

Justin “JD” Nir

Curriculum Vitae

Education

- 2020 **Doctor of Philosophy**, *University of Nebraska–Lincoln*, Lincoln, NE.
Current fourth year. Passed qualifying exams. Selected coursework: Extremal Graphs and Hypergraphs, Applications of the Probabilistic Method, Information Theory
- 2017 **Master of Arts in Mathematics**, *University of Nebraska–Lincoln*, Lincoln, NE.
- 2013 **Bachelors of Science in Computer Science, Mathematics**, *Carnegie Mellon University*, Pittsburgh, PA.
Selected coursework: Algorithm Design and Analysis, Game Theory, Graduate Topics in Discrete Mathematics, Graph Theory, Mathematical Logic

Experience

- Aug. 2015 – present **Graduate Teaching Assistant**, *University of Nebraska–Lincoln*, Lincoln, NE.
Instructor of record for algebra, trigonometry, single- and multivariable calculus courses. UNL encourages active learning classrooms, so in addition to lecturing I facilitate discovery through group work on curated worksheets.
- Aug. 2018 **Instructor**, *Johns Hopkins Center for Talented Youth*, Easton, PA.
Designed and taught a three week course in discrete mathematics and logic for gifted middle school students.
- Jun. 2016 – **Summer Intern**, *MIT Lincoln Laboratory*, Lexington, MA.
Aug. 2016 Developed software to parse logical expressions and convert them to disjunctive normal form. Aided in integrating this functionality into a secure database prototype.
- Jan. 2015 – **Research Engineer**, *Fast Orientation*, Washington, D.C..
Jul. 2015 Researched, designed and prototyped product features. Provided analysis for security evaluations.
- Jul. 2013 – **Security Analyst**, *Independent Security Evaluators*, Baltimore, MD.
Dec. 2014 Evaluated applications and documented vulnerabilities. Developed and presented security-oriented training sessions.
- May 2012 – **Summer Intern**, *Room 77*, Mountain View, CA.
Aug. 2012 Developed front- and back-end code for a site-wide promotion. Provided security evaluation of user-facing code.
- Aug. 2010 – **Undergraduate Teaching Assistant**, *Carnegie Mellon University*, Pittsburgh, PA.
May 2013 Lead recitations for Calculus II, Concepts of Mathematics and Graph Theory in the math department and Great Theoretical Ideas in Computer Science in the School of Computer Science.

Talks

- Apr. 2019 **The Chromatic Number of Random Lifts of Complete Graphs**, *CU Denver Discrete Math Seminar*, Denver, CO.
- Mar. 2019 **Turán-Type Questions about Cliques and Stars**, *CombinaTexas 2019*, College Station, TX.
- Sep. 2018 **Popularity vs. Fame: Alon-Shikhelman Results for Cliques and Stars**, *Mostly Manitoba, Michigan and Minnesota Combinatorics Graduate Student Workshop*, Ames, IA.
- Mar. 2018 **This Title is False: Hilbert, Gödel, Turing and the Beautiful Futility of Mathematics**, *Great Plains Alliance Talk Series at University of Nebraska-Kearny*, Kearny, NE.
- Oct. 2017 **Triangular and Pixel Ramsey Numbers**, *CU Denver Discrete Math Seminar*, Denver, CO.
- Jul. 2014 **Phishing and Spear Phishing: Detection and Prevention**, *Independent Security Evaluators Security Training for Enterprise Series*, Baltimore, MD.
- Nov. 2013 **Industry-wide Misunderstandings of HTTPS**, *International Conference on Information Security and Cryptology*, Seoul, South Korea.

Other Conferences

- Oct. 2018 **AMS Sectional Meeting**, *University of Michigan*, Ann Arbor, MI.
- Jul. 2018 **Building Bridges II**, Budapest, Hungary.
- Jun. 2018 **Graduate Student Workshop in Combinatorics**, *Iowa State University*, Ames, IA.
- Apr. 2018 **AMS Sectional Meeting**, *Vanderbilt University*, Nashville, TN.
- Jan. 2018 **Joint Mathematics Meetings**, San Diego, CA.
- Jun. 2017 **Graduate Student Workshop in Combinatorics**, *Denver University and CU Denver*, Denver, CO.

Honors

UNL Parents Association Certificate of Recognition for Contributions to Students recipient, University of Nebraska–Lincoln

Service

- Fall 2018 – UNL Discrete Mathematics Seminar Co-chair
present
- Fall 2018 – UNL New Graduate Mentor Program mentor
present

Publications

Jonathan Cutler, JD Nir, and A. J. Radcliffe. Supersaturation for subgraph counts. *arXiv e-prints*, page arXiv:1903.08059, Mar 2019.