SHAWN
ONG

CONTACT INFO

E-mail	so396@cornell.edu
Website	https://shawnong60.github.io
Phone Nr	+1 (720) 244 4116
LinkedIn	www.linkedin.com/in/shawn-ong-0930a262

ABOUT ME

I am a PhD Candidate in the Center for Applied Math at Cornell University. My research involves looking at connections between particular logical structures (formal languages) and models of computation (automata), though I am broadly interested in theoretical computer science, especially problems involving logic.

EDUCATION

DOCTOR OF PHILOSOPHY   2018-present
Cornell University | *Ithaca, New York*

- Major in Applied Mathematics
- Minors in Mathematics and Computer Science
- Advised by Dexter Kozen
- Expected Graduation May 2025

MASTER OF ARTS   2018-2022
Cornell University | *Ithaca, New York*

- Major in Applied Mathematics
- A-exam topic: "Review Systems and Probabilistic Automata"

MASTER OF ARTS   2016-2018
University of Pennsylvania | *Philadelphia, Pennsylvania*

- Major in Applied Mathematics
- Thesis topic: "On the Complexity of Lunar Lockout"

BACHELOR OF ARTS   2014-2018
University of Pennsylvania | *Philadelphia, Pennsylvania*

- Majors in Mathematics; Computer Science; and Logic, Information, and Computation
- Graduated with *summa cum laude*

TEACHING

ALGORITHMIC GAME THEORY (CS 6840)   Fall 2024
Cornell University | *Ithaca, New York*

ALGORITHMS (CS 6820)   Fall 2023
Cornell University | *Ithaca, New York*

CRYPTOGRAPHY (CS 4830/5830)   Spring 2023
Cornell University | *Ithaca, New York*

MULTIVARIABLE CALCULUS FOR ENGINEERS (MATH 1920)   Fall 2022
Cornell University | *Ithaca, New York*

- Head TA

INTROUCTION TO PYTHON (CS 1110)   Fall 2018-Spring 2019, Spring 2022
Cornell University | *Ithaca, New York*

CALCULUS FOR ENGINEERS (MATH 1910)   Fall 2021
Cornell University | *Ithaca, New York*

DECISION THEORY (ECON 6760/CS 5846)   Spring 2021
Cornell University | *Ithaca, New York*

REASONING ABOUT UNCERTAINTY (CS 6766)   Fall 2019
Cornell University | *Ithaca, New York*

MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE (CIS 160)   Spring 2016 - Spring 2018
University of Pennsylvania | *Philadelphia, Pennsylvania*

CHEMISTRY   Fall 2013 - Spring 2014
Douglas County High School | *Castle Rock, Colorado*

EXPERIENCE

SOFTWARE ENGINEERING INTERN   2017
Dish Network | *Littleton, Colorado*

- Reworked menu search features, moving from C to SQL for cloud storage

SOFTWARE ENGINEERING INTERN   2014
Echostar Corporation | *Englewood, Colorado*

- Developed UI for set-top boxes

ACTIVITIES

Awards
- Cornell CS Teaching Award, Spring 2022
- Max Mintz Undergraduate TA Hall of Fame, 2018
- Phi Beta Kappa, 2018
- Dean's List, Fall 2015 - Spring 2018

Programs	• **Academic Excellence Workshops** content liason
	• SIAM student member
	• Cornell Mathematics Teaching Seminar
	• Research Peer Advisor, Penn CURF

PUBLICATIONS

| Articles | **S. Ong**, S. Ma and D. Kozen (2024a). "Equivalences for Probabilistic Multiset Automata". In: *In Progress*. |
| | **S. Ong**, S. Ma and D. Kozen (2024b). "Probability and Nondeterminism with Multiset Semantics". In: *Submitted*. |

TALKS

REVIEW SYSTEMS AND PROBABILISTIC AUTOMATA   2022
Ithaca, New York

PROMOTING CREATIVE REASONING VIA GOOD QUESTIONS   2022
Ithaca, New York

• with G. Nair
PROBABILISTIC KLEENE ALGEBRA   2024
Ithaca, New York

SKILLS

● ● ●   LaTeX, Python, Java, Microsoft Office, Gradescope

● ● ○   C, MATLAB, SQL, Qualtrics

● ○ ○   Javascript, Coq, OCaml, Assembly

Languages	• English (native)
	• Mandarin (basic)
	• German (basic)