

Nuda (Tony) Zhang

nudzhang@umich.edu / <https://tonyzhangnd.github.io>

Education

- Ph.D., Computer Science, University of Michigan at Ann Arbor (2019 - present)
Advised by Manos Kapritsos
MongoDB PhD Fellowship Recipient
- B.A., Computer Science and Mathematics, Cornell University (2015 - 2018)

Publications and Technical Reports

1. **Nuda Zhang**, Travis Hance, Manos Kapritsos, Tej Chajed, Bryan Parno. *Inductive Invariants That Spark Joy: Using Invariant Taxonomies to Streamline Distributed Systems Proofs*. To appear in OSDI 2024.
2. Quentin Kniep, Lefteris Kokoris-Kogias, Alberto Sonnino, Igor Zablotchi, **Nuda Zhang**. 2024. *Pilotfish: Distributed Transaction Execution for Lazy Blockchains*. Technical Report. [\[link\]](#)
3. **Nuda Zhang**, Upamanyu Sharma, and Manos Kapritsos. 2023. *Performal: Formal Verification of Latency Properties for Distributed Systems*. Proc. ACM Program. Lang. 7, PLDI, Article 121 (June 2023), 26 pages. [\[link\]](#)
4. Benedict Elliot Smith, **Nuda Zhang**, Blake Eggleston and Scott Andreas. 2021. *CEP-15: General Purpose Transactions*. Cassandra Enhancement Proposal whitepaper. [\[link\]](#)
5. Eli Goldweber, **Nuda Zhang**, and Manos Kapritsos. 2020. *Brief Announcement: On the Significance of Consecutive Ballots in Paxos*. In Proceedings of the 39th Symposium on Principles of Distributed Computing (PODC '20). [\[link\]](#)
6. Eli Goldweber, **Nuda Zhang**, and Manos Kapritsos. 2020. *On the Significance of Consecutive Ballots in Paxos*. Technical Report. [\[link\]](#)

Work Experience

Mysten Labs

Research Intern (Summer 2023 · remote)

- Worked with Mysten Labs researchers to design and implement horizontal scaling of blockchain validators on Sui

VMware

Research Intern (Summer 2022 · Bellevue, WA)

- Worked on implementing a verified key-value store based on SplinterDB, as a proof of concept for practical, high-performance verified software

Apple

Software Engineering Intern, Cassandra Storage Team (Summer 2021 · remote)

- Developed Accord, a multi-partition transaction protocol for Apache Cassandra based on Egalitarian Paxos, published as a Cassandra Enhancement Proposal [whitepaper \(CEP-15\)](#)

Oracle

Software Engineer, Full-time (2019 · Redwood City, CA)

- Developed and maintained TimesTen, a distributed in-memory database

Teaching

- (Fall 2021) Teaching assistant for EECS 591: Distributed Systems, University of Michigan
- (Fall 2018) Teaching assistant for CS 4820: Introduction to Analysis of Algorithms, Cornell University
- (Spring 2017 - Spring 2018) Teaching assistant for CS 2110: Object-Oriented Programming & Data Structures, Cornell University

Activities

- (2024) Artifact Evaluation Committee, PLDI
- (2023) Artifact Evaluation Committee, SOSP
- (2020 - 2022) Social Chair, Computer Science and Engineering Graduate Student Organization, University of Michigan
- (2017 - 2018) Officer, Association of Computer Science Undergraduates, Cornell University