

WEN-HORNG SHEU

Contact: (530) 979-6045 ♦ wsheu@ucdavis.edu

Personal Website: <https://whsheu.github.io/>

LinkedIn: <https://www.linkedin.com/in/whsheu/>

Professional Summary: PhD candidate in Computer Science specializing in algorithm design for parallel, distributed, and streaming computation. Particularly interested in combinatorial optimization and algorithmic graph theory. Over five years of research experience and a strong background in competitive programming.

EDUCATION

PhD in Computer Science at the University of California, Davis; GPA: 4.0/4.0 *2023-Present*

- Anticipated graduation date: June 2028 (06/28)
- Research area: Distributed Algorithms, Streaming Algorithms

Master of Computer Science at National Tsing Hua University; GPA: 3.9/4.0 *2019-2021*

- Specialized courses: Approximation Algorithms, Computational Geometry

Bachelor of Computer Science at National Tsing Hua University; GPA: 3.85/4.0 *2015-2019*

- Specialized courses: Advanced Data Structure, Randomized Algorithms, Parallel Algorithm Design

SELECTED PUBLICATIONS

Faster Semi-streaming Matchings via Alternating Trees, ICALP '25

- Designed a streaming algorithm for the $(1 + \epsilon)$ -approximate maximum matching problem.
- Improved a STOC '22 result, reducing pass complexity from $O(\epsilon^{-19})$ to $O(\epsilon^{-6})$ via a new data structure.

A Framework for Boosting Matching Approximation: Parallel, Distributed, and Dynamic, SPAA '25

- Designed a framework for $(1 + \epsilon)$ -approximate matching, improving results from FOCS '24 and SODA '25.
- In distributed settings, reduced round-complexity dependence in ϵ from $\Omega(\epsilon^{-52})$ to $O(\epsilon^{-7} \log(1/\epsilon))$.
- In dynamic settings, reduced time-complexity dependence in ϵ from $\exp(1/\epsilon)$ to $\text{poly}(1/\epsilon)$.

Faster MPC Algorithms for Approximate Allocation and Matching in Uniformly Sparse Graphs, SPAA '25

- Developed a new distributed algorithm with applications in online advertising and load balancing.
- Extended an ICML '18 result, reducing round complexity in MPC by a random sampling approach.

SELECTED HONORS

- **Contributed Talk** at *Workshop on Local Algorithms, 2024*
hosted by Simons Institute for the Theory of Computing, UC Berkeley
 - Presented our recent research, an improved streaming algorithm for $(1 + \epsilon)$ -approximate matching.
- **Gold Award** in *the 2019 ICPC Asia Pacific Taipei-Hsinchu Regional Contest*
 - Attended several programming contests, including ICPC, with other students in undergraduate years.
 - Built strong abilities in teamwork and problem-solving.
- **Grandmaster on Codeforces**
 - Placed top 1% (out of 10,000+ contestants globally) in four online programming contests on Codeforces (a prestigious online competitive programming platform).
 - Ranked as a Grandmaster, within top 1% globally on Codeforces (as of Feb 2021).

SKILLS

Coding Languages	C, C++, Python
Tools	Git, L ^A T _E X, Microsoft Office
Languages	English (fluent, TOEFL 105/120), Chinese (native)