Chiao-Yu Yang

Department of Mathematics
UC Berkeley
970 Evans Hall #3840
Berkeley, CA, 94720

Tel: (510) 345–8828
Email: chiaoyu@berkeley.edu
Website: math.berkeley.edu/∼chiaoyu/

Education

- University of California, Berkeley, CA
  - *Ph.D.* in Applied Mathematics, Expected May 2021
- Reed College, Portland, OR
  - *B.A.* in Mathematics, May 2016
- Math in Moscow, Moscow, Russia
  - Study abroad program, Spring 2015
- Budapest Semester in Mathematics, Budapest, Hungary
  - Study abroad program, Spring 2014

Research Experience

- Research in Differentially Private Algorithms and Adaptive Data Analysis, UC Berkeley, with Prof. William Fithian, Ongoing
- Researcn in Multi-tiered Phase Retrieval Algorithm, UC Berkeley and Lawrence Berkeley National Lab, with Prof. James Sethian and Dr. Jeffery Donatelli, Ongoing
- Research in Developing Stochastic Particle Model for Reaction-Diffusion Processes, Courant Institute, with Prof. Aleksandar, Summer 2015 - Spring 2016
- Research in FEM and FD Schemes for Parabolic p-heat Equation, Independent University of Moscow, with Prof. Maxim Romanov, Spring 2015
- Research in WENO's Application in Hyperbolic Conservation Laws, UCLA, with Prof. Li Wang, July-Oct 2014

- Research in Industrial Project for Students, IPAM at UCLA, with Bin Bi, Illan Morgenstern, Mateo Wirth, and Lingxin Zhou, Summer 2014
- Research in Realization of Generalized Joint Degree Matrix of Graphs, BSM, with Prof. Istvan Miklos, Spring 2014
- Research in Parking Functions, Spanning Trees, and Sandpiles, Reed College, with Prof. David Perkinson, Summer 2013

Publications

- *Fast Reactive Brownian Dynamics*, joint with Aleksander Donev
  - Under preparation; summary available upon request
- *Integrating Information from External Archives to an Indexed Database*, joint with Bin Bi, Illan Morgenstern, Mateo Wirth, and Lingxin Zhou
  - Project paper; submitted to Shoah Foundation
- *Sandpiles, spanning trees, and plane duality*, joint with Melody Chan, Darren Glass, Matthew Macauley, David Perkinson, and Caryn Werner
  - *SIAM J. Discrete Math*, 29(1), 461−471, 2015
- *G-parking functions and tree inversions*, joint with David Perkinson and Kuai Yu
  - To appear in *Combinatorica*; eprint: arxiv.org/abs/1309.2201

Presentations

- Oct, 2015: Physics Department Colloquium, Reed College
- Aug, 2014: Project Presentation, Shoah Foundation at USC
- Aug, 2014: Project Presentation, IPAM at UCLA
- May, 2014: Student Research Presentation, Budapest Semester of Mathematics
- Sep, 2013: Math Department Colloquium, Reed college

Awards and Honors

- Phi Beta Kappa, 2016
- President's Summer Fellowship, Reed College, 2015
- Science Research Fellowship, Reed College, 2013

Programming Languages

C++, Fortran, Html, Java, LaTeX, Mathematica, Matlab, Pascal, Python, R, Sage, Scala, sml.

Pertinent Experience

- Grader for Abstract Algebra (Math 332), Spring 2016
- Individual tutor for Probability (Math 391), Ordinary Differential Equations (Math 322), since Fall 2015
- Grader for Multivariable Calculus (Math 211), Fall 2015
- Individual tutor for Calculus (Math 111), Introduction to Analysis (Math 112), Introduction to Number Theory (Math 131), Multivariable Calculus (Math 211&212), Linear Algebra (Math 331), Abstract Algebra (Math 332), Real Analysis (Math 321), since Fall 2014
- Grader for Real Analysis (Math 321), Fall 2014
- Grader for Calculus (Math 111), Fall 2013