Lin Yang

Department of Computer Science
Johns Hopkins University, 160 Malone Hall 3400 N. Charles Street Baltimore, Maryland 21218

E-mail: lyang@jhu.edu Phone: 443-508-8091 Webpage: http://pha.jhu.edu/~lyang

Education

2017	Johns Hopkins University **Ph.D. in Computer Science** (expected) **Ph.D. in Physics** (expected)
2015	Johns Hopkins University **MS.E. in Computer Science**
2011	Tsinghua University **B.S. in Math & Physics** (with high honors)

Preprints and Publications

Preprints

- **New Progresses on Approximating Frequency Moments in Insertion-Only Streams**
  Vladimir Braverman, Emanuele Viola, David Woodruff, **Lin Yang** (*Alphabetical order*)
  In Preparation.
- **On Asymptotic Quadratic Convergence of Proximal Newton Method in High Dimensions**
  Xingguo Li, **Lin Yang**, Jarvis Haupt, and Tuo Zhao
  In Preparation.
- **Online Multiview Learning: Dropping Convexity for Better Efficiency**
  Zhehui Chen, **Lin Yang**, Chris Li, and Tuo Zhao
  Submitted.
- **The Physical Systems Behind Optimization Algorithms**
  Lin Yang, Raman Arora, Vladimir Braverman, and Tuo Zhao
  Submitted.
- **Clustering High Dimensional Dynamic Data Streams**
  Vladimir Braverman, Gereon Frahling, Christian Sohler, Harry Lang, and **Lin Yang** (*Alphabetical order*)
  Submitted.
- **Sketches for Matrix Norms: Faster, Smaller and More General**
  Vladimir Braverman, Stephen R Chestnut, Robert Krauthgamer, and **Lin Yang** (*Alphabetical order*)
  Submitted.

Conference Publications

- **Streaming Symmetric Norms via Measure Concentration**
  Jarosław Błasiok, Vladimir Braverman, Stephen R Chestnut, Robert Krauthgamer, and **Lin Yang** (*Alphabetical order*)
  To appear in *STOC (2017)*.
- **Streaming Space Complexity of Nearly All Functions of One Variable on Frequency Vectors**
  Vladimir Braverman, and Stephen R. Chestnut and David P. Woodruff and **Lin Yang** (*Alphabetical order*)

Symposium on Principles of Database Systems (PODS), 2016

- **New Bounds for The CLIQUE-GAP Problem Using Graph Decomposition Theory**
  Vladimir Braverman, Zaoxing Liu, Tejasvam Singh, NV Vinodchandran, and **Lin Yang** (*Alphabetical order*)
  International Symposium on Mathematical Foundations of Computer Science (MFCS), 2015

- **Streaming Algorithms for Halo Finders**
  Zaoxing Liu, Nikita Ivkin, **Lin Yang**, Mark Neyrinck, Gerard Lemson, Alexander Szalay, Vladimir Braverman, Tamas Budavari, Randal Burns, and Xin Wang
  International Conference on e-Science (e-Science), 2015

- **New Time-Space Upperbounds for Directed Reachability in High-genus and H-minor-free Graphs**
  Diptarka Chakraborty, A. Pavan, Raghunath Tewari, N. V. Vinodchandran, and **Lin Yang** (*Alphabetical order*)
  International Conference on Foundation of Software Technology and Theoretical Computer Science (FSTTCS), 2014

- **A GPU-Based Visualization Method for Computing Dark Matter Annihilation Signal**
  Lin Yang, Alexander Szalay
  Astronomical Data Analysis Software and Systems (ADASS) XXII, 2013

Journal Publications

- **Warmth elevating the depths: shallower voids with warm dark matter**
  Lin Yang, Mark C Neyrinck, Miguel A Aragón-Calvo, Bridget Falck, Joseph Silk
  Monthly Notices of the Royal Astronomical Society (MNRAS), 451 (4):3606-3614, 2015

- **The Hierarchical Nature of The Spin Alignment of Dark Matter Haloes in Filaments**
  M. A. Aragón-Calvo and **Lin Yang**
  Monthly Notices of the Royal Astronomical Society (MNRAS), 440 (1): L46-L50, 2014

- **Dark Matter Contribution to Galactic Diffuse Gamma Ray Emission**
  Lin F Yang, Joseph Silk, Alexander S Szalay, Rosemary FG Wyse, Brandon Bozek, Piero Madau
  Physical Review D, 89 (6): 063530, 2014

- **Ringing the Initial Universe: the Response of Overdensity and Transformed-density Power Spectra to Initial Spikes**
  Mark C Neyrinck, **Lin Yang**
  Monthly Notices of the Royal Astronomical Society (MNRAS), 433 (2): 1628-1633, 2013

- **The Optical Counterpart of NGC 1313 X-1**
  Lin Yang, Hua Feng, and Philip Kaaret
  The Astrophysical Journal (ApJ), 733 (2), 118, 2011

Academic Service

Reviewers for

- The 44th International Colloquium on Automata, Languages, and Programming (ICALP), 2017
- IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS), 2016
- IEEE Symposium on Foundations of Computer Science (FOCS), 2016
- Quantum Information & Computation

- 19th. International Workshop on Randomization and Computation (RANDOM'2015)
- ACM Transactions on Algorithms
- Monthly Notices of the Royal Astronomical Society (MNRAS)

AWARDS

2015	The Dean Robert H. Roy Fellowship, Johns Hopkins University
2011	Global Winner (2nd) of Microsoft "Imagine Cup" Embedded Dev. Competition
2011	Outstanding College Graduate Award, Tsinghua University
2011	Ye Qisun Award (Highest Honor of the Math & Physics Program), Tsinghua University

REFERENCES

Alex Szalay Professor
Department of Physics & Astronomy and Department of Computer Science
Johns Hopkins University
Email: szalay@jhu.edu
Phone: +1-410-516-7217

Vladimir Braverman Assistant Professor
Department of Computer Science
Johns Hopkins University
Email: vova@cs.jhu.edu
Phone: +1-410-516-4975

Robert Krauthgamer Professor
Faculty of Mathematics and Computer Science
Weizmann Institute of Science
Email: robert.krauthgamer@weizmann.ac.il
Phone: +972-8-9344281

Christian Sohler Professor
Department of Computer Science
Technische Universität Dortmund
Email: christian.sohler@tu-dortmund.de
Phone: +49-231-755-6940

Tuo Zhao Assistant Professor
School of Industrial and Systems Engineering
Georgia Tech
Email: tourzhao@gatech.edu