curriculum vitae

Alexander Kozachinskiy

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place and date of birth: 17.02.1993, Moscow, Russia

Education

2015-2019	Ph.D. in Mathematics. Lomonosov Moscow State University. **Adviser**: Nikolay Vereschagin. **Thesis**: *Comparison of communication, information and decision tree complexities.*
2010-2015	Specialist in Mathematics, diploma with honors. Lomonosov Moscow State University.

Employment

2020-2021	Postdoctoral researcher University of Warwick, Coventry, UK. Department of Computer Science. **Supervisor**: Marcin Jurdzinski.
2016-2019	Junior Research Fellow and Lecturer Higher School of Economics, Moscow, Russia. Faculty of Computer Science.

Research interests

Algorithms, complexity, information theory.

Conference papers

[1] Alexander Kozachinskiy. Continuous Positional Payoffs. To appear in *Proceedings of the 31st International Conference on Concurrency Theory (CONCUR 2021).*

[2] Alexander Kozachinskiy. Polyhedral Value Iteration for Discounted Games and Energy Games. *Proceedings of the Thirty-Second Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2021).* Society for Industrial and Applied Mathematics, pp. 600-616, 2021.

[3] Alexander Kozachinskiy and Vladimir Podolskii. Multiparty Karchmer-Wigderson Games and Threshold Circuits. *Proceedings of the 35th Computational Complexity Conference (CCC 2020).* Leibniz International Proceedings in Informatics, vol. 169, pp. 24:1-24:23, 2020.

[4] Alexander Kozachinskiy and Alexander Shen. Two Characterizations of Finite-State Dimension. *Proceedings of the 22nd International Symposium on Fundamentals of Computation Theory (FCT 2019).* Lecture Notes in Computer Science, vol. 11651, pp. 80-94, 2018.

[5] Alexander Kozachinskiy. From Expanders to Hitting Distributions and Simulation Theorems. *Proceedings of the 43rd International Symposium on Mathematical Foundations of Computer Science (MFCS 2018).* Leibniz International Proceedings in Informatics, vol. 117, pp. 4:1-4:15, 2018.

[6] Egor Klenin and Alexander Kozachinskiy. One-Sided Error Communication Complexity of Gap Hamming Distance. *Proceedings of the 43rd International Symposium on Mathematical Foundations of Computer Science (MFCS 2018).* Leibniz International Proceedings in Informatics, vol. 117, pp. 7:1-7:15, 2018.

[7] Alexander Kozachinskiy. Recognizing Read-Once Functions from Depth-Three Formulas. *Proceedings of the 13th International Computer Science Symposium in Russia (CSR 2018).* Lecture Notes in Computer Science, vol. 10846, pp. 232-243, 2018. Yandex best student paper award.

[8] Alexander Kozachinskiy. On Slepian – Wolf Theorem with Interaction. *Proceedings of the 11th International Computer Science Symposium in Russia (CSR 2016).* Lecture Notes in Computer Science, vol. 9691, pp. 207-222, 2016. Yandex best student paper award.

[9] Alexander Kozachinskiy. Making Randomness Public in Unbounded-Round Information Complexity. *Proceedings of the 10th International Computer Science Symposium in Russia (CSR 2015).* Lecture Notes in Computer Science, vol. 9139, pp. 296-309, 2015.

Journal papers

[1] Alexander Kozachinskiy and Alexander Shen. Automatic Kolmogorov Complexity, Normality, and Finite-State Dimension Revisited. *Journal of Computer and System Sciences*, Vol. 118, pp. 75-107, 2021.

[2] Alexander Kozachinskiy. Recognizing Read-Once Functions from Depth-Three Formulas. *Theory of Computing Systems*, 64(1), pp. 3-16, 2020.

[3] Alexander Kozachinskiy. On Slepian – Wolf Theorem with Interaction. *Theory of Computing Systems*, 62(3), pp. 583-599, 2018.

Teaching experience

2018, 2019	Mathematical logic and computational complexity. HSE, Faculty of Computer Science. Teaching assistant.
2016, 2016, 2018	Discrete Mathematics – 2. HSE, Faculty of Computer Science. Teaching assistant.

2016, 2017, 2018	Information Theory. Yandex School of Data Analysis. Teaching assistant.
2016	Computability and Complexity. Independent University of Moscow, Math in Moscow Program. Teaching assistant.

Grants

2016-2018	Russian Fund for Basic Research grant 16-01-00362, co-performer. Project title: computational complexity and descriptive complexity. Project leader: Nikolay Vereshchagin.
2016-2017	Grant of the President of Russian Federation (MK-7312.2016.1), co-performer. Project title: complexity of Boolean functions and interactive computations. Project leader: Vladimir Podolskii.

Other achievements

Prize winner of the final of the All-Russian Olympiad in Mathematics for high school students in 2008, 2009 and 2010.

Summer schools and academic visits

2021	Simons Institute Theoretical Foundations of Computer Science program (on-line)
2019	LIRMM CNRS Montpellier, France. Two-week visit, invited by Alexander Shen.
2018	Summer School on Algorithms and Lower Bounds Prague, Czech Republic.
2018	Recent Advances in Algorithms. Summer School in St. Peterburg.
2016	Special Semester on Computational and Proof Complexity. St. Peterburg.
2010, 2011	Contemporary Mathematics. Summer School in Dubna.