

# Rohan Goyal

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CONTACT INFORMATION	Massachusetts Institute of Technology 32 Vassar St., Cambridge, MA	rohan.g@mit.edu <a href="http://www.goyal-rohan.github.io">www.goyal-rohan.github.io</a>
RESEARCH FOCUS: Robustness and safety in computation: Error-correcting codes, proof systems		
EDUCATION	<b>Massachusetts Institute of Technology</b> PhD. in Computer Science <b>Advisor:</b> Yael Tauman Kalai	September 2024-Present Cambridge, MA, USA <b>GPA:</b> 5.0/5.0
	<b>Massachusetts Institute of Technology</b> SM in Computer Science	(Expected) September 2024-December 2025 Cambridge, MA, USA
	<b>Chennai Mathematical Institute</b> , Chennai, India B.Sc.(Honours) in Mathematics and Computer Science	September 2021-April 2024 <b>CGPA:</b> 9.62/10.0
PUBLICATIONS	<ul style="list-style-type: none"><li>• <i>Efficiently Batching Unambiguous Interactive Proofs</i> [ECCC] with Bonnie Berger, Matthew Hong, and Yael Tauman Kalai.</li><li>• <i>Fast list-decoding of univariate multiplicity and folded Reed-Solomon codes</i> [ArXiv] [ECCC] with Prahladh Harsha, Mrinal Kumar, and Ashutosh Shankar.</li></ul>	[FOCS 2025, Sydney]
MANUSCRIPTS	<ul style="list-style-type: none"><li>• <i>Optimal Proximity Gaps for Subspace-Design Codes and (Random) Reed-Solomon Codes</i> [ECCC] with Venkatesan Guruswami</li><li>• <i>Fast list-recovery of univariate multiplicity and folded Reed-Solomon codes</i> [ECCC] with Prahladh Harsha, Mrinal Kumar, and Ashutosh Shankar.</li><li>• <i>Structure Theorems (and Fast Algorithms) for List Recovery of Subspace-Design Codes</i> [ECCC] with Venkatesan Guruswami</li></ul>	[Preprint] [Preprint] [Preprint]
INTERNSHIPS, RESEARCH PROJECTS	<b>Tata Institute of Fundamental Research</b> , Navy Nagar, Mumbai, India <i>Intern</i> Worked under <b>Prahladh Harsha</b> and <b>Mrinal Kumar</b> on problems related to error-correcting codes.	May 2023 - August 2023
	<b>ENS Paris</b> , 45 Rue d'Ulm, 75005 Paris, France <i>Intern</i> Worked under <b>David Saulpic</b> and <b>Frédéric Magniez</b> on quantum clustering algorithms and fairness. This internship was a part of the CMI-ENS exchange program.	May 2024 - June 2024
HONORS AND AWARDS	Bronze Medal at <b>International Mathematical Olympiad (IND1)</b> Deputy Leader India, <b>European Girls Mathematics Olympiad</b> Observer A India, <b>International Mathematical Olympiad</b> Sriram Scholarship: Complete tuition fee waiver for attending CMI Kishore Vigyanik Pratyogita Yojana (KVPY) Scholarship (All India Rank Top 100)	2021 2023 2024 2021-2024 2021-2024

TALKS	<b>Optimal Proximity Gaps for Subspace-Design Codes and (Random) Reed-Solomon Codes:</b> • Proof Systems and Error-Correcting Codes Workshop; Cornell Tech	December 2025
	<b>Efficiently Batching Unambiguous Interactive Proofs:</b> • MIT Cryptography and Information Security Seminar	November 2025
	<b>Fast list-decoding of univariate multiplicity and folded Reed-Solomon codes:</b> • University of Copenhagen; BARC Research Center • Chennai Mathematical Institute, Computer Science Seminar • FOCS	January 2025 January 2025 October, 2024
MATH TEACHING EXPERIENCE AND OUTREACH	Co-founded the Sophie Fellowship and the Online Math Club. Trained multiple IMO and EGMO teams for India, accompanied teams as a coach, and been in charge of paper setting. Organized various mathematical camps and contests including running the Championship of Mathematical and Logical Games in India.	
SERVICE	Subreviewed for STOC, FOCS, and ACM Transactions on Algorithms.	
TAING EXPERIENCE	Served as a TA at CMI for: • Discrete Mathematics • Complexity Theory • Theory of Computation	Spring 2023, 2024 Spring 2023 Fall 2022