

Michał Adamaszek

- CURRENT POSITION** Mathematics Institute and
Centre for Discrete Mathematics and its Applications (DIMAP)
University of Warwick
CV4 7AL, Coventry, United Kingdom
4th year PhD student
e-mail: aszek@mimuw.edu.pl
web: <http://www.warwick.ac.uk/~mariac>
- RESEARCH INTERESTS** Combinatorial and general algebraic topology, algorithmic aspects of topology
Homotopy theory, model categories and simplicial methods
- EDUCATION** **University of Warwick, UK** **October 2008 – June 2012 (expected)**
Postgraduate student, Advisor: Prof. John D.S. Jones
- University of Warsaw, Poland** **2001 – 2007**
M.Sc. in Mathematics, 2007, Spaces of rational maps, Adv. Prof. Stefan Jackowski
M.Sc. in Computer Science, 2006, On some properties of graceful graphs, Adv. Prof. Krzysztof Diks
- WORK IN PROGRESS** with J. Hladký, *f-vectors of three-dimensional flag Gorenstein* complexes via extremal graph theory*, in preparation
Hard squares on cylinders: suspensions and even circumference, in preparation
with J. Stacho, *Algorithmic complexity of finding cross-cycles in independence complexes*, in preparation
- PREPRINTS** with J.D.S. Jones, *The symmetric join operad*, October 2011, [arxiv/1110.2989](https://arxiv.org/abs/1110.2989)
Special cycles in independence complexes and superfrustration in some lattices, September 2011, [arxiv/1109.4914](https://arxiv.org/abs/1109.4914)
Clique complexes and graph powers, April 2011, [arxiv/1104.0433](https://arxiv.org/abs/1104.0433)
Vertex decompositions of two-dimensional complexes and graphs, July 2010, [arxiv/1007.4019](https://arxiv.org/abs/1007.4019)
- RESEARCH PUBLICATIONS** *Splittings of independence complexes and the powers of cycles*,
Journal of Combinatorial Theory, Ser. A, to appear
- with J.A. Barmak, *On a lower bound for the connectivity of the independence complex of a graph*,
Discrete Mathematics 311(21): 2566-2569 (2011)
- with A. Kozłowski, K. Yamaguchi, *Spaces of algebraic and continuous maps between real algebraic varieties*,
Quarterly Journal of Mathematics, (2011) 62(4): 771-790
- with A. Adamaszek, *Uniqueness of graph square roots of girth six*, Electronic Journal of Combinatorics
18 (2011), #P139
- with A. Adamaszek, *Large-girth roots of graphs*, SIAM J. Discrete Math. Volume 24, Issue 4, pp. 1501-1514 (2010). Preliminary version in Proc. 27th International Symposium on Theoretical Aspects of Computer Science (STACS 2010)
- with A. Czumaj, C. Sohler, *Testing Monotone Continuous Distributions on High-dimensional Real Cubes*, Proc. of the 21st ACM-SIAM Symposium on Discrete Algorithms (SODA'10), January 2010. An extended abstract in Property Testing, Current Research and Surveys, 228 - 233, ed. O. Goldreich, LNCS 6390
- with A. Adamaszek, *Combinatorics of the change-making problem*, European Journal of Combinatorics, Vol.31 (1), January 2010, p. 47-63
- with A. Niewiarowska, P. Chrzastowski-Wachtel, *VIPER, a Student-Friendly Interpreter of Pascal*, Informatics Education - Supporting Computational Thinking, ISSEP 2008, LNCS 5090, p. 192-203

- SELECTED POPULAR AND EXPOSITORY PUBLICATIONS
- Topology and subsets — the story of a theorem*, *Matematyka, Społeczeństwo, Nauczanie* 46 (2011), (in Polish; English version: [arxiv/1011.1236](https://arxiv.org/abs/1011.1236))
- 1,2,4,8, *Matematyka, Społeczeństwo, Nauczanie* 41 (2008) (in Polish)
- Picking a random integer*, *Newsletter of the European Math Society*, Dec. 2006, p. 20-23,
- RECENT TALKS AND CONFERENCES
- Sheffield-Warwick seminar on modern foundations of stable homotopy theory, 2010-2011, coorganizer
- A talk *Natural splittings of independence complexes*, WATACBA: Workshop on Algebraic Topology and Combinatorics, Buenos Aires, November 2011
- A poster *Clique complexes vs. Graph powers*, British Math. Colloquium, Leicester, April 2011
- A talk *The symmetric join operad*, 78th Transpennine Topology Triangle, Leicester, April 2011
- A talk *Clique complexes of powers of cycles*, DIMAP Workshop on Combinatorics and Graph Theory, Warwick, April 2011
- An invited talk *Finite topological spaces*, Szkoła Matematyki Poglądowej, Warsaw, January 2011
- A talk *Graph roots*, Postgraduate Combinatorial Conference, London, July 2010
- AWARDS
- Best student poster, British Mathematical Colloquium, Leicester, April 2011
- Postgraduate Scholarship, Centre for Discrete Mathematics and its Applications, University of Warwick, 2008-2012
- OTHER
- University of Warwick, UK**
- Teaching assistant* **2008 – present**
- Teaching assistant for undergraduate courses in mathematics: Discrete Mathematics and its Applications I, II; Analysis III
- University of Warsaw, Poland**
- Teaching assistant* **2005 – 2008**
- Teaching assistant for undergraduate courses in mathematics and computer science: Discrete Mathematics I, II; Geometry and Linear Algebra; Introduction to operating systems and networks; Object-oriented programming
- Editor* **2007 – 2008**
- Member of the editorial board of the popular Math.-Phys.-Astro.-Inf. monthly Delta (<http://www.deltami.edu.pl/>). Responsible for soliciting and editing articles for the informatics section.