

Yuchong Pan

CONTACT INFORMATION	+1 (604) 782-7439 panyuchong@gmail.com http://ypan.me
RESEARCH INTERESTS	Algorithms, combinatorics, optimization, theoretical computer science – especially combinatorial optimization, submodular optimization, network flow theory, network design, graph theory, theory of computation, theory of complexity.
EDUCATION	University of British Columbia B.Sc., Computer Science and Mathematics, Combined Honours, expected 2021
EMPLOYMENT	Microsoft Corporation Software Engineer Intern, 2020 Software Engineer Intern, 2019 Software Engineer Intern, 2018 University of British Columbia Undergraduate Teaching Assistant, 2020 Undergraduate Academic Assistant, 2019–2020 Undergraduate Teaching Assistant, 2019 Student Assistant, 2019 Undergraduate Teaching Assistant, 2018 Jisuanke Teaching Researcher, 2018–2019 Lecturer, 2018–2019 Sogou, Inc. Software Engineer Intern, 2017 InitialView Software Engineer Intern, 2016–2017
RESEARCH EXPERIENCE	University of British Columbia The minimum-cost congestion of single-sink unsplittable flows (thesis), 2020–2021 <ul style="list-style-type: none">◦ Advisor: F. Bruce Shepherd Gradual typing of recursive types, 2018–2020 <ul style="list-style-type: none">◦ Advisor: Ronald Garcia
TEACHING EXPERIENCE	University of British Columbia <i>Teaching Assistant</i> CPSC 311 Definition of Programming Languages, Fall 2020 CPSC 421/501 Introduction to Theory of Computing (graduate), Fall 2019 CPSC 121 Models of Computation, Fall 2018

Academic Assistant
CPSC 411

Introduction to Compiler Construction, Fall 2019–Spring 2020
Involved in the redesign of the course, supervised by William J. Bowman.

Jisuanke

Lecturer

Competitive Programming, Level 6	Spring 2019
Competitive Programming, Level 5	Fall 2018
Competitive Programming, Level 3	Summer 2018

Teaching Researcher

Competitive Programming, Level 6	Spring 2019
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VOLUNTEER EXPERIENCE

Shaoxing No.1 High School

Summer Coach (Competitive Programming), 2016
Student Lecturer (Competitive Programming), 2013–2015

TALKS AND PRESENTATIONS

- The Single-Source Unsplittable Flow Problem. UBC Computer Science. University of British Columbia. Online. 2020. [Note] [Survey]
- Perturbation-Stable Maximum Cuts. Algorithms Reading Group, UBC Computer Science. University of British Columbia. Online. 2020. [Slides]
- Unsplittable Flow Problem on Paths and Trees: Closing the LP Relaxation Integrality Gap (with Adam Jozefiak). UBC CPSC 531F Survey. University of British Columbia. Vancouver, BC. 2019. [Slides] [Survey]
- Introduction to Communication Complexity. Quantum Club Seminar. University of California, Santa Barbara. Santa Barbara, CA. 2019.
- Gradual Typing for Octave Language (with Ada Li, Kathy Wang, and Paul Wang). UBC CPSC 311 Project. University of British Columbia. Vancouver, BC. 2018. [Report]
- Some Math Notes (in Chinese). Competitive Programming Summer School. Shaoxing No. 1 High School. Shaoxing, China. 2016. [Slides]
- Graph Algorithms (in Chinese). Competitive Programming Summer School. Shaoxing No. 1 High School. Shaoxing, China. 2016. [Slides]
- Miller-Rabin Primality Test and Pollard's ρ Integer Factorization Algorithm (in Chinese). Competitive Programming Seminar. Shaoxing No. 1 High School. Shaoxing, China. 2015. [Slides]

HONORS AND AWARDS

- Faculty of Science International Student Scholarship (CAD \$7,500), University of British Columbia, 2020.
- J Fred Muir Memorial Scholarship in Science (CAD \$200), University of British Columbia, 2020.
- Trek Excellence Scholarship (CAD \$4,000), University of British Columbia, 2020.
- Science Scholar, University of British Columbia, 2020.
- Dean's Honour List, University of British Columbia, 2020.
- Faculty of Science International Student Scholarship (CAD \$5,000), University of British Columbia, 2019.
- Dean of Science Scholarship (CAD \$350), University of British Columbia, 2019.
- Trek Excellence Scholarship (CAD \$4,000), University of British Columbia, 2019.
- Stanley M Grant Scholarship in Mathematics (CAD \$1,500), University of British Columbia, 2019.
- Programming Language Implementation Summer School Fellowship (€400), 2019.
- Science Scholar, University of British Columbia, 2019.
- Dean's Honour List, University of British Columbia, 2019.

	<ul style="list-style-type: none"> ◦ Faculty of Science International Student Scholarship (CAD \$10,000), University of British Columbia, 2018. ◦ Dean of Science Scholarship (CAD \$425), University of British Columbia, 2018. ◦ Trek Excellence Scholarship (CAD \$4,000), University of British Columbia, 2018. ◦ Marie Kendall Memorial Scholarship in Science (CAD \$925), University of British Columbia, 2018. ◦ Joel Harold Marcoe Memorial Scholarship (CAD \$150), University of British Columbia, 2018. ◦ Science Scholar, University of British Columbia, 2018. ◦ Dean's Honour List, University of British Columbia, 2018. ◦ Outstanding International Student Award (CAD \$6,000), University of British Columbia, 2017. ◦ Silver Medal, China Team Selection Competition for International Olympiad in Informatics, China Computer Federation, 2015. ◦ Bronze Medal, Asia Pacific Informatics Olympiad, China Computer Federation, 2015. ◦ First Prize, National Olympiad in Informatics in Provinces (Advanced Division), China Computer Federation, 2014. ◦ First Prize, National Olympiad in Informatics in Provinces (Advanced Division), China Computer Federation, 2013.
PROFESSIONAL SERVICE	<i>Journal Review</i> SIAM Journal on Discrete Mathematics (SIDMA)
SELECTED COURSEWORK	<i>Mathematics</i> Probability (graduate) Stochastic Processes (graduate) Submodular Optimization (graduate) Combinatorial Optimization (graduate) Measure Theory and Integration (graduate) Introduction to Theory of Computing (graduate) Tools for Modern Algorithm Analysis (graduate) Beyond Worst-Case Analysis (seminar) Real Variables I & II Numerical Linear Algebra Introduction to Group Theory <i>Computer Science and Engineering</i> Introduction to Software Engineering Definition of Programming Languages Introduction to Compiler Construction Computer Hardware and Operating Systems Intermediate Algorithm Design and Analysis
ACADEMIC TRAINING	<ul style="list-style-type: none"> ◦ Second Programming Language Implementation Summer School. Bertinoro, Italy. 2019.
RELEVANT SKILLS	Languages: English, Mandarin Programming: \LaTeX , Racket, Standard ML, JavaScript, C/C++, Java, C#, Python, Ruby, MATLAB, Go, MySQL
LAST UPDATED	December 1, 2020