Dmitry Sokolov

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▬ Biographical Data

Citizenship Russia

Date and place of birth 23th August 1988, Leningrad, USSR

▬ Research Interests

Proof complexity, computational complexity, communication complexity, average-case complexity

▬ Education

2011–2015 **PhD.**, *St.Petersburg Department of V.A.Steklov Institute of Mathematics of the Russian Academy of Sciences*, St. Petersburg, Russia.
- Advisors: E. A. Hirsch, D. M. Itsykson
- Area of study: proof complexity, computational complexity
- Thesis title: On the Complexity of Splitting Algorithms for Boolean Satisfiability Problem (in russian)

2009–2011 **Master**, *St. Petersburg Academic University of the Russian Academy of Science*, St. Petersburg, Russia.
- Advisor: D. M. Itsykson
- Major: Theoretical Computer Science
- Thesis title: Hard examples for heuristic DPLL algorithm's for SAT

2009–2011 **Master**, *St. Petersburg University of Information Technology, Mechanic and Optics*, St. Petersburg, Russia.
- Advisor: D. M. Itsykson
- Major: Applied Mathematics and Computer Science
- Thesis title: Lower bounds of inversion of Goldreich's function

2005–2009 **Bachelor**, *St. Petersburg University of Information Technology, Mechanic and Optics*, St. Petersburg, Russia.
- Major: Applied Mathematics and Computer Science
- Thesis title: An application of genetic algorithms in creation of finite automaton operating the tank model in game Robocode

▬ Additional Education

Computer Science Club

Mathematics and physics club

▬ Research Positions

2020– Assistant Professor at St. Petersburg State University

2018– Researcher at St. Petersburg Department of V.A. Steklov Institute of Mathematics of the Russian Academy of Sciences

2019–2020   Visitor at University of Copenhagen

2019–2020   Postdoc at Lund University

2017–2019   Postdoc at KTH University

2018–2018   Participant of Special Semester "Lower Bounds in Computational Complexity" at Simons Institute, Berkeley

2014–2018   Junior Researcher at St. Petersburg Department of V.A. Steklov Institute of Mathematics of the Russian Academy of Sciences

2013–2013   Early stage researcher at Charles University Participant of Prague Special Semester in Logic and Complexity

━━━━━   Talks

2020   "(Semi)Algebraic Proofs over $\{\pm 1\}$ Variables." Proof Complexity workshop, Banff, Canada

2019   "(Semi)Algebraic Proofs over $\{\pm 1\}$ Variables." Problems in Theoretical Computer Science, Moscow, Russia

2019   "From Proofs to Computations." Theory seminar, University of Oxford, Oxford, UK

2019   "Monotone Circuit Lower Bounds from Resolution." Theory seminare, The University of Chicago, Chicago, USA

2018   "Reordering Rule Makes OBDD Proof Systems Stronger." CCC-2018, San Diego, USA

2018   "Monotone Circuit Lower Bounds from Resolution." Dagstuhl seminar "Proof Complexity", Germany

2017   "Dag-like communication and its application." CSR-2017, Kazan, Russia

2016   "Dag-like communication and its application." Problems in Theoretical Computer Science, Moscow, Russia

2015   "Complexity of distributions and average-case hardness." Problems in Theoretical Computer Science, Moscow, Russia

2015   "Lower Bounds for Splittings by Linear Combinations." ELC mini-workshop, Tokyo, Japan

2014   "Examples of heuristic proof." Dagstuhl seminar "Optimal algorithms and proofs" (14421)

2014   "Lower Bounds for Splittings by Linear Combinations." Mathematical Foundations of Computer Science 2014 - 39th International Symposium, Budapest, Hungary

2013   "Lower bounds on DPLL algorithms with splitting over linear functions on unsatisfiable formulas." Franco-Russian workshop on Algorithms, complexity and applications, Moscow, Russia

2013   "On short heuristic proofs." MALOA Final Conference Logic and Interactions, Luminy, France

2012   "On short heuristic proofs." Second Russian Finnish Symposium on Discrete Mathematics (RuFiDim'12), Turku, Finland

2011   "Lower bounds for myopic DPLL algorithms with a cut heuristic." The 22nd International Symposium on Algorithms and Computation (ISAAC'11), Yokohama, Japan

2011	"Lower bounds for myopic DPLL algorithms with a cut heuristic." First Russian Finnish Symposium on Discrete Mathematics (RuFiDim'11), St. Petersburg, Russia
2011	"Inverting the explicit Goldreich's function with DPLL algorithms" The 6th International Computer Science Symposium in Russia (CSR'11), St. Petersburg, Russia

Schools

2019	Swedish Summer School in Computer Science (S^3CS'17), Stockholm, Sweden
2017	Swedish Summer School in Computer Science (S^3CS'17), Stockholm, Sweden
2015	Swedish Summer School in Computer Science (S^3CS'15), Stockholm, Sweden
2014	Swedish Summer School in Computer Science (S^3CS'14), Stockholm, Sweden
2013	Computer Science E-Days (CSEDays'13), Ekaterinburg, Russia
2012	17th Estonian Winter School in Computer Science (EWSCS'12), Palmse, Estonia

Teaching

2017–2018	Special course at KTH Royal Institute of Technology
2011–2017	St. Petersburg Academic University
2011–2017	Computer Science Center

Achievements and awards

2014	Young Russian Math Contest ("Dynasty foundation"). Winner
2013	The medal of Foundation for support of education and science (Alferov's foundation)
2009	Third diploma of North-Easter European Subregional Contest. Results

Technical skills

C/C++, Java, Linux, Latex