

Nuda (Tony) Zhang

✉ nudzhang@umich.edu | 🏠 tonyzhangnd.github.io

Education

University of Michigan

PHD CANDIDATE IN COMPUTER SCIENCE

Supervised by Manos Kapritsos

Ann Arbor, MI

Aug 2019 - Present

Cornell University

B.A. IN COMPUTER SCIENCE AND MATHEMATICS

Ithaca, NY

Aug 2015 - Dec 2018

Peer-Reviewed Publications

PODC'20 Brief Announcement: On the Significance of Consecutive Ballots in Paxos,
Eli Goldweber, Nuda Zhang, Manos Kapritsos

Relevant Experience

University of Michigan at Ann Arbor

GRADUATE RESEARCHER

- Investigating improvements to proof engineering workflow
- Proving performance properties of distributed systems using formal methods
- Proved weakened consensus conditions in Paxos

Ann Arbor, MI

2019 - Present

Apple

INTERN

- Developed a multi-partition transaction protocol for Apache Cassandra based on Egalitarian Paxos, published as a Cassandra Enhancement Proposal whitepaper
- Derived a formal proof of correctness for the protocol
- Implemented network partition simulations for prototype in Jepsen Maelstrom

Remote

Summer 2021

Oracle

SOFTWARE ENGINEER

- Work on the TimesTen in-memory database system

Redwood Shores, CA

2019

Cornell University

UNDERGRADUATE RESEARCH ASSISTANT

- Work on state machine replication and Byzantine distributed transaction systems, supervised by Robbert van Renesse and Lorenzo Alvisi

Ithaca, NY

2018

Institute of High Performance Computing

SUMMER RESEARCH INTERN

- Work on cancer cell detection using computer vision techniques

Singapore

2017

Teaching Experience

EECS 591: Distributed Systems

GRADUATE STUDENT INSTRUCTOR

University of Michigan

2021

CS 4820: Introduction to Analysis of Algorithms

TEACHING ASSISTANT

Cornell University

2018

CS 2110: Object-Oriented Programming & Data Structures

RECITATION INSTRUCTOR

Cornell University

2017 - 2018

Activities

Computer Science and Engineering Graduate student organization

TEA CHAIR

University of Michigan

2020 - Present

- Organize weekly tea socials, among other service to the graduate student body

Association of Computer Science Undergraduates

RESEARCH TEAM LEAD

Cornell University

2017-2018

- Led the Undergraduate Reading Group initiative, focusing on exposing underclassman to seminal research not taught in introductory classes
- Organized campus-wide events such as tech workshops and the semesterly student-faculty luncheon

Technical Reports

Whitepaper

Cassandra Enhancement Proposal. CEP-15: General Purpose Transactions,
*Benedict Elliott Smith, **Tony Zhang**, Blake Eggleston, Scott Andreas*

arXiv:2006.01885

On the Significance of Consecutive Ballots in Paxos,
*Eli Goldweber, **Nuda Zhang**, Manos Kapritsos*