

Mikhail Raskin

Curriculum vitae

Personal details

Date and place of birth 21 August 1987, Moscow, Russia
Nationality Russia
Address University of Bordeaux, LaBRI (Bât A30),
351, Cours de la Libération, F-33405 Talence Cedex, France
Phone +33 7 69 55 11 75
Email mikhail.raskin@u-bordeaux.fr, raskin@mccme.ru

Current position

Since **2017** Research Engineer, University of Bordeaux, LaBRI

Previous positions

Dec 2015 – Feb 2017 Postdoc, Department of CS, Aarhus University

Research interests

Expressive power and properties of programming languages. Algorithm design, combinatorial and probabilistic constructions in theoretical computer science, special computation models.

Education

2008–2014 PhD, Moscow State University, Dept. of mechanics and mathematics

PhD thesis supervisor: Prof. Nikolay K. Vereshchagin

PhD thesis title: Automata on infinite words: direct and semidirect products approach.

2002–2008 Master of Science, Independent University of Moscow

2003–2008 Master of Science, Moscow State University, Dept. of mechanics and mathematics (cum laude)

MSc thesis supervisor: Prof. Nikolay K. Vereshchagin

MSc thesis title: Partial orderings on measures on the set of infinite words over a two-symbol alphabet

1999–2003 Moscow State School N 57

Publications and reviewed conference talks

1. J. Esparza, M. Raskin, C. Weil-Kennedy. Parameterized Analysis of Immediate Observation Petri Nets. (preprint available)

2. M. Raskin, M. Simkin. Oblivious RAM with Small Storage Overhead. (preprint available)
3. M. Raskin. Population protocols with unreliable communication. (in preparation for submission)
4. K. Arnsfelt, M. Raskin. A two-player stay-in-a-set game with perfect information and without Nash equilibria. (in preparation for submission)
5. M. Raskin. A superpolynomial lower bound for the size of non-deterministic complement of an unambiguous automaton. International Colloquium on Automata, Languages, and Programming 2018, Prague, Czech Republic.
6. M. Raskin. A linear lower bound for incrementing a space-optimal integer representation in the bit-probe model. International Colloquium on Automata, Languages, and Programming 2017, Warsaw, Poland
7. M. Raskin. Writing a best-effort portable code walker in Common Lisp. European Lisp Symposium 2017, Brussels, Belgium.
8. Ivan Damgård, Jesper Buus Nielsen, Antigoni Polychroniadou, Michael Raskin. On the Communication Required for Unconditionally Secure Multiplication. *Advances in Cryptology - CRYPTO Proceedings* 2016, part 2, pp. 459–488.
9. M. Raskin, N. Nikitenkov. Paradox of choice in social network games with product choice. Game theory society congress 2016, Maastrich, Netherlands.
10. M. Raskin, N. Mamardashvili. Accessing local variables during debugging. European Lisp Symposium 2016, Krakow, Poland.
11. K. Chatterjee, M. Henzinger, S. Krininger, V. Loitzenbauer, M. Raskin. Approximating the minimum cycle mean. *Theoretical Computer Science*, 2014, vol. 547, pp. 104–116
12. M. Raskin. Computable measures that are couplable but not computably couplable. International Conference on Computability, Complexity and Randomness 2013, Moscow, Russia.
13. M. Raskin. Data-transformer: an example of data-centered tool set. European Lisp Symposium 2013, Madrid, Spain.
14. M. Raskin. Toom's Partial Order Is Transitive. *Problems of Information Transmission*, 2012, vol. 48, N2, pp.154–172
15. M. Raskin. Lower Estimate of the Regulator of the Direct Product of almost Periodic and Periodic Sequences. *Vestnik Moskovskogo Universiteta (MSU Bulletin)*, Series 1, Mathematics. Mechanics. 2011, v. 6
16. M. Raskin. Coupling of computable measures coordinated with an order relation is not always computable. *Vestnik Moskovskogo Universiteta (MSU Bulletin)*. Series 1. Mathematics. Mechanics. 2012, v. 2

17. Yu. Pritykin, M. Raskin. Almost periodicity and finite automata. Workshop on Infinite Words, Automata and Dynamics 2007, Ekaterinburg, Russia.

Talks

Peer-reviewed talks

1. State complexity of complementing unambiguous finite automata. International Colloquium on Automata, Languages, and Programming 2018, Prague, Czech Republic
2. A linear lower bound for incrementing a space-optimal integer representation in the bit-probe model. International Colloquium on Automata, Languages, and Programming 2017, Warsaw, Poland
3. Writing a best-effort portable code walker in Common Lisp. European Lisp Symposium 2017, Brussels, Belgium.
4. Paradox of choice in social network games with product choice. (joint work with Nikita Nikitenkov) Game theory society congress 2016, Maastrich, Netherlands.
5. Accessing local variables during debugging. (joint work with Nikita Mamardashvili) European Lisp Symposium 2016, Krakow, Poland.
6. Computable measures that are couplable but not computably couplable. International Conference on Computability, Complexity and Randomness 2013, Moscow, Russia.
7. Data-transformer: an example of data-centered tool set. European Lisp Symposium 2013, Madrid, Spain.
8. Almost periodicity and finite automata (joint work with Yu. Pritykin). Workshop on Infinite Words, Automata and Dynamics 2007, Ekaterinburg, Russia.

Lightning talks

1. Lisp-in-the-middle: Unifying system policies as Lisp code. Lightning talk. European Lisp Symposium 2018, Marbella, Spain.
2. Lisp-in-the-middle, or I wanted a Lisp Machine and all I got was a fancy sudo. Lightning talk. European Lisp Symposium 2017, Brussels, Belgium.
3. OpenCV wrapper and form processing for Common Lisp — implementation notes. Lightning talk. European Lisp Symposium 2015, London, UK.
4. Julia: an outside view. Lightning talk. European Lisp Symposium 2014, Paris, France.
5. Screen subareas in StumpWM via tagging. Lightning talk. European Lisp Symposium 2014, Paris, France.

6. Personal software for PC: how I ended up reading email using Common Lisp. Lightning talk. European Common Lisp Meeting 2013, Madrid, Spain.
7. QueryFS: a virtual filesystem based on queries and related tools. Lightning talk. European Lisp Symposium 2012, Zadar, Croatia.

Teaching experience

University of Bordeaux (2018):

Teaching assistant: Array algorithms

Independent University of Moscow (2007–2015):

Lecture courses: Introduction to probability theory, Set theory, Mathematical logic

Teaching assistant: Geometry, Algebra, Mathematical analysis

Lomonosov Moscow State University (2015):

Co-supervision of an MSc thesis project

“Paradoxical examples of social network games with product choice”

Moscow Institute of Physics and Technology (2011–2014):

Teaching Assistant: Mathematical logic, Algorithmic complexity.

Lecture Courses at the Summer School “Contemporary Mathematics” (2007–2018)

- “Toy examples of games”;
- “Blind counting”;
- “The objects that happen to exist” (probabilistic proofs of existence);
- “We cannot wait for favors from Nature” (forcing method in set theory model construction);
- “Who am I? Where am I?” (on sampling assumptions);
- A set of conventions and conventions about sets (a survey of alternative set theories);
- Cellular automata;
- Classical nonclassical logics and standard nonstandard models;
- Fortune-teller is of no use (what can and what cannot be predicted),
- Conditional probability and other probabilistic notions;
- Introduction to game theory;
- Sequences, close to periodical (with Yu.Pritykin).

Programming experience

Main languages: Common Lisp, Python, Pascal (Free Pascal Compiler, Delphi),
POSIX Shell/Bash, Nix

Other: Julia, Scheme, C, JavaScript, OCaml, C++

Languages spoken

- Russian (native)
- English (advanced)
- French (good)