

Gweneth McKinley

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RESEARCH INTERESTS

Extremal and Probabilistic Combinatorics, Graph Theory

EDUCATION

Ph.D. Applied Mathematics 2015–present
Massachusetts Institute of Technology
Advisor: Henry Cohn

Visiting student at Universidad de Chile from 06/2019–08/2019

B.S. Mathematics 2013–2015
University of California, Davis
Highest Honors, 4.0 GPA. Advisor: Anne Schilling

A.S. Mathematics 2007–2013
Pasadena City College

RESEARCH PUBLICATIONS

Resilience of the rank of random matrices (with A. Ferber and K. Luh).
Submitted.
arXiv:1910.03619

Superlogarithmic cliques in dense inhomogeneous random graphs
SIAM Journal on Discrete Mathematics, Vol. 33, No. 3, pp. 1772–1900, 2019.
doi:10.1137/19M1249540

Supersaturated sparse graphs and hypergraphs (with A. Ferber and W. Samotij),
To appear in International Mathematics Research Notices.
doi:10.1093/imrn/rny030

A problem in card shuffling, UC Davis Undergraduate Thesis, 2015.

RESEARCH TALKS

Combinatorics and Probability Seminar, University of Illinois at Chicago 10/2019
ACO Seminar, Carnegie Mellon University 09/2019
ACGO Seminar, Universidad de Chile 06/2019
PhD Seminar on Combinatorics, Games and Optimisation,
London School of Economics 05/2019
Rio Workshop on Extremal and Structural Combinatorics,
Instituto de Matemática Pura e Aplicada, Rio de Janeiro 01/2018
MIT Combinatorics Seminar 09/2017
Mathematical Congress of the Americas: Special Session on
Extremal and Probabilistic Combinatorics, Montreal 07/2017
MIT Pure Math Graduate Student Seminar 09/2015
Northern California Undergraduate Mathematics Conference 03/2015

TEACHING	<i>Teaching Assistant</i> , MIT, 18.600, Probability and Random Variables	Spring 2019
	<i>Instructor</i> , MIT, 18.01, Single Variable Calculus	IAP 2019
	<i>Teaching Assistant</i> , MIT, 18.600, Probability and Random Variables	Fall 2018
	<i>Teaching Assistant</i> , MIT, 18.200, Principles of Discrete Applied Math	Spring 2018
	<i>Teaching Assistant</i> , MIT, 18.600, Probability and Random Variables	Fall 2017
	<i>Course Assistant/Grader</i> , MIT, 18.217, Enumerative Combinatorics	Fall 2016
RELATED WORK	<i>Graduate Resident Advisor</i> , Burton-Conner House, MIT	2018-present
	<ul style="list-style-type: none"> <i>Job description</i>: Lived in undergraduate dormitory at MIT on floor with 48 students, provided support and informal counseling, planned social events, was responsible for crisis management. 	
	<i>Program Director</i> , MIT $\sqrt{\text{mathroots}}$	2017-2018
	<ul style="list-style-type: none"> <i>Job description</i>: Hired and supervised residential staff for 2-week residential high school summer program with 20 students. Coordinated housing, food, and other program logistics. Lived with students and counselors in dormitory. 	
	<i>Mentor</i> , PRIMES, MIT Math Department	Spring 2018
	<i>Assistant Program Director</i> , MIT $\sqrt{\text{mathroots}}$	2016
	<i>Mentor</i> , Directed Reading Program, MIT Math Department	IAP 2016
FELLOWSHIPS AND AWARDS	Charles and Holly Housman Award for Excellence in Teaching, MIT, Spring 2019	
	Graduate Women of Excellence, MIT, Spring 2017	
	Stein Family Fellowship, MIT, Fall 2016	
	Praecis Presidential Fellow, MIT, 2015-2016	
	Highest Honors, UC Davis, Spring 2015	
	Outstanding Senior Award in Mathematics, UC Davis, Spring 2015	
	Department Citation, Math Department, UC Davis, Spring 2015	
	Citation for Outstanding Performance, Math Department, UC Davis, Spring 2015	
	Regents Scholar, UC Davis, 2013-2015	
Academic Senate Scholarship, Pasadena City College, Spring 2013		