

# NICHOLAS CHRISTO

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## EDUCATION

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### University of Illinois Chicago

PhD in Mathematical Computer Science -

Advised by Drs. Marcus Michelen (UIC) and Will Perkins (Georgia Tech)

Department of Mathematics, Statistics, and Computer Science

*August 2020 - Current*

Expected Graduation Date April 2026.

### University of Illinois Chicago

Masters in Science, Mathematical Computer Science

Department of Mathematics, Statistics, and Computer Science

*August 2020 - December 2022*

### Western Michigan University

Bachelor of Arts, Mathematics.

Graduated Summa Cum Laude

*May 2016 - April 2019*

Overall GPA: 3.97 Minor in Philosophy

## IN-CLASSROOM TEACHING EXPERIENCE

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Teaching Assistantship, University of Illinois - Chicago

*August 2020 - Current*

Teaching Assistantship, Western Michigan University

*September 2019 - April 2020*

70 Hour Math Pre-Internship, Vicksburg Middle School, Vicksburg, MI

*Spring 2018*

20 Hour P.E. Pre-Internship, Comstock High School, Kalamazoo, MI

*Spring 2018*

Several In-Class Field Experiences

## WORK EXPERIENCE

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### Lead Instructor, Young Scholars Program at UIC

Summer 2022, 2023, 2024

YSP is a four week summer math program available to any Chicago-area high school student to teach and let them explore new topics in mathematics and prepare them for STEM subjects in college.

Handled day-to-day operations, inviting speakers, oversaw 5 graduate student instructors and 8 undergrad assistants.

### Teaching Assistant, UIC

August 2020 - Current

Teaching Assistant Coordinator for Math 589: Teaching of Mathematics, mandatory course for first year teaching assistants to aid in developing teaching skills and methods.

- Instructor and helped design: Math 178 - Pilot Asynchronous "Catch Course" for Math 180 (Fall 2023)
- Instructor for Math 179: Early Scholars Program for Calculus 1 (S22, F22, S23, F23, S24)
- Taught three/four discussion sessions of Math 180: Calculus I (Spring 2021, Fall 2021, S22, F22, S23, F23 and S24)
- Taught two sections of LAS 110: Experience UIC (Fall 2021)

- Graduate Instructor for Young Scholars Program at UIC (Summer 2021)
- Taught three discussion sessions of Math 121: Precalculus (Fall 2020)
- Graded for two sections of MCS 401: Algorithms I (Summer 2022, 2023, 2024)

### **Math Circles of Chicago, MC2**

September 2023 - December 2023

*Instructor*

Ran hour long math activities and lessons at Gads Hill Community Center roughly once a week.

- Gads Hill Community Center in the Pilsen neighborhood (South Side) of Chicago is an after school program servicing the families living in the neighborhood.

### **Private High School Tutor**

September 2023 - Current

Tutored one high school student taking Algebra II and Intro to Statistics, parent mentioned a big improvement in grades over the time frame.

- Tutored three high school students in Calculus BC
- Tutored high school student hoping to test out of Accelerated Pre-calculus

### **Western Michigan University**

September 2019-April 2020

*Teaching Assistant*

- Taught three lab sections of MATH 1140: Excursions in Mathematics

### **Western Michigan University**

September 2016-April 2019

*Math Lab Tutor*

Helped students from classes ranging from Pre-Algebra to Calculus II, developing critical thinking and understand of mathematical concepts.

### **Western Michigan University**

Spring 2018

*Calculus I Grader*

Graded weekly assignments for sections of university Calculus I

### **Other non-relevant Jobs**

Starbucks, May 2019-August 2019, Barista

- Western Michigan University, September 2016-May 2017, Intramural Official
- Meijer, June 2016-December 2016, Grocery Clerk

## **RESEARCH**

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1. Realizability of hypergraphs and high-dimensional contingency tables with random degrees and marginals. (with M. Michelen) *preprint* (2024).
2. The set of ratios of derangements to permutations in digraphs is dense in  $[0, 1/2]$ . (with B. Austhof, P. Bennett) *Electronic Journal of Combinatorics*. 29 (2022), #P1.8.

## **INVITED TALKS**

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- November 12, 2024 Probability Seminar at Northwestern University
- October 2, 2024 Combinatorics and Probability Seminar at UIC
- June 2-4, 2023 IDEAL Get Ready for Research Workshop at UIC

- May 6, 2023 IDEAL High School Teacher Workshop at UIC
- March 10, 2023, *Partitions and Contingency Tables*, Joint Research Talk for UIC's Visiting Student Day

## CONFERENCES ORGANIZED

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03/2025: Co-Organizer 2026 GSCC (Graduate Student Combinatorics Conference), UIC, Chicago.

## ACADEMIC ACHIEVEMENTS

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Professor Herbert Alexander Award - UIC 23-24

Bernard Kurtin Scholarship - UIC 22-23

Department of Mathematics Service Award - WMU 19-20

Charles H. Butler Teaching Award ("in recognition of their excellence in teaching over an extended period") - WMU 19-20

Graduated Summa Cum Laude - WMU

Dean's List (All Possible Semesters)

Fourth Place in WMU Math Prize Competition (Fall 2018)

Colonel Charles E. Bayliss Scholarship, WMU 18-19 17-18

Robert Meagher Memorial Scholarship, WMU 18-19

Clarke Senior Award, WMU 18-19

Fred A. Beeler Memorial Scholarship, WMU 17-18

## SERVICE & VOLUNTEER EXPERIENCE

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Co-Founder, Co-Organizer of Sol's Directed Reading Program at UIC for Undergrads Fall 2023-Current  
Directed Reading Program Mentor Spring 2024 - Current

- mentee: Sebastian Tous, Spring, Summer, Fall 2024

Graduate Helper for Sonia Kovalevsky Math Day

Graduate Helper for Math Physics day in Chicago June 2024

Helped to recruit graduate students to UIC through open houses, panels, meetings, mentoring 2023-2024

Graduate Student Mentor UIC Fall 2021 - Current

Member of the UIC MSCS Graduate Faculty Mentoring Award Committee Spring 2023, 2024, & 2025

Judge for QED, High and Middle School Math Fair run by Math Circles of Chicago Fall 2023, 2024

Panelist on Graduate School for UIC Math Club Fall 2024

Panelist on REUs for UIC Math Club Fall 2023

President of AMS Student Chapter at UIC 2021-2022

Math and Science Fair for Kalamazoo Middle Schools Spring 2019

Precalculus Classroom Assistant, Summer 2018

Special Olympics Michigan - Unified Basketball, 6 hours, February 2018

PeaceJam Slam at WMU, 10 hours, November 2017

## EXTRA-CIRRICULAR

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Organizer of the MSCS Department's Ping Pong League	Fall 21-Current
Mathematics Graduate Student Association (MGSA) Co-President (UIC)	Fall 2021 - Spring 2022
MSCS Department Graduate Student Rep to UIC's Graduate Student Council	Fall 2023 - Spring 2024
Co-Organizer of Graduate Student Colloquium (UIC)	Spring 2022
Mathematics Graduate Student Association Member (UIC)	Fall 2020 - Current
Symbols of Inclusion Member and Graduate Mentor (UIC)	Fall 2022 - Current
UIC MSCS Department Graduate Ambassador	Fall 2020 - Current
Pi Mu Epsilon, Math Honors Society & Math Club (WMU)	

- Graduate Officer Fall 2019 - Spring 2020
- President April 2018 - April 2019
- Treasurer September 2017-April 2018

Outside of Math: Ice Skating in the winter, Long Distance Running, Traveling, Listening to various types of music, tabletop/board games, Daily NYT Mini Crossword, cooking.

## TECHNICAL KNOWLEDGE

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### Familiar Software & Tools

Latex, Maple, MATLAB, html, QuickBooks.  
Python through INMAS workshops (2021-2022)  
Data Science Certificate through Erdős Institute (Spring 2024).