Ran Dai

List of Publications by Year
in descending order

59 papers	651 citations	759233 12 h-index	752698 20 g-index
60 all docs	60 docs citations	60 times ranked	570 citing authors

#	Article	IF	Citations
1	Optimal power generation and load management for off-grid hybrid power systems with renewable sources via mixed-integer programming. Energy Conversion and Management, 2013, 73, 234-244.	9.2	55
2	Time-Optimal Path Planning With Power Schedules for a Solar-Powered Ground Robot. IEEE Transactions on Automation Science and Engineering, 2017, 14, 1235-1244.	5.2	44
3	Rank-constrained optimization and its applications. Automatica, 2017, 82, 128-136.	5.0	37
4	Two Approaches for Path Planning of Unmanned Aerial Vehicles with Avoidance Zones. Journal of Guidance, Control, and Dynamics, 2017, 40, 2076-2083.	2.8	36
5	Optimal path planning and power allocation for a long endurance solar-powered UAV. , 2013, , .		35
6	Optimal topology design for dynamic networks. , 2011, , .		30
7	Three-Dimensional Trajectory Optimization in Constrained Airspace. Journal of Aircraft, 2009, 46, 627-634.	2.4	28
8	Path Planning and State Estimation for Unmanned Aerial Vehicles in Hostile Environments. Journal of Guidance, Control, and Dynamics, 2010, 33, 595-601.	2.8	28
9	An energy management system for off-grid power systems. Energy Systems, 2012, 3, 153-179.	3.0	24
10	Optimal Trajectory Generation for Establishing Connectivity in Proximity Networks. IEEE Transactions on Aerospace and Electronic Systems, 2013, 49, 1968-1981.	4.7	24
11	Learning-Based Onboard Guidance for Fuel-Optimal Powered Descent. Journal of Guidance, Control, and Dynamics, 2021, 44, 601-613.	2.8	23
12	Design, Modeling and Control of a Solar-Powered Quadcopter. , 2018, , .		22
13	Path Planning of Spatial Rigid Motion with Constrained Attitude. Journal of Guidance, Control, and Dynamics, 2015, 38, 1356-1365.	2.8	21
14	Optimal path planning for solar-powered UAVs based on unit quaternions. , 2012, , .		16
15	Alternating Minimization Algorithm for Polynomial Optimal Control Problems. Journal of Guidance, Control, and Dynamics, 2019, 42, 723-736.	2.8	16
16	Path planning for multiple unmanned aerial vehicles by parameterized cornu-spirals. , 2009, , .		14
17	Spacecraft Attitude Control under Constrained Zones via Quadratically Constrained Quadratic Programming. , 2015, , .		13
18	Real-time energy-efficient traffic control via convex optimization. Transportation Research Part C: Emerging Technologies, 2018, 92, 119-136.	7.6	13

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19	Onboard fuel-optimal guidance for human-Mars entry, powered-descent, and landing mission based on feature learning. Acta Astronautica, 2022, 195, 129-144.	3.2	12
20	Path planning of solar-powered unmanned aerial vehicles at low altitude. , 2013, , .		11
21	An iterative approach to Rank Minimization Problems. , 2015, , .		11
22	Weighted Network Design With Cardinality Constraints via Alternating Direction Method of Multipliers. IEEE Transactions on Control of Network Systems, 2018, 5, 2073-2084.	3.7	10
23	B-Splines Based Optimal Control Solution. , 2010, , .		9
24	Vision-Based Terrain Classification and Solar Irradiance Mapping for Solar-Powered Robotics. , 2018, , .		9
25	An Iterative Rank Penalty Method for Nonconvex Quadratically Constrained Quadratic Programs. SIAM Journal on Control and Optimization, 2019, 57, 3749-3766.	2.1	9
26	A Unified Formulation and Nonconvex Optimization Method for Mixed-Type Decision-Making of Robotic Systems. IEEE Transactions on Robotics, 2021, 37, 831-846.	10.3	9
27	Design and Autonomous Control of a Solar-Power Blimp. , 2018, , .		8
28	A customized ADMM for rank-constrained optimization problems with approximate formulations. , 2017, , .		6
29	Angle-Based Sensor Network Localization. IEEE Transactions on Automatic Control, 2022, 67, 840-855.	5.7	6
30	Distributed path planning for building evacuation guidance. Cyber-Physical Systems, 2017, 3, 1-21.	2.0	5
31	Multi-Phase Spacecraft Mission Optimization by Quadratically Constrained Quadratic Programming. , 2019, , .		5
32	Sensor Network Localization via Alternating Rank Minimization Algorithms. IEEE Transactions on Control of Network Systems, 2020, 7, 1040-1051.	3.7	5
33	Fuel-Optimal Guidance for End-to-End Human-Mars Entry, Powered-Descent, and Landing Mission. , 2020, , .		5
34	Network Topology Design for UAV Swarming with Wind Gusts. , 2011, , .		4
35	Three-dimensional aircraft path planning based on nonconvex quadratic optimization. , 2014, , .		4
36	Motion planning for persistent traveling solar-powered unmanned ground vehicles. , 2016, , .		4

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37	Convex optimization for energy-efficient traffic control. , 2016, , .		4
38	A decomposition method for nonconvex quadratically constrained quadratic programs. , 2017, , .		4
39	Mission planning for a multi-robot team with a solar-powered charging station. , 2017, , .		4
40	Distributed Traffic Speed Control for Improving Vehicle Throughput. IEEE Intelligent Transportation Systems Magazine, 2019, 11, 56-68.	3.8	4
41	Distributed traffic control for reduced fuel consumption and travel time in transportation networks. , 2015, , .		3
42	A Distributed Algorithm for Sensor Network Localization with Limited Measurements of Relative Distance. , 2019, , .		3
43	Iterative Learning Optimization for UAV Path Planning with Avoidance Zones. , 2019, , .		3
44	System development and application of Taylor Kriging metamodeling. Engineering Computations, 2011, 28, 220-241.	1.4	2
45	Identification of network topology via quadratic optimization. , 2015, , .		2
46	An Alternating Projection Approach for Non-Convex Quadratically Constrained Quadratic Programmings. , 2019, , .		2
47	Six-Dimensional Atmosphere Entry Guidance based on Dual Quaternion. , 2021, , .		2
48	A Unified Optimization Algorithm for Bang-bang Optimal Control. , 2022, , .		2
49	Distributed estimation for spatial rigid motion based on dual quaternions. Optimal Control Applications and Methods, 2018, 39, 1371-1392.	2.1	1
50	A Complementary Cutting Plane Approach for Nonconvex Quadratically Constrained Quadratic Programs. , 2018, , .		1
51	Distributed Optimization for Convex Mixed-Integer Programs based on Projected Subgradient Algorithm. , 2018, , .		1
52	Hybrid Optimal Control for Time-Efficient Highway Traffic Management. , 2018, , .		1
53	Angle Fixability and Angle-Based Sensor Network Localization. , 2019, , .		1
54	Distributed estimation for spatial rigid motion based on dual quaternions. , 2014, , .		0

#	Article	IF	Citations
55	Power management of cooling systems with dynamic pricing. , 2014, , .		0
56	An Efficient Module Detection Algorithm for Large-Scale Complex Networks. , 2018, , .		0
57	Statistical Orbit Determination by Global Evolutionary Optimization and Batch Filter. , 2010, , .		0
58	Local Optimization of Nonconvex Mixed-Integer Quadratically Constrained Quadratic Programming Problems. , 2020, , .		0
59	Path Planning for a Jumping Rover Team With a Charging Station in Multi-Waypoints Visiting Missions. Frontiers in Control Engineering, 2022, 3, .	0.6	0