

David J. Lee

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Education

- 2021– **Cornell University, Ithaca, NY.**
Ph.D. in Computer Science.
- 2017–2021 **Williams College, Williamstown, MA.**
B.A. Mathematics, Computer Science with Highest Honors.
Summa Cum Laude. Elected Phi Beta Kappa, Sigma Xi.
Thesis: *A Practical Adaptive Quotient Filter*. Advised by Shikha Singh and Samuel McCauley.

Publications

- 2021 **Telescoping Filter: A Practical Adaptive Filter**, *David Lee*, Samuel McCauley, Shikha Singh, and Max Stein. European Symposium on Algorithms (ESA), 2021.
- 2021 **Virtual Multicrossings and Petal Diagrams for Virtual Knots and Links**, Colin Adams, Chaim Even-Zohar, Jonah Greenberg, Reuben Kaufman, *David Lee*, Darin Li, Dustin Ping, Theodore Sandstrom, Xiwen Wang. In Submission.

Awards

- 2021 **Sam Goldberg Prize in Computer Science.**
Awarded for the best thesis presentation in computer science at Williams College.
- 2021 **Sigma Xi.**
- 2021 **CRA Outstanding Undergraduate Researcher Award, Honorable Mention.**
- 2020 **Phi Beta Kappa, Junior Year.**
Awarded to top 5% of graduating class by GPA.

Work Experience

- Summer **Research Assistant, Data Structures, Williams College.**
2021 Worked with [Sam McCauley](#) and [Shikha Singh](#) on learned index structures and approximate string matching data structures.
- 2020–2021 **Undergraduate Researcher, Data Structures, Williams College.**
With [Sam McCauley](#) and [Shikha Singh](#). Designed and implemented a novel adaptive filter in C/C++.
- Summer **Undergraduate Researcher, Program Synthesis, Williams College, Poster.**
2019 With [Stephen Freund](#) for *Synchronicity* (NSF Grant #1812951). Developed an algorithm to synthesize synchronization specifications for concurrent programs, leveraging Lipton's theory of reduction.
- 2019 **Undergraduate Researcher, Knot Theory, Williams College.**
Conjectured an upper bound on the number of distinct virtual multi-crossings for a virtual n-crossing, ignoring symmetries.