Topic: Graph Machine Learning

[1] On the Equivalence Between Temporal and Static Equivariant Graph Representations, ICML 2022

[2] Optimization-Induced Graph Implicit Nonlinear Diffusion, ICML 2022

[3] SpeqNets: Sparsity-Aware Permutation-Equivariant Graph Networks, ICML 2022

[4] Descent Steps of a Relation-Aware Energy Produce Heterogeneous Graph Neural Networks, NIPS 2022

[5] Ordered Subgraph Aggregation Networks, NIPS 2022

[6] Graph Neural Networks as Gradient Flows, ICLR 2023 Submission

[7] DiGress: Discrete Denoising Diffusion for Graph Generation, ICLR 2023 Submission

Topic: Reduced-Rank Regression

[1] Fast Algorithms for Sparse Reduced-Rank Regression, AISTATS 2019

[2] Reduced Rank Regression via Adaptive Nuclear Norm Penalization, Biometrika 2013

[3] Envelopes and Reduced-Rank Regression, Biometrika 2015

[4] Robust Reduced-Rank Regression, Biometrika 2017

[5] Sparse PCA: Optimal Rates and Adaptive Estimation, The Annals of Statistics 2013

[6] Fast and Privacy Preserving Distributed Low-Rank Regression, ICASSP 2017

[7] Accelerated Sparse Linear Regression via Random Projection, AAAI 2016

[8] Robust Reduced-Rank Modeling via Rank Regression, Journal of Statistical Planning and Inference 2017

Topic: Blind Deconvolution

[1] Short-and-Sparse Deconvolution Via Rank-One Constrained Optimization (Roco), ICASSP 2022

[2] Manifold Gradient Descent Solves Multi-Channel Sparse Blind Deconvolution Provably and Efficiently, IEEETIT 2021

[3] Blind Deconvolution Using Modulated Inputs, IEEETSP 2020

[4] Compressive Blind Image Deconvolution, IEEETIP 2013

[5] Near-Optimal Compressed Sensing of a Class of Sparse Low-Rank Matrices via Sparse Power Factorization, IEEETIT 2018

[6] Efficient Blind Deblurring under High Noise Levels, ISPA 2019

Topic: Latent Variable Gaussian Graphical Model

[1] Alternating direction methods for latent variable Gaussian graphical model selection, Neural Computation 2013

[2] Learning latent variable Gaussian graphical models, ICML 2014

[3] Precision matrix estimation in high dimensional Gaussian graphical models with faster rates, AISTATS 2016

[4] Copula Gaussian graphical models with hidden variables, ICASSP 2012

[5] Speeding up latent variable Gaussian graphical model estimation via nonconvex optimization, NIPS 2017

[6] Low-rank and sparse structure pursuit via alternating minimization, PMLR2016

[7] Partial Gaussian graphical model estimation, IEEETIT 2014

Topic: Nonconvex Statistical Optimization

[1] Graphical Nonconvex Optimization via an Adaptive Convex Relaxation, ICML 2018

[2] Nonconvex Sparse Graph Learning under Laplacian Constrained Graphical Model, NIPS 2019

[3] Towards Faster Rates and Oracle Property for Low-Rank Matrix Estimation, ICML 2016

[4] On Quadratic Convergence of DC Proximal Newton Algorithm in Nonconvex Sparse Learning, NIPS 2017

[5] Statistical sparse online regression: A diffusion approximation perspective, ICML 2018

[6] On Fast Convergence of Proximal Algorithms for SQRT-Lasso Optimization: Don't Worry About its Nonsmooth Loss Function, UAI 2019

Topic: Robust Covariance Estimation

[1] An l-infinity eigenvector perturbation bound and its application to robust covariance estimation, JMLR 2018

[2] Group symmetric robust covariance estimation, IEEETSP 2015

[3] Defense against backdoor attacks via robust covariance estimation, ICML 2021

[4] Faster algorithms for high-dimensional robust covariance estimation, COLT 2019

[5] Robust Gaussian covariance estimation in nearly-matrix multiplication time, NIPS 2020

[6] Robust shrinkage estimation of high-dimensional covariance matrices, IEEETSP 2011

Topic: Machine Learning for Combinatorial Optimization

[1] Machine learning for combinatorial optimization: a methodological tour d'horizon, arXiv 2018

[2] Combinatorial optimization with graph convolutional networks and guided tree search, NIPS 2018

[3] Learning mixed-integer convex optimization strategies for robot planning and control, CDC 2020

[4] Learning combinatorial optimization algorithms over graphs, NIPS 2017

[5] Learning cut selection for Mixed-intergerliner programming via hierarchical sequence model, ICLR 2023

[6] A GNN-guided predict-and-search framework for mixed-integer linear programming, ICLR 2023

[7] Configuring mixed-integer linear programming solvers with deep metric learning, ICLR 2023

Topic: Robust Mean Estimation

[1] Robust and differentially private mean estimation, NIPS 2021

[2] Recent Advances in Algorithmic High-Dimensional Robust Statistics, arxiv 2019

[3] Outlier Robust Mean Estimation with Subgaussian Rates via Stability, NIPS 2020

[4] High-Dimensional Robust Mean Estimation in Nearly-Linear Time, SODA 2019

[5] High-dimensional Robust Mean Estimation via Gradient Descent, ICML 2020

[6] Mean Estimation and Regression Under Heavy-Tailed Distributions: A Survey, Foundations of Computational Mathematics 2019

[7]Robust Online and Distributed Mean Estimation Under Adversarial Data Corruption, arXiv 2022

[8] Robust Sparse Mean Estimation via Sum of Squares, COLT 2022

Topic: GARCH Estimation

[1] A GARCH Model with Artificial Neural Networks, Information 2020
[2] AI algorithms for fitting GARCH parameters to empirical financial data, Physica A: Statistical Mechanics and Its Applications 2022
[3] Estimating value at risk: LSTM vs. GARCH, arXiv 2022
[4] Estimating GARCH models using support vector machines, Quantitative Finance 2003
[5] Support Vector Machine-Based GARCH-type Models: Evidence from ASEAN-5 Stock Markets, Data Science for Financial Econometrics 2021
[6] Estimating GARCH models using kernel machine learning, Journal of the Korean Data and Information 2010
[7] Estimation of GARCH models and performance analysis of volatility trading system using Support Vector Regression, Journal of Intelligence and Information Systems 2017