

Nicolas James Marks Ford

1801 Shattuck Ave. Apt. 309 Berkeley, CA 94709
(414) 243-5827 njmford@gmail.com <http://nicf.net>

EDUCATION **Ph.D.**, Mathematics, University of Michigan, under David Speyer. Dec 2013.
B.S., Mathematics (with Honors), University of Chicago. GPA: 3.88. Jun 2009.
Sigma Xi, Phi Beta Kappa; received Paul Cohen Prize, given to the graduating seniors who have achieved the highest record in mathematics.

EXPERIENCE **Visiting Scholar**, University of California, Berkeley. Jan 2016 – Jan 2017.
This is a one-year research appointment in the mathematics department under Lauren Williams. My work has centered on the connections between combinatorics, commutative algebra, and algebraic geometry.

Software Developer / Researcher, Jane Street Capital. Jan 2014 – Aug 2015.
I worked in two sections of the firm during my time at Jane Street. As part of the market data group, I developed performance-critical software to read and interpret market data in real time for the firm's trading systems. On the options desk, my work centered on developing and implementing options trading strategies, writing data analysis tools, and developing software to assist the options traders.

Mentor / Faculty, Canada/USA Mathcamp. Summers of 2010–2013 and 2016.
Mentors are the graduate students who form most of the instructional staff at Mathcamp (see <http://mathcamp.org>). I was in charge of designing and teaching classes and helping to run the camp during the summer. Over all five summers I taught around 20–25 classes.

Graduate Student Instructor, University of Michigan. 2009–2012.
For four semesters I was in charge of one section of calculus, serving as the primary instructor for about 30 students. Also, in 2012, I served as a TA for a course on high school geometry for future teachers.

RESEARCH PAPERS Nicolas Ford and Jake Levinson. *Foundations of Boij–Söderberg theory for Grassmannians*. In preparation. arXiv:1609.03446.

Nicolas Ford and Khrystyna Serhiyenko. *The Existence of Green-to-Red Sequences for Quivers Arising From Le-Diagrams*. In preparation. arXiv:1610.01695.

Nicolas Ford, Jake Levinson, and Steven Sam. *Towards Boij–Söderberg theory for Grassmannians: The case of square matrices*. Submitted to *Algebra and Number Theory* August 21, 2016. arXiv:1608.04058.

Nicolas Ford. 2015. *The expected codimension of a matroid variety*. *J. Algebraic Comb.* 41, 1 (February 2015), 29-47.

Nicolas Ford. *Geometric Shifts and Positroid Varieties*. (Ph.D. thesis.) arXiv:1508.01935.

OTHER PROJECTS **Bean and Nothingness**. I am currently working as a designer and the lead developer on a puzzle game due for release sometime in 2017. For more information, see <http://beanandnothingness.com>.