

# Li Chen 陳力

c2251393@gmail.com

+1 (929)317-9007 (mobile)

## Education

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**Georgia Institute of Technology**, Atlanta, GA, US

*August 2020 - Current*

— Ph.D. in Algorithms, Combinatorics and Optimization (ACO)

**National Taiwan University**, Taipei, Taiwan

*September 2014 - July 2018*

— B.S. in Computer Science and Information Engineering (CSIE)

— Overall G.P.A. 4.20/4.30, Major G.P.A. 4.29/4.30, Rank: 2/103

## Research Interest

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Algorithms and data structures. Specifically, fast graph algorithms.

## Publication

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- **Li Chen**, Gramoz Goranci, Monika Henzinger, Richard Peng and Thatchaphol Saranurak. *Fast Dynamic Cuts, Distances and Effective Resistances via Vertex Sparsifiers*. In FOCS 2020. (arxiv:2005.02368)

## Experience

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**Software Engineering Intern**, Google, Kirkland, WA

*Jul 2018 - Sep 2018*

- Worked on Search Ads 360 data pipeline.

**Research Assistant**, National Taiwan University, Taipei, Taiwan,

*June 2017 - Jan 2019*

- Studying various 1st order methods for large-scale logistic regression. Focusing on their competitive performance on CTR (Click-Through-Rate) prediction task.

- Advisor: Prof. Chih-Jen Lin

**Software Engineering Intern**, Mixerbox, Taipei, Taiwan

*Apr 2017 - Jul 2017, Sep 2017 - Feb 2018*

- Worked on content generation of the landing page and artist pages of the music app Mixerbox by machine learning tools. Since the app has an enormous number of users (over 100 million downloads and 1 million daily active users), we designed efficient methods to do the job.

**Research Assistant**, National Taiwan University, Taipei, Taiwan,

*July 2016 - July 2018*

- Worked on various fundamental problems on planar graphs, such as minimum  $st$  cut and shortest non-crossing paths.

- Independently derived an  $O(n \log \log n)$ -time algorithm for shortest non-crossing paths problem. Previous best bound is an  $O(n \log n)$  algorithm derived 2 decades ago. The result is achieved by combining various recent tricks in planar graph. - Advisor: Prof. Hsueh-I Lu

**Quantitative Research Intern**, WorldQuant, Taipei, Taiwan

*Aug 2017 - Sep 2017*

- Developed quantitative financial models using a stock market simulation system (WebSim).

**Software Engineering Intern**, Google, Taipei, Taiwan

*July 2016 - Sep 2016*

- Worked on Android's boot loader. Speed up an essential procedure to gather hardware information in boot loader. More details: <https://source.android.com/devices/architecture/dto/optimize>

**Network Management Group**, National Taiwan University, Taipei, Taiwan

*Feb 2015 - Aug 2017*

- Assisted in managing and improving the network environment of CSIE department in NTU which has hundreds of users per day.

- Advisor: Prof. Hsin-Mu Tsai

## Teaching Experience

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**Teaching Assistant**, *Algorithm Design and Analysis*, National Taiwan University *Fall 2018*  
**Teaching Assistant**, *Data Structure and Algorithm*, National Taiwan University *Spring 2018*  
- Held and designed educational activities for students to familiarize with course material.  
**Lecturer**, *IOIcamp*, National Taiwan University *Winter 2016, 2017*  
- A training camp for high school and college students on competitive programming.  
- Taught advanced data structures and efficient polynomial operations.  
**Lecturer**, *Sprout*, National Taiwan University *Mar - Jun 2015, 2016*  
- A long-term program teaching talented high school students computer science.  
- Taught basic C/C++ and Python programming.

## Awards and Honors

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**2nd place**, ICPC North America Championship *2020*  
**Champion**, ICPC Southeast USA Regional *2019*  
**Fourteenth Place**, ACM ICPC World Finals *2018*  
**Champion**, ACM ICPC Asia Hualien Regional *2017*  
**Champion**, National Collegiate Programming Contest of Taiwan *2014-2015, 2017*  
**Presidential Award (awarded to students ranking top 5%)**, National Taiwan University *2014-2015*  
**Bronze Medalist, 2nd place within Taiwanese team**, International Olympiad in Informatics *2013*

## Synergistic Activity

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Judging the ICPC Taipei Regional Contest, National Taiwan University *Fall 2018*  
Organizing a stand for LIBSVM at Future Tech Exhibition, Taipei World Trade Center *Winter 2017*  
Judging the Taiwanese team selection contest for International Olympiad in Informatics *Spring 2015*