

Harry Sha

CONTACT INFORMATION

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1-647-451-3485

EDUCATION

Ph.D., Computer Science, University of Toronto **2021-**
Advisor: Prof. Swastik Kopparty
G.P.A.: 4.00/4.00

M.S., Computer Science, Stanford University **2019-2021**
Advisor: Prof. Li-Yang Tan
G.P.A.: 4.00/4.30

B.S., Math, Stanford University **2016-2021**
Degree conferred with distinction.
G.P.A.: 3.98/4.30

TEACHING

Course Instructor, University of Toronto

CSC 108 – Introduction to Computer Programming	Fall 2025
CSC 236 – Introduction to the Theory of Computation	Summer 2025
CSC 373 – Algorithm Design Analysis and Complexity	Winter 2025
CSC 373 – Algorithm Design Analysis and Complexity	Winter 2024
CSC 236 – Introduction to the Theory of Computation	Summer 2023
CSC 236 – Introduction to the Theory of Computation	Fall 2022
CSC 236 – Introduction to the Theory of Computation	Summer 2022

Teaching Assistant, University of Toronto

CSC 463 – Computability and Complexity Theory	3x – Fall 2024*
CSC 438 – Computability and Logic	Winter 2023
CSC 448 – Formal Languages and Automata	Fall 2021

Teaching Assistant, Stanford University

CS 255 – Introduction to Cryptography	2x – Winter 2021
CS 103 – Mathematical Foundations of Computing	2x – Fall 2020

Curriculum Manager and Instructor, Inspirit AI **2020–2021**

*When taught multiple times, the most recent semester is listed

RESEARCH INTERESTS	My research interests are in theoretical computer science and discrete math, focusing on error-correcting codes, boolean function analysis, combinatorics, pseudorandomness, and graph theory.	
PUBLICATIONS	5. Kopparty, S., Kumar, M. & Sha, H. <i>High Rate Multivariate Polynomial Evaluation Codes</i> in <i>Proceedings of the 57th Annual ACM Symposium on Theory of Computing</i> (Association for Computing Machinery, New York, NY, USA, June 15, 2025), 810–821. ISBN: 979-8-4007-1510-5. https://doi.org/10.1145/3717823.3718106 (2025). 4. Kopparty, S., Potukuchi, A. & Sha, H. <i>Error-Correcting Graph Codes</i>. <i>LIPICs, Volume 325, ITCS 2025</i> 325 (ed Meka, R.) 67:1–67:20. ISSN: 1868-8969. https://drops.dagstuhl.de/entities/document/10.4230/LIPICs.ITCS.2025.67 (2025) (2025). 3. Kopparty, S. & Sha, H. <i>Small Shadow Partitions</i> arXiv: 2410.22040 [cs]. http://arxiv.org/abs/2410.22040 (2025). Pre-published. 2. Mossé, M., Sha, H. & Tan, L.-Y. <i>A Generalization of the Satisfiability Coding Lemma and Its Applications</i> in <i>25th International Conference on Theory and Applications of Satisfiability Testing (SAT 2022)</i> (eds Meel, K. S. & Strichman, O.) 236 (Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl, Germany, 2022), 9:1–9:18. ISBN: 978-3-95977-242-6. https://drops.dagstuhl.de/opus/volltexte/2022/16683 (2023). 1. Yih, J., Sha, H., Beam, D. E., Parvizi, J. & Gross, J. J. Reappraising Faces: Effects on Accountability Appraisals, Self-Reported Valence, and Pupil Diameter. <i>Cognition & Emotion</i> 33, 1041–1050. ISSN: 1464-0600. pmid: 30092708 (Aug. 2019).	
INDUSTRY EXPERIENCE	Software Engineer Intern , Akuna Capital	Summer 2019
	Data Science Intern , Locus Analytics	Summer 2018
EXPERTISE	CS theory, discrete math, probability, combinatorics, programming, data science.	
TECHNICAL SKILLS	Expert. Python, L ^A T _E X, Pandas, Plotly/Dash, Quarto, Proficient. Bash, HTML, and Javascript,	
AWARDS	Doctoral Completion Award , University of Toronto	Fall 2025
	C.C. Gotlieb (Kelly) Graduate Fellowship , University of Toronto	2023–2024
	Departmental Fellowship , University of Toronto	2022–2023
	Best Paper (Theory Track) , SAT2022 Conference	2022