

Kyle Luh

CONTACT INFORMATION	Harvard University John A. Paulson School of Engineering and Applied Sciences 33 Oxford St. Cambridge, MA 02138	<code>kluh@seas.harvard.edu</code>
RESEARCH INTERESTS	Probabilistic Combinatorics, Random Matrix Theory, Concentration of Measure, Randomized Algorithms, and applications of the above to Theoretical Computer Science and Statistics/Machine Learning.	
Current Position	Harvard University Postdoctoral Researcher in Computer Science Theory Group - 9/2017 to present	
EDUCATION	Yale University Ph.D. in Mathematics - 5/2017 <ul style="list-style-type: none">• Advisor: Van Vu M.S. in Mathematics, June 2015 M.S. in Physics, May 2012 Harvey Mudd College B.A. in Mathematics and Physics, May 2011 <ul style="list-style-type: none">• Graduated with distinction• Honors in mathematics	
PUBLICATIONS	A. Ferber, G. Kronenberg, K. Luh, <i>Optimal Threshold for a Random Graph to be 2-Universal</i> (submitted) K. Luh <i>Complex Random Matrices have no Real Eigenvalues</i> (submitted) A. Ferber, K. Luh, O. Nguyen, <i>Embedding Large Graphs into a Random Graph</i> , Bulletin of the London Mathematical Society, doi:10.1112/blms.12066 A. Ferber, K. Luh, D. Montealegre, O. Nguyen, <i>Packing Loose Hamilton Cycles</i> , Packing Loose Hamilton Cycles. Combinatorics, Probability and Computing, 1-11. doi:10.1017/S0963548317000402 K. Luh and V. Vu, <i>Dictionary Learning with Random Samples: Optimal Recovery</i> , IEEE Transactions on Information Theory,62(3):1516-1527, 2016. K. Luh and V. Vu <i>Random matrices: l_1 concentration and dictionary learning with few samples</i> , Proceedings of the 56th Annual IEEE Symposium on Foundations of Computer Science (FOCS), pages 1409-1425, 2015. K. Luh and N. Pippenger, <i>Large-Deviation Bounds for Sampling without Replacement</i> , The American Mathematical Monthly 121.5 (2014): 449-454. Y. van Gennip, K. Luh et al., <i>Community detection using spectral clustering on sparse geosocial data</i> , SIAM Journal on Applied Mathematics 73.1 (2013): 67-83.	

E. Ding, J. N. Kutz, and K. Luh, *Stability analysis of cavity solitons governed by the cubic-quintic Ginzburg-Landau equation*, Journal of Physics B: Atomic, Molecular and Optical Physics 44.6 (2011): 065401.

TEACHING
EXPERIENCE

Spring 2017 Lecturer, Single Variable Calculus II
Fall 2015 Lecturer, Single Variable Calculus II
Spring 2015 Lecturer, Multivariable Calculus
Fall 2014 Directed Reading Mentor (Topics in Probability)
Spring 2014 Lecturer, Multivariable Calculus
Spring 2013 Teaching Assistant, Discrete Mathematics
Spring 2012 Teaching Assistant, Fundamentals of Physics
Fall 2011 Teaching Assistant, General Physics Laboratory

HONORS AND
AWARDS

2017 NSF Mathematical Sciences Postdoctoral Research Fellowship
2016 Prize Teaching Fellowship
Yale University (Only 5 awarded that year amongst 1,200 graduate instructors)
2015 AAAS/Science Program for Excellence in Science
2014 Prize Teaching Fellowship
Yale University (Only 8 awarded amongst 1,200 graduate instructors)
2011 Meritorious Paper
Mathematical Contest in Modeling
2010 National Undergraduate Fellowship
Princeton University
2007-2010 Merit Scholarship
Harvey Mudd College
2007-2010 Robert C. Byrd Scholar, Washington Scholar, National Merit Scholar

INVITED
PRESENTATIONS

Rutgers Combinatorics Seminar (4/2017)
Search Theory Seminar at Rényi Institute of Mathematics, Budapest (8/2016)
Harvard Chaining Methods and their Applications to Computer Science (6/2016)
Columbia Foundations of Data Science Seminar Series (10/2015)
Harvard Random Matrix and Probability Theory Seminar (9/2015)
Yale Probability and Combinatorics Seminar (3/2015)

RECENT TALKS

Yale Topics in Combinatorics Seminar (10/2016)
Yale Topics in Probability Seminar (3/2016)
56th Annual IEEE Symposium on Foundations of Computer Science (FOCS 10/2015)
17th International Conference on Random Structures and Algorithms (Pittsburgh, 7/2015)

RELEVANT SKILLS

- Native English and Mandarin speaker.
- Experienced in programming with C++, Java, Python, Mathematica, and Matlab.

SERVICE

- Co-organized Directed Reading Program in Yale Math Department
- Mentored two Undergraduates in Directed Reading Program
- Lectured at Yale Summer Undergraduate Research Program
- Volunteer weekly as Mathematics tutor at New Haven Public Library

REFERENCES

Van Vu, Percey F. Smith Professor of Mathematics , Yale University, (203)432-7320, van.vu@yale.edu