

# Shuang Li

## List of Publications by Year in descending order

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Version: 2024-02-01

104  
papers

1,673  
citations

331670

21  
h-index

361022

35  
g-index

105  
all docs

105  
docs citations

105  
times ranked

849  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fast computation of the Jovian-moon three-body flyby map based on artificial neural networks. <i>Acta Astronautica</i> , 2022, 193, 710-720.	3.2	15
2	A hybrid relative navigation algorithm for a large-scale free tumbling non-cooperative target. <i>Acta Astronautica</i> , 2022, 194, 114-125.	3.2	4
3	Convex optimization of asteroid landing trajectories driven by solar radiation pressure. <i>Chinese Journal of Aeronautics</i> , 2022, 35, 200-211.	5.3	7
4	ANN-based method for fast optimization of Jovian-moon gravity-assisted trajectories in CR3BP. <i>Advances in Space Research</i> , 2022, 69, 2865-2882.	2.6	3
5	Hybrid method for accurate multi-gravity-assist trajectory design using pseudostate theory and deep neural networks. <i>Science China Technological Sciences</i> , 2022, 65, 595-610.	4.0	3
6	Mars Entry Trajectory Planning with Range Discretization and Successive Convexification. <i>Journal of Guidance, Control, and Dynamics</i> , 2022, 45, 755-763.	2.8	12
7	Constrained Motion Planning of 7-DOF Space Manipulator via Deep Reinforcement Learning Combined with Artificial Potential Field. <i>Aerospace</i> , 2022, 9, 163.	2.2	18
8	Real-time trajectory optimization for collision-free asteroid landing based on deep neural networks. <i>Advances in Space Research</i> , 2022, 70, 112-124.	2.6	8
9	Comparison of continuity equation and Gaussian mixture model for long-term density propagation using semi-analytical methods. <i>Celestial Mechanics and Dynamical Astronomy</i> , 2022, 134, .	1.4	3
10	Research Advancements in Key Technologies for Space-Based Situational Awareness. <i>Space: Science &amp; Technology</i> , 2022, 2022, .	2.5	12
11	Mixed uncertainty quantification for terminal flight state of Mars atmospheric entry. <i>Acta Astronautica</i> , 2022, 199, 183-194.	3.2	3
12	A greedy-based hybrid trajectory optimization method for the "Dyson Ring" building problem. <i>Acta Astronautica</i> , 2022, , .	3.2	0
13	Rotation based analytic range-only initial relative orbit solution for natural periodic motion. <i>Acta Astronautica</i> , 2021, 178, 584-594.	3.2	3
14	Recent advances in contact dynamics and post-capture control for combined spacecraft. <i>Progress in Aerospace Sciences</i> , 2021, 120, 100678.	12.1	26
15	10th China Trajectory Optimization Competition: Problem description and summary of the results. <i>Astrodynamics</i> , 2021, 5, 1-11.	2.4	5
16	Dynamics and on-orbit assembly strategies for an orb-shaped solar array. <i>Acta Astronautica</i> , 2021, 178, 881-893.	3.2	24
17	Inertial parameter estimation and control of non-cooperative target with unilateral contact constraint. <i>Chinese Journal of Aeronautics</i> , 2021, 34, 225-240.	5.3	2
18	FADS based aerodynamic parameters estimation for mars entry considering fault detection and tolerance. <i>Acta Astronautica</i> , 2021, 180, 243-259.	3.2	2

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19	Range-based collaborative relative navigation for multiple unmanned aerial vehicles using consensus extended Kalman filter. <i>Aerospace Science and Technology</i> , 2021, 112, 106647.	4.8	22
20	Integration of gradient guidance and edge enhancement into super-resolution for small object detection in aerial images. <i>IET Image Processing</i> , 2021, 15, 3037-3052.	2.5	1
21	Design of High-Inclination Artificial Frozen Orbits Around Europa. <i>Journal of the Astronautical Sciences</i> , 2021, 68, 585-607.	1.5	4
22	Optimization of short-arc ellipse fitting with prior information for planetary optical navigation. <i>Acta Astronautica</i> , 2021, 184, 119-127.	3.2	5
23	Quantum-Interference Artificial Neural Network With Application to Space Manipulator Control. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2021, 57, 2167-2182.	4.7	7
24	Effects of solar radiation pressure on asteroid surface hopping transfers for high area/mass ratio rovers. <i>Research in Astronomy and Astrophysics</i> , 2021, 21, 146.	1.7	2
25	Comparison of powered descent guidance laws for planetary pin-point landing. <i>Acta Astronautica</i> , 2021, 187, 101-114.	3.2	6
26	Collision-Free Trajectory Design for Long-Distance Hopping Transfer on Asteroid Surface Using Convex Optimization. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2021, 57, 3071-3083.	4.7	14
27	Constrained motion planning of free-float dual-arm space manipulator via deep reinforcement learning. <i>Aerospace Science and Technology</i> , 2021, 109, 106446.	4.8	55
28	Two-Stage Pursuit Strategy for Incomplete-Information Impulsive Space Pursuit-Evasion Mission Using Reinforcement Learning. <i>Aerospace</i> , 2021, 8, 299.	2.2	11
29	A fast Chebyshev polynomial method for calculating asteroid gravitational fields using space partitioning and cosine sampling. <i>Advances in Space Research</i> , 2020, 65, 1105-1124.	2.6	8
30	Adaptive mesh refinement method for solving optimal control problems using interpolation error analysis and improved data compression. <i>Journal of the Franklin Institute</i> , 2020, 357, 1603-1627.	3.4	13
31	High-dimensional uncertainty quantification for Mars atmospheric entry using adaptive generalized polynomial chaos. <i>Aerospace Science and Technology</i> , 2020, 107, 106240.	4.8	15
32	Lift-off velocity on the surface of a binary asteroid system. <i>Acta Astronautica</i> , 2020, 170, 302-319.	3.2	3
33	Contact dynamics and relative motion estimation of non-cooperative target with unilateral contact constraint. <i>Aerospace Science and Technology</i> , 2020, 98, 105705.	4.8	14
34	Accessibility of near-Earth asteroids and main-belt asteroids in a gravity-assisted multi-target mission. <i>Planetary and Space Science</i> , 2020, 182, 104851.	1.7	5
35	Robust coordinated control for large flexible spacecraft based on consensus theory. <i>Journal of the Franklin Institute</i> , 2020, 357, 5359-5379.	3.4	19
36	Fuel-Optimal Asteroid Descent Trajectory Planning Using a Lambert Solution-Based Costate Initialization. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2020, 56, 4338-4352.	4.7	18

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37	In-orbit robotic assembly mission design and planning to construct a large space telescope. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2020, 6, 1.	1.8	8
38	Agile Satellite Mission Planning Via Task Clustering and Double-Layer Tabu Algorithm. <i>CMES - Computer Modeling in Engineering and Sciences</i> , 2020, 122, 235-257.	1.1	6
39	Optical Image Generation and High-precision Line-of-Sight Extraction for Mars Approach Navigation. <i>Journal of Navigation</i> , 2019, 72, 229-252.	1.7	4
40	Pseudostate theory based iterative preliminary design method for powered gravity-assist interplanetary trajectories. <i>Acta Astronautica</i> , 2019, 165, 139-149.	3.2	8
41	An extra degree-of-freedom model for combined spacecraft attitude control with unilateral contact constraint. <i>Acta Astronautica</i> , 2019, 165, 54-67.	3.2	13
42	Observability criterion of angles-only navigation for spacecraft proximity operations. <i>Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering</i> , 2019, 233, 4302-4315.	1.3	9
43	Constructing a Large Antenna Reflector via Spacecraft Formation Flying and Reconfiguration Control. <i>Journal of Guidance, Control, and Dynamics</i> , 2019, 42, 1372-1382.	2.8	13
44	Mars entry trajectory planning using robust optimization and uncertainty quantification. <i>Acta Astronautica</i> , 2019, 161, 249-261.	3.2	16
45	Slew path planning of agile-satellite antenna pointing mechanism with optimal real-time data transmission performance. <i>Aerospace Science and Technology</i> , 2019, 90, 103-114.	4.8	10
46	Mars atmospheric entry trajectory optimization with maximum parachute deployment altitude using adaptive mesh refinement. <i>Acta Astronautica</i> , 2019, 160, 401-413.	3.2	21
47	Feedback Linearization with Active Disturbance Rejection for Entry Guidance. , 2019, , .		1
48	Maneuver-free approach to range-only initial relative orbit determination for spacecraft proximity operations. <i>Acta Astronautica</i> , 2019, 163, 87-95.	3.2	16
49	Integrated guidance for Mars entry and powered descent using reinforcement learning and pseudospectral method. <i>Acta Astronautica</i> , 2019, 163, 114-129.	3.2	25
50	Space collision probability computation based on on-board optical cues. <i>Acta Astronautica</i> , 2019, 155, 33-44.	3.2	3
51	Fast Homotopy Method for Asteroid Landing Trajectory Optimization Using Approximate Initial Costates. <i>Journal of Guidance, Control, and Dynamics</i> , 2019, 42, 585-597.	2.8	58
52	A new multi-satellite autonomous mission allocation and planning method. <i>Acta Astronautica</i> , 2019, 163, 287-298.	3.2	34
53	Configuration optimization of multi-optical sensors with complex pointing constraints. <i>Acta Astronautica</i> , 2019, 155, 302-312.	3.2	0
54	On-board passive-image based non-cooperative space object capture window estimation. <i>Aerospace Science and Technology</i> , 2019, 84, 953-965.	4.8	6

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55	Planetary landing site detection and selection using multilevel optimization strategy. <i>Acta Astronautica</i> , 2019, 163, 272-286.	3.2	6
56	Finite time sliding sector control for spacecraft atmospheric entry guidance. <i>Acta Astronautica</i> , 2019, 163, 108-113.	3.2	5
57	Station-keeping of libration point orbits by means of projecting to the manifolds. <i>Acta Astronautica</i> , 2019, 163, 38-44.	3.2	6
58	Single crater-aided inertial navigation for autonomous asteroid landing. <i>Advances in Space Research</i> , 2019, 63, 1085-1099.	2.6	9
59	Optical/radio/pulsars integrated navigation for Mars orbiter. <i>Advances in Space Research</i> , 2019, 63, 512-525.	2.6	13
60	Hierarchical approach for fast searching optimal launch opportunity in a wide range. <i>Advances in Space Research</i> , 2019, 63, 572-588.	2.6	0
61	Mars entry fault-tolerant control via neural network and structure adaptive model inversion. <i>Advances in Space Research</i> , 2019, 63, 557-571.	2.6	23
62	Radio/FADS/IMU integrated navigation for Mars entry. <i>Advances in Space Research</i> , 2018, 61, 1342-1358.	2.6	16
63	Problem A of 9th China trajectory optimization competition: Results found at NUA. <i>Acta Astronautica</i> , 2018, 150, 182-192.	3.2	7
64	Computational guidance for planetary powered descent using collaborative optimization. <i>Aerospace Science and Technology</i> , 2018, 76, 37-48.	4.8	14
65	Artificial Equilibrium Points near Irregular-Shaped Asteroids with Continuous Thrust. <i>Journal of Guidance, Control, and Dynamics</i> , 2018, 41, 1308-1319.	2.8	15
66	Quasi-model free control for the post-capture operation of a non-cooperative target. <i>Acta Astronautica</i> , 2018, 147, 59-70.	3.2	12
67	Overview of China's 2020 Mars mission design and navigation. <i>Astrodynamics</i> , 2018, 2, 1-11.	2.4	25
68	Onboard mission planning for agile satellite using modified mixed-integer linear programming. <i>Aerospace Science and Technology</i> , 2018, 72, 204-216.	4.8	50
69	Improved semi-analytical computation of center manifolds near collinear libration points. <i>Research in Astronomy and Astrophysics</i> , 2018, 18, 138.	1.7	2
70	Editorial: Special Section on 9th China Trajectory Optimization Competition (CTOC). <i>Acta Astronautica</i> , 2018, 150, 177.	3.2	0
71	On-orbit assembly mission planning considering topological constraint and attitude disturbance. <i>Acta Astronautica</i> , 2018, 152, 692-704.	3.2	16
72	A novel inertial-aided feature detection model for autonomous navigation in planetary landing. <i>Acta Astronautica</i> , 2018, 152, 667-681.	3.2	5

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73	Antiwindup Terminal Sliding Mode Control for Mars Entry Using Supertwisting Sliding Mode Disturbance Observer. <i>Journal of Aerospace Engineering</i> , 2018, 31, 06018002.	1.4	1
74	Robust Flight Envelope Generation Approach for Mars Entry using Uncertainty Quantification and Reachable Controllable Sets. , 2018, , .		0
75	Review of optimization methodologies in global and China trajectory optimization competitions. <i>Progress in Aerospace Sciences</i> , 2018, 102, 60-75.	12.1	23
76	Problem B of 9th China trajectory optimization competition: Results found at NUA. <i>Acta Astronautica</i> , 2018, 150, 240-249.	3.2	4
77	Angles-only initial relative orbit determination algorithm for non-cooperative spacecraft proximity operations. <i>Astrodynamics</i> , 2018, 2, 217-231.	2.4	31
78	A particle-linkage model for non-axisymmetric elongated asteroids. <i>Research in Astronomy and Astrophysics</i> , 2018, 18, 084.	1.7	7
79	Optimal slew path planning for the Sino-French Space-based multiband astronomical Variable Objects Monitor mission. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2018, 4, 1.	1.8	7
80	Comparative study on autonomous navigation for Mars cruise probe based on observability analysis. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2018, 4, 1.	1.8	0
81	Concept design and cluster control of advanced space connectable intelligent microsatellite. <i>Acta Astronautica</i> , 2017, 141, 1-7.	3.2	7
82	Modified Multiresolution Technique for Mesh Refinement in Numerical Optimal Control. <i>Journal of Guidance, Control, and Dynamics</i> , 2017, 40, 3328-3338.	2.8	10
83	Database construction for vision aided navigation in planetary landing. <i>Acta Astronautica</i> , 2017, 140, 235-246.	3.2	10
84	Artificial equilibrium points in binary asteroid systems with continuous low-thrust. <i>Astrophysics and Space Science</i> , 2017, 362, 1.	1.4	6
85	Enabling technologies for Chinese Mars lander guidance system. <i>Acta Astronautica</i> , 2017, 133, 375-386.	3.2	19
86	Innovative hazard detection and avoidance strategy for autonomous safe planetary landing. <i>Acta Astronautica</i> , 2016, 126, 66-76.	3.2	19
87	A general method for the generation and extension of collinear libration point orbits. <i>Celestial Mechanics and Dynamical Astronomy</i> , 2016, 126, 339-367.	1.4	6
88	Mars atmospheric entry trajectory optimization via particle swarm optimization and Gauss pseudo-spectral method. <i>Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering</i> , 2016, 230, 2320-2329.	1.3	18
89	Innovative hazard detection and avoidance guidance for safe lunar landing. <i>Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering</i> , 2016, 230, 2086-2103.	1.3	10
90	Guidance Summary and Assessment of the Chang'e-3 Powered Descent and Landing. <i>Journal of Spacecraft and Rockets</i> , 2016, 53, 258-277.	1.9	45

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91	RBF neural network based second-order sliding mode guidance for Mars entry under uncertainties. Aerospace Science and Technology, 2015, 43, 226-235.	4.8	55
92	High-precision Mars Entry Integrated Navigation Under Large Uncertainties. Journal of Navigation, 2014, 67, 327-342.	1.7	25
93	Rapid design and optimization of low-thrust rendezvous/interception trajectory for asteroid deflection missions. Advances in Space Research, 2014, 53, 696-707.	2.6	18
94	Review and prospect of guidance and control for Mars atmospheric entry. Progress in Aerospace Sciences, 2014, 69, 40-57.	12.1	89
95	Innovative Mars entry integrated navigation using modified multiple model adaptive estimation. Aerospace Science and Technology, 2014, 39, 403-413.	4.8	34
96	Next-generation Mars EDL GNC: Challenges and solutions. , 2014, , .		2
97	Multi-information fusion based localization algorithm for Mars rover. Advances in Aircraft and Spacecraft Science, 2014, 1, 455-469.	0.5	1
98	Image Processing Algorithms For Deep-Space Autonomous Optical Navigation. Journal of Navigation, 2013, 66, 605-623.	1.7	39
99	Command generator tracker based direct model reference adaptive tracking guidance for Mars atmospheric entry. Advances in Space Research, 2012, 49, 49-63.	2.6	87
100	Mars entry trajectory optimization using DOC and DCNLP. Advances in Space Research, 2011, 47, 440-452.	2.6	51
101	Radio beacons/IMU integrated navigation for Mars entry. Advances in Space Research, 2011, 47, 1265-1279.	2.6	40
102	MCAV/IMU integrated navigation for the powered descent phase of Mars EDL. Advances in Space Research, 2010, 46, 557-570.	2.6	25
103	Vision-aided inertial navigation for pinpoint planetary landing. Aerospace Science and Technology, 2007, 11, 499-506.	4.8	79
104	Autonomous navigation and guidance for landing on asteroids. Aerospace Science and Technology, 2006, 10, 239-247.	4.8	58