Courtney Y. Paquette (née Kempton)

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EDUCATION

University of Washington
Seattle, WA 09/11-08/17
- PhD in Mathematics (emphasis in Optimization) Completed June 2017
  Thesis: *Structure and complexity in non-convex and nonsmooth optimization*
  Advisor: Dmitriy Drusvyatskiy

University of Washington
Seattle, WA 09/07-06/11
- Majors: Mathematics and Business Administration (emphasis in Finance)
- Mathematics GPA: 3.94, Business GPA: 3.93, Cumulative GPA: 3.93
- Summa Cum Laude in Finance, Magna Cum Laude with Honors in Mathematics

POSITIONS

University of Waterloo-Department of Combinatorics and Optimization
Waterloo, ON, Canada 07/18-present
- NSF Postdoctoral Fellowship

Lehigh University-Industrial and Systems Engineering
Bethlehem, PA 01/18-07/18
- NSF TRIPODS Postdoctoral position

Ohio State University-Mathematics
Columbus, OH 08/17-12/17
- Ross Assistant Professor (Postdoctoral position)

University of Washington-Mathematics
Seattle, WA 09/11-08/17
- Graduate Student

AWARDS

- NSF Postdoctoral fellowship (July 2018-present)
- Tanzi-Egerton Fellowship Award (2016)
- Excellence in Teaching Award (UW Math department) (2012)
- Nominated for Excellence in Teaching (university-wide award) (2012)

TEACHING

Graduate instructor-Nonlinear optimization (ISE 417)
Lehigh University, Bethlehem PA 01/18-/06/18
- Taught a graduate course in the basics of numerical optimization- optimality conditions for unconstrained and constrained, first-order and second-order method, and programming.

Calculus instructor (Math 1152)
Ohio State University, Columbus OH 08/17-12/17
- Taught three sections of second semester of calculus
- Used traditional and online course material for online and traditional students

Lead Teaching Assistant
University of Washington, Seattle WA 06/16-08/17
- Organize and coordinate a 5 day TA orientation for incoming math graduate students
- Advises incoming graduate students on skills in teaching as a TA Mentor
- Supervises first year graduate students

Research Experience for Undergraduates (REU) Teaching Assistant
University of Washington, Seattle WA Summers ‘11, ‘12, ‘15
- Assisted groups of 2-3 students in projects related to inverse problems

Teaching Assistant
University of Washington, Seattle WA 09/11-08/17
- Teaches own class for a sophomore-level Differential Equations Class as well as a TA for the introduction calculus series

PAPERS

Papers are arranged in reverse chronological order, according to the date they are submitted to the arXiv

- D. Davis, D. Drusvyatskiy, K.J. MacPhee, and C. Paquette. *Subgradient methods for sharp weakly convex functions.* (2018) arXiv: https://arxiv.org/pdf/1803.02461.pdf
- D. Davis, D. Drusvyatskiy, and C. Paquette. *The nonsmooth landscape of phase retrieval.* (2017) arXiv: https://arxiv.org/pdf/1711.03247.pdf
- C. Paquette, H. Lin, D. Drusvyatskiy, J. Mairal, and Z. Harchaoui. *Catalyst Acceleration for Gradient-Based Non-Convex Optimization.* (AISTATS 2018) arXiv: https://arxiv.org/pdf/1703.10993.pdf
- D. Drusvyatskiy and C. Paquette. *Efficiency of minimizing compositions of convex functions and smooth maps. (submitted 2nd round Math. Prog.)* (2015) arXiv: https://arxiv.org/pdf/1605.00125.pdf
- D. Drusvyatskiy and C. Paquette. *Variational analysis of spectral functions simplified*. Journal of Convex Analysis. 25(1), 2018.

INVITED TALKS

- *Generic acceleration schema beyond convexity,* INFORMS annual meeting (2017), Houston, TX (October 2017)
- *Minimizing convex composites,* Lehigh University Optimization Seminar, Bethlehem, PA (September 2017)
- *Proximal methods for minimizing convex compositions,* SIAM-optimization, Vancouver, BC (May 2017)
- *Catalyst for Gradient-based Nonconvex Optimization,* Inria-Grenoble Seminar, Grenoble (April 2017)
- *Generic acceleration schema beyond convexity,* Optimization and Statistical Learning, Les Houches (April 2017)
- *An accelerated algorithm for minimizing convex compositions*, West Coast Optimization Meeting, University of British Columbia (September 2016)

INTERNSHIPS

Microsoft Corporation
Redmond, WA 06/10-09/10
SQL Server Strategy Intern (Financial Rotation Program Intern)
- Developed an intricate model in Excel to illustrate Microsoft's volume licensing trends from customer, revenue, and contract data
- Presented recommendations on both SQL Server's EAP and mobile strategy to the executive team
- Invented a metric to measure the success of SQL Server's EAP and forecasted its revenue over the next three years

State Farm Insurance
DuPont, WA 06/09-08/09
Planning and Analysis Summer Hire Intern

- Analyzed production data on young adults and formulated conclusions that were presented to a committee
- Processed two weekly property and casualty trend reports while also completing numerous special requests

EXTRA-CURRICULAR

NSF TRIPODS/DIMACS: Organizer
Lehigh University, Bethlehem PA 08/2018
- Arranged and scheduled speakers for a 3 day conference as part of the NSF TRIPODS grant

NSF TRIPODS summer school: Organizer
Lehigh University, Bethlehem PA 08/2018
- Arranged and scheduled 40 students to participate in a 3 day summer school that covers optimization, TensorFlow, and online learning

Opt-ML Seminar: Organizer
Lehigh University, Bethlehem PA 01/2018-06/2018
- Arranged and scheduled student and faculty speakers from multiple departments (computer science, electrical engineering, statistics, mathematics, and applied math)

Trends in Optimization Seminar: Organizer
University of Washington, Seattle 2016-2017
- Arranged and scheduled student and faculty speakers from multiple departments (computer science, electrical engineering, statistics, mathematics, and applied math)

UW AWM Chapter: Secretary and Organizer
University of Washington, Seattle 2015-2017
- Part of the leadership group that established the University of Washington's first AWM chapter
- Chief organizer of a campus outreach tutoring program to encourage undergraduate women to pursue mathematics

Graduate-level Research in Industrial Projects for Students (GRIPS, part of IPAM)
Berlin, Germany Summer 2015
Research Intern-Supply Chain Management
- Designed and implemented six new heuristics in C to solve a supply chain model as part of a team of four
- Used machine learning clustering algorithms to analyze characteristics of solutions

Mathematical Modeling Competition
Seattle, WA February 2011
- Researched/developed a mathematical model that optimized the location of repeaters