Conf.: Proceedings of the 37th International Symposium on Mathematical Foundations of Computer Science, MFCS 2012
 Volume 7464 of Lecture Notes in Computer Science (LNCS), Springer, 2012
- [18] Petr A. Golovach, Pinar Heggernes, Pim van ’t Hof, Fredrik Manne, Daniël Paulusma, Michał Pilipczuk,
Modifying a graph using vertex elimination,
 Algorithmica 72(1), pp. 99–125, 2015
Conf.: Proceedings of the 38th International Workshop on Graph-Theoretic Concepts in Computer Science, WG 2012
 Volume 7551 of Lecture Notes in Computer Science (LNCS), Springer, 2012

- [19] Fedor V. Fomin, Stefan Kratsch, Marcin Pilipczuk, Michał Pilipczuk, Yngve Villanger, *Tight bounds for parameterized complexity of Cluster Editing with a small number of clusters*, Journal of Computer and System Sciences 80(7), pp. 1430–1447, Elsevier, 2014
Conf.: Proceedings of the 30th International Symposium on Theoretical Aspects of Computer Science, STACS 2013
 Volume 20 of LIPIcs, Schloß Dagstuhl — Leibniz-Zentrum für Informatik, 2013
- [20] Fedor V. Fomin, Bart M. P. Jansen, Michał Pilipczuk, *Preprocessing subgraph and minor problems: when does a small vertex cover help?*, Journal of Computer and System Sciences 80(2), pp. 468–495, Elsevier, 2014
Conf.: Proceedings of the 7th International Symposium on Parameterized and Exact Computation, IPEC 2012
 Volume 7535 of Lecture Notes in Computer Science (LNCS), Springer, 2012
- [21] Marek Cygan, Stefan Kratsch, Marcin Pilipczuk, Michał Pilipczuk, Magnus Wahlström, *Clique cover and graph separation: New incompressibility results*, ACM Transactions on Computation Theory 6(2):6, ACM, 2014
Conf.: Proceedings of the 39th International Colloquium on Automata, Languages, and Programming, ICALP 2012
 Volume 7391 of Lecture Notes in Computer Science (LNCS), Springer, 2012
- [22] Marek Cygan, Marcin Pilipczuk, Michał Pilipczuk, Jakub Onufry Wojtaszczyk, *Solving the 2-Disjoint Connected Subgraphs problem faster than 2^n* , Algorithmica 70(2), pp. 195–207, Springer, 2014
Conf.: Proceedings of the 10th Latin American Symposium on Theoretical Informatics, LATIN 2012
 Volume 7256 of Lecture Notes in Computer Science (LNCS), Springer, 2012
- [23] Marek Cygan, Daniel Lokshtanov, Marcin Pilipczuk, Michał Pilipczuk, Saket Saurabh, *On cutwidth parameterized by vertex cover*, Algorithmica 68(4), pp. 940–953, Springer, 2014
Conf.: Proceedings of the 6th International Symposium on Parameterized and Exact Computation, IPEC 2011
 Volume 7112 of Lecture Notes in Computer Science (LNCS), Springer, 2011
- [24] Marek Cygan, Marcin Pilipczuk, Michał Pilipczuk, Jakub Onufry Wojtaszczyk, *Scheduling partially ordered jobs faster than 2^n* , Algorithmica 68(3), pp. 692–714, Springer, 2014
Conf.: Proceedings of the 19th Annual European Symposium on Algorithms, ESA 2011
 Volume 6942 of Lecture Notes in Computer Science (LNCS), Springer, 2011
- [25] Marek Cygan, Dániel Marx, Marcin Pilipczuk, Michał Pilipczuk, Ildikó Schlotter, *Parameterized complexity of Eulerian deletion problems*, Algorithmica 68(1), pp. 41–61, Springer, 2014
Conf.: Proceedings of the 37th International Workshop on Graph-Theoretic Concepts in Computer Science, WG 2011
 Volume 6986 of Lecture Notes in Computer Science (LNCS), Springer, 2011
- [26] Marek Cygan, Daniel Lokshtanov, Marcin Pilipczuk, Michał Pilipczuk, Saket Saurabh, *On the hardness of losing width*, Theory of Computing Systems 54(1), pp. 73–82, Springer, 2014
Conf.: Proceedings of the 6th International Symposium on Parameterized and Exact Computation, IPEC 2011
 Volume 7112 of Lecture Notes in Computer Science (LNCS), Springer, 2011
- [27] Marek Cygan, Marcin Pilipczuk, Michał Pilipczuk, Jakub Onufry Wojtaszczyk, *Subset Feedback Vertex Set is fixed-parameter tractable*, SIAM Journal on Discrete Mathematics 27(1), pp. 290–309, SIAM, 2013
Conf.: Proceedings of the 38th International Colloquium on Automata, Languages, and Programming, ICALP 2011
 Volume 6755 of Lecture Notes in Computer Science (LNCS), Springer, 2011

- [28] Marek Cygan, Marcin Pilipczuk, Michał Pilipczuk, Jakub Onufry Wojtaszczyk,
On Multiway Cut parameterized above lower bounds,
ACM Transactions on Computation Theory 5(1):3, ACM, 2013
Conf.: Proceedings of the 6th International Symposium on Parameterized and Exact Computation, IPEC 2011
Volume 7112 of Lecture Notes in Computer Science (LNCS), Springer, 2011
- [29] Marek Cygan, Marcin Pilipczuk, Michał Pilipczuk, Jakub Onufry Wojtaszczyk,
*A polynomial algorithm for 3-Compatible Coloring and the stubborn list partition problem
(the stubborn problem is stubborn no more)*,
SIAM Journal on Computing 41(4), pp. 815–828, SIAM, 2012
Conf.: Proceedings of the 22nd Annual ACM-SIAM Symposium on Discrete Algorithms, SODA 2011
- [30] Marek Cygan, Marcin Pilipczuk, Michał Pilipczuk, Jakub Onufry Wojtaszczyk,
Improved FPT algorithm and quadratic kernel for Pathwidth One Vertex Deletion,
Algorithmica 64(1), pp. 170–188, Springer, 2012
Conf.: Proceedings of the 5th International Symposium on Parameterized and Exact Computation, IPEC 2010
Volume 6478 of Lecture Notes in Computer Science (LNCS), Springer, 2010
- [31] Marcin Pilipczuk, Michał Pilipczuk, Riste Škrekovski,
Some results on Vizing’s conjecture and related problems,
Discrete Applied Mathematics 160(16–17), pp. 2484–2490, Elsevier, 2012
- [32] Marek Cygan, Marcin Pilipczuk, Michał Pilipczuk, Jakub Onufry Wojtaszczyk,
Kernelization hardness of connectivity problems in d -degenerate graphs,
Discrete Applied Mathematics 160(15), pp. 2131–2141, Elsevier, 2012
Conf.: Proceedings of the 36th International Workshop on Graph-Theoretic Concepts in Computer Science, WG 2010
Volume 6410 of Lecture Notes in Computer Science (LNCS), Springer, 2010
- [33] Marek Cygan, Michał Pilipczuk, Riste Škrekovski,
On the inequality between radius and Randić index for graphs,
MATCH Communications in Mathematical and in Computer Chemistry 67(2), pp. 451–466, 2012
- [34] Marek Cygan, Geevarghese Philip, Marcin Pilipczuk, Michał Pilipczuk, Jakub Onufry Wojtaszczyk,
Dominating Set is fixed parameter tractable in claw-free graphs,
Theoretical Computer Science 412(50), pp. 6982–7000, Elsevier, 2011
- [35] Marek Cygan, Michał Pilipczuk, Riste Škrekovski,
Relation between Randić index and average distance of trees,
MATCH Communications in Mathematical and in Computer Chemistry 66(2), pp. 605–612, 2011

Articles in peer-reviewed conference proceedings

- [36] Jan van den Heuvel, Stephan Kreutzer, Michał Pilipczuk, Daniel A. Quiroz, Roman Rabinovich, Sebastian Siebertz,
Model-checking for successor-invariant first-order formulas on graph classes of bounded expansion,
Accepted to 22nd Annual ACM/IEEE Symposium on Logic in Computer Science, LICS 2017
- [37] Mikołaj Bojańczyk, Michał Pilipczuk,
Optimizing tree decompositions in MSO,
Proceedings of the 34th International Symposium on Theoretical Aspects of Computer Science, STACS 2017
Volume 66 of LIPIcs, Schloß Dagstuhl — Leibniz-Zentrum für Informatik, 2017
- [38] Fedor V. Fomin, Daniel Lokshtanov, Michał Pilipczuk, Saket Saurabh, Marcin Wrochna,
Fully polynomial-time parameterized computations for graphs and matrices of low treewidth,
Proceedings of the 28th Annual ACM-SIAM Symposium on Discrete Algorithms, SODA 2017

- [39] Fedor V. Fomin, Daniel Lokshtanov, Dániel Marx, Marcin Pilipczuk, Michał Pilipczuk, Saket Saurabh, *Subexponential parameterized algorithms for planar and apex-minor-free graphs via low treewidth pattern covering*, Proceedings of the 57th Annual IEEE Symposium on Foundations of Computer Science, FOCS 2016
- [40] Marcin Pilipczuk, Michał Pilipczuk, Marcin Wrochna, *Edge Bipartization faster than 2^k* , Proceedings of the 11th International Symposium on Parameterized and Exact Computation, IPEC 2016 Volume 63 of LIPIcs, Schloß Dagstuhl — Leibniz-Zentrum für Informatik, 2016
- [41] Archontia C. Giannopoulou, Michał Pilipczuk, Jean-Florent Raymond, Dimitrios M. Thilikos, Marcin Wrochna, *Cutwidth: obstructions and algorithmic aspects*, Proceedings of the 11th International Symposium on Parameterized and Exact Computation, IPEC 2016 Volume 63 of LIPIcs, Schloß Dagstuhl — Leibniz-Zentrum für Informatik, 2016
- [42] Ivan Bliznets, Marek Cygan, Paweł Komosa, Michał Pilipczuk, *Hardness of approximation for H -free edge modification problems*, Proceedings of the 19th Int. Workshop on Approximation Algorithms for Comb. Optimization Problems, APPROX 2016 Volume 60 of LIPIcs, Schloß Dagstuhl — Leibniz-Zentrum für Informatik, 2016
- [43] Stephan Kreutzer, Michał Pilipczuk, Roman Rabinovich, Sebastian Siebertz, *The generalised colouring numbers on classes of bounded expansion*, Proceedings of the 41st International Symposium on Mathematical Foundations of Computer Science, MFCS 2016 Volume 58 of LIPIcs, Schloß Dagstuhl — Leibniz-Zentrum für Informatik, 2016
- [44] Mikołaj Bojańczyk, Michał Pilipczuk, *Definability equals recognizability for graphs of bounded treewidth*, 21st Annual ACM/IEEE Symposium on Logic in Computer Science, LICS 2016
- [45] Filip Murlak, Charles Paperman, Michał Pilipczuk, *Schema validation via streaming circuits*, 35th ACM Symposium on Principles of Database Systems, PODS 2016
- [46] Marek Cygan, Daniel Lokshtanov, Marcin Pilipczuk, Michał Pilipczuk, Saket Saurabh, *Lower bounds for approximation schemes for Closest String*, 15th Scandinavian Symposium and Workshops on Algorithm Theory, SWAT 2016 Volume 53 of LIPIcs, Schloß Dagstuhl — Leibniz-Zentrum für Informatik, 2016
- [47] Dmitry Chistikov, Wojciech Czerwiński, Piotr Hofman, Michał Pilipczuk, Michael Wehar, *Shortest Paths in One-Counter Systems*, Proceedings of the 19th Int. Conference on Foundations of Software Science and Computation Structures, FoSSaCS 2016 Volume 9634 of Lecture Notes in Computer Science (LNCS), Springer, 2016
- [48] Pål Grønås Drange, Markus S. Dregi, Fedor V. Fomin, Stephan Kreutzer, Daniel Lokshtanov, Marcin Pilipczuk, Michał Pilipczuk, Felix Reidl, Fernando Sánchez Villaamil, Saket Saurabh, Sebastian Siebertz, Somnath Sikdar, *Kernelization and Sparseness: the case of Dominating Set*, Proceedings of the 33rd International Symposium on Theoretical Aspects of Computer Science, STACS 2016 Volume 47 of LIPIcs, Schloß Dagstuhl — Leibniz-Zentrum für Informatik, 2016
- [49] Michał Pilipczuk, Marcin Wrochna, *On Space Efficiency of Algorithms Working on Structural Decompositions of Graphs*, Proceedings of the 33rd International Symposium on Theoretical Aspects of Computer Science, STACS 2016 Volume 47 of LIPIcs, Schloß Dagstuhl — Leibniz-Zentrum für Informatik, 2016
- [50] Ivan Bliznets, Marek Cygan, Paweł Komosa, Lukáš Mach, Michał Pilipczuk, *Lower bounds for the parameterized complexity of Minimum Fill-in and other completion problems*, Proceedings of the 27th Annual ACM-SIAM Symposium on Discrete Algorithms, SODA 2016

- [51] Ivan Bliznets, Fedor V. Fomin, Marcin Pilipczuk, Michał Pilipczuk,
A subexponential parameterized algorithm for Interval Completion,
Proceedings of the 27th Annual ACM-SIAM Symposium on Discrete Algorithms, SODA 2016
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