

Jarosław Błasiok, PhD

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Current position Postdoctoral researcher at ETH Zürich (2023-present).

Education

2014 – 2019:

Ph. D. in Computer Science
John A. Paulson School of Engineering and Applied Sciences
Harvard University
Cambridge, Massachusetts, USA

2012 – 2014:

M. Sc. in Computer Science
Faculty of Mathematics, Informatics and Mechanics
University of Warsaw
Warsaw, Poland

2009 – 2012:

B.S. in Computer Science
Faculty of Mathematics, Informatics and Mechanics
University of Warsaw
Warsaw, Poland

Previous position Postdoctoral researcher at Columbia University, Simons Junior Fellow (2019-2023).

Awards and honors

- Simons Junior Fellow, 2019-2023
- Siebel Scholar, class of 2019
- Best student paper award for *Optimal streaming and tracking distinct elements with high probability*, (SODA 2018)
- Nomination to participate in the 6th Heidelber Laureate Forum, 2018

Publications

*author names in alphabetical order unless indicated by **

- J. Błasiok, P. Nakkiran *Smooth ECE: Principled Reliability Diagrams via Kernel Smoothing*, Unpublished manuscript, in submission
- J. Błasiok, P. Gopalan, L. Hu, A. T. Kalai, P. Nakkiran *Loss minimization yields multicalibration for large neural networks*, Unpublished manuscript, in submission
- J. Błasiok, P. Gopalan, L. Hu, P. Nakkiran *When Does Optimizing a Proper Loss Yield Calibration?*, (NeurIPS 2023)
- J. Alman, J. Błasiok *Matrix Multiplication and Number on the Forehead Communication*, (CCC 2023)
- J. Błasiok, P. Gopalan, L. Hu, P. Nakkiran *A Unified Theory of Distance from Calibration*, (STOC 2023)

- A. Andoni, J. Błasiok, A. Filtser *Communication Complexity of Inner Product in Symmetric Normed Spaces*, 14th Innovations in Theoretical Computer Science (ITCS 2023)
- B. Kulynych, Y. Yang, Y. Yu, J. Błasiok, P. Nakkiran *What You See is What You Get: Distributional Generalization for Algorithm Design in Deep Learning*, Thirty-sixth Conference on Neural Information Processing Systems (NeurIPS 2022)*
- J. Błasiok, P. Ivanov, Y. Jin, C. H. Lee, R. A. Servedio, E. Viola *Fourier Growth of Structured \mathbb{F}_2 -Polynomials and Applications*, 25th International Conference on Randomization and Computation (RANDOM 2021)
- J. Błasiok, Patrick Lopatto, Kyle Luh, Jake Marcinek, Shravas Rao *An Improved Lower Bound for Sparse Reconstruction from Subsampled Hadamard Matrices*, Discrete Analysis (preliminary version at FOCS 2019)
- J. Błasiok, M. Bun, A. Nikolov, T. Steinke *Towards an Optimal Algorithm for Concentrated Differential Privacy*, 30th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2019)
- J. Błasiok, Venkatesan Guruswami, Madhu Sudan *Polar Codes with exponentially small error at finite block length*, 22nd International Conference on Randomization and Computation (RANDOM 2018)
- J. Błasiok, V. Guruswami, P. Nakkiran, A. Rudra, M. Sudan *General Strong Polarization*, Journal of ACM (preliminary version at STOC 2018)
- J. Błasiok *Optimal streaming and tracking distinct elements with high probability*, ACM Transactions on Algorithms (preliminary version at SODA 2018 **Best student paper award**)
- J. Błasiok, J. Ding, J. Nelson *Continuous monitoring of ℓ_p norms in data streams*, 21st International Workshop on Randomization and Computation (RANDOM 2017)
- J. Błasiok, V. Braverman, S. R. Chestnut, R. Krauthgamer, L. F. Yang *Streaming Symmetric Norms via Measure Concentration*, 49th Annual ACM Symposium on the Theory of Computing (STOC 2017)
- C. E. Tsourakakis, M. Mitzenmacher, K. G. Larsen, J. Błasiok, B. Lawson, P. Nakkiran, V. Nakos *Predicting positive and negative links with noisy queries: Theory & practice*, Internet Mathematics (2017)*
- J. Błasiok, C. E. Tsourakakis *ADAGIO: Fast Data-aware Near-Isometric Linear Embeddings*, IEEE 16th International Conference on Data Mining (ICDM 2016)
- J. Błasiok, J. Nelson *An improved analysis of the ER-SpUD dictionary learning algorithm*, The 43rd International Colloquium on Automata, Languages and Programming (ICALP 2016)
- J. Błasiok, M. Kamiński, J.-F. Raymond and T. Trunck *Induced minors and well-quasi-ordering*, Journal of Combinatorial Theory, Series B (preliminary version at EuroComb 2015)
- J. Błasiok and M. Kamiński *Chain Minors are FPT*, Algorithmica 2016, (preliminary version at IPEC 2013)

Teaching Experience

- Teaching Fellow for *High dimensional probability*, Harvard University, Spring 2019
- Teaching Fellow for *Applied Algebra*, Harvard University, Fall 2016.
 - Certificate of Distinction in Teaching, awarded by Derek Bok Center for Teaching and Learning.
- Teaching Fellow for Summer School *Mathematical Methods for High-Dimensional Data Analysis*, Technische Universität München, Summer 2016
- Teaching Fellow for *Algorithms for Big Data*, Harvard University, Fall 2015
 - Certificate of Distinction in Teaching, awarded by Derek Bok Center for Teaching and Learning.
- Long collaboration with Polish Children’s Fund in organization of workshops/lectures in Computer Science for exceptionally gifted Polish High School students. In particular between 2009 and 2014 presented or helped presenting to high school students basics of the following topics
 - Automata theory and complexity theory
 - Graph algorithms
 - Number theory and basic cryptography
 - Image processing

Achievements in programming competitions

- Fifth place (silver medal) on ACM ICPC World Finals (2014)
- Gold medalist of XXI International Olympiad in Informatics (2009)
- Gold medalist of XX International Olympiad in Informatics (2008)
- Gold medalist – with first place – of XV Polish Olympiad in Informatics (2008)
- Gold medalist of XIV Baltic Olympiad in Informatics (2008)
- Silver medalist of XIV Polish Olympiad in Informatics (2007)
- Silver medalist of XVI Polish Olympiad in Informatics (2009)
- Bronze medalist of XV Central European Olympiad in Informatics (2008)
- Bronze medalist of XVI Central European Olympiad in Informatics (2009)
- Bronze medalist of XIII Baltic Olympiad in Informatics (2007)
- Laureate of LX Polish Olympiad in Mathematics (2009)
- Finalist of XIII Polish Olympiad in Informatics (2006)
- Finalist of LVIII Polish Olympiad in Mathematics (2007)

Industry Experience

Software Developer Engineer in Google Corporation, Irvine, CA
Summer internship in 2013, Google Analytics team

Software Developer Engineer in Microsoft Corporation, Redmond, WA
Summer internship in 2012, Server Tools and Business division

Software Developer in Future Processing, Poland
Worked on Adaptive Vision Studio in 2011 — rapid machine vision development environment.