

Yuchong Pan

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http://ypan.me

RESEARCH INTERESTS Combinatorics, algorithms, optimization, theoretical computer science, programming languages, and compilers – especially graph theory, combinatorial optimization, sub-modular optimization, theory of computation, theory of complexity, gradual typing, type systems, and functional programming.

EDUCATION **University of British Columbia**
B.S., Computer Science and Mathematics, Combined Honours, expected 2021
◦ Minor in Arts, Philosophy

EMPLOYMENT **Microsoft Corporation**
Software Engineer Intern, 2020
Software Engineer Intern, 2019
Software Engineer Intern, 2018

University of British Columbia
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**
Single-source unsplittable flow problem, 2020–present
◦ Advisor: F. Bruce Shepherd
Gradual typing of recursive types, 2018–2020
◦ Advisor: Ronald Garcia

TEACHING EXPERIENCE **University of British Columbia**
Teaching Assistant
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

- Things I Learned: Performance Analysis of Interpreter in CoreCLR Runtime. Intern Presentation, Microsoft. Online. 2020. To appear.
- 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] [Report]
- 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

- 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.
- 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.

	<ul style="list-style-type: none"> ◦ 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	<ul style="list-style-type: none"> ◦ Probability (graduate) ◦ Stochastic Processes (graduate) ◦ Submodular Optimization (graduate) ◦ Combinatorial Optimization (graduate) ◦ Tools for Modern Algorithm Analysis (graduate) ◦ Introduction to Theory of Computing (graduate) ◦ Beyond Worst-Case Analysis (seminar) ◦ Real Variables I & II ◦ Introduction to Software Engineering ◦ Definition of Programming Languages ◦ Introduction to Compiler Construction ◦ Intermediate Algorithm Design and Analysis ◦ Computer Hardware and Operating Systems ◦ Philosophy of Law ◦ Philosophy of Religion ◦ Philosophy After 1800 (Russell & Wittgenstein)
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	July 30, 2020