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RESEARCH INTERESTS	Machine Learning, Optimization	
ACADEMIC APPOINTMENTS	<b>Professor</b> Dec., 2020 – present <b>Research Professor</b> Dec., 2019 – Dec., 2020	School of Artificial Intelligence, Nanjing University
	<b>Associate Professor</b> Apr., 2014 – Dec., 2019	Department of Computer Science and Technology, Nanjing University
	<b>Postdoctoral Researcher</b> Aug., 2012 – Apr., 2014	Department of Computer Science and Engineering, Michigan State University • Advisor: Prof. Rong Jin
EDUCATION	<b>Zhejiang University</b> , Hangzhou, China	
	Ph.D., Computer Science and Technology, Sep., 2007 – Jun., 2012 • Advisor: Prof. Chun Chen	
	B.E., Software Engineering, Sep., 2003 – Jun., 2007	
	<b>Michigan State University</b> , East Lansing, USA	
	Visiting Student, Department of Computer Science and Engineering, Jun., 2011 – Dec., 2011 • Advisor: Prof. Rong Jin	
HONORS AND AWARDS	<ul style="list-style-type: none"> <li>• 2021, NSFC Excellent Young Scientists Fund</li> <li>• 2019, Microsoft Research Asia Collaborative Research 2019 Grant Award</li> <li>• 2018, DAMO Academy Young Fellow</li> <li>• 2017, Young Elite Scientist Sponsorship Program by CAST</li> <li>• 2016, Young Talent Development Program of the CCF</li> <li>• 2012, AAAI-12 Outstanding Paper Award</li> <li>• 2011, Chu Kochen Award (Highest Honour of Zhejiang University)</li> <li>• 2010, ACM Multimedia 2010 Best Paper Award Runner-up</li> <li>• 2010, Scholarship Award for Excellent Doctoral Student Granted by Ministry of Education</li> <li>• 2007, 2012, Excellent Graduate of Zhejiang Province</li> <li>• 2007, 2012, Excellent Graduate of Zhejiang University</li> </ul>	
PROFESSIONAL SERVICE	<b>Editorial Boards</b>	
	<ul style="list-style-type: none"> <li>• Action Editor, <i>Machine Learning</i>, Since Jun., 2021</li> <li>• Associate Editor, <i>Neurocomputing</i>, Since Mar., 2021</li> <li>• Topic Editor, <i>Remote Sensing</i>, Feb., 2021 – Aug., 2021</li> </ul>	

- Editorial Board Reviewer, *Journal of Machine Learning Research*, Since Jun., 2020

#### **Area Chair**

- The 39th International Conference on Machine Learning (ICML 2022)
- The 35th Annual Conference on Neural Information Processing Systems (NeurIPS 2021)
- The 30th International Joint Conference on Artificial Intelligence (IJCAI 2021)
- The 26th International Joint Conference on Artificial Intelligence (IJCAI 2017)
- The 3rd Chinese Conference on Pattern Recognition and Computer Vision (PRCV 2020)
- The CAAI International Conference on Artificial Intelligence (CICAI 2021)

#### **Senior Program Committee Member**

- The 31st International Joint Conference on Artificial Intelligence (IJCAI 2022)
- The 34th AAAI Conference on Artificial Intelligence (AAAI 2020)
- The 33rd AAAI Conference on Artificial Intelligence (AAAI 2019)
- The 29th International Conference on Artificial Intelligence (IJCAI 2020)
- The 28th International Conference on Artificial Intelligence (IJCAI 2019)
- The 27th International Conference on Artificial Intelligence (IJCAI 2018)

#### **Program Committee Member**

- The 38th International Conference on Machine Learning (ICML 2021)
- The 37th International Conference on Machine Learning (ICML 2020)
- The 36th International Conference on Machine Learning (ICML 2019)
- The 35th International Conference on Machine Learning (ICML 2018)
- The 33rd International Conference on Machine Learning (ICML 2016)
- The 26th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2020)
- The 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2019)
- The 24th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2018)
- The 22nd ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2016)
- The 21st ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2015)
- The 36th AAAI Conference on Artificial Intelligence (AAAI 2022)
- The 35th AAAI Conference on Artificial Intelligence (AAAI 2021)
- The 32nd AAAI Conference on Artificial Intelligence (AAAI 2018)
- The 31st AAAI Conference on Artificial Intelligence (AAAI 2017)
- The 29th AAAI Conference on Artificial Intelligence (AAAI 2015)
- The 26th AAAI Conference on Artificial Intelligence (AAAI 2012)
- The 25th International Joint Conference on Artificial Intelligence (IJCAI 2016)
- The 24th International Joint Conference on Artificial Intelligence (IJCAI 2015)
- The 23rd International Joint Conference on Artificial Intelligence (IJCAI 2013)
- The 23rd ACM International Conference on Multimedia (MM 2015)
- The 22nd ACM International Conference on Multimedia (MM 2014)

#### **Reviewer**

- The 34th Annual Conference on Neural Information Processing Systems (NeurIPS 2020)
- The 33rd Annual Conference on Neural Information Processing Systems (NeurIPS 2019)

- The 32nd Annual Conference on Neural Information Processing Systems (NeurIPS 2018)
- The 31st Annual Conference on Neural Information Processing Systems (NIPS 2017)
- The 30th Annual Conference on Neural Information Processing Systems (NIPS 2016)
- The 29th Annual Conference on Neural Information Processing Systems (NIPS 2015)
- The 28th Annual Conference on Neural Information Processing Systems (NIPS 2014)
- The 27th Annual Conference on Neural Information Processing Systems (NIPS 2013)
- The 21st International Conference on Artificial Intelligence and Statistics (AISTATS 2018)
- The 20th International Conference on Artificial Intelligence and Statistics (AISTATS 2017)
- The 19th International Conference on Artificial Intelligence and Statistics (AISTATS 2016)
- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- IEEE Transactions on Knowledge and Data Engineering (TKDE)
- Transactions on Intelligent Systems and Technology (TIST)
- IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics (TSMCB)
- IEEE Transactions on Systems, Man, and Cybernetics, Part C: Applications and Reviews (TSMCC)
- IEEE Transactions on Cybernetics
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
- IEEE Transactions on Big Data (TBD)
- ACM Transactions on Knowledge Discovery from Data (TKDD)
- Machine Learning, Pattern Recognition
- Information Sciences, Neural Networks
- Neurocomputing, Pattern Recognition Letters
- Signal Processing, Knowledge-Based Systems
- Journal of Scientific Computing (JOMP)
- Journal of Selected Topics in Signal Processing (JSTSP)
- Journal of Computer Science and Technology (JCST)
- SCIENCE CHINA Information Sciences

#### **Program Co-Chair**

- The 19th China Symposium on Machine Learning and Applications (MLA 2021)

#### **Workshop Co-Chair**

- The 11th Vision and Learning Seminar (VALSE 2021)
- The 9th Vision and Learning Seminar (VALSE 2019)

#### **APR Co-Chair**

- The 10th Vision and Learning Seminar (VALSE 2020)

#### **Organizing Committee Member**

- The 16th China Symposium on Machine Learning and Applications (MLA 2018)

#### **BOOK**

1. Zhi-Hua Zhou, Wei Wang, Wei Gao, and **Lijun Zhang**. Introduction to the Theory of Machine Learning (In Chinese). China Machine Press, 2020.

#### **CONFERENCE PUBLICATIONS**

1. Yimu Wang, Bo Xue, Quan Cheng, Yuhui Chen, and **Lijun Zhang**. Deep Unified Cross-Modality Hashing by Pairwise Data Alignment. In *Proceedings of the 30th International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 1129–1135, 2021.

2. Peng Zhao, and **Lijun Zhang**. Improved Analysis for Dynamic Regret of Strongly Convex and Smooth Functions. In *Proceedings of the 3rd Conference on Learning for Dynamics and Control (L4DC)*, pp. 48–59, 2021.
3. Shiyin Lu, Guanghui Wang, and **Lijun Zhang**. Stochastic Graphical Bandits with Adversarial Corruptions. In *Proceedings of the 35th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 8749–8757, 2021.
4. Shiyin Lu, Yao Hu, and **Lijun Zhang**. Stochastic Bandits with Graph Feedback in Non-Stationary Environments. In *Proceedings of the 35th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 8758–8766, 2021.
5. Yuanyu Wan, and **Lijun Zhang**. Approximate Multiplication of Sparse Matrices with Limited Space. In *Proceedings of the 35th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 10058–10066, 2021.
6. Yuanyu Wan, and **Lijun Zhang**. Projection-free Online Learning over Strongly Convex Sets. In *Proceedings of the 35th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 10067–10075, 2021.
7. Yuanyu Wan, Bo Xue, and **Lijun Zhang**. Projection-Free Online Learning in Dynamic Environments. In *Proceedings of the 35th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 10076–10084, 2021.
8. Peng Zhao, Yu-Jie Zhang, **Lijun Zhang**, and Zhi-Hua Zhou. Dynamic Regret of Convex and Smooth Functions. In *Advances in Neural Information Processing Systems 33 (NeurIPS)*, pp. 12510–12520, 2020.
9. Pengcheng Li, Runze Li, Qing Da, An-Xiang Zeng, and **Lijun Zhang**. Improving Multi-Scenario Learning to Rank in E-Commerce by Exploiting Task Relationships in the Label Space. In *Proceedings of the 29th ACM International Conference on Information and Knowledge Management (CIKM)*, pp. 2605–2612, 2020.
10. Yimu Wang, Shiyin Lu, and **Lijun Zhang**. Searching Privately by Imperceptible Lying: A Novel Private Hashing Method with Differential Privacy. In *Proceedings of the 28th ACM International Conference on Multimedia (ACM Multimedia)*, pp. 2700–2709, 2020.
11. Yimu Wang, Xiu-Shen Wei, Bo Xue, and **Lijun Zhang**. Piecewise Hashing: A Deep Hashing Method for Large-Scale Fine-Grained Search. In *Proceedings of the 3rd Chinese Conference on Pattern Recognition and Computer Vision (PRCV)*, pp. 432–444, 2020.
12. Yuanyu Wan, Wei-Wei Tu, and **Lijun Zhang**. Projection-free Distributed Online Convex Optimization with  $O(\sqrt{T})$  Communication Complexity. In *Proceedings of the 37th International Conference on Machine Learning (ICML)*, pp. 9818–9828, 2020.
13. Yan Yan, Yi Xu, **Lijun Zhang**, Xiaoyu Wang, and Tianbao Yang. Stochastic Optimization for Non-convex Inf-Projection Problems. In *Proceedings of the 37th International Conference on Machine Learning (ICML)*, pp. 10660–10669, 2020.
14. **Lijun Zhang**. Online Learning in Changing Environments. In *Proceedings of the 29th International Joint Conference on Artificial Intelligence (IJCAI)*, Early Career, pp. 5178–5182, 2020.
15. Bo Xue, Guanghui Wang, Yimu Wang, and **Lijun Zhang**. Nearly Optimal Regret for Stochastic Linear Bandits with Heavy-Tailed Payoffs. In *Proceedings of the 29th International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 2936–2942, 2020.

16. **Lijun Zhang**, Shiyin Lu, and Tianbao Yang. Minimizing Dynamic Regret and Adaptive Regret Simultaneously. In *Proceedings of the 23rd International Conference on Artificial Intelligence and Statistics (AISTATS)*, pp. 309–319, 2020.
17. Peng Zhao, **Lijun Zhang**, Yuan Jiang, and Zhi-Hua Zhou. A Simple Approach for Non-stationary Linear Bandits. In *Proceedings of the 23rd International Conference on Artificial Intelligence and Statistics (AISTATS)*, pp. 746–755, 2020.
18. Peng Zhao, Guanghui Wang, **Lijun Zhang**, and Zhi-Hua Zhou. Bandit Convex Optimization in Non-stationary Environments. In *Proceedings of the 23rd International Conference on Artificial Intelligence and Statistics (AISTATS)*, pp. 1508–1518, 2020.
19. Yimu Wang, Ren-Jie Song, Xiu-Shen Wei, and **Lijun Zhang**. An Adversarial Domain Adaptation Network for Cross-Domain Fine-Grained Recognition. In *Proceedings of the 2020 IEEE Winter Conference on Applications of Computer Vision (WACV)*, pp. 1217–1225, 2020.
20. Guanghui Wang, Shiyin Lu, Weiwei Tu, and **Lijun Zhang**. SAdam: A Variant of Adam for Strongly Convex Functions. In *International Conference on Learning Representations (ICLR)*, 2020.
21. Guanghui Wang, Shiyin Lu, Yao Hu, and **Lijun Zhang**. Adapting to Smoothness: A More Universal Algorithm for Online Convex Optimization. In *Proceedings of the 34th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 6162–6169, 2019.
22. Shiyin Lu, Guanghui Wang, Yao Hu, and **Lijun Zhang**. Multi-Objective Generalized Linear Bandits. In *Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 3080–3086, 2019.
23. Pengcheng Li, Jinfeng Yi, Bowen Zhou, and **Lijun Zhang**. Improving the Robustness of Deep Neural Networks via Adversarial Training with Triplet Loss. In *Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 2909–2915, 2019.
24. Guanghui Wang, Shiyin Lu, and **Lijun Zhang**. Adaptivity and Optimality: A Universal Algorithm for Online Convex Optimization. In *Proceedings of 35th Conference on Uncertainty in Artificial Intelligence (UAI)*, 2019.
25. **Lijun Zhang**, and Zhi-Hua Zhou. Stochastic Approximation of Smooth and Strongly Convex Functions: Beyond the  $O(1/T)$  Convergence Rate. In *Proceedings of the 32nd Annual Conference on Learning Theory (COLT)*, pp. 3160–3179, 2019.
26. **Lijun Zhang**, Tie-Yan Liu, and Zhi-Hua Zhou. Adaptive Regret of Convex and Smooth Functions. In *Proceedings of the 36th International Conference on Machine Learning (ICML)*, pp. 7414–7423, 2019.
27. Shiyin Lu, Guanghui Wang, Yao Hu, and **Lijun Zhang**. Optimal Algorithms for Lipschitz Bandits with Heavy-tailed Rewards. In *Proceedings of the 36th International Conference on Machine Learning (ICML)*, pp. 4154–4163, 2019.
28. **Lijun Zhang**, and Zhi-Hua Zhou.  $\ell_1$ -regression with Heavy-tailed Distributions. In *Advances in Neural Information Processing Systems 31 (NeurIPS)*, pp. 1076–1086, 2018.
29. **Lijun Zhang**, Shiyin Lu, and Zhi-Hua Zhou. Adaptive Online Learning in Dynamic Environments. In *Advances in Neural Information Processing Systems 31 (NeurIPS)*, pp. 1323–1333, 2018.

30. Mingrui Liu, Xiaoxuan Zhang, **Lijun Zhang**, Rong Jin, and Tianbao Yang. Fast Rates of ERM and Stochastic Approximation: Adaptive to Error Bound Conditions. In *Advances in Neural Information Processing Systems 31 (NeurIPS)*, pp. 4678–4689, 2018.
31. Pengcheng Li, Jinfeng Yi, and **Lijun Zhang**. Query-Efficient Black-Box Attack by Active Learning. In *Proceedings of the 18th IEEE International Conference on Data Mining (ICDM)*, pp. 1200–1205, 2018.
32. **Lijun Zhang**, Tianbao Yang, Rong Jin, and Zhi-Hua Zhou. Dynamic Regret of Strongly Adaptive Methods. In *Proceedings of the 35th International Conference on Machine Learning (ICML)*, pp. 5877–5886, 2018.
33. Guanghui Wang, Dakuan Zhao, and **Lijun Zhang**. Minimizing Adaptive Regret with One Gradient per Iteration. In *Proceedings of the 27th International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 2762–2768, 2018.
34. Yuanyu Wan, Nan Wei, and **Lijun Zhang**. Efficient Adaptive Online Learning via Frequent Directions. In *Proceedings of the 27th International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 2748–2754, 2018.
35. Yuanyu Wan, and **Lijun Zhang**. Accelerating Adaptive Online Learning by Matrix Approximation. In *Proceedings of The 22nd Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, pp. 405–417, 2018.
36. Tianbao Yang, Zhe Li, and **Lijun Zhang**. A Simple Analysis for Exp-concave Empirical Minimization with Arbitrary Convex Regularizer. In *Proceedings of the 21st International Conference on Artificial Intelligence and Statistics (AISTATS)*, pp. 445–453, 2018.
37. Haipeng Dai, Ke Sun, Alex X. Liu, **Lijun Zhang**, Jiaqi Zheng, and Guihai Chen. Charging Task Scheduling for Directional Wireless Charger Networks. In *Proceedings of the 47th International Conference on Parallel Processing (ICPP)*, 2018.
38. **Lijun Zhang**, Tianbao Yang, Jinfeng Yi, Rong Jin, and Zhi-Hua Zhou. Improved Dynamic Regret for Non-degenerate Functions. In *Advance in Neural Information Processing Systems 30 (NIPS)*, pp. 732–741, 2017.
39. Bo-Jian Hou, **Lijun Zhang**, and Zhi-Hua Zhou. Learning with Feature Evolvable Streams. In *Advance in Neural Information Processing Systems 30 (NIPS)*, pp. 1416–1426, 2017.
40. Jinfeng Yi, Cho-Jui Hsieh, Kush R. Varshney, **Lijun Zhang**, and Yao Li. Scalable Demand-Aware Recommendation. In *Advance in Neural Information Processing Systems 30 (NIPS)*, pp. 2409–2418, 2017.
41. **Lijun Zhang**, Tianbao Yang, and Rong Jin. Empirical Risk Minimization for Stochastic Convex Optimization:  $O(1/n)$ - and  $O(1/n^2)$ -type of Risk Bounds. In *Proceedings of the 30th Conference on Learning Theory (COLT)*, pp. 1954–1979, 2017.
42. Tianbao Yang, Qihang Lin, and **Lijun Zhang**. A Richer Theory of Convex Constrained Optimization with Reduced Projections and Improved Rates. In *Proceedings of the 34th International Conference on Machine Learning (ICML)*, pp. 3901–3910, 2017.
43. Xinyu Yan, **Lijun Zhang**, and Wu-Jun Li. Semi-Supervised Deep Hashing with a Bipartite Graph. In *Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 3238–3244, 2017.

44. Bo-Jian Hou, **Lijun Zhang**, and Zhi-Hua Zhou. Storage Fit Learning with Unlabeled Data. In *Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 1844–1850, 2017.
45. Yichi Xiao, Zhe Li, Tianbao Yang, and **Lijun Zhang**. SVD-free Convex-Concave Approaches for Nuclear Norm Regularization. In *Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 3126–3132, 2017.
46. Jie Zhang, and **Lijun Zhang**. Efficient Stochastic Optimization for Low-Rank Distance Metric Learning. In *Proceedings of the 31st AAAI Conference on Artificial Intelligence (AAAI)*, pp. 933–939, 2017.
47. Zhe Li, Tianbao Yang, **Lijun Zhang**, and Rong Jin. A Two-stage Approach for Learning a Sparse Model with Sharp Excess Risk Analysis. In *Proceedings of the 31st AAAI Conference on Artificial Intelligence (AAAI)*, pp. 2224–2230, 2017.
48. Yi Xu, Haiqin Yang, **Lijun Zhang**, and Tianbao Yang. Efficient Non-oblivious Randomized Reduction for Risk Minimization with Improved Excess Risk Guarantee. In *Proceedings of the 31st AAAI Conference on Artificial Intelligence (AAAI)*, pp. 2796–2802, 2017.
49. **Lijun Zhang**, Tianbao Yang, Rong Jin, and Zhi-Hua Zhou. Sparse Learning for Large-scale and High-dimensional Data: A Randomized Convex-concave Optimization Approach. In *Proceedings of the 27th International Conference on Algorithmic Learning Theory (ALT)*, pp. 83–97, 2016.
50. Jianhui Chen, Tianbao Yang, Qihang Lin, **Lijun Zhang**, and Yi Chang. Optimal Stochastic Strongly Convex Optimization with a Logarithmic Number of Projections. In *Proceedings of the 32nd Conference on Uncertainty in Artificial Intelligence (UAI)*, pp. 122–131, 2016.
51. **Lijun Zhang**, Tianbao Yang, Rong Jin, Yichi Xiao, and Zhi-Hua Zhou. Online Stochastic Linear Optimization under One-bit Feedback. In *Proceedings of the 33rd International Conference on Machine Learning (ICML)*, pp. 392–401, 2016.
52. Tianbao Yang, **Lijun Zhang**, Rong Jin, and Jinfeng Yi. Tracking Slowly Moving Clairvoyant: Optimal Dynamic Regret of Online Learning with True and Noisy Gradient. In *Proceedings of the 33rd International Conference on Machine Learning (ICML)*, pp. 449–457, 2016.
53. **Lijun Zhang**, Tianbao Yang, Jinfeng Yi, Rong Jin, and Zhi-Hua Zhou. Stochastic Optimization for Kernel PCA. In *Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 2316–2322, 2016.
54. Weizhong Zhang, **Lijun Zhang**, Rong Jin, Deng Cai, and Xiaofei He. Accelerated Sparse Linear Regression via Random Projection. In *Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 2337–2343, 2016.
55. Zhe Li, Tianbao Yang, **Lijun Zhang**, and Rong Jin. Fast and Accurate Refined Nyström Based Kernel SVM. In *Proceedings of the 30th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 1830–1836, 2016.
56. Jinfeng Yi, **Lijun Zhang**, Tianbao Yang, Wei Liu, and Jun Wang. An Efficient Semi-Supervised Clustering Algorithm with Sequential Constraints. In *Proceedings of the 21th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)*, pp. 1405–1414, 2015.

57. Mehrdad Mahdavi, **Lijun Zhang**, and Rong Jin. Lower and Upper Bounds on the Generalization of Stochastic Exponentially Concave Optimization. In *Proceedings of the 28th Conference on Learning Theory (COLT)*, pp. 1305–1320, 2015.
58. Tianbao Yang, **Lijun Zhang**, Rong Jin, and Shenghuo Zhu. An Explicit Sampling Dependent Spectral Error Bound for Column Subset Selection. In *Proceedings of the 32nd International Conference on Machine Learning (ICML)*, pp. 135–143, 2015.
59. Tianbao Yang, **Lijun Zhang**, Rong Jin, and Shenghuo Zhu. Theory of Dual-Sparse Regularized Randomized Reduction. In *Proceedings of the 32nd International Conference on Machine Learning (ICML)*, pp. 305–314, 2015.
60. **Lijun Zhang**, Tianbao Yang, Rong Jin, and Zhi-Hua Zhou. A Simple Homotopy Algorithm for Compressive Sensing. In *Proceedings of the 18th International Conference on Artificial Intelligence and Statistics (AISTATS)*, pp. 1116–1124, 2015.
61. **Lijun Zhang**, Tianbao Yang, Rong Jin, and Zhi-Hua Zhou. Online Bandit Learning for a Special Class of Non-convex Losses. In *Proceedings of the 29th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 3158–3164, 2015.
62. **Lijun Zhang**, Jinfeng Yi, and Rong Jin. Efficient Algorithms for Robust One-bit Compressive Sensing. In *Proceedings of the 31st International Conference on Machine Learning (ICML)*, pp. 820–828, 2014.
63. Jinfeng Yi, **Lijun Zhang**, Jun Wang, Rong Jin, and Anil K. Jain. A Single-Pass Algorithm for Efficiently Recovering Sparse Cluster Centers of High-dimensional Data. In *Proceedings of the 31st International Conference on Machine Learning (ICML)*, pp. 658–666, 2014.
64. Weizhong Zhang, **Lijun Zhang**, Yao Hu, Rong Jin, Deng Cai, and Xiaofei He. Sparse Learning for Stochastic Composite Optimization. In *Proceedings of the 28th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 893–899, 2014.
65. **Lijun Zhang**, Mehrdad Mahdavi, and Rong Jin. Linear Convergence With Condition Number Independent Access of Full Gradients. In *Advances in Neural Information Processing Systems 26 (NIPS)*, pp. 980–988, 2013.
66. Mehrdad Mahdavi, **Lijun Zhang**, and Rong Jin. Mixed Optimization for Smooth Functions. In *Advances in Neural Information Processing Systems 26 (NIPS)*, pp. 674–682, 2013.
67. **Lijun Zhang**, Mehrdad Mahdavi, Rong Jin, Tianbao Yang, and Shenghuo Zhu. Recovering the Optimal Solution by Dual Random Projection. In *Proceedings of the 26th Annual Conference on Learning Theory (COLT)*, pp. 135–157, 2013.
68. **Lijun Zhang**, Jinfeng Yi, Rong Jin, Ming Lin, and Xiaofei He. Online Kernel Learning with a Near Optimal Sparsity Bound. In *Proceedings of the 30th International Conference on Machine Learning (ICML)*, pp. 621–629, 2013.
69. **Lijun Zhang**, Tianbao Yang, Rong Jin, and Xiaofei He.  $O(\log T)$  Projections for Stochastic Optimization of Smooth and Strongly Convex Functions. In *Proceedings of the 30th International Conference on Machine Learning (ICML)*, pp. 1121–1129, 2013.
70. Jinfeng Yi, **Lijun Zhang**, Rong Jin, Qi Qian, and Anil K. Jain. Semi-Supervised Clustering by Input Pattern Assisted Pairwise Similarity Matrix Completion. In *Proceedings of the 30th International Conference on Machine Learning (ICML)*, pp. 1400–1408, 2013.



71. Tianbao Yang, Mehrdad Mahdavi, Rong Jin, **Lijun Zhang**, and Yang Zhou. Multiple Kernel Learning from Noisy Labels by Stochastic Programming . In *Proceedings of the 29th International Conference on Machine Learning (ICML)*, pp. 233–240, 2012.
72. **Lijun Zhang**, Rong Jin, Chun Chen, Jiajun Bu, and Xiaofei He. Efficient Online Learning for Large-Scale Sparse Kernel Logistic Regression. In *Proceedings of the 26th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 1219–1225, 2012.
73. Zhanying He, Chun Chen, Jiajun Bu, Can Wang, **Lijun Zhang**, Deng Cai, and Xiaofei He. Document Summarization Based on Data Reconstruction. In *Proceedings of the 26th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 620–626, 2012. (Outstanding Paper Award)
74. **Lijun Zhang**, Chun Chen, Jiajun Bu, Zhengguang Chen, Shulong Tan, and Xiaofei He. Discriminative Codeword Selection for Image Representation. In *Proceedings of the 18th ACM International Conference on Multimedia (ACM Multimedia)*, pp. 173–182, 2010.
75. Jiajun Bu, Shulong Tan, Chun Chen, Can Wang, Hao Wu, **Lijun Zhang**, and Xiaofei He. Music Recommendation by Unified Hypergraph: Combining Social Media Information and Music Content. In *Proceedings of the 18th ACM International Conference on Multimedia (ACM Multimedia)*, pp. 391–400, 2010.
76. Chun Chen, Zhengguang Chen, Jiajun Bu, Can Wang, **Lijun Zhang**, and Cheng Zhang. G-Optimal Design with Laplacian Regularization. In *Proceedings of the 24th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 413–418, 2010.
77. Hao Wu, Jiajun Bu, Chun Chen, Can Wang, Guang Qiu, **Lijun Zhang**, and Jianfeng Shen. Modeling Dynamic Multi-Topic Discussions in Online Forums. In *Proceedings of the 24th AAAI Conference on Artificial Intelligence (AAAI)*, pp. 1455–1460, 2010.
78. **Lijun Zhang**, Chun Chen, Wei Chen, Jiajun Bu, Deng Cai, and Xiaofei He. Convex Experimental Design Using Manifold Structure for Image Retrieval. In *Proceedings of the 17th ACM International Conference on Multimedia (ACM Multimedia)*, pp. 45–53, 2009.

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PUBLICATIONS

1. Peng Zhao, Guanghui Wang, **Lijun Zhang**, and Zhi-Hua Zhou. Bandit Convex Optimization in Non-stationary Environments. *Journal of Machine Learning Research (JMLR)*, 22(125): 1–45, 2021.
2. Bo-Jian Hou, **Lijun Zhang**, and Zhi-Hua Zhou. Learning With Feature Evolvable Streams. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 33(6): 2602–2615, 2021.
3. Tianbao Yang, **Lijun Zhang**, Qihang Lin, Shenghuo Zhu, and Rong Jin. High-dimensional Model Recovery from Random Sketched Data by Exploring Intrinsic Sparsity. *Machine Learning*, 109(5): 899–938, 2020.
4. Yuanyu Wan, and **Lijun Zhang**. Accelerating Adaptive Online Learning by Matrix Approximation. *International Journal of Data Science and Analytics (JDSA)*, 9(4): 389–400, 2020.
5. Fanhua Shang, Kaiwen Zhou, Hongying Liu, James Cheng, Ivor W. Tsang, **Lijun Zhang**, Dacheng Tao, and Licheng Jiao. Sparse Learning with Stochastic Composite Optimization. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 32(1): 188–202, 2020.

6. **Lijun Zhang**, Tianbao Yang, Rong Jin, and Zhi-Hua Zhou. Relative Error Bound Analysis for Nuclear Norm Regularized Matrix Completion. *Journal of Machine Learning Research (JMLR)*, 20(97): 1–22, 2019.
7. Tianbao Yang, **Lijun Zhang**, Rong Jin, Shenghuo Zhu, and Zhi-Hua Zhou. A Simple Homotopy Proximal Mapping Algorithm for Compressive Sensing. *Machine Learning*, 108(6): 1019–1056, 2019.
8. Weizhong Zhang, **Lijun Zhang**, Zhongming Jin, Rong Jin, Deng Cai, Xuelong Li, Ronghua Liang, and Xiaofei He. Sparse Learning with Stochastic Composite Optimization. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 39(6): 1223–1236, 2017.
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#### INVITED TALKS

- Smoothed Online Learning, The 3rd Conference on Big Data and Artificial Intelligence Organized by CSIAM (**CSIAM-BDAI 2021**).
- Online Learning in Changing Environments, Early Career Spotlight Talks of the 29th International Joint Conference on Artificial Intelligence (**IJCAI 2020**).
- Adaptive Regret for Online Learning, Microsoft Research Asia Academic Day 2019.
- Learning under Heavy-tailed Distributions, The 2nd International Symposium on Image Computing and Digital Medicine (**ISICDM 2018**).
- Efficient Online Learning for Dynamic Environments, The 1st Conference on Big Data and Artificial Intelligence Organized by CSIAM (**CSIAM-BDAI 2018**).
- Efficient Online Learning for Dynamic Environments, 2018 International Workshop on Signal Processing, Optimization and Control (**SPOC 2018**).
- Online Learning and Applications, The 1st International Symposium on Image Computing and Digital Medicine (**ISICDM 2017**).
- Fast Rates for Empirical Risk Minimization: Beyond the  $O(1/n)$  Risk Bound, The 16th China Conference on Machine Learning (**CCML 2017**).
- Online Learning in Dynamic Environment, The 2nd Youth Symposium on Scientific and Engineering Computing (**YSSEC 2016**).
- Online Stochastic Linear Optimization under One-bit Feedback, The 6th Vision and Learning Seminar (**VALSE 2016**).
- Randomized Algorithms for Large-scale Convex Optimization, 2016 Nanjing Workshop on Numerical Optimization with Applications.
- Stochastic Optimization for Large-scale Machine Learning, The 13rd Chinese Workshop on Machine Learning and Applications (**MLA 2015**).

- Randomized Algorithms for Large-scale Convex Optimization, The 2nd Chinese Workshop on Evolutionary Computation and Learning (**ECOLE 2015**).