Benyu Wang

University of Michigan, Ann Arbor, US

benyuw@umich.edu | wbyyui.github.io

Updated April 1, 2025

Interests

∘ Broad interest in **Theoretical Computer Science**.

∘ Study and research experience in **Graph Algorithms** / **Combinatorics**.

Education

University of Michigan   **Ann Arbor, US**

PhD student at Computer Science and Engineering (CSE)   Aug 2023 – now

∘ Advisor: *Prof. Thatchaphol Saranurak*

∘ GPA: **4.00**/4.00

Tsinghua University (Yao Class)   **Beijing, China**

B.Eng., Computer Science and Technology   Aug 2019 – Jun 2023

∘ Advisor: *Prof. Ran Duan*

∘ GPA: **3.90**/4.00 & For Yao Class courses only: **3.98**/4.00

Selected Courses: (A+/A stand for 95-100 in 100-point values, A+ is the best grade)

· Mathematics for Computer Science (A+) & Mathematics for Artificial Intelligence (A+)

· Theory of Computation (A+) & Design and Analysis of Algorithms (A+)

Experiences

University of Michigan   **Ann Arbor, US**

Undergraduate Research Intern (Visitor)   Feb 2022 – Aug 2022

∘ Visited the theory group of UM. Worked with *Prof. Seth Pettie* and *Prof. Thatchaphol Saranurak*.

INSAIT   **Sofia, Bulgaria**

Research Intern (Visitor)   Sep 2024 – Dec 2024

Teaching

Graduate Student Instructor, Introduction to Algorithms   Winter 2025, University of Michigan

Undergraduate algorithm course instructed by Prof. Thatchaphol Saranurak.

Teaching Assistant, Theory of Computation   Spring 2023, Tsinghua University

Undergraduate complexity theory course instructed by Prof. Ran Duan.

Teaching Assistant, Design and Analysis of Algorithms   Fall 2022, Tsinghua University

Graduate-Level algorithm course instructed by Prof. Ran Duan.

Services

Conference Review: STOC(25), FOCS(23,24), SODA(24,25), ICALP(23), ITCS(24,25) ESA(24).

Journal Review: Algorithmica

Selected Awards and Scholarships

ICPC Astana World Finalist (Rank 2/15 in ICPC ECNA/NAC)   2023-2024

Excellent Academic Scholarship & **Excellent Art** Scholarship of Tsinghua University   2022

Gold Medal in Chinese Mathematical Olympiad (CMO) (ranked **86th** in China)   2018

Silver Medal in National Olympiad in Informatics (NOI) (ranked **90th** in China)   2018

Publications

Tight Conditional Lower Bounds for Vertex Connectivity Problems

Zhiyi Huang, Yaowei Long, Thatchaphol Saranurak, **Benyu Wang**

○ STOC 2023, arXiv:2212.00359.

○ We gave **tight lower bounds** for vertex connectivity problems assuming the 4-Clique conjecture, which separates the hardness of vertex connectivity problems and related edge connectivity problems.

Undirected 3-Fault Replacement Path in Nearly Cubic Time

Shucheng Chi, Ran Duan, Benyu Wang, Tianle Xie

○ In submission, arXiv:2411.18312.