

Dakai Kang

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Education

University of California, Davis
Computer Science, Ph.D. Candidate

Sep 2022 – Present
Davis, CA

Research Team

Exploratory Systems Lab (expolab.org), advised by Prof. Mohammad Sadoghi (msadoghi@ucdavis.edu).

Research Topics

- High-Performance Blockchain Infrastructure
- BFT Consensus Protocols; Transaction Scheduling; Parallel Execution; MEV Problem

Teaching

- ECS165A, Databases, UC Davis, [Winter 2023](#), [2026](#) – Teaching Assistant
- ECS189F, Distributed Ledgers, UC Davis, [Fall 2023](#) – Teaching Assistant
- ECS265, Distributed Database Systems, UC Davis, [Fall 2024](#), [2025](#) – Teaching Assistant
- ECS188, Ethics in Computer Science, UC Davis, [Spring 2025](#) – Teaching Assistant

Awards

- GGCS Spring Quarter Fellowship Award, UC Davis (2023, 2024)
- GGCS Summer Ph.D. Fellowship (2023, 2024)

University of California, Davis

GREAT (Global Research Experience in Advanced Technology) Program

Sep 2021 – July 2022
Remote

Research Assistant Intern, Exploratory Systems Lab (expolab.org).

Zhejiang University

Software Engineering, Bachelor

Sep 2018 – July 2022
Hangzhou, China

Awards

- The Third Prize Scholarship of Zhejiang University (2019, 2020, 2021)
- Excellent Engineer Scholarship of Software Engineering Major (2022)

Work Experience

Sei Labs, Inc. (<https://www.sei.io>)

Research Scientist (Incoming)

Starting in June 2026

Mysten Labs, Inc. (<https://www.mystenlabs.com>)

Research Intern

Jun 2025 – Sep 2025
Remote

- Worked on a research project on transaction scheduling in Multi-proposer consensus to accelerate parallel transaction execution and mitigate congestion under high-contention workloads.

Publications

- [1] **Kang, D.**, Chen, J., Dinh, T. T. A., & Sadoghi, M. (2025). FairDAG: consensus fairness over multi-proposer causal design. *Proceedings of the VLDB Endowment*, 19(2), 265–278.
- [2] Gupta, S., **Kang, D.**, Malkhi, D., & Sadoghi, M. (2025). *Brief announcement: Carry the tail in consensus protocols*. In *Proceedings of the 39th International Symposium on Distributed Computing (DISC 2025)* (Leibniz International Proceedings in Informatics [LIPIcs], Vol. 356, pp. 59:1–59:7). Schloss Dagstuhl – Leibniz-Zentrum für Informatik. <https://doi.org/10.4230/LIPIcs.DISC.2025.59>
- [3] **Kang, D.**, Gupta, S., Malkhi, D., & Sadoghi, M. (2025). Hotstuff-1: Linear consensus with one-phase speculation. *Proceedings of the ACM on Management of Data*, 3(3), 1–29. (**Honorable Mention for Best Artifact**)
- [4] **Kang, D.**, Rahnema, S., Hellings, J., & Sadoghi, M. (2024, May). Spotless: Concurrent rotational consensus made practical through rapid view synchronization. In *2024 IEEE 40th International Conference on Data Engineering (ICDE)* (pp. 1916–1929). IEEE.

Preprints

- [5] Gupta, S., **Kang, D.**, Malkhi, D., & Sadoghi, M. (2025). Carry the Tail in Consensus Protocols. *arXiv preprint arXiv:2508.12173*.
- [6] Xie, S., **Kang, D.**, Lyu, H., Niu, J., & Sadoghi, M. (2025). Fides: Scalable Censorship-Resistant DAG Consensus via Trusted Components. *arXiv preprint arXiv:2501.01062*.

Open-Source Projects

- [1] ResilientDB (under Apache Incubation, <https://expolab.resilientdb.com>), **Architect**
 - Github Repository: <https://github.com/apache/incubator-resilientdb>
 - Implemented BFT consensus protocols in ResilientDB, including PBFT, HotStuff-1 and FairDAG, etc.

Peer-Review Service

Program Committee Member

- International Symposium on Reliable Distributed Systems (**SRDS**) 2026

Invited Reviewer

- IEEE International Conference on Data Engineering (**ICDE**) (Demo Track) 2026
- IEEE Transactions on Information Forensics and Security (**T-IFS**) 2025
- IEEE Transactions on Dependable and Secure Computing (**TDSC**) 2025–2026
- ACM **SIGMOD** ARI (Availability & Reproducibility Initiative) 2025
- European Conference on Computer Systems (**EuroSys**) Shadow PC program 2026

External Reviewer

- ACM Conference on Computer and Communications Security (**CCS**) 2025
- International Conference on Very Large Data Bases (**VLDB**) 2023–2025
- ACM Special Interest Group on Management of Data (**SIGMOD**) 2024–2025
- IEEE International Conference on Data Engineering (**ICDE**) 2024
- ACM/IFIP International Middleware Conference (**Middleware**) 2024