

Charles J. Argue

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Department of Mathematics
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- EDUCATION** *Pursuing Doctor of Philosophy, Mathematics* Aug 2016 - Present
Carnegie Mellon University, Pittsburgh, PA
- Yeshiva Program* Sep 2015 - Aug 2016
David Shapell College of Jewish Studies, Jerusalem, Israel
- Bachelor of Science, Mathematics with Honors* Mar 2015
University of Chicago, Chicago, IL
Cumulative GPA 3.92
- RECOGNITION** Phi Beta Kappa, inducted Junior year
University Scholarship 2011-15
Dean's List 2011-13
- TEACHING** *Instructor of Record*
Carnegie Mellon University, Dept. of Mathematics, Pittsburgh, PA
 • Integral and Differential Calculus Summer 2018
- Teaching Assistant*
Carnegie Mellon University, Dept. of Mathematics, Pittsburgh, PA
 • Discrete Mathematics Fall 2018
 • Operations Research Spring 2018
 • Calculus in Three Dimensions Spring, Fall 2017
 • Methods and Models for Optimization Fall 2016
- Coordinator* Aug 2017 - Present
 Head Coach Aug 2016 - Present
Western Pennsylvania ARML Team, Pittsburgh, PA
 • Planned and taught practices for a Pittsburgh-area high school math team
 • Managed team coaches, calendar, communications, \$16,000 budget
- Tutor* Sep 2013 - Aug 2015
InstaEDU Inc./Chegg Inc.
- Teaching Assistant* Oct 2012 - Jun 2013
University of Chicago, Dept. of Mathematics, Chicago, IL
 • Studies in Mathematics I (Number Theory), Fall 2012
 • Elementary Functions and Calculus, Winter-Spring 2013
- TALKS** *A Nearly-Linear Bound for Nested Convex Body Chasing*
SODA, San Diego, CA, Jan 2019 (scheduled).
- Rank-one generated spectral cones*
INFORMS Annual Meeting, Houston, TX, Oct 2017

Sizes of Infinity, Proofs of $\sum_{n=1}^{\infty} \frac{1}{n^2} = \frac{\pi^2}{6}$, 'Hay in a Haystack'
Western Pennsylvania ARML Team Practice, Pittsburgh, PA, 2016-2017

PUBLICATIONS *A Nearly-Linear Bound for Nested Convex Body Chasing*
(with A. Gupta et al.) SODA 2019 (to appear).

Covers in Partitioned Intersecting Hypergraphs
(with R. Aharoni) European Journal of Combinatorics, January 2016

PROJECTS Online nested convex body chasing (with Anupam Gupta)
Rank-one generated spectrahedra (with Fatma Kılınç-Karzan)
Covers in cross-intersecting families of hypergraphs (with Ron Aharoni)

COURSEWORK *Graduate*
Design and Analysis of Algorithms, Graph Theory, Discrete Mathematics, Linear Programming, Convex Optimization, Integer Programming, Measure Theory, Probability, Combinatorial Optimization, Abstract Algebra

Undergraduate
Analysis in \mathbb{R}^n , Representation Theory, Ordinary Differential Equations, Complex Analysis, Point-Set Topology, Mathematical Logic, Mathematical Statistics, Non-parametric Inference

PROFESSIONAL *Research Assistant* Summer 2015
Carnegie Mellon University, Dept. of Mathematics, Pittsburgh, PA

- Studied Ramsey theory with Professor Ryan O'Donnell
- Studied probabilistic combinatorics with Professor Thomas Bohman

Research Intern Summer 2014
Technion, Dept. of Mathematics, Haifa, Israel

- Studied hypergraph theory with Professor Ron Aharoni

Counselor Summers 2011 - 2013
Camp Airy, Thurmont, MD

- Worked with co-counselors to provide 24-hour supervision for up to 36 boys
- Worked in teams to handle behavioral problems
- Planned and facilitated group activities
- Coordinated all Israeli staff and all Israel-related programming (2013)

SKILLS *Computer Skills:* LaTeX, Matlab, Mathematica
Languages: Fluent in Biblical Hebrew, proficient in Modern Hebrew