

# Daniel Condon

## Curriculum Vitæ

### Education

- 2011–2014 **B.S. Applied Mathematics**, *Georgia Institute of Technology*.  
2015–2017 **M.A. Mathematics**, *Indiana University*, Bloomington.  
2015–present **Ph.D. Candidate Mathematics**, *Indiana University*, Bloomington.

### Research Interests

Algebraic and Enumerative Combinatorics, Social Choice, Mathematical Physics

### Teaching

#### Indiana University

- Spring 2022 **CLLC-L 230 The Mathematics of Voting**, *Instructor of Record*.  
I developed this course, which is planned for Spring 2022
- Fall 2021 **J113 Introduction to Calculus with Applications**, *Instructor of Record*.
- Spring 2021 **D117 Introduction to Finite Math. 2**, *Instructor of Record*.
- Fall 2020 **M118 Finite Mathematics**, *Assistant Instructor*.
- Summer 2020 **M106 The Math. of Decision and Beauty**, *Online Co-Instructor*.
- Spring 2020 **M106 The Math. of Decision and Beauty**, *Assistant Instructor*.
- Fall 2019 **M118 Finite Mathematics**, *Instructor of Record*.
- Fall 2019 **V118 Finite Math. with Applications**, *Assistant Instructor*.
- Summer 2019 **M106 The Math. of Decision and Beauty**, *Instructor of Record*.
- Spring 2019 **M106 The Math. of Decision and Beauty**, *Instructor of Record*.
- Fall 2018 **M106 The Math. of Decision and Beauty**, *Instructor of Record*.
- Summer 2018 **M106 The Math. of Decision and Beauty**, *Course Developer*.
  - Developed teaching materials and resources for a general education course covering music theory, graph theory, voting theory, game theory, and projection.
  - Helped organize graduate student instructors.
- Spring 2018 **D116 Introduction to Finite Math. 1**, *Instructor of Record*.
- Fall 2017 **M106 The Math. of Decision and Beauty**, *Instructor of Record*.
- Spring 2017 **M106 The Math. of Decision and Beauty**, *Assistant Instructor*.
- Fall 2016 **M018 Basic Algebra for Finite Mathematics**, *Instructor of Record*.
- Summer 2016 **M118 Finite Mathematics**, *Instructor of Record*.

#### Georgia Institute of Technology

Rawles Hall, 831 E 3rd St – Bloomington, Indiana 47405 – United States

☎ (404)-259-4014 • ✉ [dmcondon@indiana.edu](mailto:dmcondon@indiana.edu)

🌐 [www.danielcondon.com](http://www.danielcondon.com)

- Fall 2014 **MATH 1502 Calculus 2**, *Recitation Leader*.
- Spring 2014 **Math Lab Tutor**.
- Spring 2014 **MATH 1502 Calculus 2**, *Recitation Leader*.
- Fall 2013 **MATH 1501 Calculus 1**, *Recitation Leader*.

## Awards

- 2021 David A. Rothrock Teaching Award
- 2020 David A. Rothrock Mathematics Fellowship
- 2019 Schober Travel Award
- 2018 David A. Rothrock Teaching Award
- 2016 James P. Williams Memorial Award

## Service

- 2020–present **Machine Learning for Research Club Officer**, *Indiana University*.
- 2021–present **Peer Mentor**, *Indiana University Department of Mathematics*.
- 2020–2021 **Peer Mentoring Program Organizer**, *Indiana University Department of Mathematics*.
- Spring 2021 **Directed Reading Program Mentor**, *Indiana University Department of Mathematics*, The Game of Cops and Robbers on Graphs, Bonato, Nowakowski.
- 2019 – 2021 **Grad Student Combinatorics Seminar Organizer**, *Indiana University Department of Mathematics*.
- 2019 – 2020 **Grad Student Combinatorics Seminar Organizer**, *Indiana University Department of Mathematics*.
- Spring 2019 **Directed Reading Program Mentor**, *Indiana University Department of Mathematics*, Winning Ways for your Mathematical Plays, Berlekamp, Conway, Guy.
- Fall 2018 **Directed Reading Program Mentor**, *Indiana University Department of Mathematics*, Winning Ways for your Mathematical Plays, Berlekamp, Conway, Guy.

## Talks

- Fall 2021 **Information Theory and Decision Trees**. Machine Learning for Research Club
- Spring 2021 **Generating Functions and Error Correcting Codes**. Generatingfunctionology Seminar, *Indiana University Department of Mathematics*.
- Spring 2021 **Introduction to Generating Functions, Parts 1-3**. Generatingfunctionology Seminar, *Indiana University Department of Mathematics*.
- Fall 2020 **Random Forests**. Machine Learning for Research Club, Beginner Project Group
- Fall 2020 **Decision Trees**. Machine Learning for Research Club, Beginner Project Group
- Fall 2020 **Flag Varieties**. Algebraic Combinatorics Seminar, *Indiana University Department of Mathematics*.
- Fall 2020 **Intersections of Schubert Varieties in the Grassmannian, Part 1**. Algebraic Combinatorics Seminar, *Indiana University Department of Mathematics*.

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- Spring 2020 **Decision Trees.** Machine Learning Seminar, *Indiana University Department of Mathematics.*
- Spring 2020 **Polyominoes.** Grad Student Combinatorics Seminar, *Indiana University Department of Mathematics.*
- Spring 2020 **Combinatorial Game Theory.** Grad Student Combinatorics Seminar, *Indiana University Department of Mathematics.*
- Spring 2020 **Voting Theory.** Grad Student Combinatorics Seminar, *Indiana University Department of Mathematics.*
- Fall 2019 **Constraint Programming in Combinatorics.** Grad Student Combinatorics Seminar, *Indiana University Department of Mathematics.*
- Fall 2019 **Combinatorial Designs and Finite Geometries** Grad Student Combinatorics Seminar, *Indiana University Department of Mathematics.*
- Fall 2019 **Generating Functions and Sicherman Dice** Grad Student Combinatorics Seminar, *Indiana University Department of Mathematics.*
- 2014 **The Colored Cubes Problem.** Joint Math Meetings Combinatorics Session

## Papers

### Preprints

**Tilings of Dented Half Hexagons.** in preparation

### Published

**Lozenge Tiling Function Ratios for Hexagons with Dents on Two Sides.** *Electron. J. Combin.* Vol. 27-3 (2020)

**The Color Cubes Puzzle with Two and Three Colors** (with Ethan Berkove, David Cervantes Nava, and Rachel Katz) *The Mathematics of Various Entertaining Subjects* Vol. 2 (2017) pp. 125-140

**Automorphisms of  $S_6$  and the Colored Cubes Puzzle** (with Ethan Berkove, David Cervantes Nava, and Rachel Katz) *Australas. J. Combin.* Vol. 68 (2017) pp. 71-93

**On Generalizations of Separating and Splitting Families.** (with Samuel Coskey, Luke Serafin, and Cody Stockdale) *Electron. J. Combin.* Vol. 23-3 (2016)

## Work With Youth

- 2018, 2021 **Science Fest Volunteer**, *Indiana University.*
- 2021 **CYT Live Instructor**, *Johns Hopkins*, Cryptography.
- [National Youth Leadership Training](#), [Atlanta Area Council](#)
- 2020 **Assistant Scoutmaster of Program.**
- 2014 **Assistant Scoutmaster.**
- 2008-2013 **Youth Staffer.**
- [Other Scouting](#), [Atlanta Area Council](#)

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- 2012 **Camp Area Director**, *Bert Adams Scout Reservation*.  
2011 **Camp Counselor**, *Bert Adams Scout Reservation*.

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## Other Interests

### Creative Writing

#### Tabletop Roleplaying Games

- Organized online play with multiple groups during quarantine

#### Backpacking

- Wilderness First Responder trained
- Pacific Crest Trail Thru Hike, 2017
- Pennine Way Thru Hike, 2016
- Appalachian Trail Thru Hike, 2015

#### Caving

- NCRC Orientation to Cave Rescue trained