Dian Jin

Curriculum Vitae

Edison, New Jersy — uestcjd@gmail.com — (732) 310-8275

EDUCATION

Rutgers University, New Brunswick *09/2020 - 06/2025*
Ph.D. in Electrical and Computer Engineering
Advisor: Prof. Yuqian Zhang

Rutgers University, New Brunswick *09/2019 - 06/2020*
M.S. in Electrical and Computer Engineering

University of Electronic Science and Technology of China *09/2015 - 06/2019*
B.E in Automation Engineering

EMPLOYMENT

Teaching Assistant: Rutgers University, School of Engineering. *09/2020 - Now*

Research Internship: Shanghai AI Lab *05/2024 - 09/2024*

- Mentor: Dr. Qiaosheng Zhang
- Topic: Community detection for Label-SBM with side information.

Machine Learning Internship: Alibaba, TaoBao-Mall group. *06/2023 - 09/2023*

- Mentor: Dr. Shuguang Han
- Topic: Search-enhanced recommendation system.

Machine Learning Internship: Futurewei, AI research. *06/2022 - 09/2022*

- Mentor: Dr. Masood Mortazavi and Dr. Ning Yan
- Topic: Optimal embedding size for graph clustering.

Machine Learning Internship: iFlytek, AI research. *06/2019 - 08/2019*

- Topic: Machine translation estimation.

RESEARCH OF INTEREST

High-dimensional statistics, convex and non-convex optimization, low-rank/non-negative matrix factorization, graph clustering, signal processing.

PUBLICATIONS

Dian Jin, Xin Bing, and Yuqian Zhang.
Unique sparse decomposition of low-rank matrices.
IEEE Transactions on Information Theory, vol. 69, no. 4, pp. 2452-2484, April 2023.

Dian Jin, Xin Bing, and Yuqian Zhang.
Unique sparse decomposition of low-rank matrices.
Neural Information Processing Systems, 2021.

Xin Bing[#], Xin He[#], **Dian Jin**[#], and Yuqian Zhang[#]. (Sole student author)
Optimal vintage factor analysis with deflation varimax. *arXiv*:2310.10545.
To appear in *The Annals of Statistics*.

Dian Jin, Yuqian Zhang, and Qiaosheng Zhang.
Community detection for Contextual-LSBM: theoretical limitations of misclassification rate and efficient algorithms. *arXiv*:2501.11139.
IEEE International Symposium on Information Theory, 2025

(# alphabetic order)

PREPRINTS AND WORK IN PROGRESS

Dian Jin, Xin Bing, and Yuqian Zhang.
One-shot Robust Federated Learning of ICA. *arXiv*:2505.20532
(Submitted to NeurIPS 2025)

Bias-variance tradeoff in divide-and-conquer method in overcomplete ICA.
Joint work with Xin Bing and Yuqian Zhang

Decentralized policy for quantized observation in the Random Access Channel.
Joint work with Xinran Chen.

INVITED TALKS AND PRESENTATION

INFORMS Annual Meeting 2022, Date: 10/2022. Indianapolis, IN.

Poster sessions: Rutgers Research Day(2022). Date: 12/2022. Rutgers University.

Poster sessions: AI time PhD Sharing. Date 03/2022. Remote.

SERVICE TO ACADEMIC COMMUNITY

Reviewer for conferences: ISIT, NeurIPS, ICLR

Reviewer for journal: IEEE Transactions on Information Theory.