



Samson Zhou

Curriculum Vitae

Education

- 2011–Present **Purdue University**, *Ph.D. Candidate in Computer Science*,
Expected graduation: May 2018.
- 2006–2011 **Massachusetts Institute of Technology**, *Master of Engineering in Computer Science*.
- 2006–2011 **Massachusetts Institute of Technology**, *Bachelor of Science in Computer Science*.
- 2006–2011 **Massachusetts Institute of Technology**, *Bachelor of Science in Mathematics*.
- 2004–2006 **Texas A&M University**.
- 2002–2006 **A&M Consolidated High School**.

Research

Current Research Interests

Sublinear Algorithms, Approximation Algorithms, Data Stream Algorithms

Publications

- 2018 **Funda Ergün, Elena Grigorescu, Erfan Sadeqi Azer, Samson Zhou**, *Periodicity in Data Streams with Wildcards*, The 13th International Computer Science Symposium in Russia, CSR.
- Jeremiah Blocki, Samson Zhou**, *On the Computational Complexity of Minimal Cumulative Cost Graph Pebbling*, 22nd International Conference, Financial Cryptography and Data Security, FC.
- Jeremiah Blocki, Ben Harsha, Samson Zhou**, *On the Economics of Offline Password Cracking*, 39th IEEE Symposium on Security and Privacy, S&P.

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- 2017 **Elena Grigorescu, Erfan Sadeqi Azer, Samson Zhou**, *Streaming for Aibohphobes: Longest Palindrome with Mismatches*, 37th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science, FSTTCS.
- Jeremiah Blocki, Samson Zhou**, *On the Depth-Robustness and Cumulative Pebbling Cost of Argon2i*, 15th IACR Theory of Cryptography Conference, TCC.
- Elena Grigorescu, Erfan Sadeqi Azer, Samson Zhou**, *Longest Alignment with Edits in Data Streams*, 54th Annual Conference on Communication, Control, and Computing, Allerton.
- Funda Ergün, Elena Grigorescu, Erfan Sadeqi Azer, Samson Zhou**, *Streaming Periodicity with Mismatches*, 21st International Workshop on Randomization and Computation, RANDOM.
- 2016 **Venkata Gandikota, Elena Grigorescu, Sidharth Jaggi, Samson Zhou**, *Nearly Optimal Sparse Group Testing*, Proceedings of 54th Annual Conference on Communication, Control, and Computing, Allerton.
- 2011 **Samson Zhou**, *Human and Artificial Intelligence Acquisition of Quantifiers*, M.Eng. Thesis, Advised by Robert C. Berwick, MIT Professor of Computational Linguistics and Computer Science and Engineering.

Manuscripts

- 2018 **Vladimir Braverman, Harry Lang, Samson Zhou**, *Improved Methods on Time-Decay Streams*.
- Vladimir Braverman, Elena Grigorescu, Harry Lang, David P. Woodruff, Samson Zhou**, *Nearly Optimal Distinct Elements and Heavy Hitters on Sliding Windows*.
- Vladimir Braverman, Petros Drineas, Jalaj Upadhyay, Samson Zhou**, *Numerical Linear Algebra in the Sliding Window Model*.
- Jeremiah Blocki, Venkata Gandikota, Elena Grigorescu, Samson Zhou**, *Relaxed Locally Correctable Codes in Computationally Bounded Channels*.
- Jeremiah Blocki, Ling Ren, Samson Zhou**, *Bandwidth-Hard Functions: Reductions and Lower Bounds*.
- 2017 **Greg Frederickson, Samson Zhou**, *Optimal Parametric Search for Path and Tree Partitioning*.
- 2016 **Marc Bury, Elena Grigorescu, Andrew McGregor, Morteza Monemizadeh, Chris Schwegelshohn, Sofya Vorotnikova, Samson Zhou**, *Structural Results on Matching Estimation with Applications to Streaming*.
- Elena Grigorescu, Morteza Monemizadeh, Samson Zhou**, *Estimating Weighted Matchings in $o(n)$ Space*.

Talks

- 2018 **Password Hashing and Graph Pebbling**, *April 13*, Midwest Theory Day, Toyota Technological Institute at Chicago.
- On the Computational Complexity of Minimal Cumulative Cost Graph Pebbling**, *January 22*, Theory Seminar, Purdue University.
- 2017 **Pattern Matching over Noisy Data Streams**, *November 29*, Theory Seminar, Johns Hopkins University.
- Streaming Periodicity with Mismatches**, *August 16*, 21st International Workshop on Randomization and Computation, RANDOM.
- Streaming for Aibohphobes: Longest Near-Palindrome under Hamming Distance**, *February 10*, Theory Seminar, Indiana University Bloomington.
- Streaming for Aibohphobes: Longest Near-Palindrome under Hamming Distance**, *February 9*, Theoretical Computer Science Reading Group, Purdue University.
- On the Computational Complexity of Minimal Cumulative Cost Graph Pebbling**, *January 23*, Cryptography Reading Group, Purdue University.
- Recent Results in Heavy Hitters**, *January 20*, Theoretical Computer Science Reading Group, Purdue University.
- 2016 **Recent Results in Group Testing**, *October 13*, Rutgers University.
- Nearly Optimal Sparse Group Testing**, *September 28*, 54th Annual Conference on Communication, Control, and Computing, Allerton.
- Nearly Optimal Sparse Group Testing**, *September 23*, Theoretical Computer Science Reading Group, Purdue University.
- Structural Results on Matching Estimation with Applications to Streaming**, *September 9*, Theoretical Computer Science Reading Group, Purdue University.
- Recent Results in Group Testing, Part 2**, *April 11*, Theoretical Computer Science Reading Group, Purdue University.
- Recent Results in Group Testing, Part 1**, *April 6*, Theoretical Computer Science Reading Group, Purdue University.

Posters

- 2018 **Password Hashing and Graph Pebbling**, *February 21*, Purdue Sigma Xi Poster Competition.
- 2017 **Streaming Algorithms for Strings with Mismatches**, *September 8*, Purdue CS Student Research Showcase.

Streaming Algorithms for Strings with Mismatches, *June 22*, 49th Annual ACM Symposium on the Theory of Computing, STOC.

Awards

- 2018 Purdue Sigma Xi Research Award, Poster Competition Winner (Engineering)
- 2016 Graduate TA of the Year
- 2006 Siemens Award for Advanced Placement
University Interscholastic League, General Mathematics, Texas State Champion

Professional Service

Reviewer or External Reviewer for:

- International Colloquium on Automata, Languages, and Programming (ICALP) 2018
- IEEE International Symposium on Information Theory (ISIT) 2018
- ACM Symposium on Theory of Computing (STOC) 2018
- Latin American Theoretical INformatics Symposium (LATIN) 2018
- ACM-SIAM Symposium on Discrete Algorithms (SODA) 2017
- ACM Symposium on Parallelism in Algorithms and Architectures (SPAA) 2017
- IEEE Symposium on Foundations of Computer Science (FOCS) 2017
- International Computer Science Symposium in Russia (CSR) 2017
- International Workshop on Randomization and Computation (RANDOM) 2016
- Algorithmica (ALGO)
- IEEE Transactions on Information Theory

2016-2017 **Organizer of the Theoretical CS Reading Group**, *Purdue University*.

References

Greg Frederickson, *Advisor, Professor Emeritus*,
Department of Computer Science, Purdue University.
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Elena Grigorescu, *Advisor, Assistant Professor*,
Department of Computer Science, Purdue University.
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Jeremiah Blocki, *Assistant Professor*,
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