

Education	<ul style="list-style-type: none"> o BA, Cornell University, cum laude in mathematics, May 2001 o PhD, University of California at Davis, mathematics, Dec 2007 o MS, Rutgers, mathematical finance, Jan 2014
Employment History	<ul style="list-style-type: none"> o LoanStreet Inc. 2018 - current, <i>Software engineer for financial technology</i> <ul style="list-style-type: none"> • Gather and translate requirements for loan origination and trading business. • Rebuild Django backend with greater accuracy and scalability as primary objectives. o MIO Partners (McKinsey & Co subsidiary) 2016 - 2018, <i>Quant developer for trading</i> <ul style="list-style-type: none"> • Designed Python-based portfolio management tools following object-oriented principles. Tools are used interactively for analysis and as components in report-generation processes deployed in Docker containers. • Created and maintained daily trading opportunity charts reviewed by the CEO. Data was processed from a variety of sources including emails and databases. • As project manager, gathered requirements for a web app (React JS and Python), coded back-end computations, and managed two front-end developers. o JP Morgan Chase 2015 - 2016, <i>Quant developer for regulatory capital</i> <ul style="list-style-type: none"> • Automated Excel and Access-based manual processes as robust server processes using proprietary Python-based environment (Athena). • Worked on back-end processes and event-driven GUI design, following the Agile methodology, including thorough test coverage. • Frequent communication and signoffs from business users were required, with careful documentation showing accuracy of results. o Nomura 2014 - 2015, <i>Front office developer for electronic trading</i> <ul style="list-style-type: none"> • Created a low-latency order book generator that used Tibco Rendezvous to aggregate market-data and pricing and communicate with smart order router and GUI (Java/Linux). • Primary maintainer of automated market-maker for USD swaps and swap futures. • Created a FIX trade feed from ION trading platform into trade management system. o Nomura 2013, <i>Intern for equities connectivity team</i> o University of California, Davis 2012 Lecturer <i>Head instructor for courses in calculus, linear algebra, and probability</i> o Bard College, BHSEC program 2009 - 2011, Assistant Professor <i>Oversaw the development of accelerated math curriculum for early college program.</i> o University of Victoria 2008 - 2009, PIMS Postdoctoral Fellow <i>Conducted mathematical research in low-dimensional topology</i>
Skills & Abilities	<ul style="list-style-type: none"> o Able to self-manage and rapidly iterate while gathering and updating requirements. o Programming languages: Python, Java, C o Work experience in a Linux server environment, using Unix tools (grep, awk, sed, vi(m), etc.) o Able to digest new quantitative literature from a top-down, conceptual viewpoint
Papers	<ul style="list-style-type: none"> o "Boundary-Twisted Normal Form and the Number of Elementary Moves to Unknot", <i>New York J. Math</i> 18 (2012) 389-408. o "The Unknotting Problem and Normal Surface Q-Theory", <i>Journal of Knot Theory and Its Ramifications</i>, accepted for publication
Fellowships & Scholarships	<ul style="list-style-type: none"> o Pacific Institute for the Mathematical Sciences Postdoctoral Fellowship o National Science Foundation VIGRE Fellowship (4 years) o Rutgers MSMF Gary Chropuvka Scholarship Award
Personal	<ul style="list-style-type: none"> o Naturalized U.S. Citizen; moved to the U.S. at age eight.