

Liwei Jiang

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Employment

Georgia Institute of Technology Atlanta, GA
Postdoctoral Researcher July 2024 – present
Advisor: Professor Ashwin Pananjady and Professor Katya Scheinberg
H. Milton Stewart School of Industrial and Systems Engineering

Education

Cornell University Ithaca, NY
PhD in Operations Research Sep 2019 – May 2024
Advisor: Professor Damek Davis
School of Operations Research and Information Engineering

Nanjing University Nanjing, China
BS in Statistics Sep 2015 – Jun 2019
Department of Mathematics

University of Wisconsin-Madison Madison, WI
Exchange student Jan 2018 – Dec 2018
Department of Mathematics

Honors and scholarships

The Hsien Wu and Daisy Yen Wu Scholarship, Cornell 2023
Teaching Assistant of the Year, Cornell ORIE 2022
Teaching Assistant of the Year, Cornell ORIE 2021
National Scholarship, China 2016

Journal publications

Asymptotic normality and optimality in nonsmooth stochastic approximation

Damek Davis*, Dmitriy Drusvyatskiy*, Liwei Jiang*
The Annals of Statistics, to appear.

A local nearly linearly convergent first-order method for nonsmooth functions with quadratic growth

Damek Davis*, Liwei Jiang*
Foundations of Computational Mathematics, 2024.

Algorithmic regularization in model-free overparametrized asymmetric matrix factorization

Liwei Jiang, Yudong Chen, Lijun Ding
SIAM Journal on Mathematics of Data Science (SIMODS), 2023

On the translates of general dyadic systems on \mathbb{R}

Theresa C Anderson*, Bingyang Hu*, Liwei Jiang*, Connor Olson*, Zeyu Wei*
Mathematische Annalen, 2020

Conference papers

Rank overspecified robust matrix recovery: subgradient method and exact recovery

Lijun Ding*, Liwei Jiang*, Yudong Chen, Qing Qu, Zhihui Zhu
Neural Information Processing Systems Conference (NeurIPS), 2021

Preprints

Active manifolds, stratifications, and convergence to local minima in nonsmooth optimization

Damek Davis*, Dmitriy Drusvyatskiy*, Liwei Jiang*
preprint, 2022. Major revision at *Foundations of Computational Mathematics*. Available on *arxiv*.

A validation approach to over-parameterized matrix and image recovery

with Lijun Ding, Zhen Qin, Jinxin Zhou, Zhihui Zhu
preprint, 2022. Available on *arxiv*.

Teaching experience

Teaching assistant, Department of Operations Research (Cornell)

ORIE 6300: Mathematical Programming	2023 Fall
ORIE 3500/5500: Probability and Statistics II	2021 Fall
ORIE 3510/5510: Stochastic Process	2020 Spring
ORIE 3500/5500: Probability and Statistics II	2020 Fall
ORIE 4600/5600: Intro to Financial Engineering	2020 Spring
ORIE 3500/5500: Probability and Statistics II	2019 Fall

Teaching assistant, Department of Mathematics (Cornell)

Math 2940: Linear Algebra for Engineers	2023 Spring
Math 2940: Linear Algebra for Engineers	2022 Fall
Math 2940: Linear Algebra for Engineers	2022 Spring

Industry experience

Amazon, Research Scientist Intern Jun 2023 - Aug 2023
For huge-scale inventory planning problems at Amazon, I helped design and implement distributed primal-dual algorithms to obtain optimized buying plans using production data.

Talks

A local nearly linearly convergent first-order method for nonsmooth functions with quadratic growth

UCSD ECE department, 2/2024
Informs, 10/2024

Asymptotic normality and optimality in stochastic nonsmooth approximation

Informs, 10/2023

Cornell Young Researcher Workshop (speaker), 10/2023

International Symposium on Mathematical Programming, 7/2024

Subgradient methods avoid strict saddle point

SIAM Conference on Optimization, 6/2023

International Conference on Continuous Optimization, 7/2022

Rank overspecified robust matrix recovery: Subgradient method and exact recovery

Neural Information Processing Systems (virtual), 12/2021

Informs, 10/2021

Service

Reviewing

Mathematical Programming, Operations Research, Mathematics of Operations Research, Information and Inference: A Journal of the IMA, Machine Learning, Stochastic Systems

Diversity

Cornell ORIE PhD application support for underrepresented students, 2020

Cornell ORIE PhD application support for underrepresented students, 2021

Skills

Programming

Proficient in: Python (experience working with PyTorch and language models), Matlab, Java, LaTeX.

Languages

Mandarin (native), English (fluent)

References

Damek Davis: dsd95@cornell.edu.

Yudong Chen: yudong.chen@wisc.edu

Adrian Lewis: adrian.lewis@cornell.edu

Katya Scheinberg: ktyas@cornell.edu