

# LIN YANG

4002D Linkwood Dr., Baltimore, MD 21210 (443)508-8091 lyang@jhu.edu

## RESEARCH INTERESTS

Streaming algorithms, sketching, sublinear time/memory algorithms, high-dimensional geometry, cosmology

## EDUCATION

Johns Hopkins University, Baltimore, MD	
Ph.D. Candidate in Physics & Astronomy (6 <sup>th</sup> Year), Advisor: Alex Szalay	2012-Present
Ph.D. Candidate in Computer Science (2 <sup>th</sup> Year), Advisor: Vladimir Braverman	2015-Present
MS.E. in Computer Science (GPA 4.0/4.0)	2015
Tsinghua University, Beijing, China	
B.S. in Math & Physics with High Honors	2011

## PUBLICATIONS

1. With Braverman, V., Chestnut, S., Krauthgamer., *Streaming Matrix Norm faster*, In preparation 2016
2. With Braverman, V., Frahling, G., Lang H., Sohler C. *Clustering High Dimensional Dynamic Data Streams*, In Preparation for STOC 2017 2016
3. With Błasiok, J., Braverman, V., Chestnut, S., Krauthgamer, *Streaming Symmetric Norms via Measure Concentration*, In Preparation for STOC 2017 2016
4. With Liu, Z., Ivkin, N., Neyrinck, M., Lemson, G., Szalay, A., Braverman, V., Budavari, T., Burns, T. and Wang, X., *Streaming Algorithms for Halo Finders*, eScience 2015
5. With Braverman, V., Chestnut, S., *Streaming Space Complexity of Nearly All Functions of One Variable on Frequency Vectors*, PODS 2016
6. With Neyrinck, M., Silk, J., *Void Density Profile As an Indicator of Warm Dark Matter*, MNRAS 2015
7. With Braverman, V., Liu, Z., Singh, T. Vinodchandran, N. V., *Identifying Streaming Cliques using extremal graph theory*, MFCS 2015
8. With Chakraborty, D., Pavan, A., Tewari, R. Vinodchandran, N. V., *New Time-Space Upperbounds for Directed Reachability in High-genus and H-minor-free Graphs*, FSTTCS 2014
9. With Silk, J., Szalay, A., Wyse, R., Bozek, B., and Madau P., *Dark matter contribution to Galactic diffuse gamma ray emission*, Physical Review D 2014
10. With Aragon-Calvo, M. F., *The hierarchical nature of the spin alignment of dark matter haloes in filaments*, MNRAS 2013
11. With Neyrinck, M., *Ring the initial Universe: the response of overdensity and transformed-density*, MNRAS 2013
12. With Szalay A., *A GPU-based visualization method for computing the dark matter annihilation signal*, ADASS 2013
13. With Zhang, X, Wang Y., and Yi, H., Tao P., *Harmonicare: a novel wind instrument easy to learn and play*, Ubicomp, 497-498 2011
14. With Feng, H., & Kaaret, P., *Optical Study of Ultra-Luminous X-ray Source NGC1313 X-1*, Astrophysical Journal, 733, 118 2011

## WORK & TEACHING EXPERIENCE

Johns Hopkins University, Teaching Assistant for Randomized Algorithms	Fall 2016
Johns Hopkins University, Teaching Assistant for Randomized Algorithms	Fall 2015
TimezenStudio, Shanghai, Part-time Android developer	2015-Present
Jiangyin Justeck Inc., IT assistant internship, Jiangsu, China	June 2014

<i>IDIES, Johns Hopkins University, Research Assistant at Professor Alex Szalay group</i>	2012-Present
<i>Johns Hopkins University, Teaching Assistant of General Physics &amp; General Physics Experiments</i>	2011-2012

## AWARDS

The Dean Robert H. Roy Fellowship, Johns Hopkins University	2015
Global Winner (2 <sup>nd</sup> ) for the Microsoft “Imagine Cup” Embedded Dev. Comp.	July 2011
Outstanding (Bachelor) Graduate Award from Tsinghua Univ.	July 2011
Ye Qisun Award (Highest Undergraduate Student Award to physics majors)	June 2011
Meritorious Award for the Mathematical Contest in Modeling, USA	April 2010

## SKILLS

<i>Language:</i>	Mandarin Chinese (native), English (fluently)
<i>Programming:</i>	Multi-year experience in <i>C, C++, Java, Python, Matlab</i> <i>Android Development (experienced developer)</i>

## REFERENCE

Alex Szalay	Professor, Johns Hopkins University <i>Tel: (410)-516-7217</i> <i>Email: szalay@jhu.edu</i>
Vladimir Braverman	Assistant Professor, Johns Hopkins University <i>Tel: (410) 516-4975</i> <i>Email: vova@cs.jhu.edu</i>
Robert Krauthgamer	Professor, Weizmann Institute of Science <i>Tel: +08-9344281</i> <i>Email: robert.krauthgamer@weizmann.ac.il</i>
Vinodchandran N. Variyam	Professor, University of Nebraska-Lincoln <i>Tel: (402) 472-5002</i> <i>Email: vinod@cse.unl.edu</i>