

Anthony Man-Cho So

List of Publications by Year in descending order

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100
papers

5,323
citations

257357

24
h-index

168321

53
g-index

101
all docs

101
docs citations

101
times ranked

3801
citing authors

#	ARTICLE	IF	CITATIONS
1	Semidefinite Relaxation of Quadratic Optimization Problems. IEEE Signal Processing Magazine, 2010, 27, 20-34.	4.6	2,486
2	Outage Constrained Robust Transmit Optimization for Multiuser MISO Downlinks: Tractable Approximations by Conic Optimization. IEEE Transactions on Signal Processing, 2014, 62, 5690-5705.	3.2	507
3	Theory of semidefinite programming for Sensor Network Localization. Mathematical Programming, 2007, 109, 367-384.	1.6	226
4	On approximating complex quadratic optimization problems via semidefinite programming relaxations. Mathematical Programming, 2007, 110, 93-110.	1.6	153
5	Robust Convex Approximation Methods for TDOA-Based Localization Under NLOS Conditions. IEEE Transactions on Signal Processing, 2016, 64, 3281-3296.	3.2	140
6	Optimal Spectrum Sharing in MIMO Cognitive Radio Networks via Semidefinite Programming. IEEE Journal on Selected Areas in Communications, 2011, 29, 362-373.	9.7	130
7	Physical-Layer Multicasting by Stochastic Transmit Beamforming and Alamouti Space-Time Coding. IEEE Transactions on Signal Processing, 2013, 61, 4230-4245.	3.2	130
8	A unified approach to error bounds for structured convex optimization problems. Mathematical Programming, 2017, 165, 689-728.	1.6	101
9	Slow Adaptive OFDMA Systems Through Chance Constrained Programming. IEEE Transactions on Signal Processing, 2010, 58, 3858-3869.	3.2	85
10	A Framework for One-Bit and Constant-Envelope Precoding Over Multiuser Massive MISO Channels. IEEE Transactions on Signal Processing, 2019, 67, 5309-5324.	3.2	66
11	Probabilistic SINR constrained robust transmit beamforming: A Bernstein-type inequality based conservative approach. , 2011, , .		62
12	Proximal Gradient Method for Nonsmooth Optimization over the Stiefel Manifold. SIAM Journal on Optimization, 2020, 30, 210-239.	1.2	60
13	On Solving Coverage Problems in a Wireless Sensor Network Using Voronoi Diagrams. Lecture Notes in Computer Science, 2005, , 584-593.	1.0	59
14	A Unified Theorem on SDP Rank Reduction. Mathematics of Operations Research, 2008, 33, 910-920.	0.8	48
15	Moment inequalities for sums of random matrices and their applications in optimization. Mathematical Programming, 2011, 130, 125-151.	1.6	44
16	Deterministic approximation algorithms for sphere constrained homogeneous polynomial optimization problems. Mathematical Programming, 2011, 129, 357-382.	1.6	41
17	A Safe Approximation Approach to Secrecy Outage Design for MIMO Wiretap Channels. IEEE Signal Processing Letters, 2014, 21, 118-121.	2.1	40
18	On the Estimation Performance and Convergence Rate of the Generalized Power Method for Phase Synchronization. SIAM Journal on Optimization, 2017, 27, 2426-2446.	1.2	35

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19	Scalable and Flexible Multiview MAX-VAR Canonical Correlation Analysis. IEEE Transactions on Signal Processing, 2017, 65, 4150-4165.	3.2	34
20	An Integrated Approach of Machine Learning and Systems Thinking for Waiting Time Prediction in an Emergency Department. International Journal of Medical Informatics, 2020, 139, 104143.	1.6	34
21	Safe convex approximation to outage-based MISO secrecy rate optimization under imperfect CSI and with artificial noise. , 2011, , .		33
22	Rank-two transmit beamformed Alamouti space-time coding for physical-layer multicasting. , 2012, , .		33
23	Online Nonlinear AUC Maximization for Imbalanced Data Sets. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 882-895.	7.2	33
24	Universal Rigidity: Towards Accurate and Efficient Localization of Wireless Networks. , 2010, , .		32
25	Beyond convex relaxation: A polynomial-time non-convex optimization approach to network localization. , 2013, , .		31
26	Universal Rigidity and Edge Sparsification for Sensor Network Localization. SIAM Journal on Optimization, 2010, 20, 3059-3081.	1.2	29
27	Quadratic optimization with orthogonality constraint: explicit Łojasiewicz exponent and linear convergence of retraction-based line-search and stochastic variance-reduced gradient methods. Mathematical Programming, 2019, 178, 215-262.	1.6	28
28	Distributionally Robust Slow Adaptive OFDMA with Soft QoS via Linear Programming. IEEE Journal on Selected Areas in Communications, 2013, 31, 947-958.	9.7	27
29	A Robust Design for MISO Physical-Layer Multicasting Over Line-of-Sight Channels. IEEE Signal Processing Letters, 2016, 23, 939-943.	2.1	25
30	Nonconvex Robust Low-Rank Matrix Recovery. SIAM Journal on Optimization, 2020, 30, 660-686.	1.2	25
31	Linear Matrix Inequalities with Stochastically Dependent Perturbations and Applications to Chance-Constrained Semidefinite Optimization. SIAM Journal on Optimization, 2012, 22, 1394-1430.	1.2	23
32	Cheap semidefinite relaxation MIMO detection using row-by-row block coordinate descent. , 2011, , .		21
33	Distributionally robust chance-constrained transmit beamforming for multiuser MISO downlink. , 2014, , .		21
34	Robust artificial noise-aided transmit optimization for achieving secrecy and energy harvesting. , 2014, , .		21
35	Low-Rank Semidefinite Programming: Theory and Applications. Foundations and Trends® in Optimization, 2016, 2, 1-156.	7.2	21
36	A family of inexact SQA methods for non-smooth convex minimization with provable convergence guarantees based on the LuoTseng error bound property. Mathematical Programming, 2019, 174, 327-358.	1.6	21

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37	Understanding Notions of Stationarity in Nonsmooth Optimization: A Guided Tour of Various Constructions of Subdifferential for Nonsmooth Functions. IEEE Signal Processing Magazine, 2020, 37, 18-31.	4.6	20
38	Robust transmit designs for an energy harvesting multicast system. , 2014, , .		18
39	A discrete first-order method for large-scale MIMO detection with provable guarantees. , 2017, , .		17
40	A Stochastic Beamformed Amplify-and-Forward Scheme in a Multigroup Multicast MIMO Relay Network with Per-Antenna Power Constraints. IEEE Transactions on Wireless Communications, 2016, , 1-1.	6.1	16
41	Unraveling the Rank-One Solution Mystery of Robust MISO Downlink Transmit Optimization: A Verifiable Sufficient Condition via a New Duality Result. IEEE Transactions on Signal Processing, 2017, 65, 1909-1924.	3.2	16
42	Weakly Convex Optimization over Stiefel Manifold Using Riemannian Subgradient-Type Methods. SIAM Journal on Optimization, 2021, 31, 1605-1634.	1.2	16
43	Multi-group multicast beamforming in cognitive radio networks via rank-two transmit beamformed Alamouti space-time coding. , 2013, , .		15
44	Non-asymptotic convergence analysis of inexact gradient methods for machine learning without strong convexity. Optimization Methods and Software, 2017, 32, 963-992.	1.6	15
45	A semidefinite programming approach to tensegrity theory and realizability of graphs. , 2006, , .		15
46	Probabilistic Analysis of the Semidefinite Relaxation Detector in Digital Communications. , 2010, , .		14
47	A Newton Tracking Algorithm With Exact Linear Convergence for Decentralized Consensus Optimization. IEEE Transactions on Signal and Information Processing Over Networks, 2021, 7, 346-358.	1.6	13
48	A perturbation inequality for concave functions of singular values and its applications in low-rank matrix recovery. Applied and Computational Harmonic Analysis, 2016, 40, 396-416.	1.1	12
49	Distributionally Robust Collaborative Beamforming in D2D Relay Networks With Interference Constraints. IEEE Transactions on Wireless Communications, 2017, 16, 5048-5060.	6.1	12
50	Pari-Mutuel Markets: Mechanisms and Performance. , 2007, , 82-95.		12
51	Minimum Symbol Error Rate-Based Constant Envelope Precoding for Multiuser Massive Miso Downlink. , 2018, , .		11
52	Stochastic Combinatorial Optimization with Controllable Risk Aversion Level. Mathematics of Operations Research, 2009, 34, 522-537.	0.8	10
53	Latent Aspect Mining via Exploring Sparsity and Intrinsic Information. , 2014, , .		10
54	Another Look at Anonymous Communication. IEEE Transactions on Dependable and Secure Computing, 2019, 16, 731-742.	3.7	10

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55	On the Quadratic Convergence of the Cubic Regularization Method under a Local Error Bound Condition. SIAM Journal on Optimization, 2019, 29, 904-932.	1.2	10
56	Local strong convexity of maximum-likelihood TDOA-Based source localization and its algorithmic implications. , 2017, , .		9
57	A Provably Convergent Projected Gradient-Type Algorithm for TDOA-Based Geolocation Under the Quasi-Parabolic Ionosphere Model. IEEE Signal Processing Letters, 2020, 27, 1335-1339.	2.1	9
58	Local Strong Convexity of Source Localization and Error Bound for Target Tracking under Time-of-Arrival Measurements. IEEE Transactions on Signal Processing, 2022, 70, 190-201.	3.2	9
59	A Penalty Alternating Direction Method of Multipliers for Convex Composite Optimization Over Decentralized Networks. IEEE Transactions on Signal Processing, 2021, 69, 4282-4295.	3.2	8
60	Robust Relay Beamforming in Device-to-Device Networks with Energy Harvesting Constraints. , 2016, , .		7
61	Voting-Based Multiagent Reinforcement Learning for Intelligent IoT. IEEE Internet of Things Journal, 2021, 8, 2681-2693.	5.5	7
62	An Efficient Alternating Direction Method for Graph Learning from Smooth Signals. , 2021, , .		7
63	Hardness and Approximation Results for L_p -Ball Constrained Homogeneous Polynomial Optimization Problems. Mathematics of Operations Research, 2014, 39, 1084-1108.	0.8	6
64	A beamformed alamouti amplify-and-forward scheme in multigroup multicast cloud-relay networks. , 2015, , .		6
65	Rank-Two Beamforming and Stochastic Beamforming for MISO Physical-Layer Multicasting with Finite-Alphabet Inputs. IEEE Signal Processing Letters, 2015, 22, 1614-1618.	2.1	6
66	Geolocation of Unknown Emitters Using Tdoa of Path Rays Through the Ionosphere by Multiple Coordinated Distant Receivers. , 2018, , .		6
67	On the performance of semidefinite relaxation MIMO detectors for QAM constellations. , 2009, , .		5
68	LDPC code design for Gaussian multiple-access channels using dynamic EXIT chart analysis. , 2017, , .		5
69	Globally Convergent Accelerated Proximal Alternating Maximization Method for L1-Principal Component Analysis. , 2019, , .		5
70	Probabilistic analysis of semidefinite relaxation detectors for multiple-input, multiple-output systems. , 2009, , 166-191.		4
71	Stochastic amplify-and-forward schemes for multigroup multicast transmission in a distributed relay network. , 2015, , .		4
72	Semidefinite Relaxation and Approximation Analysis of a Beamformed Alamouti Scheme for Relay Beamforming Networks. IEEE Transactions on Signal Processing, 2017, 65, 2428-2443.	3.2	4

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73	Mixed-Integer Semidefinite Relaxation of Joint Admission Control and Beamforming: An SOC-Based Outer Approximation Approach with Provable Guarantees. , 2018, , .		4
74	Nonconvex Optimization for Signal Processing and Machine Learning [From the Guest Editors]. IEEE Signal Processing Magazine, 2020, 37, 15-17.	4.6	4
75	Manifold Proximal Point Algorithms for Dual Principal Component Pursuit and Orthogonal Dictionary Learning. IEEE Transactions on Signal Processing, 2021, 69, 4759-4773.	3.2	4
76	Probabilistic Simplex Component Analysis. IEEE Transactions on Signal Processing, 2022, 70, 582-599.	3.2	4
77	Supporting group communication among interacting agents in wireless sensor networks. , 0, , .		3
78	A polynomial optimization approach for robust beamforming design in a device-to-device two-hop one-way relay network. , 2016, , .		3
79	SDR approximation bounds for the robust multicast beamforming problem with interference temperature constraints. , 2017, , .		3
80	A Fast Proximal Point Algorithm for Generalized Graph Laplacian Learning. , 2020, , .		3
81	Maximum Flow Routing Strategy With Dynamic Link Allocation for Space Information Networks Under Transceiver Constraints. IEEE Transactions on Vehicular Technology, 2022, 71, 9993-10000.	3.9	3
82	LPA-SD: An Efficient First-Order Method for Single-Group Multicast Beamforming. , 2018, , .		2
83	Phase Retrieval via Sensor Network Localization. Journal of the Operations Research Society of China, 2019, 7, 127-146.	0.9	2
84	Manifold Proximal Point Algorithms for Dual Principal Component Pursuit and Orthogonal Dictionary Learning. , 2019, , .		2
85	Stochastic Mechanism Design. , 2007, , 269-280.		2
86	SISAL Revisited. SIAM Journal on Imaging Sciences, 2022, 15, 591-624.	1.3	2
87	Robust beamforming in two-way relay networks: Quartically perturbed chance constrained formulation and tractable approximation. , 2014, , .		1
88	A semidefinite relaxation approach to the geolocation of two unknown co-channel emitters by a cluster of formation-flying satellites using both TDOA and FDOA measurements. , 2016, , .		1
89	Distributionally Robust Relay Beamforming in Wireless Communications. , 2016, , .		1
90	Scalable and flexible Max-Var generalized canonical correlation analysis via alternating optimization. , 2017, , .		1

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91	Sparse High-Order Portfolios Via Proximal Dca And Sca. , 2021, , .		1
92	Another Look at Anonymous Communication. Lecture Notes in Computer Science, 2017, , 56-82.	1.0	1
93	A Newton Tracking Algorithm with Exact Linear Convergence Rate for Decentralized Consensus Optimization. , 2020, , .		1
94	Dynamic Regret Bound for Moving Target Tracking Based on Online Time-of-Arrival Measurements. , 2020, , .		1
95	Fast First-order Methods for the Massive Robust Multicast Beamforming Problem with Interference Temperature Constraints. , 2019, , .		0
96	A Penalty Alternating Direction Method of Multipliers for Decentralized Composite Optimization. , 2020, , .		0
97	An Efficient Augmented Lagrangian-Based Method for Linear Equality-Constrained Lasso. , 2020, , .		0
98	Low-Cost Lipschitz-Independent Adaptive Importance Sampling of Stochastic Gradients. , 2021, , .		0
99	Adaptive coordinate sampling for stochastic primal–dual optimization. International Transactions in Operational Research, 2022, 29, 24-47.	1.8	0
100	Non-convex exact community recovery in stochastic block model. Mathematical Programming, 2022, 195, 1-37.	1.6	0