

# Lexiao Lai

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## EDUCATION

### Columbia University in the City of New York

Doctor of Philosophy in Operations Research

Master of Science in Operations Research

GPA: **4.26/4.33**

New York, U.S.

Sept. 2019 - May 2024 (expected)

Sept. 2019 - May 2020

### The University of Hong Kong

Bachelor of Science Major in Mathematics, Minor in Finance

cGPA: **3.87 /4.3**; Major GPA: **4.19/4.3**

Hong Kong

Sept. 2015 - June 2019

### University of Toronto

HKUWW Undergraduate Student Exchange Programme

GPA: **4.0/4.0**

Toronto, Canada

Sept. - Dec. 2017

## RESEARCH INTERESTS

Nonconvex optimization, semi-algebraic geometry, low-rank matrix recovery.

## RELEVANT COURSES

- **Columbia:** Optimization I & II, Foundation of Optimization, Advanced Topics in IEOR (in polynomial optimization), Stochastic Models I & II, Analysis of Algorithms
- **HKU:** Topics in Math Programming and Optimization (theories and algorithms of convex optimization), Introduction to Optimization, Real Analysis, Functional Analysis, Introduction to Partial Differential Equations, (Ordinary) Differential Equations, Discrete Mathematics, Abstract Algebra, Stochastic Processes, Introductory Econometrics, Mathematical Finance
- **U of Toronto:** Applied Linear Programming, Algorithmic Game Theory, Functions of Complex Variables

## RESEARCH PAPERS

- Cédric Jozs, Lexiao Lai, Nonsmooth rank one matrix factorization landscape, submitted, 2020
- Elliot Cartee, Lexiao Lai, Qianli Song, Alexander Vladimirovsky, Time-dependent surveillance-evasion games, 58th IEEE Conference on Decision and Control, 2019 [[preprint](#)]

## AWARDS & HONOURS

- Outstanding Winner of *Mathematical Contest in Modelling* 2017  
(Top 13 winners out of 8843 teams)  
Organized by COMAP Inc.
- Ranked 134 out of 4638 in *78th William Putnam Mathematical Competition* 2017  
Organized by *Mathematical Association of America*
- Walter Brown Memorial Prizes in Mathematics 2019  
Awarded to the best final year student in Mathematics
- Doris Chen Undergraduate Project Prize 2018  
To recognise research outputs and excellent performance in project courses in Mathematics
- Liu Ming-Chit Prize in Mathematics 2018  
Awarded to a student in Mathematics who has completed his/her 2nd or 3rd year of study
- Alan John Allis Prize in Mathematics 2016,2017  
Awarded to not more than *five* 1st or 2nd year undergraduates in Mathematics
- Dean's Honours List 2016,2017,2019
- HKSAR Government Scholarship 2015-2019
- Talent Development Scholarship 2018

## COMPUTER SKILLS

**Programming Languages:** Python, MATLAB,  $\LaTeX$ .