

SHAOCONG MA

CONTACT INFORMATION

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EDUCATION

PhD in Electrical and Computer Engineering	Sep.2019-Jun. 2022(Expected)
University of Utah	GPA:4.0/4.0
M.A. in Statistics	Sep.2017-Jun. 2019
University of California, Santa Barbara	GPA: 3.9/4.0
B.S. in Statistics	Sep. 2013-Jun. 2017
Sichuan University	GPA: 3.6/4.0

PUBLICATIONS

Shaocong Ma, Yi Zhou. *Understanding the Impact of Model Incoherence on Convergence of Incremental SGD with Random Reshuffle*. ICML. 2020. (Acceptance rate: 21.8%)

Shaocong Ma, Yi Zhou, Shaofeng Zou. *Variance-Reduced Off-Policy TDC Learning: Non-Asymptotic Convergence Analysis*. NeurIPS. 2020. (Acceptance rate: 20.1%)

Shaocong Ma, Ziyi Chen, Yi Zhou, Shaofeng Zou. *Greedy-GQ with Variance Reduction: Finite-time Analysis and Improved Complexity*. ICLR. 2021. (Acceptance rate: 28.7%)

LEADING PROJECTS

A Convergent Single-Loop Proximal-GDA Algorithm with Momentum for Nonconvex Minimax Optimization

- Submitted to ICML 2021.
- Built a GPU-based accelerating optimization environment.
- Implemented high-performance algorithms using PyTorch for solving large-scale min-max optimization problem.

Q-Learning with Stability-Guaranteed Function Approximation

- In progress.
- Proposed a function class leading to the convergence guarantee of Q-learning with function approximation.
- Implemented an OpenAI-like simulation environment with multi-cores acceleration.

General Reinforcement Learning Framework with Partial-Ordered k-Module Rewards

- In progress.
- Designed a general RL framework using rewards with values in a k-module.
- Included the time-dependent rewards and multi-goal rewards as special cases.

TEACHING EXPERIENCES

Statistics; Statistics for Life Science; Statistics for Economics;
Survival Analysis; Actuarial Statistics; Fundamentals of Signals and Systems.