Benjamin Krakoff

Website: www.umich.edu/~bkrakoff
Github : https://github.com/benkrakoff

bkrakoff@umich.edu
(480)406-7028

ACADEMIC INTERESTS

Hardy Spaces, the Szegö projection and duality in several complex variables.

EDUCATION

University of Michigan, Ann Arbor, MI
Ph.D. Candidate in Mathematics, 4th Year
Advisor: David Barrett — Expected May 2022.

Yale University, New Haven, CT
Bachelor of Arts, Mathematics Major
GPA 3.87, Cum Laude — May 2017

Budapest Semesters in Mathematics, Budapest, Hungary
Semester Abroad
Letter Grade A+ — Spring 2016

PUBLICATIONS

Diameter and Automorphisms of Gelfand-Tsetlin Polytopes
Discrete Computational Geom (2019) 62: 209
Co-Authored with Yibo Gao, Lisa Yang.
Research supported by 2016 University of Minnesota REU. — July 2019

Counting Finite Index Subrings of $\mathbb{Z}^n$
Acta Arith. (2020), 29 pp.
Co-Authored with Stanislov Atanasov, Nathan Kaplan, Julia Menzel.
Research supported by 2015 Summer Undergraduate Research at Yale. — July 2018

TECHNICAL SKILLS

Languages /Software: Python, C++, LaTeX
Mathematics : Calculus/Analysis, Linear Algebra, Probability, Combinatorics

WORK EXPERIENCE

Los Alamos National Laboratory:
NSF sponsored internship with Dr. Christian Negre and
Dr. Susan M. Mniszewski to develop software for D-Wave annealer. — Spring 2021

AWARDS AND SCHOLARSHIPS

Graduate Fellowship
Umich Math Dept., 10,500 USD — Fall 2018

Deforest Senior Mathematical Prize
Yale Math Dept., 1500 USD — May 2017

Math Competition, 2nd Place
Math competition at Budapest Semesters in Math, 150 USD — April 2016

CONFERENCES AND WORKSHOPS

CIRM 2020, Luminy, Fr
Conference on complex dynamics. — Jan. 2020

Sage Days 104, St. Louis, MO
Conference to develop tools in Sage for arithmetic dynamics — Nov. 2019

MSRI Berkeley, CA
Summer school in random and arithmetic structures in topology. — June 2019

Fields Institute, Toronto, CA
Summer school on Teichmüller theory and dynamics. — July 2018

| **TALKS** | **The Edwards-Anderson Ising Model** | Fall 2020 |
| | University of Michigan, Course on Computational Physics | |

Superattracting Fixed Points — Winter 2020
University of Michigan, Student Dynamics Seminar

Convexity and (Wein)Stein Manifolds — Fall 2019
University of Michigan, Course on Symplectic Geometry

Complex Projective Space as a Kähler Manifold — Fall 2019
University of Michigan, Course on Symplectic Geometry

Complex Dynamics and Julia Sets — Fall 2018
University of Michigan, Student Dynamics Seminar

The Matrix-Tree Theorem — Winter 2018
University of Michigan Undergraduate Math Club

Pondering the Projective Plane — Fall 2017
Yale University Undergraduate Math Society

Riemann-Roch and Algebraic Curves — Fall 2017
University of Michigan, Student Algebraic Geometry Seminar

The Curve Complex of a Closed Surface — Fall 2017
University of Michigan, Course on Teichmuller Theory

TEACHING

Math 105 Trigonometry and Pre-Calculus — Fall 2017

Math 115 Calc. I — Winter 2018

Math 116 Calc. II — Winter and Fall 2019, Fall 2020

Math 215 Calc. III — Winter 2020

Mentor University of Michigan Lab of Geometry — Fall 2020
Helped mentor undergraduates on research project to plot zeros of rational solutions to Painlevé VI equation.

Tutor Numerical Linear Algebra — Winter 2020
Tutoring Marjorie Lee Brown scholar.

Summer Aide — Summer 2020
Helped prepare pedagogy and technology for remote semester.