# Siddhartha Jain

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## Education

2022 - present **PhD. in Computer Science**
The University of Texas at Austin (UT Austin)
**Advisor**: Scott Aaronson

2020 - 2022 **MSc. in Computer Science**
École Polytechnique Fédérale de Lausanne (EPFL)

2016 - 2020 **BTech. in Computer Science & Applied Mathematics**
IIIT Delhi

## Manuscripts

preprint **Consumable Data via Quantum Communication**
with Dar Gilboa, Jarrod McClean

preprint **Quantum Communication Advantage in TFNP**
with Mika Göös, Tom Gur, Jiawei Li

## Publications

FOCS'24 **Pigeonhole Principle and Ramsey in TFNP**
with Jiawei Li, Robert Robere, Zhiyang Xun

RANDOM'22 **Communication Complexity of Collision**
with Mika Göös

FOCS'22 **Separations in Proof Complexity and TFNP**
with Mika Göös, Gilbert Maystre, Alexandros Hollender, Robert Robere, Ran Tao, William Pires

CCC'22 **Further Collapses in TFNP**
with Mika Göös, Gilbert Maystre, Alexandros Hollender, Robert Robere, Ran Tao, William Pires

FOCS'21 (Invited to Special Issue) **Unambiguous DNFs and Alon-Saks-Seymour**
with Mika Göös, Shalev Ben-David, Robin Kothari, Kaspars Balodis

## Employment

2022 - present **Graduate Research Assistant | UT Austin**
Working at QIC with Scott Aaronson.

2021 - 2022 **MSc. Research Scholar | EPFL**
Part of the Research Scholar program by the IC department, working with Mika Göös (EPFL).

## Honors & Awards

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| 2021 | Paper invited to SICOMP Special Issue of FOCS 2021 |
| 2021 | MSc. Research Scholar (EPFL) |
| 2020 | Graduation with Honors (IIITD) |
| 2019 | Dean's list (IIITD) |
| Travel grants | Swiss Winter School on Theoretical Computer Science 2023, FOCS'22 NSF Travel grant, IIAS Quantum Computation Winter School 2019, IISc Data Science Summer School 2019 |

## Academic

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| Service (external reviewer) | SODA('25), ITCS('25, '23), QIP('24), CCC('23,'24), TQC('24), ICALP('21, '22), FSTTCS ('22,'23) |
| Coursework (UT Austin) | Learning Theory (A), Pseudorandomness (A), Combinatorics and Graph Theory (A) |
| Coursework (EPFL) | Advanced Algorithms (6/6), Probabilistic Methods in Combinatorics (5.75/6), Computational Complexity (6/6), Information Theory & Coding (6/6) |
| Coursework (IIITD) | Modern Algorithm Design (A), Randomised Algorithms (A-), Combinatorics and Its Applications (A), Complexity Theory (A), Theory of Computation (A), Discrete Structures (A), Abstract Algebra (A), Number Theory (A+) |

## Skills

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| Languages | **Hindi:** native<br>**English:** fluent (written and spoken)<br>**French:** beginner |
| Programming | Lean, Python, LaTeX, Java (intermediate), scala (intermediate), Qiskit (beginner) |

## References


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|---|---|
| Scott Aaronson | aaronson@cs.utexas.edu<br>Schlumberger Centennial Chair of Computer Science<br>The University of Texas at Austin |
| Mika Göös | mika.goos@epfl.ch<br>Assistant Professor in the School of Computer and Communication Sciences<br>École Polytechnique Fédérale de Lausanne (EPFL) |
| Tom Gur | tom.gur@cl.cam.ac.uk<br>Associate Professor in the Department of Computer Science and Technology<br>University of Cambridge |