

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 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

Over-parametrization via Lifting for Low-rank Matrix Sensing: Conversion of Spurious Solutions to Strict Saddle Points

ZIYE MA, IGOR MOLYBOG, JAVAD LAVAEI, SOMAYEH SOJOU DI

2023

- International Conference on Machine Learning(ICML) 2023, **Oral**.

Semidefinite Programming versus Burer-Monteiro Factorization for Matrix Sensing

BATURALP YALCIN*, ZIYE MA*, JAVAD LAVAEI, SOMAYEH SOJOU DI(*EQUAL CONTRIBUTION)

2022

- Association for the Advancement of Artificial Intelligence(AAAI) 2023, **Oral**.

Noisy Low-rank Matrix Optimization: Geometry of Local Minima and Convergence Rate

ZIYE MA, SOMAYEH SOJOU DI

2022

- International Conference on Artificial Intelligence and Statistics(AISTATS) 2023, **Oral(Top 6% of accepted papers)**.

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

ZIYE MA, YINGJIE BI, JAVAD LAVAEI, SOMAYEH SOJOU DI

2021

- INFORMS Journal on Optimization.

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

ZIYE MA*, YINGJIE BI*, JAVAD LAVAEI, SOMAYEH SOJOU DI(*EQUAL CONTRIBUTION)

2021

- Association for the Advancement of Artificial Intelligence(AAAI) 2022

A Sequential Framework Towards an Exact SDP Verification of Neural Networks

ZIYE MA, SOMAYEH SOJOU DI

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

Certiably Globally Optimal Extrinsic Calibration from Per-Sensor Egomotion

MATTHEW GIAMOU, ZIYE MA, VALENTIN PERETROUKHIN, JONATHAN KELLY

2018

- IEEE Robotics and Automation Letters

Experience

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, Spring 2023

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

Outstanding Graduate Student Instructor (GSI) Award

UC Berkeley

BERKELEY'S CAMPUS-WIDE RECOGNITION OF TEACHING EXCELLENCE, NOMINATED BY HOME DEPARTMENT.

2023

ACADEMIC SERVICE

2020-Now **Graduate Student Member**, Graduate Admissions Committee, EECS, UC Berkeley

2020-Now **Reviewer**, Journal of Machine Learning Research(JMLR), AISTATS, ICML, NeurIPS

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