# My name is Nathan Mull. This is my Curriculum Vitae.

## Contact Information


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## Research Interests

- Pure type systems and normalization
- SAT solvers and proof complexity

## Education

- University Of Chicago
    - PhD Student, *Expected Graduation:* Winter 2023
    - M.S. in Computer Science, *Thesis Title:* **CDCL SAT Solvers, Subsystems of Resolution, and the Ordered Decision Strategy**, Winter 2020
- University of California at Berkeley
    - B.A. in Pure Mathematics with Honors, Spring 2016
    - B.A. in Computer Science, Spring 2016

## Research

- Nathan Mull. **An Irrelevance-Eliminating Translation for Tiered Pure Type Systems.** In preparation, draft upon request, 2022.
- Nathan Mull. **Strong Normalization from Weak Normalization in Non-Dependent Pure Type Systems via Thunkification.** Research Report, 2022.
- Nathan Mull. **A Generalized Translation of Pure Type Systems.** In preparation, draft upon request, 2022. (Extended abstract presented at the International Conference on Types for Proofs and Programs, 2022)
- Nathan Mull, Shuo Pang, and Alexander Razborov. **On CDCL-based Proof**

**Systems with the Ordered Decision Strategy.** SIAM Journal on Computing, 2022. (Conference version in the Proceedings of the 23rd International Conference on Theory and Applications of Satisfiability Testing (SAT), 2020)
- Nathan Mull, Daniel J. Fremont, and Sanjit A. Seshia. **On the Hardness of SAT with Community Structure.** In the Proceedings of the 19th International Conference on Theory and Applications of Satisfiability Testing (SAT), 2016.

# Awards

- GAANN Fellowship, awarded by the Computer Science Department at the University of Chicago, 2016

# Work Experience

- Email Archives Fellow, Digital Library Development Center at the University of Chicago Library, {Winter 2022, Spring 2022} (Continuing through Fall 2022 as a non-fellow)

# Teaching Experience

- Instructor, University of Chicago
    - CMSC 10500, Fundamentals of Computer Programming I, {Summer 2022, Summer 2021, Summer 2020, Summer 2019, Summer 2018}
- Teaching Assistant, University of Chicago
    - CMSC 22100, Programming Languages, Fall 2022
    - CMSC 22500, Type Theory, {Spring 2022, Spring 2021, Spring 2020}
    - MPCS 55001, Algorithms, {Fall 2021, Winter 2022}
    - CMSC 22400/32400, Programming Proofs, Winter 2021
    - CMSC 16100, Honors Introduction to Programming I, {Fall 2020, Fall 2019, Fall 2018}
    - CAPP 30271, Mathematics for Computer Science and Data Analysis, Winter 2020
    - CMSC 22300, Functional Programming, Spring 2019
    - CMSC 25300, Mathematical Foundations of Machine Learning, Winter 2019
    - MPCS 53111, Machine Learning, Spring 2018
    - CMSC 27200, Theory of Algorithms, Winter 2018
    - CMSC 27130, Honors Discrete Mathematics, Fall 2017