

Vaibhav KRISHAN

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RESEARCH POSITIONS

PDF (TCS) The Institute of Mathematical Sciences July 2024-Present

EDUCATION

Ph.D. Indian Institute of Technology Bombay July 2017-May 2024
COMPUTER SCIENCE Advised by Prof. Sundar Vishwanathan
AND ENGINEERING and Prof. Nutan Limaye

B.Tech. Indian Institute of Technology Bombay July 2009-May 2013
COMPUTER SCIENCE CPI: 7.59/10
AND ENGINEERING

JOURNAL PUBLICATIONS

Algorithmica A #SAT Algorithm for Small Constant-depth Circuits with PTF gates
with S. Bajpai, D. Kush, N. Limaye and S. Srinivasan
Algorithmica 84, 1132-1162 (2022).

CONFERENCE PUBLICATIONS

ITCS 2026 Lower Bounds and Separations for Torus Polynomials
with S. Vishwanathan
The 17th Innovations in Theoretical Computer Science Conference, 2026.

CSR 2021 Upper Bound for Torus Polynomials
The 16th International Computer Science Symposium in Russia, 2021.

ITCS 2019 A #SAT Algorithm for Small Constant-depth Circuits with PTF gates
with S. Bajpai, D. Kush, N. Limaye and S. Srinivasan
The 10th Innovations in Theoretical Computer Science Conference, 2019.

PREPRINTS

ECCC Isolation Lemma for Directed Reachability and NL vs. L
with N. Limaye

TALKS AND PRESENTATIONS

Presentation	Lower Bounds and Separations for Torus Polynomials ITCS 2026.
Video	Lower Bounds and Separations for Torus Polynomials ITCS 2026.
Lecture	Polynomials and Computation Foundational Lecture Series on TCS, IMSc, 2025.
Presentation	Upper Bound for Torus Polynomials CSR 2021. (online)
Presentation and Poster	A #SAT Algorithm for Small Constant-depth Circuits with PTF gates ITCS 2019.

SERVICE AND ENGAGEMENT

Sub-reviewer	Computational Complexity Conference (CCC) 2024.
Sub-reviewer	Foundations of Software Technology and Theoretical Computer Science (FSTTCS) 2024
Volunteer	FSTTCS 2019

TEACHING ASSISTANCE

- Awarded best TA of the semester for CS 101.
- Awarded best TA of the month for Automata Theory.
- TA duty for complexity theory twice, design and analysis of algorithms, combinatorics, and theoretical machine learning.

PROFESSIONAL EXPERIENCE

- Freelance work in quantitative trading for multiple clients since May '22.
- Quantitative Research Consultant for AlphaGrep, and for 5-Swans, during official break from PhD June '21-May '22.
- As Quantitative Developer in AlphaGrep from June '16-July 17 and Jan '14-April '15.
- As Data Scientist in Housing.com from May '15-May '16.
- As Software Engineer in Samsung from July '13-Dec '13.

PERSONAL DETAILS

D.O.B.	09 th December 1993
Sex	Male
Nationality	Indian