

Jingbang Chen

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Education

University of Waterloo , Waterloo, Canada Ph.D. in Computer Science Advisor: Richard Peng	<i>Jan 2023 - Current</i>
Georgia Institute of Technology , Atlanta, USA M.S. in Computer Science Advisor: Richard Peng	<i>Aug 2020 - Dec 2022</i>
Zhejiang University , Hangzhou, China B.Eng. (Honors) Pursuit Science Class, Chu Kochen Honors College (Joint Program with College of Computer Science and Technology)	<i>Sep 2016 - Jun 2020</i>

Awards and Honors

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

*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)
- *Fast Adaptively Weighted Matrix Factorization for Recommendation with Implicit Feedback.* (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, Richard Peng, Yixiang Fang, Chenhao Ma.
Submitted.
The first three authors contribute equally.
- *Faster Algorithms for Internal Dictionary Queries.* (Arxiv:2312.11873)
Jingbang Chen, Jiangqi Dai, Qingyu Shi, Tingqiang Xu.
Submitted.
- *Sandpile Prediction on Structured Undirected Graphs.* (Arxiv:2307.07711)
Ruinian Chang, **Jingbang Chen**, J. Ian Munro, Richard Peng, Qingyu Shi.
Submitted.
- *Learning-Augmented B-Trees.* (Arxiv:2211.09251)
Xinyuan Cao, **Jingbang Chen**, Li Chen, Chris Lambert, Richard Peng, Daniel Sleator.
Submitted.

Talks

<i>Graph Algorithm Design Beyond Theoretical and Practical Scenarios</i>		
- Topical Seminar, School of Data Science, The Chinese University of Hong Kong, Shenzhen		<i>Feb 2024</i>
- Topical Seminar, College of Computer Science and Technology, Zhejiang University		<i>Feb 2024</i>
- Topical Seminar, Very Large Scale Intelligent Graph Computing Research Center, Hangzhou City University		<i>Feb 2024</i>
<i>Distance Queries over Dynamic Interval Graphs</i>		
- ISAAC 2023, Kyoto, Japan		<i>Dec 2023</i>

Professional Experience

Coach , <i>Georgia Tech Competitive Programming Team</i>	<i>2022 - Current</i>
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 , <i>Universal Cup</i>	<i>2023 - Current</i>
Universal Cup is a non-profit organization dedicated to offering training resources for competitive programming teams. In the previous season, over 750 teams from more than 300 affiliations all over the world, registered and participated in a total of 22 stages, encompassing contests from Asia, Europe, and America. In the current season, there are over 3000 teams registered and more than 28 stages are scheduled. Sponsoring by Huawei, the first Universal Cup Onsite Final will be hosted in late 2024.	
Trainer , <i>Competitive Programming Camp</i>	<i>2020 - Current</i>
- North American Programming Camp, 2024 - ByteDance Winter Training Camp, 2020 - 2021 - CCPC-Wannafly Winter Training Camp, 2020	
Problem Setter and Chief Judge , <i>Collegiate Programming Contests</i>	<i>2018 - Current</i>

- 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 University 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 Tech 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