

Rohan Goyal

CONTACT INFORMATION	Massachusetts Insitute of Technology 32 Vassar St., Cambridge, MA	rohan.g@mit.edu www.goyal-rohan.github.io
RESEARCH INTERESTS	I am broadly interested in theoretical computer science. In particular, I focus on notions of robustness in computation: error-correcting codes, proof systems etc.	
EDUCATION	Massachusetts Institute of Technology , Cambridge, MA, USA Advisor: Yael Tauman Kalai PhD. in Computer Science	September 2024-Present CGPA: 5.0/5.0
	Chennai Mathematical Institute , Chennai, India B.Sc.(Honours) in Mathematics and Computer Science	September 2021-April 2024 CGPA: 9.62/10.0
HONORS AND AWARDS	Deputy Leader India, European Girls Mathematics Olympiad 2023 Indian team Observer A India, International Mathematical Olympiad Bronze Medal at International Mathematical Olympiad (IND1) Asian Pacific Mathematical Olympiad, Bronze Medal Sriram Scholarship: Complete tuition fee waiver for attending CMI	2023 2024 2021 2020 2021-2024
INTERNSHIPS, RESEARCH PROJECTS	Tata Institute of Fundamental Research , Navy Nagar, Mumbai, India <i>Intern</i> Worked under Prof. Prahladh Harsha and Prof. Mrinal Kumar on problems related to Error-correcting codes. ENS Paris , 45 Rue d'Ulm, 75005 Paris, France <i>Intern</i> Worked under Prof. David Saulpic and Frédéric Magniez on problems related to clustering algorithms. This internship was a part of the CMI-ENS exchange program.	May 2023 - August 2023 May 2024-June 2024
WRITING AND PUBLICATIONS	Publications <ul style="list-style-type: none"><i>Fast list-decoding of univariate multiplicity and folded Reed-Solomon codes</i> [FOCS 2024, Chicago] [ArXiv] [ECCC] with Prahladh Harsha, Mrinal Kumar and Ashutosh Shankar. Manuscripts <ul style="list-style-type: none"><i>Efficiently Batching Unambiguous Interactive Proofs</i> with Matthew Hong and Yael Tauman Kalai.	
OLYMPIAD PROJECTS AND OUTREACH	Indian Mathematical Olympiad Program I am involved in various roles in the Indian Mathematical Olympiad Program. Some of these are: <ul style="list-style-type: none">Deputy leader for India at EGMO 2023Paper setting, grading, problem proposing: IMO TSTs: 2023 EGMO TSTs 2021, 2022, 2023 INMO 2023, 2024Teaching, training: EGMOTC 2022, 2023 IMOTC 2023 INMOTCs 2022, 2023 EGMO PDC 2022, 2023 IMO PDC 2022, 2023	2021-present

Championship of Mathematical and Logical Games [\[Post by Ghislain Fourny, ETH\]](#) 2022
Conducted the qualifying, regional and national stages of the Championship of Mathematical and Logical Games in India for the first time. We had over 3000 participants and took 16 students across to EPFL, Switzerland for the international finals. We did not charge any participants at any stage and were completely sponsored by Inshorts Ltd. Organized under "Indian Federation of Mathematical Games" which I co-founded.

Sophie Fellowship [\[Web\]](#) 2021-2024
Co-founded Sophie Fellowship to provide more resources and guidance to talented students interested in participating in international and national mathematical Olympiads. The team consists of various IMO and EGMO medalists.

Online Math Club [\[YouTube\]](#) 2021-2023
I was the co-director for Online Math Club (OMC) and am currently in an advisory role. We take weekly public lectures on topics in mathematics (Olympiad and introductory college material) accessible to high schoolers and share them on YouTube later. We have collected over 100 lectures on various different topics in mathematics. I have also taught many of these sessions.

STEMS [\[Web\]](#) [\[YouTube\]](#) 2021-2023
At CMI, we annually conduct exams in mathematics, computer science and physics for high school students and undergraduates. We then call the highest performing students to CMI for a 3-day camp where we have many renowned speakers in the three subjects. I was the math head in 2021, overall head in 2022 and am in an advisory role this year.

Other teaching, talks, and activities

I have helped organize multiple math camps, taken lecture series in camps, offered private instruction to many students who went on to medal at the IMO and EGMO. I have also taken various expository lectures for a variety of organizations such as RAM, Unacademy, DhiMath, Mathematical Teachers' Association of India, Mathematical Initiatives in Nepal etc.