

SHIQIAN MA

Department of Mathematics, University of California, Davis, CA 95616

Email: sqma@ucdavis.edu \diamond <https://www.math.ucdavis.edu/~sqma/>

ACADEMIC APPOINTMENTS

- July 2019 – present
Associate Professor.
Department of Mathematics, UC Davis.
- July 2017 – June 2019
Assistant Professor.
Department of Mathematics, UC Davis.
- Faculty: Graduate Group in Applied Mathematics, UC Davis. 2017 – present
- Faculty: Electrical and Computer Engineering Graduate Program, UC Davis. 2019 – present
- Faculty: Center for Data Science and Artificial Intelligence Research, UC Davis. 2020 – present
- Faculty: UC Davis TETRAPODS Institute of Data Science. 2019 – present
- December 2012 - July 2017
Assistant Professor.
Department of Systems Engineering & Engineering Management, The Chinese University of Hong Kong.
- September 2011 - December 2012
NSF Postdoctoral Fellow. Institute for Mathematics and Its Applications (IMA), University of Minnesota.
Mentor: Shuzhong Zhang

EDUCATION

- Ph.D. 2011
Department of Industrial Engineering and Operations Research,
Columbia University, New York, NY, USA
Advisor: Donald Goldfarb
- M.S. 2006
Institute of Computational Mathematics and Scientific/Engineering Computing,
Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Beijing, China
Advisor: Ya-xiang Yuan
- B.S. 2003
School of Mathematical Sciences, Peking University, Beijing, China.

LONG-TERM WORKSHOPS

- Core participant of the *Bridging Continuous and Discrete Optimization* workshop. Simons Institute for the Theory of Computing, UC Berkeley. Aug 16- Dec 15, 2017
- Core participant of the *Modern Trends in Optimization and Its Application* workshop. IPAM, UCLA. September 12 – December 17, 2010.

HONORS AND AWARDS

- Excellence Award for Visiting Scholar at Tencent AI Lab, 2018

- Distinguished Paper Award, International Congress of Chinese Mathematicians, 2017
- Journal of Operations Research Society of China, Excellent Paper Award, 2016
- INFORMS George Nicholson Student Paper Competition, Honorable Mention, 2011
- Finalist of the 2011 IBM Herman Goldstine Fellowship.
- Winner of the INFORMS Optimization Society Best Student Paper Prize, 2010.
- The Class of 1988 Doctoral Fellowship, Columbia University. 2009-2010.

PROFESSIONAL SERVICES AND EDITORIALSHIP

- Area Chair of NeurIPS 2022.
- Editorial Board Member, Journal of Scientific Computing, 2021 – present
- Area Chair of ICML 2021, 2022.
- Cluster chair of IOS (INFORMS Optimization Society) conference 2020.
- Cluster chair of Nonlinear Optimization at INFORMS Annual Meeting. 2019, 2020
- Vice Chair of Nonlinear Optimization Group of the INFORMS Optimization Society. 2019-2020
- Guest editor for *Pacific Journal of Optimization* on the special issue “Polynomial and Tensor Optimization”, 2015.

MEMBERSHIP OF SOCIETY

- MOS: Mathematical Optimization Society
- SIAM: Society for Industrial and Applied Mathematics
- INFORMS: The Institute for Operations Research and the Management Sciences

RESEARCH GRANTS

- Meta Platforms (formerly Facebook) research fund. PI. \$100,000. Duration: 2022-2023.
- Collaborative Research: CIF: Small: New Theory and Applications of Non-smooth and Non-Lipschitz Riemannian Optimization. Lead PI. NSF CISE Core Programs. Award number CCF-2007797. Funded. UC Davis Portion: \$316,750. Duration: 10/01/2020-09/30/2023.
- NSF Research Experiences for Undergraduates (REU) Program (\$16,000), Summer 2021
- Collaborative Research: New Methods, Theory and Applications for Nonsmooth Manifold-Based Learning. Lead PI. NSF CDS&E-MSS Program, Award number DMS-1953210. Funded. UC Davis Portion: \$150,000. Duration: 06/01/2020-05/31/2023.
- Nonsmooth Riemannian Optimization for Online Learning. PI. CeDAR (Center for Data Science and Artificial Intelligence Research) Innovative Data Science Seed Funding Program. UC Davis. Funded. Amount: \$40,000. Duration: 04/21/2020-04/20/2022.
- UC Davis TETRAPODS Institute of Data Science. Agency: NSF. Grant No.: DMS-1934568. Research. Award Amount: \$1,500,000. Duration: 10/01/2019-09/30/2022. Role: Senior Personnel. PI Name: Naoki Saito
- “Stochastic Quasi-Newton Methods for Nonconvex Optimization Problems”. General Research Fund of Hong Kong Research Grants Council, Principal Investigator. Project number: 14206017. 01/01/2018-12/31/2020. Amount: HK\$ 472,351. (Co-Investigator: Donald Goldfarb and Xiao Wang). (Note: The PI left Hong Kong shortly after this grant was awarded. So the grant was returned per the request from Hong Kong Research Grants Council.)

- “Optimization Algorithms for Low-Rank Tensor Recovery and Tensor PCA”. General Research Fund of Hong Kong Research Grants Council, Principal Investigator. Project number: 14205314. 01/01/2015-12/31/2017. Amount: HK\$ 500,000. (Co-Investigator: Shuzhong Zhang and Bo Jiang)
- “Sparse Optimization for High-Dimensional Data Analysis: Algorithms and Applications”. General Research Fund (Early Career Scheme) of Hong Kong Research Grants Council, Principal Investigator. Project number: CUHK 439513. 01/01/2014-12/31/2016. Amount: HK\$ 595,100.
- Direct Grant from Engineering Panel of The Chinese University of Hong Kong. Principal Investigator. Project Code: 4055016. 02/01/2013-01/31/2015. Amount: HK\$ 150,000.

RESEARCH INTERESTS

- Methodologies: Optimization; Operations Research
- Applications: Data Science; Machine Learning; Statistics; Signal Processing; Image Processing; Bioinformatics

PUBLICATIONS

- Google Scholar Citation: 5370, h-index: 35, as of June 13, 2022
- * denotes student or research assistant under my supervision when the work was conducted.

In Pipeline

1. Jiaxiang Li*, **Shiqian Ma**. Federated Learning on Riemannian Manifolds. submitted to NeurIPS. 2022.
2. Xuxing Chen*, Minhui Huang*, **Shiqian Ma**. Decentralized Bilevel Optimization. submitted to NeurIPS. 2022.
3. Minhui Huang*, Kaiyi Ji, **Shiqian Ma**, Lifeng Lai. Efficiently Escaping Saddle Points in Bilevel Optimization. submitted to JMLR. 2022.
4. Minhui Huang*, **Shiqian Ma**, Lifeng Lai. On the Convergence of the Projected Alternating Maximization Algorithm for Equitable and Optimal Transport. submitted to JMLR. 2022.
5. Chao Zhang, Xiaojun Chen, and **Shiqian Ma**. A Riemannian Smoothing Steepest Descent Method for Non-Lipschitz Optimization on Submanifolds. submitted to Math Programming, 2022.
6. Jiaxiang Li*, Krishnakumar Balasubramanian, **Shiqian Ma**. Zeroth-order Optimization on Riemannian Manifolds. submitted to Math of Operations Research, 2020
7. Conghui Tan*, **Shiqian Ma** and Tong Zhang. A Varying-Coefficient Regularized Dual Averaging Algorithm for Regularized Stochastic Optimization. working paper. 2019.
8. Bo Jiang, **Shiqian Ma**, Anthony Man-Cho So, and Shuzhong Zhang. Vector Transport-Free SVRG with General Retraction for Riemannian Optimization: Complexity Analysis and Practical Implementation. working paper. 2017

Journal Papers

1. Zhongruo Wang*, Krishnakumar Balasubramanian, **Shiqian Ma**, Meisam Razaviyayn. Zeroth-Order Algorithms for Nonconvex Minimax Problems with Improved Complexities. accepted in *Journal of Global Optimization*. 2022
2. Bokun Wang*, **Shiqian Ma**, Lingzhou Xue. Riemannian Stochastic Proximal Gradient Methods for Nonsmooth Optimization over the Stiefel Manifold. *Journal of Machine Learning Research*. 23(106):1-33, 2022.

3. Shixiang Chen*, Zengde Deng, **Shiqian Ma** and Anthony Man-Cho So. Manifold Proximal Point Algorithms for Dual Principal Component Pursuit and Orthogonal Dictionary Learning. *IEEE Transactions on Signal Processing*. 69: 4759-4773. 2021
4. Zhongruo Wang*, Bingyuan Liu, Shixiang Chen, **Shiqian Ma**, Lingzhou Xue, Hongyu Zhao. A Manifold Proximal-Linear Method for Sparse Spectral Clustering with Application to Single-Cell RNA Sequencing Data Analysis. Accepted in *INFORMS Journal on Optimization*. 2021.
5. Minhui Huang*, **Shiqian Ma**, Lifeng Lai. Robust Low-Rank Matrix Completion via an Alternating Manifold Proximal Gradient Continuation Method. *IEEE Transactions on Signal Processing*. 69: 2639-2652. 2021
6. Tianyi Lin*, **Shiqian Ma**, Yinyu Ye and Shuzhong Zhang. An ADMM-Based Interior-Point Method for Large-Scale Linear Programming. *Optimization Methods and Software*. 36 (2-3): 389-424. 2021.
7. **Shiqian Ma**, Mingyi Hong. A Gentle Introduction to ADMM for Statistical Problems. Wiley StatsRef: Statistics Reference Online. 2021
8. Shixiang Chen*, **Shiqian Ma**, Anthony Man-Cho So and Tong Zhang. Proximal Gradient Method for Nonsmooth Optimization over the Stiefel Manifold. *SIAM J. Optimization*, 30 (1): 210-239, 2020
9. Junyu Zhang, **Shiqian Ma**, Shuzhong Zhang. Primal-Dual Optimization Algorithms over Riemannian Manifolds: an Iteration Complexity Analysis. *Mathematical Programming Series A*. 184: 445-490, 2020.
10. Mingyi Hong, Tsung-Hui Chang, Xiangfeng Wang, Meisam Razaviyayn, **Shiqian Ma**, Zhi-Quan Luo. A Block Successive Upper Bound Minimization Method of Multipliers for Linearly Constrained Convex Optimization. *Mathematics of Operations Research*. 45 (3): 833-861. 2020.
11. Shixiang Chen*, **Shiqian Ma**, Lingzhou Xue and Hui Zou. An Alternating Manifold Proximal Gradient Method for Sparse Principal Component Analysis and Sparse Canonical Correlation Analysis. *INFORMS J. Optimization*. 2020. 2 (3): 192-208.
12. Conghui Tan*, Yuqiu Qian, **Shiqian Ma** and Tong Zhang. Accelerated Dual-Averaging Primal-Dual Method for Composite Convex Minimization. *Optimization Methods and Software*. 35 (4): 741-766, 2020.
13. **Shiqian Ma**, Fei Wang, Linchuan Wei and Henry Wolkowicz. Robust Principal Component Analysis using Facial Reduction. *Optimization and Engineering*, 21: 1195-1219, 2020.
14. Ya-Feng Liu, Xin Liu and **Shiqian Ma**. On the non-ergodic convergence rate of an inexact augmented Lagrangian framework for composite convex programming. *Mathematics of Operations Research*. 44 (2): 632-650, 2019.
15. Bo Jiang, Tianyi Lin*, **Shiqian Ma** and Shuzhong Zhang. Structured Nonconvex and Nonsmooth Optimization: Algorithms and Iteration Complexity Analysis. *Computational Optimization and Applications*. 72 (1): 115-157, 2019.
16. Bo Jiang, **Shiqian Ma** and Shuzhong Zhang. Low-M-Rank Tensor Completion and Robust Tensor PCA. *IEEE Journal of Selected Topics in Signal Processing*. 12 (6): 1390-1404, 2018. (Previous title: New Ranks for Even-Order Tensors and Their Applications in Low-Rank Tensor Optimization.)
17. **Shiqian Ma** and Necdet Serhat Aybat. Efficient Optimization Algorithms for Robust Principal Component Analysis and Its Variants. *Proceedings of the IEEE*. 106 (8): 1411-1426. 2018.

18. Jason Causey, Junyu Zhang, **Shiqian Ma**, Bo Jiang, Jake Qualls, David G. Politte, Fred Prior, Shuzhong Zhang and Xiuzhen Huang. Highly accurate model for prediction of lung nodule malignancy with CT scans. *Scientific Reports*. 8, Article number: 9286, 2018.
19. Tianyi Lin*, **Shiqian Ma** and Shuzhong Zhang. Global Convergence of Unmodified 3-Block ADMM for a Class of Convex Minimization Problems. *Journal of Scientific Computing*, 76 (1): 69-88, 2018.
20. Lei Yang, Junhui Wang and **Shiqian Ma**. Reduced-Rank Modeling for High-Dimensional Model-Based Clustering. *Journal of Computational Mathematics*, 36 (3): 428-442, 2018. (Invited paper on Special issue of International Workshop on Modern Optimization and Applications)
21. Necdet Serhat Aybat, Zi Wang, Tianyi Lin* and **Shiqian Ma**. Distributed Linearized Alternating Direction Method of Multipliers for Composite Convex Consensus Optimization. *IEEE Transactions on Automatic Control*. 63 (1): 5-20, 2018.
22. Yuwen Gu, Jun Fan, Lingchen Kong, **Shiqian Ma**, and Hui Zou. ADMM for High-Dimensional Sparse Penalized Quantile Regression. *Technometrics*. 60 (3): 319-331, 2018
23. Xiao Wang, **Shiqian Ma**, Donald Goldfarb and Wei Liu. Stochastic Quasi-Newton Methods for Nonconvex Stochastic Optimization. *SIAM J. Optimization*. 27 (2): 927-956, 2017
24. Tianyi Lin*, **Shiqian Ma** and Shuzhong Zhang. An Extragradient-Based Alternating Direction Method for Convex Minimization. *Foundations of Computational Mathematics*, 17 (1): 35-59, 2017
25. Xiao Wang, **Shiqian Ma** and Ya-xiang Yuan. Penalty Methods with Stochastic Approximation for Stochastic Nonlinear Programming. *Mathematics of Computation*, 86 (306): 1793-1820, 2017.
26. Bo Jiang, **Shiqian Ma**, Matthew Price Hardin, Linbo Qiao, Jason Causey, Ian Bitts, Daniel Johnson, Shuzhong Zhang and Xiuzhen Huang. SparRec: An effective matrix completion framework of missing data imputation for GWAS. *Scientific Reports*. 6, Article number: 35534, 2016
27. **Shiqian Ma** and Junfeng Yang. Applications of Gauge Duality in Robust Principal Component Analysis and Semidefinite Programming. *Science China Mathematics, Special issue on ICIAM (invited paper)*. 59: 1579-1592, 2016
28. Tianyi Lin*, **Shiqian Ma** and Shuzhong Zhang. Iteration Complexity Analysis of Multi-Block ADMM for a Family of Convex Minimization without Strong Convexity. *Journal of Scientific Computing*. 69: 52-81, 2016.
29. **Shiqian Ma**. Alternating Proximal Gradient Method for Convex Minimization. *Journal of Scientific Computing*, 68(2): 546-572, 2016
30. Ya-Feng Liu, **Shiqian Ma**, Yu-Hong Dai and Shuzhong Zhang. A Smoothing SQP Framework for a Class of Composite L_q Minimization over Polyhedron. *Mathematical Programming Series A*, 158(1): 467-500, 2016.
31. Caihua Chen, **Shiqian Ma**, Junfeng Yang. A General Inertial Proximal Point Algorithm for Mixed Variational Inequality Problem. *SIAM Journal On Optimization*, 25 (4): 2120-2142, 2015.
32. Caihua Chen, Raymond H. Chan, **Shiqian Ma** and Junfeng Yang. Inertial Proximal ADMM for Linearly Constrained Separable Convex Optimization. *SIAM Journal on Imaging Sciences*, 8 (4): 2239-2267, 2015.
33. Tianyi Lin*, **Shiqian Ma** and Shuzhong Zhang. On the Sublinear Convergence Rate of Multi-Block ADMM. *Journal of the Operations Research Society of China*, 3(3): 251-274, 2015.
34. Tianyi Lin*, **Shiqian Ma** and Shuzhong Zhang. On the Global Linear Convergence of the ADMM with Multi-Block Variables. *SIAM Journal on Optimization*, 25 (3): 1478-1497, 2015.

35. Ya-Feng Liu, Yu-Hong Dai and **Shiqian Ma**, Joint Power and Admission Control: Non-Convex L_q Approximation and An Effective Polynomial Time Deflation Approach. *IEEE Transactions on Signal Processing*, 63 (14): 3641-3656, 2015
36. Xiangfeng Wang, Mingyi Hong, **Shiqian Ma** and Zhi-Quan Luo, Solving Multiple-Block Separable Convex Minimization Problems Using Two-Block Alternating Direction Method of Multipliers. *Pacific Journal of Optimization, Special issue (invited paper)*, 11 (4): 645-667, 2015
37. **Shiqian Ma**, Daniel Johnson, Cody Ashby, Donghai Xiong, Carole L. Cramer, Jason H. Moore, Shuzhong Zhang and Xiuzhen Huang. SPARCoC: a new framework for molecular pattern discovery and cancer gene identification. *PLoS ONE* 10(3): e0117135, 2015.
38. Zhiwei Qin, Donald Goldfarb and **Shiqian Ma**. An Alternating Direction Method for Total Variation Denoising. *Optimization Methods and Software*, 30 (3): 594-615, 2015.
39. Bo Jiang, **Shiqian Ma** and Shuzhong Zhang. Tensor Principal Component Analysis via Convex Optimization. *Mathematical Programming Series A*, 150 (2): 423-457, 2015.
40. Bo Jiang, **Shiqian Ma** and Shuzhong Zhang. Alternating Direction Method of Multipliers for Real and Complex Polynomial Optimization Models. *Optimization, Special issue (invited paper)*, 63 (6): 883-898, 2014.
41. Necdet Serhat Aybat, Donald Goldfarb and **Shiqian Ma**. Efficient Algorithms for Robust and Stable Principal Component Pursuit. *Computational Optimization and Applications*, 58: 1-29, 2014.
42. Donald Goldfarb, **Shiqian Ma** and Katya Scheinberg. Fast Alternating Linearization Methods for Minimizing the Sum of Two Convex Functions. *Mathematical Programming Series A*, 141 (1-2): 349-382, 2013.
43. **Shiqian Ma**. Alternating Direction Method of Multipliers for Sparse Principal Component Analysis. *Journal of the Operations Research Society of China*, 1 (2): 253-274, 2013. (Best Paper Award of J. Operations Research Society of China, Awarded in 2016)
44. Bo Huang, **Shiqian Ma** and Donald Goldfarb. Accelerated Linearized Bregman Method. *Journal of Scientific Computing, Special issue (invited paper)*. 54 (2-3): 428-453, 2013.
45. **Shiqian Ma**, Lingzhou Xue and Hui Zou. Alternating Direction Methods for Latent Variable Gaussian Graphical Model Selection. *Neural Computation*, 25 (8): 2172-2198, 2013.
46. Lingzhou Xue, **Shiqian Ma** and Hui Zou. Positive Definite ℓ_1 Penalized Estimation of Large Covariance Matrices. *Journal of the American Statistical Association*. 107 (500): 1480-1491, 2012.
47. Donald Goldfarb and **Shiqian Ma**. Fast Multiple-Splitting Algorithms for Convex Optimization. *SIAM Journal on Optimization*, 22 (2): 533-556, 2012. (INFORMS Optimization Society 2010 Best Student Paper Prize; Honorable Mention of 2011 INFORMS George Nicholson Student Paper Prize).
48. **Shiqian Ma**, Donald Goldfarb and Lifeng Chen. Fixed Point and Bregman Iterative Methods for Matrix Rank Minimization. *Mathematical Programming Series A*. 128 (1): 321-353, 2011.
49. Donald Goldfarb and **Shiqian Ma**. Convergence of Fixed-Point Continuation Algorithms for Matrix Rank Minimization. *Foundations of Computational Mathematics*. 11 (2): 183-210, 2011.
50. Yanfei Wang and **Shiqian Ma**, A Fast Subspace Method for Image Deblurring. *Applied Mathematics and Computation*. 215 (6): 2359-2377, 2009.

51. Yanfei Wang, **Shiqian Ma**, Hua Yang, Jindi Wang and Xiaowen Li. On The Effective Inversion by Imposing a priori Information for Retrieval of Land Surface Parameters. *Science in China Series D*. 52 (4):540-549, 2009.
52. Yanfei Wang and **Shiqian Ma**, Projected Barzilai-Borwein Methods for Large Scale Nonnegative Image Restorations. *Inverse Problems in Science and Engineering*. 15 (6) : 559-583, 2007.

Conference Papers

1. Zhongruo Wang*, Krishnakumar Balasubramanian, **Shiqian Ma**, Meisam Razaviyayn. Zeroth-Order Algorithms for Stochastic Nonconvex Minimax Problems with Improved Complexities. 2021 ICML workshop on “Beyond First-Order Methods in Machine Learning Systems”.
2. Minhui Huang*, **Shiqian Ma**, Lifeng Lai. Projection Robust Wasserstein Barycenter. ICML, 2021.
3. Minhui Huang*, **Shiqian Ma**, Lifeng Lai. A Riemannian Block Coordinate Descent Method for Computing the Projection Robust Wasserstein Distance. ICML, 2021.
4. Shixiang Chen*, Zengde Deng, **Shiqian Ma** and Anthony Man-Cho So. Manifold Proximal Point Algorithms for Dual Principal Component Pursuit and Orthogonal Dictionary Learning. Proceedings of the 2019 Asilomar Conference on Signals, Systems, and Computers. Nov 3-6, 2019
5. Conghui Tan*, Tong Zhang, **Shiqian Ma** and Ji Liu. Stochastic Primal-Dual Method for Empirical Risk Minimization with $O(1)$ Per-Iteration Complexity. *NIPS*. 2018.
6. Shixiang Chen*, **Shiqian Ma** and Wei Liu. Geometric descent method for convex composite minimization. *NIPS*. 2017
7. Li Shen, Wei Liu, Ganzhao Yuan, **Shiqian Ma**. GSOS: Gauss-Seidel Operator Splitting Algorithm for Multi-term Nonsmooth Convex Composite Optimization. *ICML*. 2017
8. Li Shen, Wei Liu, Junzhou Huang, Yugang Jiang and **Shiqian Ma**. Adaptive Proximal Average Approximation for Composite Convex Minimization. *AAAI*. 2017
9. Conghui Tan*, **Shiqian Ma**, Yu-Hong Dai and Yuqiu Qian. Barzilai-Borwein Step Size for Stochastic Gradient Descent. *NIPS*. 2016
10. Xiao Wen*, Linbo Qiao, **Shiqian Ma**, Wei Liu, Hong Cheng. Sparse Subspace Clustering for Incomplete Images. ICCV Workshop on Robust Subspace Learning and Computer Vision. 2015
11. Wei Liu, Cun Mu, Rongrong Ji, **Shiqian Ma**, John R. Smith, Shih-Fu Chang. Low-Rank Similarity Metric Learning in High Dimensions. *AAAI 2015*.
12. Weiwei Shen, Jun Wang and **Shiqian Ma**. Doubly Regularized Portfolio with Risk Minimization. *AAAI 2014*.
13. Mingyi Hong, Tsung-Hui Chang, Xiangfeng Wang, Meisam Razaviyayn, **Shiqian Ma**, Zhi-Quan Luo. A block coordinate descent method of multipliers: Convergence Analysis and Applications. *ICASSP. 2014*.
14. **Shiqian Ma** and Amit Chakraborty. Reconstructing A Sequence of Magnetic Resonance Images Simultaneously Using Low-Rank and Sparse Model. *IEEE Workshop on Mathematical Methods in Biomedical Image Analysis (MMBIA)*. 2012.
15. Katya Scheinberg, **Shiqian Ma** and Donald Goldfarb. Sparse Inverse Covariance Selection via Alternating Linearization Methods. *Twenty-Fourth Annual Conference on Neural Information Processing Systems (NIPS)*. 2010.

16. Wei Liu, **Shiqian Ma**, Dacheng Tao, Jianzhuang Liu and Peng Liu. Semi-Supervised Sparse Metric Learning using Alternating Linearization Optimization. *The Sixteenth ACM SIGKDD International Conference On Knowledge Discovery and Data Mining (SIGKDD)*. 2010.
17. Donald Goldfarb, **Shiqian Ma** and Zaiwen Wen. Solving Low-Rank Matrix Completion Problems Efficiently. *The 47th Allerton Conference on Communication, Control and Computing, Illinois, 2009*
18. **Shiqian Ma**, Wotao Yin, Yin Zhang and Amit Chakraborty. An Efficient Algorithm for Compressed MR Imaging Using Total Variation and Wavelets, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. 2008.
19. Yanfei Wang, Xiaowen Li, **Shiqian Ma**, Hua Yang, Zuhair Nashed and Yanning Guan. BRDF Model Inversion of Multiangular Remote Sensing: Ill-posedness and the Interior Point Solution Method. *Proceedings of the 9th International Symposium on Physical Measurements and Signatures in Remote Sensing (ISPMSRS)*, Vol. XXXVI : 328-330, 2005.

Book Chapters

1. **Shiqian Ma**, Mingyi Hong. A Gentle Introduction to alternating direction method of multipliers (ADMM) for statistical problems. In “Computational Statistics in Data Science”. Piegorsch, W., Levine, R., Zhang, H., and Lee, T., eds. Chichester: John Wiley & Sons. Article No. stat08314. 2021
2. **Shiqian Ma**, Bo Jiang, Xiuzhen Huang, and Shuzhong Zhang. Tensor Models: Solution Methods and Applications. Chapter in *Big Data over Networks*, editors: Shuguang (Robert) Cui, Alfred O. Hero III, Zhi-Quan (Tom) Luo, and José M. F. Moura. Cambridge University Press. 2015
3. Katya Scheinberg and **Shiqian Ma**. Optimization Methods for Sparse Inverse Covariance Selection. in *Suvrit Sra, Sebastian Nowozin, and Stephen J. Wright editors: Optimization for Machine Learning*, MIT Press, 2011
4. Yanfei Wang, **Shiqian Ma** and Qinghua Ma. Full Space and Subspace Methods for Large Scale Image Restoration. in *Y. F. Wang, A. G. Yagola and C. C. Yang editors: Optimization and Regularization for Computational Inverse Problems and Applications*, Beijing/Berlin: Higher Education Press and Springer, 2010

Technical Reports

1. Zaiwen Wen, Donald Goldfarb, **Shiqian Ma** and Katya Scheinberg. Row by Row Methods for Semidefinite Programming. *Technical Report, Columbia University*. 2009.

Newsletter

1. **Shiqian Ma**. Fast Multiple Splitting Algorithms for Convex Optimization. *INFORMS OS Today. The Newsletter of the INFORMS Optimization Society*. 2011.

PATENTS

- Amit Chakraborty, Wotao Yin and **Shiqian Ma**. System and Method for Fixed Point Continuation for Total Variation Based Compressed Sensing Imaging. Patent number: US8014616. Issue date: Sep 6, 2011.

TEACHING EXPERIENCES

UC Davis, Department of Mathematics

- MAT-16B: Short Calculus, Spring 2021, Fall 2021

- MAT-170 (previously MAT-160): Math for Data Analytics and Decision Making, Spring 2020, Spring 2022.
- MAT-168: Optimization, Winter 2020, Fall 2020, Fall 2021.
- MAT-135A: Probability, Winter 2019.
- MAT-167: Applied Linear Algebra, Fall 2018.
- MAT-258A: Numerical Optimization, Spring 2018, Fall 2020.
- MAT-21D: Vector Analysis, Winter 2018, Fall 2018.

Chinese University of Hong Kong, Department of Systems Engineering and Engineering Management

- ESTR3508: Stochastic Models, Faculty of Engineering, CUHK. Spring 2017.
- SEEM5350: Numerical Optimization, Spring 2017.
- SEEM2460: Introduction to Data Science, Spring 2017.
- SEEM5121: Numerical Optimization, Spring 2015, Spring 2016.
- SEEM3570: Stochastic Models, Spring 2016, Spring 2017.
- SEEM3440: Operations Research II, Spring 2014, Spring 2015.
- SEEM3470: Dynamic Optimization and Applications, Spring 2014.
- SEEM5630: Stochastic Inventory and Revenue Management, Spring 2013.

University of Minnesota, Department of Industrial and Systems Engineering

- IE 5112: Introduction to Operations Research, Fall 2012.

CONFERENCE PRESENTATIONS, SEMINAR TALKS ETC.

1. Invited speaker at the workshop: Robustness and Resilience in Stochastic Optimization and Statistical Learning: Mathematical Foundations. Erice, Italy, May 19-25, 2022 (cancelled due to pandemic)
2. Invited speaker at Workshop on Optimal Transport and Applications to Machine Learning. East China Normal University. Shanghai, China. May 15, 2022
3. Invited speaker in the Optimization and Data Science Seminar at UCSD. April 13, 2022.
4. Invited speaker at SIAM Conference on Imaging Science. TU Berlin, Berlin, Germany. Mar 22-25, 2022
5. Invited seminar in the Department of Industrial and Systems Engineering at University of Minnesota. Mar 2, 2022
6. Keynote speaker at the Sixth International Conference on Statistical Optimization and Learning. Beijing, China. Dec 17-19, 2021
7. Invited talk at The International Conference on Current Progress in Mathematics. Shanghai University, Shanghai, China. Nov 14, 2021.
8. Invited online seminar in Department of Mathematics, Nanjing University, China. Nov 04, 2021
9. Invited speaker at INFORMS Annual Meeting. Anaheim, CA, USA. October 24-27, 2021.
10. Invited online seminar at Data Science Seminar, Johns Hopkins University, Baltimore, MD, September 15, 2021.

11. Invited online talk in the MIDO (Mathematics in Imaging, Data and Optimization) seminar, Rensselaer Polytechnic Institute, Troy, NY, September 8, 2021.
12. Invited online seminar at Shanghai University of Finance and Economics, Shanghai, China. August 10, 2021.
13. Invited online seminar in Department of Mathematics, Nanjing University of Science and Technology, Nanjing, China. July 7, 2021.
14. Invited speaker at SIAM Conference on Optimization. July 20-23, 2021. Virtual Conference (Originally scheduled in Spokane, Washington, U.S.)
15. Two presentations at ICML. July 18-24, 2021
16. Invited speaker at Mini-Symposium on Low-Rank Models and Applications, Fields Institute, Toronto, Canada. June 9-11, 2021
17. Invited online talk in the Workshop on Optimization Theory and Methods, Beijing International Center for Mathematical Research, Peking University, China. Jan 30-31, 2021.
18. Invited online seminar in the Department of Mathematics, Sichuan University, China. Jan 20, 2021.
19. Plenary speaker. Mathematical Optimization Online Conference. Guangxi University, China, July 20-22, 2020.
20. Invited participant in the workshop: New Developments in Quantum Machine Learning, Banff International Research Station, Banff, Alberta, Canada. July 2020. (cancelled due to pandemic).
21. Invited online seminar. Shanghai University of Finance and Economics, China, July 14, 2020
22. Invited seminar in the Department of Industrial & Enterprise Systems Engineering at University of Illinois at Urbana-Champaign, Feb 19, 2020.
23. Invited seminar in the Department of Combinatorics and Optimization at University of Waterloo, Feb 7, 2020.
24. Invited talk at the 53rd Annual Asilomar Conference on Signals, Systems, and Computers. Pacific Grove, CA. Nov 3-6, 2019.
25. Invited talk at The Third Conference on Scientific and Engineering Computing for Young Chinese Scientists. Beijing, China. Aug 17-21, 2019
26. Invited talk at Seminar in Department of Mathematics, Nanjing University, Nanjing, China. Dec 14, 2018
27. Invited talk at Workshop On New Computing-Driven Opportunities for Optimization. Wuyishan, Fujian, China. August 13-17, 2018
28. Invited talk at Workshop on Optimization Theory and Applications. The Chinese University of Hong Kong (Shenzhen), Shenzhen, China. Aug 9-10, 2018
29. Invited talk at International Symposium on Math Programming (ISMP). Bordeaux, France. July 1-6, 2018
30. Invited talk at DIMACS Workshop on ADMM and Proximal Splitting Methods in Optimization. Rutgers University. June 11-13, 2018.
31. Invited talk at BayArea Optimization Day. May 19, 2018. Stanford University.
32. Invited talk at INFORMS Optimization Conference. Denver. Mar 22-25, 2018
33. Invited talk at UC Davis Math Club. Feb 26, 2018.

34. Invited Seminar in Department of Statistics, UC Davis. Jan 11, 2018.
35. Invited talk at Optimization and Data Science Seminar. Department of Mathematics. UCSD. Dec 6, 2017.
36. Poster presentation at NIPS 2017, Dec 4-9, 2017, Long Beach, CA, USA.
37. Invited talk at Matrix Computations and Scientific Computing Seminar. Departments of Math and CS. UC Berkeley. Oct 25, 2017
38. Invited talk at GGAM Annual Meeting, UC Davis. Oct 18, 2017
39. Invited talk at ShanghaiTech Symposium on Information Science and Technology (SSIST). ShanghaiTech University. Shanghai, China. July 2-4, 2017
40. Invited talk at Workshop on Optimization in Scientific Computing, The Chinese University of Hong Kong, June 21-23, 2017.
41. Mini-courses at The 9th ORSCM Summer Workshop, National Tsing Hua University, Taiwan. June 15-16, 2017
42. Invited talk at The Third International Conference on Engineering and Computational Mathematics, The Hong Kong Polytechnic University, May 31-Jun 2, 2017.
43. Invited talk at SIAM Conference on Optimization, May 22-25, 2017, Vancouver, British Columbia, Canada.
44. Poster presentation at NIPS 2016, Dec 5-10, 2016, Barcelona, Spain
45. Invited talk at Annual Meeting of OR Society of China, Oct 13-17, 2016, Kunming, Yunnan, China
46. Invited talk at The 2nd Youth Symposium on Scientific and Engineering Computing, Sep 29-30, 2016, Beijing, China
47. Invited talk at ICCOPT 2016, August 8-11, 2016, National Graduate Institute for Policy Studies, Roppongi, Tokyo, Japan
48. Invited talk at the ICSA Conference on Data Science, July 2-4, 2016. Yunnan. China
49. Invited talk at the International Workshop on Modern Optimization and Applications, June 27-29, 2016, Beijing.
50. Invited talk at The 4th Workshop on Optimization and Risk Management, Hong Kong Polytechnic University, 16-17 December, 2015.
51. Invited talk at the 2015 Nanjing International Conference on Numerical Optimization with Applications. Nanjing Normal University. Nanjing. November 27-29, 2015
52. Invited talk at the 8th International Congress on Industrial and Applied Mathematics, August 10-14, 2015, Beijing, China
53. Invited talk at The 10th International Conference on Numerical Optimization and Numerical Linear Algebra, Yan'an, Shaanxi, China. August 5-8, 2015.
54. Invited talk at IBM T. J Watson Research Center, Yorktown Heights, NY, USA, July 24, 2015
55. Invited talk at ISMP 2015, July 12-17, 2015, Pittsburgh, PA, USA
56. Invited talk at Workshop on Optimization and Data Analytics, PolyU, Hong Kong, May 13-14, 2015.
57. Invited talk at The Joint ORSC/EURO International Conference on Continuous Optimization, Shanghai University, May 10-12, 2015, Shanghai, China.

58. Invited talk at Workshop on Tensor Analysis and Applications, PolyU, Hong Kong, May 5, 2015.
59. Invited talk at Workshop on New Trends in Optimization for Imaging, Tsinghua Sanya International Mathematics Forum, January 19-23, 2015, Sanya, China
60. Invited talk at Workshop on Numerical Optimization, Shanghai Jiaotong University, January 3-4, 2015, Shanghai, China
61. Invited talk at the 2014 International Workshop on Signal Processing, Optimization, and Compressed Sensing. National University of Defense Technology, Changsha, China. December 22-23, 2014
62. Invited talk at Workshop on Optimization for Modern Computation, Beijing International Center For Mathematical Research, Peking University, Beijing, China, September 2-4, 2014
63. Invited talk at Workshop on Sparse Optimization and Big Data, Zhashui, Xi'an, China, August 11-13, 2014
64. Invited talk at the SIAM Conference on Optimization, May 19-22, 2014, San Diego, CA, USA
65. Invited talk at the SIAM Conference on Imaging Sciences, Hong Kong, May 12-14, 2014
66. Invited talk at the Structured Preconditioning and Iterative Methods with Applications Workshop, Tsinghua Sanya International Mathematics Forum, March 24-29, 2014, Sanya, China
67. Invited talk at The Second International Conference on Engineering and Computational Mathematics, PolyU Hong Kong, December 16-18, 2013.
68. Invited talk at The 2013 International Workshop on Signal Processing, Optimization, and Control, December 28-31, 2013, Harbin, China
69. Invited talk at the CMIV Workshop on Computational Methods and Image Processing, Hong Kong Baptist University, Hong Kong, August 20, 2013.
70. Invited talk at The Fourth International Conference on Continuous Optimization (ICCOPT), Lisbon, Portugal, July 27-August 1, 2013.
71. Invited talk at the Young Mathematician Forum, Peking University and Beijing International Center for Mathematical Research, Beijing, June 18-21, 2013.
72. Invited talk at The 1st Chongqing Workshop on Computational and Applied Mathematics, Chongqing, China, May 30-Jun 2, 2013.
73. Invited talk at ISMP, Berlin, Germany, August, 2012
74. Invited talk at The 2012 International Workshop on Signal Processing, Optimization, and Control, July 2012, Hefei, China
75. Invited talk at Beijing INFORMS, June 2012, Beijing
76. Invited talk at INFORMS Annual Meeting, Charlotte, NC, November, 2011
77. Attendee of the *Sparse Statistics, Optimization and Machine Learning Workshop*, Banff, Calgary, Canada. January 16-21, 2011.
78. Invited talk at INFORMS Computing Society Conference, Monterey, CA, January 9-11, 2011
79. Poster presentation in NIPS 2010. Vancouver, B.C., Canada. Dec. 6-9, 2010.
80. Invited talks at INFORMS Annual Meeting, Austin, TX, November, 2010
81. Invited talk at the 10th MOPTA conference, Lehigh University, August, 2010

82. Attendee of the ONR Compressed Sensing Workshop. Georgia Institute of Technology, Atlanta, GA. May 10-11, 2010.
83. Invited talk at the 20th International Symposium of Mathematical Programming (ISMP), Chicago, August, 2009
84. Invited talk at the 47th Allerton Conference on Communication, Control and Computing. Allerton Park and Retreat Center, Illinois, October, 2009
85. Invited talks at INFORMS Annual Meeting, San Diego, CA, October, 2009
86. Poster presentation in AFRL-Duke Compressive-Sensing Workshop. Duke University, Feb. 25-26, 2009.
87. Poster presentation in CVPR 2008. Anchorage, Alaska. June 24-26, 2008.
88. Attendee of the *SIAM Conference on Optimization*. Boston, MA. May 10-13, 2008.

PROFESSIONAL SERVICES

- Area Chair of NeurIPS 2022.
- Area Chair of ICML 2022.
- Session Chair (3 sessions), SIAM Conference on Optimization. July 2021
- Area Chair of ICML 2021.
- Cluster chair of Nonlinear Optimization at INFORMS Annual Meeting. Maryland. 2020
- Cluster chair of IOS (INFORMS Optimization Society) conference 2020, Greenville, SC, March 15-17, 2020.
- Cluster chair of Nonlinear Optimization at INFORMS Annual Meeting. Seattle. 2019.
- NSF panel. 2019, 2020, 2021
- Vice Chair of Nonlinear Optimization Group of the INFORMS Optimization Society. 2019-2020
- Session Chair. ISMP. Bordeaux, France. July 1-6, 2018.
- Session Chair. INFORMS Optimization Conference. Mar 22-25, 2018. Denver.
- Session Chair. SIAM Conference on Optimization (OP17), May 22-25, 2017. Vancouver, British Columbia, Canada.
- Committee Member of INFORMS Optimization Society Student Paper Competition. 2016
- Technical Program Committee Member. The 2016 IEEE Global Conference on Signal and Information Processing (GlobalSIP 2016). Washington DC, USA, December 7-9
- Session Chair. ICCOPT 2016. Japan.
- Program committee of AAAI 2016.
- Program committee of Workshop on Robust Subspace Learning and Computer Vision at ICCV 2015 and ICCV 2017.
- Session Chair (4 sessions). The 22nd International Symposium on Mathematical Programming (ISMP), Pittsburgh, USA, 2015.
- Council Member for the Mathematical Programming Branch of OR Society of China. 2014-2018
- Session Chair. The Fourth International Conference on Continuous Optimization (ICCOPT), Lisbon, Portugal, July 27-August 1, 2013.

- Panelist member of the Second International Workshop on Mathematical Issues in Information Sciences, Xi'an, China, June 29-July 4, 2013.
- Organizing committee member of The 1st Chongqing Workshop on Computational and Applied Mathematics, Chongqing, China, May 30-Jun 2, 2013.
- Session Chair. The 21st International Symposium on Mathematical Programming (ISMP), Berlin, Germany, 2012.
- Program Committee. The 18th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, Beijing, China, 2012.
- Session Chair. INFORMS Annual Meeting, Charlotte, NC, USA, 2011.
- Referee for Grant Proposals: *NSF panel*, 2019, 2020, 2021. *US Department of Energy (DOE)*, 2014. *HKBU Faculty Research Grant*, 2014. *University of Macau Multi-Year Research Grant*, 2019.
- Referee for Journals: *Acta Mathematica Scientia*, *Advances in Computational Mathematics*, *Annals of Mathematical Sciences and Applications*, *Annals of Statistics*, *Applied and Computational Harmonic Analysis*, *Calcolo*, *Computational and Applied Mathematics*, *Computational Optimization and Applications*, *Computational Statistics*, *Computational Statistics and Data Analysis*, *Electronic Journal of Linear Algebra*, *Foundations and Trends in Optimization*, *Frontiers of Mathematics in China*, *IEEE Journal of Selected Topics in Signal Processing*, *IEEE Signal Processing Letters*, *IEEE Transactions on Automatic Control*, *IEEE Transactions on Image Processing*, *IEEE Transactions on Information Theory*, *IEEE Transactions on Medical Imaging*, *IEEE Transactions on Neural Networks and Learning Systems*, *IEEE Transactions on Signal Processing*, *IMA Journal of Numerical Analysis*, *Information Sciences*, *INFORMS Journal on Optimization*, *Inverse Problems and Imaging*, *Inverse Problems in Science and Engineering*, *Journal of the American Statistical Association*, *Journal of Computational and Applied Mathematics*, *Journal of Global Optimization*, *Journal of Industrial and Management Optimization*, *Journal of Inverse and Ill-Posed Problems*, *Journal of Machine Learning Research*, *Journal of Operations Research Society of China*, *Journal of Optimization Theory and Applications*, *Journal of Scientific Computing*, *Linear Algebra and Its Applications*, *Machine Learning*, *Mathematical Methods of Operations Research*, *Mathematical Programming*, *Mathematical Programming Computation*, *Mathematics of Computation*, *Mathematics of Operations Research*, *Numerical Algorithms*, *Numerical Linear Algebra with Applications*, *Operations Research*, *Optimization*, *Optimization and Engineering*, *Optimization Methods and Software*, *Pacific Journal of Optimization*, *Pattern Recognition*, *Proceedings of the IEEE*, *Science China Mathematics*, *SIAM Journal on Imaging Sciences*, *SIAM Journal on Mathematics of Data Science*, *SIAM Journal on Matrix Analysis and Applications*, *SIAM Journal on Optimization*, *SIAM Journal on Scientific Computing*, *Signal Processing*, *SMAI J. of Computational Mathematics*.
- Referee for Conferences: *GlobalSIP 2016, 2017*; *The 2013 IEEE International Symposium on Circuits and Systems*; *NIPS 2012-2019*; *ICML 2017-2019*; *SIGKDD 2012*; *The 10th International Conference on Sampling Theory and Applications 2013*; *EUSIPCO 2014*; *AISTATS 2022*.
- Referee for Book Proposal: *CRC Press (September 2014)*, *SIAM (Mar 2021)*
- Others: referee for S. T. Yau High School Math Awards 2015.

LOCAL SERVICES

UC Davis

- Ad hoc committee on redesigning the PhD curriculum on Numerical Analysis/Computing. 2021
- Events and Displays Committee. 2020-2022

- GGAM Executive Committee. 2020-2022
- Mentor for Associate Instructors. 2019-2020
- Undergraduate Advisor. 2018-2019
- Seminar organizer for Mathematics of Data and Decisions. Fall 2018, Fall 2019
- Alternate representative for the L&S College assembly. 2017-2019
- Academic Senate. 2019-2020

CUHK

- Graduate Panel of SEEM, CUHK. 2015 - 2017.
- Faculty board of Engineering, CUHK, 2015 - 2017
- Working group member for HKPFS summer workshop, Faculty of Engineering, CUHK, 2015 - 2017.
- Qualifying exam committee of SEEM, CUHK. 2013-2017.
- Committee member for UG Summer Research Internship 2013-2016.
- Helped organize the CUHK-CAS workshop, October 2013.

STUDENTS SUPERVISED

PhD students

- Xuxing Chen, PhD student. Department of Mathematics. UC Davis. started 2020
- Jiaxiang Li, PhD student. Department of Mathematics. UC Davis. started 2019
- Minhui Huang, PhD student. ECE Department. UC Davis. started 2019.
- Zhongruo Wang, PhD student. Department of Mathematics. UC Davis. started 2017.
- Conghui Tan, PhD student. Department of SEEM, CUHK. 2015-2019. Defended on 6/20/2019. PhD Dissertation Title: “Efficient Stochastic Optimization Algorithms for Large-Scale Machine Learning Problems”. (first position after graduation: AI researcher at WeBank.)
- Shixiang Chen, PhD student. Department of SEEM, CUHK. 2015-2019. Defended on 7/10/2019. PhD Dissertation Title: “First-order Algorithms for Structured Optimization: Convergence, Complexity and Applications”. (first position after graduation: Postdoctoral associate at Texas A&M U)

Master students

- Xiao Wen, MPhil, Department of SEEM, CUHK, Defended on 07/07/2014. Co-supervised with Hong Cheng. Now at Prudential Hong Kong.
- Yongyang Zhu, MPhil. Department of SEEM, CUHK. Defended on 03/23/2017.

Undergraduate students

- Tingyang Yu, Exchange visiting undergraduate student from Chinese University of Hong Kong. Summer 2022
- Yuxuan Wan, Exchange visiting undergraduate student from Chinese University of Hong Kong. Summer 2022
- Denise Cerna, Undergraduate student. Economics and Math. UC Davis. Summer 2021 (REU project NSF CCF-2007797)

- Tejes Srivastava, Undergraduate student. Computer Science and Math. UC Davis. Summer 2021 (REU project NSF CCF-2007797)
- Ye Wang, Undergraduate student. Math department. UC Davis. 02/2019-06/2019
- Jiayi Lei, Undergraduate student. Math department. UC Davis. 01/2019-06/2019
- Ziyue Xiang, Undergraduate from Math of CUHK. 09/2015-12/2015.
- Zhipeng Yan, Undergraduate from Math of CUHK. 09/2015-12/2015.
- Yuxin Li, Undergraduate from SEEM of CUHK. 02/2016-04/2016.
- Jing Xin, Undergraduate from Math of CUHK. 05/2016-07/2016.
- Jinlu Shi, Undergraduate from Math of CUHK. 05/2016-07/2016.
- Changchang Liu, Undergraduate from Math of CUHK. 06/2016.
- Dixi Wang, Undergraduate from Math of CUHK. 06/2016.
- Yue Shi, Undergraduate from Math of CUHK. 06/2016.

Research Assistant

- Tianyi Lin, 04/2013-10/2015. Now in PhD program of UC Berkeley.

THESIS COMMITTEE

- Haotian Li, PhD student. Department of Mathematics, UC Davis. 2021 (supervisor: Naoki Saito)
- Anthony Nguyen, PhD student. Department of Mathematics, UC Davis. 2021 (supervisor: Krishna Balasubramanian)
- Will Wright, PhD student. Department of Mathematics, UC Davis. 2019 (supervisor: Zhaojun Bai)
- Pengxiang Cui, PhD, Department of SEEM, CUHK, July 2017. (supervisor: Xiting Gong and Sean Zhou)
- Tong Wang, PhD, Department of SEEM, CUHK, May 2017. (supervisor: Xiting Gong and Sean Zhou)
- Man Chung Yue, PhD, Department of SEEM, CUHK, April 2017. (supervisor: Anthony Man-Cho So)
- Kairen Zhang, PhD, Department of SEEM, CUHK, August 2016. (supervisor: Xiting Gong and Sean Zhou)
- Weijie Wu, PhD, Department of SEEM, CUHK, July 2016. (supervisor: Anthony Man-Cho So).
- Rujun Jiang, PhD, Department of SEEM, CUHK, May, 2016. (supervisor: Duan Li).
- Chi Zhang, MPhil, Department of SEEM, CUHK, July, 2015. (supervisor: Anthony Man-Cho So).
- Guojian Yin, PhD, Department of Mathematics, CUHK, August, 2014. (supervisor: Raymond H. Chan).
- Bojun Lv, PhD, Department of SEEM, CUHK, July, 2014. (supervisor: Duan Li).
- Baiyi Wu, PhD, Department of SEEM, CUHK, June, 2014. (supervisor: Duan Li).

QUALIFYING EXAM COMMITTEE

- Yue Wu, PhD student. Department of Mathematics, UC Davis. 2021 (supervisor: Jesus De Loera)
- Wai Ho Chak, PhD student. Department of Mathematics, UC Davis. 2021 (supervisor: Naoki Saito)
- Qianhui Wan, PhD student. Department of Mathematics, UC Davis. 2021 (supervisor: Albert Fannjiang)
- Xinyue Hu, PhD student. Department of Civil and Environmental Engineering, UC Davis. 2021 (supervisor: Yueyue Fan)
- Po-Wei Chi, Master student. Department of Electrical and Computer Engineering, UC Davis. 2021 (supervisor: Kwan-Liu Ma)
- Dong Min Roh, PhD student. Department of Mathematics, UC Davis. 2021 (supervisor: Zhaojun Bai)
- Jiaxiang Li, PhD student. Department of Mathematics, UC Davis. 2021 (supervisor: Shiqian Ma)
- Minhui Huang, PhD student. Department of Electrical and Computer Engineering, UC Davis. 2020 (supervisor: Shiqian Ma and Lifeng Lai)
- Stephen Sheng, PhD student. Department of Mathematics, UC Davis. 2019 (supervisor: James Sharpnack)
- Anthony Nguyen, PhD student. Department of Mathematics, UC Davis. 2019 (supervisor: Krishna Balasubramanian)
- Haotian Li, PhD student. Department of Mathematics, UC Davis. 2019 (supervisor: Naoki Saito)
- Zhenyu Wei, PhD student. Department of Statistics, UC Davis. 2018 (supervisor: Thomas Lee)
- Qin Ding, PhD student. Department of Statistics, UC Davis. 2018 (supervisor: Cho-Jui Hsieh)