

# Ziye(Gaven) Ma

ELECTRICAL ENGINEERING AND COMPUTER SCIENCE · UC BERKELEY

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## Education

### University of California, Berkeley

Berkeley, CA, United States

PH.D IN ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Sep.2019 - Now

- Research Interests: Mathematical Optimization, Machine Learning, Robust Estimation
- Research Advisor: Somayeh Sojoudi

### University of California, Berkeley

Berkeley, CA, United States

M.S. IN ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Sep.2019 - Dec.2020

- Thesis: Tightening the SDP Relaxation Gap in Neural Network Verification
- GPA:3.96

### University of Toronto

Toronto, ON, Canada

B.A.SC IN ENGINEERING SCIENCE, MAJOR IN ROBOTICS ENGINEERING

Sep.2014 - Jun.2019

- cGPA:3.89, Major GPA:3.95
- Highest Ranking: 3/288

## Publication

### Geometric Analysis of Noisy Low-rank Matrix Recovery in the Exact Parameterized and the Overparameterized Regimes

ZIYE MA\*, YINGJIE BI\*, JAVAD LAVAEI, SOMAYEH SOJOUDI

2021

- Mathematical Programming. In Review

### Sharp Restricted Isometry Property Bounds for Low-rank Matrix Recovery Problems with Corrupted Measurements

ZIYE MA\*, YINGJIE BI\*, JAVAD LAVAEI, SOMAYEH SOJOUDI

2021

- Association for the Advancement of Artificial Intelligence(AAAI). To Appear

### Partition-Based Convex Relaxations for Certifying the Robustness of ReLU Neural Networks

BRENDON ANDERSON, ZIYE MA, JINGQI LI, SOMAYEH SOJOUDI

2021

- Journal of Machine Learning Research. In Review

### A Sequential Framework Towards an Exact SDP Verification of Neural Networks

ZIYE MA, SOMAYEH SOJOUDI

2021

- IEEE Conference on Data Science and Advanced Analytics

### Tightened Convex Relaxations for Neural Network Robustness Certification

BRENDON ANDERSON, ZIYE MA, JINGQI LI, SOMAYEH SOJOUDI

2020

- IEEE Conference on Decision and Control

## Certifiably Globally Optimal Extrinsic Calibration from Per-Sensor Egomotion

MATTHEW GIAMOU, ZIYE MA, VALENTIN PERETROUKHIN, JONATHAN KELLY

2018

- IEEE Robotics and Automation Letters

## Experience

### STARS Lab, University of Toronto Institute for Aerospace Studies

Toronto, ON

UNDERGRADUATE RESEARCHER

May.2018 - May, 2019

- Research sponsored by NSERC scholarship.
- Research on the front of convex optimization theory, robot calibration, and point cloud registration.

### Advanced Micro Devices, Inc

Markham, ON

SOFTWARE ENGINEER, INTERN

May.2017 - May.2018

- Software Engineer in the Apple Multimedia Team.
- Developed MacOS application for internal use with C++ and Obj-C
- Dealt with video decoding/encoding and video processing.
- Python scripting for data analysis.

## Teaching & Academic Service

### TEACHING

#### CS189/289 Introduction to Machine Learning

UC Berkeley

GRADUATE STUDENT INSTRUCTOR (GSI)

Spring 2021, Spring 2022

- Responsible for holding office hours and discussion sessions.
- Design and grade homework/midterm/exams.

### ACADEMIC SERVICE

2021,2022 **Graduate Student Member**, Graduate Admissions Committee, EECS, UC Berkeley

2021 **Reviewer**, Journal of Machine Learning Research

2021 **Reviewer**, Conference on Uncertainty in Artificial Intelligence

2020 **Reviewer**, International Conference on Artificial Intelligence and Statistics

## Awards & Certificates

### HONORS & AWARDS

2018 **First Place**, Daisy Intelligence Hackathon

Toronto, ON

2016 **Sullivan Memorial Scholarship**, University of Toronto

Toronto, ON

2015 **Dhillon Satinder Kaur Memorial Scholarship**, University of Toronto

Toronto, ON

2014 **Richardson R. John Memorial Scholarship**, University of Toronto

Toronto, ON

2014-now **Dean's Honour List(every term)**, University of Toronto

Toronto, ON

2014 **UofT Scholar (Academic Ledger #1)**, University of Toronto

Toronto, ON

2011 **Gold Medalist**, Canadian Intermediate Mathematics Contest

National

2014 **Top 50**, Sir Isaac Newton Contest

National

### CERTIFICATES

2011 **Level Eight Certificate in Piano**, Royal Conservatory of Music

Markham, ON

2010 **N2 certificate for Japanese**, Japanese-Language Proficiency Test

Beijing, China