Da Qi Chen

daqic@andrew.cmu.edu

RESEARCH INTERESTS

Combinatorial Optimization, Approximation Algorithms, Extremal Graph Theory

EDUCATION

Carnegie Mellon University – Pittsburgh, USA 2016-2021
Doctoral Candidate
- Program: Algorithm, Combinatorics, and Optimization
- Advisor: R. Ravi

University of Waterloo – Waterloo, Canada 2015-2016
Master of Mathematics
- Department of Combinatorics and Optimization
- Thesis: Cyclically 5-Connected Graphs
- Advisor: Luke Postle

University of Waterloo – Waterloo, Canada 2011-2014
Bachelor of Mathematics
- Department: Statistics and Actuarial Science

PUBLICATIONS

Vector Clock Model for Rumor Spreading
- Authors: Da Qi Chen, R. Ravi, Alex Rudenko
- arXiv: 2111.05450

Many Cliques with Few Edges and Bounded Maximum Degree
- Authors: Debsoumya Chakraborti, Da Qi Chen
- Accepted by Journal of Combinatorial Theory, Series B
- arXiv: 2003.07943

Minimizing the Number of Edges in $K_{s,t}$-Saturated Bipartite Graphs
- Authors: Debsoumya Chakraborti, Da Qi Chen, Mihir Hasabnis
- Accepted by SIAM Journal on Discrete Mathematics
- arXiv: 2009.07651

Vertex Downgrading to Minimize Connectivity
- Authors: Hassene Assi, Da Qi Chen, R. Ravi
- Proceedings of the 17th Scandinavian Symposium and Workshops on Algorithm Theory 2020

Exact Results on Generalized Erdos-Gallai Problems
- Authors: Debsoumya Chakraborti, Da Qi Chen
- Submitted to European Journal of Combinatorics
- arXiv: 2006.04681

CURRENT PROJECTS

Unit Downgrading of Minimum Spanning Trees
- Authors: Hassene Aissi, Solal Attias, Da Qi Chen, R. Ravi

Finding Short-Hop Minimum Spanning Trees
- Authors: Da Qi Chen, David, Ellis Hershkowitz, R. Ravi

PRESENTATIONS

Bipartite Saturation, Online — November 2020
IBS Virtual Discrete Math Colloquium

Graph Interdiction, Carnegie Mellon University — October 2020
SIAM Grad Student Mini-Conference

Vertex Downgrading to Minimize Connectivity, Online — June 2020
17th Scandinavian Symposium and Workshops on Algorithm Theory

Minimizing Cuts via the Ball-Growing Method, Carnegie Mellon University — May 2020
Operation Research Seminar

On Cyclically 5-Connected Graphs, University of Waterloo — August 2016
Graph Theory Seminar

Dijoins and Dicuts, University of Waterloo — August 2014
Undergraduate Research Seminar

TEACHING EXPERIENCE

Carnegie Mellon University
Teaching Assistant

- Business Networks 45-951 (Fall 19), Calculus in 3-D 21-259 (Fall 19, Spring 19), Differential and Integral Calculus 21-120 (Fall 18), Differential Calculus 21-111 (Spring 18), Calculus II 21-112 (Fall 17), Concepts of Math 21-127 (Spring 17), Matrix Algebra with Applications 21-240 (Fall 16)

University of Waterloo
Teaching Assistant

- Intro to Combinatorics Math 239 (Fall 15, Winter 16), Algebra Math 135 (Summer 15), Calculus 1 Math 137 (Summer 16, Winter 15)

AWARDS

Alexander Graham Bell Canada Graduate Scholarship – Doctoral Program — 2016-2019

Natural Science and Engineering Research Council of Canada Undergraduate Research Assistantship — May-August 2014
University of Waterloo

Piquard Family Scholarship — February 2014

Natural Science and Engineering Research Council of Canada Undergraduate Research Assistantship — May-August 2013
McGill University