Jingbang Chen

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Education

University of Waterloo, Waterloo, Canada   *Jan 2023 - Current (Expected Graduate in 2025)*
Ph.D. in Computer Science
Advisor: Richard Peng

Georgia Institute of Technology, Atlanta, USA   *Aug 2020 - Dec 2022*
M.S. in Computer Science
Advisor: Richard Peng

Zhejiang University, Hangzhou, China   *Sep 2016 - Jun 2020*
B.Eng. (Honors)
Pursuit Science Class, Chu Kochen Honors College (Joint Program with College of Computer Science and Technology)

Awards and Honors

Champion, ICPC Asia Qingdao Regional	*2017*
Champion, ICPC Southeast USA Regional	*2020*
Champion, Zhejiang Province Collegiate Programming Competition	*2018*
3rd place, ICPC North America Championship	*2021*
3rd place, CCPC Jilin Regional	*2018*
4th place, ICPC East-Continent Finals	*2019*
4th Place, CCPC Harbin Regional	*2017*
Gold Medal, ICPC Asia Beijing Regional	*2017*
Gold Medal, ICPC Asia East-Continent League Finals	*2017*
Gold Medal, ICPC Asia Xuzhou Regional	*2018*
Gold Medal, ICPC Asia Xuzhou Regional	*2019*
Gold Medal, ICPC Asia Shenyang Regional	*2019*
Gold Medal, CCPC Finals	*2017*
Gold Medal, CCPC Qinhuangdao Regional	*2017*
Rank Prize, 13th Place, 46th ICPC World Finals	*2024*
Rank Prize, 56th Place, 42nd ICPC World Finals	*2018*
Bronze Medal, National Olympiad of Informatics Finals	*2015*
Second-Class Scholarship, Elite Students in Basic Sciences	*2017 - 2018*
Second-Class Scholarship Excellence in Research and Innovation	*2016 - 2017*

*ICPC is short for International Collegiate Programming Contest and CCPC is short for China Collegiate Programming Contest.

Publications and Manuscripts

Authors ' names are sorted in alphabetical order when publishing in Theoretical Computer Science related conferences.

- *Scalable Algorithm for Finding Balanced Subgraphs with Tolerance in Signed Networks.* (Arxiv:2402.05006)
  Jingbang Chen*, Qiuyang Mang*, Hangrui Zhou*, Richard Peng, Yu Gao, Chenhao Ma.
  ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2024)
  The first three authors contribute equally.

- *Distance Queries over Dynamic Interval Graphs.* (DOI: LIPIcs.ISAAC.2023.18)
  Jingbang Chen, Meng He, J. Ian Munro, Richard Peng, Kaiyu Wu, Daniel J. Zhang.
  International Symposium on Algorithms and Computation (ISAAC 2023)
  Computational Geometry: Theory and Applications (Volume 122) (DOI: j.comgeo.2024.102103)

- *Hardness of Graph-Structured Algebraic and Symbolic Problems.* (Arxiv:2109.12736)
  Jingbang Chen, Yu Gao, Yufan Huang, Richard Peng, Runze Wang.
  Algorithms and Data Structures Symposium (WADS 2023)

- *Exponential Convergence of Sinkhorn Under Regularization Scheduling.* (Arxiv:2207.00736)
  Jingbang Chen, Li Chen, Yang P. Liu, Richard Peng, Arvind Ramaswami.
  SIAM Conference on Applied and Computational Discrete Algorithms (ACDA 2023)

- *Fast Adaptively Weighted Matrix Factorization for Recommendation with Implicit Feedback.* (Arxiv:2003.01892)
  Jiawei Chen, Can Wang, Sheng Zhou, Qihao Shi, **Jingbang Chen**, Yan Feng, Chun Chen.
  AAAI Conference on Artificial Intelligence (AAAI 2020)

- *Predicting long-term scientific impact based on multi-field feature extraction.* (DOI: 10.1109/ACCESS.2019.2910239)
  Ziming Wu, Weiwei Lin, Pan Liu, **Jingbang Chen**, Li Mao.
  IEEE Access 2019

- *Efficient Historical Butterfly Counting in Large Temporal Bipartite Networks via Graph Structure-aware Index.* (Arxiv:2406.00344)
  Qiuyang Mang*, **Jingbang Chen***, Hangrui Zhou*, Yu Gao, Yingli Zhou, Qingyu Shi, Richard Peng, Yixiang Fang, Chenhao Ma.
  Submitted.
  The first three authors contribute equally.

- *Nearly Optimal Internal Dictionary Matching.* (Arxiv:2312.11873)
  Jingbang Chen, Jiangqi Dai, Qiuyang Mang, Qingyu Shi, Tingqiang Xu.
  Submitted.

- *Sandpile Prediction on Undirected Graphs.* (Arxiv:2307.07711)
  Ruinian Chang, **Jingbang Chen**, J. Ian Munro, Richard Peng, Qingyu Shi, Zeyu Zheng.
  Submitted.

- *Learning-Augmented B-Trees.* (Arxiv:2211.09251)
  Xinyuan Cao, **Jingbang Chen**, Li Chen, Chris Lambert, Richard Peng, Daniel Sleator.
  Submitted.

Talks

Graph Algorithm Design Beyond Theoretical and Practical Scenarios
  - Topical Seminar, School of Data Science, The Chinese University of Hong Kong, Shenzhen   *Feb 2024*
  - Topical Seminar, College of Computer Science and Technology, Zhejiang University   *Feb 2024*
  - Topical Seminar, Very Large Scale Intelligent Graph Computing Research Center, Hangzhou City University   *Feb 2024*

Distance Queries over Dynamic Interval Graphs
  - ISAAC 2023, Kyoto, Japan   *Dec 2023*

Sandpile Prediction on Undirected Graphs
  - Algorithms & Complexity Seminar, University of Waterloo   *June 2024*

Professional Experience

Coach, *Georgia Tech Competitive Programming Team*   *2022 - Current*
  Teams have won 6th place in the 2022 ICPC North American Championship, 8th place in the 2023 ICPC North American Championship, and Champion in the 2023 ICPC South USA Regional. With my coaching, They have advanced to the ICPC World Finals 2022, 2023, and 2024 North American Championship.

Co-founder, President, *Universal Cup*   *2023 - Current*
  Universal Cup is a non-profit organization dedicated to offering training resources for competitive programming teams. In 1st season, over 750 teams from more than 300 affiliations worldwide registered and participated in 22 stages, encompassing contests from Asia, Europe, and America. Over 3,000 teams are registered in the 2nd season, and more than 28 stages are scheduled. Sponsoring by Huawei, the 2024 Universal Cup Summer Summit and 2nd Universal Cup Semifinal were successfully hosted in Cancún, Mexico, on June 2024.

Trainer, *Competitive Programming Camp*   *2020 - Current*
  - North American Programming Camp, 2024

- ByteDance Winter Training Camp, 2020 - 2021
- CCPC-Wannafly Winter Training Camp, 2020

Problem Setter and Chief Judge, *Collegiate Programming Contests*   *2018 - Current*
- ICPC Qingdao Regional, 2018
- ICPC Nanjing Regional, 2020
- ICPC Nanjing Regional, 2021
- ICPC Macau Regional, 2021
- ICPC Nanjing Regional, 2022
- ICPC Macau Regional, 2022
- ICPC Nanjing Regional, 2023
- ICPC Nanjing Regional, 2024
- ICPC Hangzhou Regional, 2024
- Zhejiang Univerisity Programming Competition, 2019
- Zhejiang Province Collegiate Programming Competition, 2019
- Zhejiang Province Collegiate Programming Competition, 2021
- Shandong Province Collegiate Programming Competition, 2019
- Shaanxi Province Collegiate Programming Competition, 2019
- Sichuan Province Collegiate Programming Competition, 2021
- Shandong Province Collegiate Programming Competition, 2023
- Guangdong Province Collegiate Programming Competition, 2023
- Moscow Pre-Finals Workshop, 2020 - 2021
- Petrozavodsk Training Camp, 2019 - 2022
- Multi-University Training on HDU, 2019 - 2020
- Multi-University Training on Nowcoder, 2020 - 2021
- OpenCup, 2020 - 2022
- ZOJ Monthly, 2018 - 2019
- Codeforces, Round 573, 2019

President, *Students Association for Overseas Exchange (SAOE), Zhejiang University*   *2017 - 2019*

SAOE was established on 2005 with the goal of creating a platform for students to share information about overseas exchanges. The association is dedicated to facilitating the dissemination and popularization of exchange information through lectures, experience-sharing sessions, the collection and compilation of information on overseas exchanges, and various other activities. It also conducts surveys and research on students' overseas exchange experiences, striving to identify key issues in these exchanges and enable more students to share the outcomes of their international experiences.

Student Co-coach, *Zhejiang University Competitive Programming Team*   *2018 - 2021*

Zhejiang University Competitive Programming Team is one of the top programming teams all over the world. They won the ICPC World Finals in 2011, which makes them one of the two universities that have ever won the world champion in Asia. Currently, the team is coached by Professor Can Wang.

Research Assistant, *College of Computer Science and Technology, Zhejiang University*   *2020 - 2021*

Intern, *Creative Optimization Group, Strategic Algorithms Developing Center, Department of Advertising, Tencent Holdings Ltd.*   *2019*

Service

Subreviewer for SODA 2024, SoCG 2024, ICALP 2024, ESA 2024, ACDA 2023

Teaching Assistant in Georgia Teach for CS 4540 Advanced Algorithms, Fall 2020; CS 3511 Design and Analysis of Algorithms (Honors), Spring 2020; CS 3510 Design and Analysis of Algorithms, Fall 2021

School Representative in 15th Knowledge Contest of Diplomatic Protocol and Social Etiquette, 2016; Basic Top Talents Academic Conference, 2017; Basic Top Talents Academic Conference in Computer Science, 2017