Jingbang Chen

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Experience

Co-founder, President, *Universal Cup*   *2023 - Current*
Universal Cup (`https://ucup.ac/`) is an organization dedicated to offering high-quality training resources and hosting onsite events for the competitive programming community. Over 8,000 teams are registered from more than 700 affiliations all over the world are registered. Sponsored by Huawei, we hosted the 2024 Universal Cup Summer Summit and 2nd Universal Cup Semifinal in Cancún, Mexico, in June 2024 and the 2025 Universal Cup Finals in Dongguan, China, in February 2025.

Coach, Deputy Leader, *Egyptian Olympiad in Informatics (EOI)*   *2023 - Current*
Winning 4 Bronzes in IOI 2023; 5 Bronzes, 1 Silver in IOI 2024 (Two teams participated due to hosting).

Trainer, *North American Programming Camp*   *2024*

Trainer, *ByteDance Winter Training Camp*   *2020 - 2021*

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

Education

University of Waterloo, Waterloo, Canada   *Jan 2023 - Current (Expected Graduate in 2025.7)*
Ph.D. in Computer Science   Advisor: Richard Peng

Georgia Institute of Technology, Atlanta, USA   *Aug 2020 - May 2023*
M.S. in Computer Science   Advisor: Richard Peng

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

Publications and Manuscripts

- *On the Power of Learning-Augmented Search Trees.* (Arxiv:2211.09251)
  Jingbang Chen*, Xinyuan Cao*, Alicia Stepin, Li Chen.
  International Conference on Machine Learning (ICML 2025)

- *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.
  International Conference on Very Large Data Bases (VLDB 2025)

- *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)

- *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)

- *Scalable Algorithm for Sandpile Prediction.* (Arxiv:2307.07711)
  Jingbang Chen*, Ruinian Chang*, Zeyu Zheng*, Qingyu Shi, J. Ian Munro, Richard Peng.
  In Submission.

- *Yet Another Paper Whose Name Cannot be Revealed Yet.*
  Jingbang Chen, Weinuo Li, Yingli Zhou, Hangrui Zhou, Qiuyang Mang, Can Wang, Yixiang Fang, Chenhao Ma.
  In Submission.

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

Programming Competition[1]

Champion, ICPC Asia Qingdao Regional	*2017*
Champion, ICPC Southeast USA Regional	*2020*
Champion, Zhejiang Province Collegiate Programming Competition	*2018*
3rd place, **Silver Medal**, ICPC North America Championship	*2021*
3rd place, **Gold Medal**, CCPC Jilin Regional	*2018*
4th place, **Gold Medal**, ICPC East-Continent Finals	*2019*
4th Place, **Gold Medal**, CCPC Harbin 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 (NOI)	*2015*

Gold Medal: Beijing (2017), East-Continent League Finals (2017), Xuzhou (2018), Xuzhou (2019), Shenyang (2019); CCPC Finals (2017), CCPC Qinhuangdao (2019).

Coach, *Georgia Tech Competitive Programming Team*	*2022 - 2024*

Winning 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, advancing to the 46th, 47th ICPC World Finals.

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

Winning champion in the 2019 CCPC Qinhuangdao Regional, the 2023 ICPC Shenyang Regional, and Bronze medal (10th place) in the 48th ICPC World Finals.

Problem Setter and Chief Judge, *Programming Contests*	*2018 - Current*

- ICPC Regional: Qingdao (2018); Nanjing (2020 - 2024); Macau (2021, 2022); Hangzhou (2024).

- Provincial Competition: Zhejiang (2019, 2021); Shandong (2019, 2023, 2024); Shaanxi (2019); Sichuan (2021); Guangdong (2023); Yunnan (2024).

- University Competition: Zhejiang University (2019); Hangzhou Normal University (2019).

- Training Camps and Series: Moscow Pre-Finals Workshop (2020, 2021); Petrozavodsk Training Camp (2019 - 2022); Multi-University Training on HDU (2019, 2020), Nowcoder (2020, 2021); Open Cup (2020 - 2022).

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	*Jun 2024*

Scalable Algorithm for Finding Balanced Subgraphs with Tolerance in Signed Networks

- Algorithms & Complexity Seminar, University of Waterloo	*Aug 2024*

Service

[1]ICPC is short for International Collegiate Programming Contest and CCPC is short for China Collegiate Programming Contest.

Reviewer for FOCS 2025, TKDE 2025, KDD 2025, WWW 2025, SODA 2024, SoCG 2024, ICALP 2024, ESA 2024, ACDA 2023