

GAUTAM CHETAN KAMATH

ADDRESS

32 Vassar Street
Room 32-G628
Cambridge, MA 02139

CONTACT

Website: www.gautamkamath.com
Cell: (657) 206-7724
Email: g@csail.mit.edu
Skype ID: hoonose.me

EDUCATION

Massachusetts Institute of Technology

Ph.D. candidate, September 2018 (expected)
Advisor: Constantinos Daskalakis
Electrical Engineering and Computer Science

Massachusetts Institute of Technology

S.M., September 2014
Thesis: On Learning and Covering Structured Distributions
Advisor: Constantinos Daskalakis
Electrical Engineering and Computer Science

Cornell University

B.S., summa cum laude, May 2012
Computer Science, Electrical and Computer Engineering

PUBLICATIONS

Which Distribution Distances are Sublinearly Testable?

Constantinos Daskalakis, Gautam Kamath, John Wright
Proceedings of the 29th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2018)

Testing Ising Models

Constantinos Daskalakis, Nishanth Dikkala, Gautam Kamath
Proceedings of the 29th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2018)

Efficient and Optimally Robust Learning of High-Dimensional Gaussians

Ilias Diakonikolas, Gautam Kamath, Daniel M. Kane, Jerry Li, Ankur Moitra, Alistair Stewart
Proceedings of the 29th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2018)

Concentration of Multilinear Functions of the Ising Model with Applications to Network Data

Constantinos Daskalakis, Nishanth Dikkala, Gautam Kamath
Advances in Neural Information Processing Systems 30 (NIPS 2017)

Being Robust (in High Dimensions) Can Be Practical

Ilias Diakonikolas, Gautam Kamath, Daniel M. Kane, Jerry Li, Ankur Moitra, Alistair Stewart
Proceedings of the 34th International Conference on Machine Learning (ICML 2017)

Priv'IT: Private and Sample Efficient Identity Testing

Bryan Cai, Constantinos Daskalakis, Gautam Kamath
Proceedings of the 34th International Conference on Machine Learning (ICML 2017)

Robust Estimators in High Dimensions without the Computational Intractability

Ilias Diakonikolas, Gautam Kamath, Daniel M. Kane, Jerry Li, Ankur Moitra, Alistair Stewart
SIAM Journal on Computing, to appear
Preliminary version in Proceedings of the 57th Annual IEEE Symposium on Foundations of Computer Science (FOCS 2016)

Invited to the SIAM Journal on Computing Special Issue for FOCS 2016

Invited to Highlights of Algorithms 2017 (HALG 2017)

A Size-Free CLT for Poisson Multinomials and its Applications

Constantinos Daskalakis, Anindya De, Gautam Kamath, Christos Tzamos
Proceedings of the 48th ACM Symposium on Theory of Computing (STOC 2016)

Optimal Testing for Properties of Distributions

Jayadev Acharya, Constantinos Daskalakis, Gautam Kamath
Advances in Neural Information Processing Systems 28 (NIPS 2015)
Spotlight Presentation

On the Structure, Covering, and Learning of Poisson Multinomial Distributions

Constantinos Daskalakis, Gautam Kamath, Christos Tzamos
Proceedings of the 56th Annual IEEE Symposium on Foundations of Computer Science (FOCS 2015)

A Chasm Between Identity and Equivalence Testing with Conditional Queries

Jayadev Acharya, Clément Canonne, Gautam Kamath
Theory of Computing, to appear
Preliminary version in Proceedings of the 19th International Workshop on Randomization and Computation (RANDOM 2015)

Adaptive Estimation in Weighted Group Testing

Jayadev Acharya, Clément Canonne, Gautam Kamath
Proceedings of the 2015 IEEE International Symposium on Information Theory (ISIT 2015)

On Learning and Covering Structured Distributions

Gautam Kamath
S.M. Thesis, 2014
Available at www.gautamkamath.com/thesis.pdf

Faster and Sample Near-Optimal Algorithms for Proper Learning Mixtures of Gaussians

Constantinos Daskalakis, Gautam Kamath
Proceedings of the 27th Annual Conference on Learning Theory (COLT 2014)

An Analysis of One-Dimensional Schelling Segregation

Christina Brandt, Nicole Immorlica, Gautam Kamath, Robert Kleinberg
Proceedings of the 44th ACM Symposium on Theory of Computing (STOC 2012)

TALKS

Principled Tools for Modern Statistical Data Science

Boston University Computer Science Seminar, February 2018
McGill University Computer Science Seminar, February 2018
University of Waterloo Computer Science Seminar, February 2018

Which Distribution Distances are Sublinearly Testable?

Conference on Information Sciences and Systems (**Invited**), March 2018
Symposium on Discrete Algorithms, January 2018

Statistical Hypothesis Testing in the Modern Age

University of Pennsylvania, December 2017
Boston University Algorithms and Theory Seminar, November 2017
University of Massachusetts Amherst Theory Seminar, October 2017
McMaster Seminar in Computing and Software, October 2017
Cornell Theory Seminar, September 2017

Priv'IT: Private and Sample Efficient Identity Testing

International Conference on Machine Learning, August 2017
Private and Secure Machine Learning, August 2017

A Size-Free CLT for Poisson Multinomials and its Applications

Symposium on Theory of Computing, June 2016

Robust Estimators in High Dimensions without the Computational Intractability

Cornell Theory Lunch, September 2017

China Theory Week, August 2016 (**Invited**)

Optimal Testing for Properties of Distributions

Northeastern Theory Seminar, March 2017 (**Invited**)

University of Pennsylvania Theory Lunch, September 2016 (**Invited**)

MIT Signals, Information, and Algorithms Laboratory Group Meeting, March 2016

University of Massachusetts Boston, February 2016 (**Invited**)

Berkeley Theory Lunch, September 2015

A Chasm Between Identity and Equivalence Testing with Conditional Queries

MIT Theory Lunch, February 2015

Faster and Sample Near-Optimal Algorithms for Proper Learning Mixtures of Gaussians

Conference on Learning Theory, June 2014

MIT Theory Lunch, May 2014

An Analysis of One-Dimensional Schelling Segregation

Interdisciplinary Workshop on Information and Decision in Social Networks, November 2012

Symposium on Theory of Computing, May 2012 (**Winner of Best Student Presentation Award**)

TEACHING EXPERIENCE

Teaching Assistant	Massachusetts Institute of Technology	Spring 2015, 2017
6.853: Algorithmic Game Theory and Data Science		(1 semester)
6.856: Randomized Algorithms		(1 semester)
Teaching Assistant	Cornell University	Spring 2010 - Spring 2012
CS 1114: Intro to Computing with Matlab and Robotics		(2 semesters)
CS 2850: Networks		(1 semester)
CS 3110: Data Structures and Functional Programming		(5 semesters)
CS 4820: Introduction to Algorithms		(3 semesters)

HONORS AND AWARDS

MIT Akamai Presidential Graduate Fellowship	September 2012 - May 2013
Symposium on Theory of Computing Best Student Presentation Award	May 2012
Cornell Computer Science Prize for Academic Excellence	May 2012
Eight time Dean's list at Cornell University	Fall 2008 - Spring 2012
Recognized by Cornell CS for outstanding work as TA for CS 3110 and CS 4820	Spring 2012
John G. Pertsch Jr. Prize for second highest GPA in ECE	Spring 2011
Recognized by Cornell CS for outstanding work as TA for CS 1114	Spring 2010
Canadian Open Mathematics Challenge Gold Medalist in Central Ontario Region	Spring 2007

SERVICE

Editor of Property Testing Review (March 2016 - Present)

Editor of MIT Theory of Computation Student Blog (November 2013 - Present)

Co-organizer for the TCS+ online seminar series in Theoretical Computer Science (August 2014 - Present)

Co-organizer of FOCS 2017 Workshop on Frontiers in Distribution Testing (October 2017)

Advisor for Danny Lewin MIT Theory Student Retreat (Fall 2014, 2016, 2017)

Co-organizer of FOCS 2016 Workshop on Orthogonal Polynomials and Applications (October 2016)

Organizer of the Second Annual Sublinear Algorithms and Big Data Day (April 2015)

Organizer of Second Annual Danny Lewin MIT Theory Student Retreat (October 2013)

Cofounder and organizer of MIT Theory Lunch (Fall 2012 - Summer 2013)

External reviewer for: STOC, FOCS, SODA, COLT, ITCS, RANDOM, STACS, ICALP, NIPS, FnT-TCS, Theory Comput. Syst., JMLR

REFERENCES

Constantinos Daskalakis (costis@csail.mit.edu)
Associate Professor, Massachusetts Institute of Technology