VIHAN SHAH

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EDUCATION

University of Waterloo *September 2023 - Present*
PhD in Computer Science
Cheriton School of Computer Science
Advisor: Sepehr Assadi

Rutgers University *September 2020 - September 2023*
PhD in Computer Science
New Brunswick College of Arts and Sciences
Advisor: Sepehr Assadi
Received a Master's degree in Computer Science

Rutgers University *September 2019 - May 2020*
BA in Computer Science
Camden College of Arts and Sciences

Mahindra Ecole Centrale (MEC) *August 2016 - May 2019*
Completed 3 years of B.Tech in Computer Science

RESEARCH INTERESTS

My research interest is in Theoretical Computer Science and specifically in Sublinear and Streaming
Algorithms. I have recently also worked on dynamic algorithms and learning augmented algorithms. I
generally enjoy working on Graph problems in the these settings.

CONFERENCE PAPERS

Learning-augmented Maximum Independent Set *APPROX 2024*
with Vladimir Braverman, Prathamesh Dharangutte and Chen Wang.

New Lower Bounds in Merlin-Arthur Communication and *ITCS 2024*
Graph Streaming Verification with Prantar Ghosh

Streaming Algorithms and Lower Bounds for Estimating *NeurIPS 2023*
Correlation Clustering Cost with Sepehr Assadi and Chen Wang

Tight Bounds for Vertex Connectivity in Dynamic Streams *SOSA 2023*
with Sepehr Assadi

Generalizing Greenwald-Khanna Streaming Quantile *ICDT 2023*
Summaries for Weighted Inputs
with Sepehr Assadi, Nirmit Joshi and Milind Prabhu

Space Optimal Vertex Cover in Dynamic Streams *APPROX 2022*
with Kheeran K. Naidu

An Asymptotically Optimal Algorithm for Maximum Matching in Dynamic Streams with Sepehr Assadi   *ITCS 2022*

RELEVANT COURSEWORK

Sublinear and Streaming Algorithms   *Spring 2020*

Graph Streaming Algorithms   *Fall 2020*

Derandomization   *Spring 2022*

Linear Programming   *Fall 2022*

HONORS AND AWARDS

NeurIPS Scholar Award   *October 2023*

EXTERNAL REVIEWER

Symposium on Theory of Computing (STOC)   *2022, 2024*

Symposium on Discrete Algorithms (SODA)   *2022, 2023, 2024*

Symposium on Principles of Distributed Computing (PODC)   *2021*

European Symposium on Algorithms (ESA)   *2022, 2023, 2024*

International Colloquium on Automata, Languages, and Programming (ICALP)   *2023*

TEACHING

Directed Reading Program (DRP) Mentor for Women in Mathematics (WiM) at University of Waterloo   *Winter 24*

Guest Lectures on Sublinear and Streaming Algorithms at PACT (Program in Algorithmic and Combinatorial Thinking) in Princeton University   *Summer 2020, 21, 22, 23, 24*

Teaching Assistant for Design and Analysis of Computer Algorithms (CS 205) at Rutgers University   *Spring 21, 22, Fall 21*

Teaching Assistant for Introduction to Discrete Structures (CS 205) at Rutgers University   *Fall 20, Summer 21*

Teaching Assistant for Discrete Mathematics at PACT   *Summer 19*