ZHAN SONG zhansong@umd.edu

First-Year Computer Engineering Ph.D. Student in UMD

EDUCATION

University of Maryland, College Park — Maryland, United States
Ph.D. in Electrical and Computer Engineering (GPA: 3.94/4.00, Qualified) — Aug. 2024 — present
Advisor: Cunxi Yu

University of California, San Diego — California, United States
M.S. in Computer Science and Engineering (Artificial Intelligence) (GPA: 4.00/4.00) — Sep. 2023 — June 2024
Advisor: Chung-Kuan Cheng

Fudan University — Shanghai, China
B.S. in Computer Science and Technology (GPA: 3.67/4.00, Class Rank: 9/110) — Sep. 2019 — June 2023
Advisor: Li Shang

RESEARCH INTERESTS

- Logic Synthesis
- Formal Verification
- AI/LLM for EDA

PUBLICATIONS

Jiaqi Yin, Zhan Song, Chen Chen, Yaohui Cai, Zhiru Zhang, Cunxi Yu. ***e-boost: Boosted E-Graph Extraction with Adaptive Heuristics and Exact Solving*** 2025 IEEE/ACM International Conference on Computer Aided Design (ICCAD)

Jiaqi Yin*, Zhan Song* (co-first), Chen Chen, Qihao Hu, Cunxi Yu. ***BoolE: Exact Symbolic Reasoning via Boolean Equality Saturation*** 2025 ACM/IEEE Design Automation Conference (DAC) [Best Paper Nomination]

Jiaqi Yin, Zhan Song, Nicolas Bohm Agostini, Antonino Tumeo, Cunxi Yu. ***HEC: Equivalence Verification Checking for Code Transformation via Equality Saturation*** 2025 USENIX Annual Technical Conference (ATC)

Zhiyuan Chen, Chung-Kuan Cheng, Zhan Song* (corresponding), Yucheng Wang. ***Noise-Aware Circuit Clustering based on Analytical Placement Evolution*** 2024 ACM International Workshop on System-Level Interconnect Pathfinding (SLIP)

WORK EXPERIENCE

eBay — Shanghai, China
Software Engineer Intern, Payments & Risk Team — Jan. 2022 — Sep. 2022

AWARDS AND HONORS

- Best Paper Nomination, Design Automation Conference (DAC 2025) — June 2025
- Second Prize, Invent Week Landing Awards, eBay China Center of Excellence (CCOE) (Top 5%) — Aug. 2022
- Fudan University Scholarship, 2020, 2022, 2023

OPEN-SOURCE FRAMEWORKS

- **BoolE**: Exact Symbolic Reasoning via Boolean Equality Saturation
- **Noise-Aware Circuit Clustering**: Noise-Aware Circuit Clustering based on Analytical Placement Evolution