

Piotr Skowron

CONTACT INFORMATION	92 Old Road, Headington Oxford, OX3 8SX United Kingdom	<i>Phone:</i> (+48)515 177 085 <i>E-mail:</i> p.k.skowron@gmail.com piotr.skowron@cs.ox.ac.uk <i>Web page:</i> www.mimuw.edu.pl/~ps219737
CITIZENSHIP	Polish	
EDUCATION	University of Warsaw, Faculty of Mathematics, Informatics and Mechanics, 2004 to 2009 and 2010 to 2015. PhD, Computer Science, April 2015 (distinguishment). <ul style="list-style-type: none">• Thesis: <i>Resource Allocation in Cooperative and Selfish Distributed Systems.</i>• Area of Study: Algorithms, Resource Allocation, Multi-Agent Systems, Distributed Systems, Game Theory, Computational Social Choice.• Advisors: prof. Piotr Faliszewski, dr hab. Krzysztof Rządca. MSc, Computer Science, June 2009. <ul style="list-style-type: none">• Thesis: <i>Resource Management Unit in HYDRASor System.</i>• Area of Study: Distributed Systems. BSc, Mathematics, February 2009. <ul style="list-style-type: none">• Thesis: <i>Bayesian Networks and Their Application.</i>• Area of Study: Decision Support Systems. Jagiellonian University, Institute of Computer Science, 2012. One semester internship, February 2012 to June 2012. The University of Edinburgh, School of Informatics, 2008. One semester exchange program Socrates-Erasmus, January 2008 to June 2008. Second High School in Ostrowiec Świętokrzyski, 2000 to 2004. High school diploma with honors, May 2004.	
WORK EXPERIENCE	University of Oxford, February 2016 to present. <ul style="list-style-type: none">• Position: Research Assistant.• Area of research: Computational Social Choice, Complexity Theory, Algorithms. Google Inc., May 2014 to January 2016. <ul style="list-style-type: none">• Position: Software Engineer.• Responsibilities: Design, research and implementation of cluster management mechanisms and algorithms. 9LivesData/NEC, August 2008 to January 2012. <ul style="list-style-type: none">• Position: Consultant/Software developer.• Responsibilities: Design, research and implementation of HYDRASor – a distributed, scalable, high-performance, secondary storage system aimed at the enterprise market.	

Interdisciplinary Centre for Mathematical and Computational Modeling, August 2007 to October 2007.

- Position: Internship.
- Project: Resistanse of Influenza Viruses (RIVERS); participated in modeling influenza in Poland.

PATENTS

Storage System. Piotr Skowron, Marek Biskup, Lukasz Heldt, Cezary Dubnicki.
US Patent 2013 (patent nr: 20130031563),
WO Patent 2012 (patent nr: WO/2012/029259).

JOURNAL
PUBLICATIONS

1. *Achieving fully proportional representation: Approximability results.* Piotr Skowron, Piotr Faliszewski, Arkadii Slinko. *Artificial Intelligence*. 222: 67–103 (2015).
2. *The complexity of fully proportional representation for single-crossing electorates.* Piotr Skowron, Lan Yu, Piotr Faliszewski, Edith Elkind. *Theoretical Computer Science*. 569: 43–57 (2015).
3. *Flexible Replica Placement for Optimized P2P Backup on Heterogeneous, Unreliable Machines.* Piotr Skowron, Krzysztof Rządca. *Concurrency and Computation: Practice and Experience*. To appear.

CONFERENCE
PUBLICATIONS

1. *Committee Scoring Rules: Axiomatic Classification and Hierarchy.* Piotr Faliszewski, Piotr Skowron, Arkadii Slinko, Nimrod Talmon. *IJCAI 2016*. To appear.
2. *Multiwinner Analogues of the Plurality Rule: Axiomatic and Algorithmic Perspectives.* Piotr Faliszewski, Piotr Skowron, Arkadii Slinko, Nimrod Talmon. *AAAI 2016*. To appear.
3. *Multi-Attribute Proportional Representation.* Jérôme Lang, Piotr Skowron. *AAAI 2016*. To appear.
4. *Complexity of Finding Equilibria of Plurality Voting Under Structured Preferences.* Edith Elkind, Vangelis Markakis, Svetlana Obraztsova, Piotr Skowron. *AAMAS 2016*. To appear.
5. *What Do We Elect Committees For? A Voting Committee Model for Multi-Winner Rules.* Piotr Skowron. *IJCAI 2015*, pages 1141–1148.
6. *Equilibria of Plurality Voting: Lazy and Truth-biased Voters.* Edith Elkind, Evangelos Markakis, Svetlana Obraztsova, Piotr Skowron. *SAGT 2015*, pages 110–122.
7. *Elections with Few Candidates: Prices, Weights, and Covering Problems.* Robert Bredereck, Piotr Faliszewski, Rolf Niedermeier, Piotr Skowron, Nimrod Talmon. *ADT 2015*, pages 414–431.
8. *Fully Proportional Representation with Approval Ballots: Approximating the Max-Cover Problem with Bounded Frequencies in FPT Time.* Piotr Skowron, Piotr Faliszewski. *AAAI 2015*, pages 2124–2130.

9. *Finding a Collective Set of Items: From Proportional Multirepresentation to Group Recommendation*. Piotr Skowron, Piotr Faliszewski, Jérôme Lang. AAAI 2015, pages 2131–2137.
10. *Geographically Distributed Load Balancing with (Almost) Arbitrary Load Functions*. Piotr Skowron, Krzysztof Rzdca. HiPC 2015, pages 305–314.
11. *People are Processors: Coalitional Auctions for Complex Projects*. Piotr Skowron, Krzysztof Rzdca, Anwitaman Datta. AAMAS 2014, pages 1525–1526.
12. *Properties of Multiwinner Voting Rules*. Edith Elkind, Piotr Faliszewski, Piotr Skowron, Arkadii Slinko. AAMAS 2014, pages 53–60.
13. *A Characterization of the Single-Peaked Single-Crossing Domain*. Edith Elkind, Piotr Faliszewski, Piotr Skowron. AAAI 2014, pages 654–660.
14. *Non-monetary Fair Scheduling—a Cooperative Game Theory Approach*. Piotr Skowron, Krzysztof Rzdca. SPAA 2013, pages 288–297.
15. *Fully Proportional Representation as Resource Allocation: Approximability Results*. Piotr Skowron, Piotr Faliszewski, Arkadii Slinko. IJCAI 2013, pages 353–359.
16. *Network Delay-Aware Load Balancing in Selfish and Cooperative Distributed Systems*. Piotr Skowron, Krzysztof Rzdca. IPDPSW 2013, pages 7–18.
17. *Achieving Fully Proportional Representation is Easy in Practice*. Piotr Skowron, Piotr Faliszewski, Arkadii Slinko. AAMAS 2013, pages 399–406.
18. *The Complexity of Fully Proportional Representation for Single-Crossing Electorates*. Piotr Skowron, Lan Yu, Piotr Faliszewski, Edith Elkind. SAGT 2013, pages 1–12.
19. *Fuzzy Adaptive Control for Heterogeneous Tasks in High-Performance Storage Systems*. Piotr Skowron, Marek Biskup, Lukasz Heldt, Cezary Dubnicki. SYSTOR 2013, pages 13:1–13:11.
20. *Exploring Heterogeneity of Unreliable Machines for P2P Backup*. Piotr Skowron, Krzysztof Rzdca. HPCS 2013, pages 91–98.
21. *Fair Share is Not Enough: Measuring Fairness in Scheduling With Cooperative Game Theory*. Piotr Skowron, Krzysztof Rzdca. PPAM(2) 2013, pages 38–48.

WORKSHOPS

1. *Top-k-Counting Multi-Winner Voting Rules*. 7th Summer Workshop of The Centre for Mathematics in Social Science. Auckland, New Zealand. February 2016.
2. *Finding a Collective Set of Items: From Proportional Multirepresentation to Group Recommendation*. COMSOC, Pittsburgh, USA. June 2014.
3. *Non-monetary fair scheduling: a cooperative game theory approach*. New Challenges in Scheduling Theory, Aussois, France. March 2014.
4. *Approximating the maxcover problem with bounded frequencies in fpt time*. Forum of Theoretical Informatics (FIT), Jarnołtówek, Poland. April 2014.

5. *People are processors: Coalitional auctions for complex projects*. The Workshop on Economic and Computational Aspects of Game Theory and Social Choice (ECAGS), Warsaw, Poland. March 2014.
6. *Approximating the maxcover problem with bounded frequencies in fpt time*. The Workshop on Economic and Computational Aspects of Game Theory and Social Choice (ECAGS), Warsaw, Poland. March 2014.
7. *Fully Proportional Representation as Resource Allocation: Approximability Results*. The Fourth Workshop on Cooperative Games in Multiagent Systems (CoopMAS), St. Paul, USA. May 2013.
8. *Non-monetary Fair Scheduling—a Cooperative Game Theory Approach*. The Fourth Workshop on Cooperative Games in Multiagent Systems (CoopMAS), St. Paul, USA. May 2013.
9. *Fully Proportional Representation as Resource Allocation: Approximability Results*. Forum of Theoretical Informatics (FIT), Toruń, Poland. April 2013.
10. *Multiwinner Voting as Resource Allocation*. 6th Multidisciplinary Workshop on Advances in Preference Handling (M-PREF), Montpellier, France. August 2013.
11. *Network Delay-Aware Load Balancing in Selfish and Cooperative Distributed Systems*. New Challenges in Scheduling Theory, Frejus, France. October 2012.

INTERNATIONAL
COLLABORATION

prof. Arkadii Slinko, visit at The University of Auckland, Auckland, 17th February to 4th March 2016.

prof. Arkadii Slinko, visit at The University of Auckland, Auckland, 11th to 23rd January 2014.

prof. Jerome Lang, visit at University Paris-Dauphine, Paris, 18th to 28th June 2013.

prof. Edith Elkind, visit at Nanyang Technological University, Singapur, 22nd February to 2nd March 2013.

AWARDS AND
SUCCESES

Runner-up of the 2015 IFAAMAS Victor Lesser Distinguished Dissertation Award, 2016.

National Science Center (Poland): Preludium grant, Principal Investigator, 2014-2016.

PhD scholarship program POKL “National PhD Program in Mathematical Sciences”, 2010-2014.

Finalist of the 55th *Polish Mathematical Olympiad*, 2004.

Laureate of the 4th *Open Internet Mathematical Contest For High School Students* organized by Warsaw University of Technology, 2004.

Prize of the Mayor of Ostrowiec Świętokrzyski for special achievements, 2004.

ACADEMIC SERVICE	PC member: AAAI 2014, AAAI 2015, AAMAS 2015, IJCAI 2015, AAAI 2016, IJCAI 2016, ECAI 2016, ADT 2016. Reviewing for journals: AIJ, JAIR JPDC, Parallel Computing, RAIRO-ITA.
TEACHING	C++ (2011), Control Theory in Computer Systems (2011), Introduction to Programming (2013, 2014), Distributed Systems (2013), Computer Networks (2013).
FOREIGN LANGUAGES	English , fluent. German , basic.
TECHNOLOGIES	C++, C, Python, Linux.