Shuang Li

List of Publications by Year
in descending order

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	Review and prospect of guidance and control for Mars atmospheric entry. Progress in Aerospace Sciences, 2014, 69, 40-57.	12.1	89
2	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
3	Vision-aided inertial navigation for pinpoint planetary landing. Aerospace Science and Technology, 2007, 11, 499-506.	4.8	79
4	Autonomous navigation and guidance for landing on asteroids. Aerospace Science and Technology, 2006, 10, 239-247.	4.8	58
5	Fast Homotopy Method for Asteroid Landing Trajectory Optimization Using Approximate Initial Costates. Journal of Guidance, Control, and Dynamics, 2019, 42, 585-597.	2.8	58
6	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
7	Constrained motion planning of free-float dual-arm space manipulator via deep reinforcement learning. Aerospace Science and Technology, 2021, 109, 106446.	4.8	55
8	Mars entry trajectory optimization using DOC and DCNLP. Advances in Space Research, 2011, 47, 440-452.	2.6	51
9	Onboard mission planning for agile satellite using modified mixed-integer linear programming. Aerospace Science and Technology, 2018, 72, 204-216.	4.8	50
10	Guidance Summary and Assessment of the Chang'e-3 Powered Descent and Landing. Journal of Spacecraft and Rockets, 2016, 53, 258-277.	1.9	45
11	Radio beacons/IMU integrated navigation for Mars entry. Advances in Space Research, 2011, 47, 1265-1279.	2.6	40
12	Image Processing Algorithms For Deep-Space Autonomous Optical Navigation. Journal of Navigation, 2013, 66, 605-623.	1.7	39
13	Innovative Mars entry integrated navigation using modified multiple model adaptive estimation. Aerospace Science and Technology, 2014, 39, 403-413.	4.8	34
14	A new multi-satellite autonomous mission allocation and planning method. Acta Astronautica, 2019, 163, 287-298.	3.2	34
15	Angles-only initial relative orbit determination algorithm for non-cooperative spacecraft proximity operations. Astrodynamics, 2018, 2, 217-231.	2.4	31
16	Recent advances in contact dynamics and post-capture control for combined spacecraft. Progress in Aerospace Sciences, 2021, 120, 100678.	12.1	26
17	MCAV/IMU integrated navigation for the powered descent phase of Mars EDL. Advances in Space Research, 2010, 46, 557-570.	2.6	25
18	High-precision Mars Entry Integrated Navigation Under Large Uncertainties. Journal of Navigation, 2014, 67, 327-342.	1.7	25

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19	Overview of China's 2020 Mars mission design and navigation. Astrodynamics, 2018, 2, 1-11.	2.4	25
20	Integrated guidance for Mars entry and powered descent using reinforcement learning and pseudospectral method. Acta Astronautica, 2019, 163, 114-129.	3.2	25
21	Dynamics and on-orbit assembly strategies for an orb-shaped solar array. Acta Astronautica, 2021, 178, 881-893.	3.2	24
22	Review of optimization methodologies in global and China trajectory optimization competitions. Progress in Aerospace Sciences, 2018, 102, 60-75.	12.1	23
23	Mars entry fault-tolerant control via neural network and structure adaptive model inversion. Advances in Space Research, 2019, 63, 557-571.	2.6	23
24	Range-based collaborative relative navigation for multiple unmanned aerial vehicles using consensus extended Kalman filter. Aerospace Science and Technology, 2021, 112, 106647.	4.8	22
25	Mars atmospheric entry trajectory optimization with maximum parachute deployment altitude using adaptive mesh refinement. Acta Astronautica, 2019, 160, 401-413.	3.2	21
26	Innovative hazard detection and avoidance strategy for autonomous safe planetary landing. Acta Astronautica, 2016, 126, 66-76.	3.2	19
27	Enabling technologies for Chinese Mars lander guidance system. Acta Astronautica, 2017, 133, 375-386.	3.2	19
28	Robust coordinated control for large flexible spacecraft based on consensus theory. Journal of the Franklin Institute, 2020, 357, 5359-5379.	3.4	19
29	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
30	Mars atmospheric entry trajectory optimization via particle swarm optimization and Gauss pseudo-spectral method. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2016, 230, 2320-2329.	1.3	18
31	Fuel-Optimal Asteroid Descent Trajectory Planning Using a Lambert Solution-Based Costate Initialization. IEEE Transactions on Aerospace and Electronic Systems, 2020, 56, 4338-4352.	4.7	18
32	Constrained Motion Planning of 7-DOF Space Manipulator via Deep Reinforcement Learning Combined with Artificial Potential Field. Aerospace, 2022, 9, 163.	2.2	18
33	Radio/FADS/IMU integrated navigation for Mars entry. Advances in Space Research, 2018, 61, 1342-1358.	2.6	16
34	On-orbit assembly mission planning considering topological constraint and attitude disturbance. Acta Astronautica, 2018, 152, 692-704.	3.2	16
35	Mars entry trajectory planning using robust optimization and uncertainty quantification. Acta Astronautica, 2019, 161, 249-261.	3.2	16
36	Maneuver-free approach to range-only initial relative orbit determination for spacecraft proximity operations. Acta Astronautica, 2019, 163, 87-95.	3.2	16

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37	Artificial Equilibrium Points near Irregular-Shaped Asteroids with Continuous Thrust. Journal of Guidance, Control, and Dynamics, 2018, 41, 1308-1319.	2.8	15
38	High-dimensional uncertainty quantification for Mars atmospheric entry using adaptive generalized polynomial chaos. Aerospace Science and Technology, 2020, 107, 106240.	4.8	15
39	Fast computation of the Jovian-moon three-body flyby map based on artificial neural networks. Acta Astronautica, 2022, 193, 710-720.	3.2	15
40	Computational guidance for planetary powered descent using collaborative optimization. Aerospace Science and Technology, 2018, 76, 37-48.	4.8	14
41	Contact dynamics and relative motion estimation of non-cooperative target with unilateral contact constraint. Aerospace Science and Technology, 2020, 98, 105705.	4.8	14
42	Collision-Free Trajectory Design for Long-Distance Hopping Transfer on Asteroid Surface Using Convex Optimization. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 3071-3083.	4.7	14
43	An extra degree-of-freedom model for combined spacecraft attitude control with unilateral contact constraint. Acta Astronautica, 2019, 165, 54-67.	3.2	13
44	Constructing a Large Antenna Reflector via Spacecraft Formation Flying and Reconfiguration Control. Journal of Guidance, Control, and Dynamics, 2019, 42, 1372-1382.	2.8	13
45	Optical/radio/pulsars integrated navigation for Mars orbiter. Advances in Space Research, 2019, 63, 512-525.	2.6	13
46	Adaptive mesh refinement method for solving optimal control problems using interpolation error analysis and improved data compression. Journal of the Franklin Institute, 2020, 357, 1603-1627.	3.4	13
47	Quasi-model free control for the post-capture operation of a non-cooperative target. Acta Astronautica, 2018, 147, 59-70.	3.2	12
48	Mars Entry Trajectory Planning with Range Discretization and Successive Convexification. Journal of Guidance, Control, and Dynamics, 2022, 45, 755-763.	2.8	12
49	Research Advancements in Key Technologies for Space-Based Situational Awareness. Space: Science & Technology, 2022, 2022, .	2.5	12
50	Two-Stage Pursuit Strategy for Incomplete-Information Impulsive Space Pursuit-Evasion Mission Using Reinforcement Learning. Aerospace, 2021, 8, 299.	2.2	11
51	Innovative hazard detection and avoidance guidance for safe lunar landing. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2016, 230, 2086-2103.	1.3	10
52	Modified Multiresolution Technique for Mesh Refinement in Numerical Optimal Control. Journal of Guidance, Control, and Dynamics, 2017, 40, 3328-3338.	2.8	10
53	Database construction for vision aided navigation in planetary landing. Acta Astronautica, 2017, 140, 235-246.	3.2	10
54	Slew path planning of agile-satellite antenna pointing mechanism with optimal real-time data transmission performance. Aerospace Science and Technology, 2019, 90, 103-114.	4.8	10

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55	Observability criterion of angles-only navigation for spacecraft proximity operations. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2019, 233, 4302-4315.	1.3	9
56	Single crater-aided inertial navigation for autonomous asteroid landing. Advances in Space Research, 2019, 63, 1085-1099.	2.6	9
57	Pseudostate theory based iterative preliminary design method for powered gravity-assist interplanetary trajectories. Acta Astronautica, 2019, 165, 139-149.	3.2	8
58	A fast Chebyshev polynomial method for calculating asteroid gravitational fields using space partitioning and cosine sampling. Advances in Space Research, 2020, 65, 1105-1124.	2.6	8
59	In-orbit robotic assembly mission design and planning to construct a large space telescope. Journal of Astronomical Telescopes, Instruments, and Systems, 2020, 6, 1.	1.8	8
60	Real-time trajectory optimization for collision-free asteroid landing based on deep neural networks. Advances in Space Research, 2022, 70, 112-124.	2.6	8
61	Concept design and cluster control of advanced space connectable intelligent microsatellite. Acta Astronautica, 2017, 141, 1-7.	3.2	7
62	Problem A of 9th China trajectory optimization competition: Results found at NUAA. Acta Astronautica, 2018, 150, 182-192.	3.2	7
63	A particle-linkage model for non-axisymmetric elongated asteroids. Research in Astronomy and Astrophysics, 2018, 18, 084.	1.7	7
64	Quantum-Interference Artificial Neural Network With Application to Space Manipulator Control. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 2167-2182.	4.7	7
65	Optimal slew path planning for the Sino-French Space-based multiband astronomical Variable Objects Monitor mission. Journal of Astronomical Telescopes, Instruments, and Systems, 2018, 4, 1.	1.8	7
66	Convex optimization of asteroid landing trajectories driven by solar radiation pressure. Chinese Journal of Aeronautics, 2022, 35, 200-211.	5.3	7
67	A general method for the generation and extension of collinear libration point orbits. Celestial Mechanics and Dynamical Astronomy, 2016, 126, 339-367.	1.4	6
68	Artificial equilibrium points in binary asteroid systems with continuous low-thrust. Astrophysics and Space Science, 2017, 362, 1.	1.4	6
69	On-board passive-image based non-cooperative space object capture window estimation. Aerospace Science and Technology, 2019, 84, 953-965.	4.8	6
70	Planetary landing site detection and selection using multilevel optimization strategy. Acta Astronautica, 2019, 163, 272-286.	3.2	6
71	Station-keeping of libration point orbits by means of projecting to the manifolds. Acta Astronautica, 2019, 163, 38-44.	3.2	6
72	Comparison of powered descent guidance laws for planetary pin-point landing. Acta Astronautica, 2021, 187, 101-114.	3.2	6

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73	Agile Satellite Mission Planning Via Task Clustering and Double-Layer Tabu Algorithm. CMES - Computer Modeling in Engineering and Sciences, 2020, 122, 235-257.	1.1	6
74	A novel inertial-aided feature detection model for autonomous navigation in planetary landing. Acta Astronautica, 2018, 152, 667-681.	3.2	5
75	Finite time sliding sector control for spacecraft atmospheric entry guidance. Acta Astronautica, 2019, 163, 108-113.	3.2	5
76	Accessibility of near-Earth asteroids and main-belt asteroids in a gravity-assisted multi-target mission. Planetary and Space Science, 2020, 182, 104851.	1.7	5
77	10th China Trajectory Optimization Competition: Problem description and summary of the results. Astrodynamics, 2021, 5, 1-11.	2.4	5
78	Optimization of short-arc ellipse fitting with prior information for planetary optical navigation. Acta Astronautica, 2021, 184, 119-127.	3.2	5
79	Problem B of 9th China trajectory optimization competition: Results found at NUAA. Acta Astronautica, 2018, 150, 240-249.	3.2	4
80	Optical Image Generation and High-precision Line-of-Sight Extraction for Mars Approach Navigation. Journal of Navigation, 2019, 72, 229-252.	1.7	4
81	Design of High-Inclination Artificial Frozen Orbits Around Europa. Journal of the Astronautical Sciences, 2021, 68, 585-607.	1.5	4
82	A hybrid relative navigation algorithm for a large–scale free tumbling non–cooperative target. Acta Astronautica, 2022, 194, 114-125.	3.2	4
83	Space collision probability computation based on on-board optical cues. Acta Astronautica, 2019, 155, 33-44.	3.2	3
84	Lift-off velocity on the surface of a binary asteroid system. Acta Astronautica, 2020, 170, 302-319.	3.2	3
85	Rotation based analytic range-only initial relative orbit solution for natural periodic motion. Acta Astronautica, 2021, 178, 584-594.	3.2	3
86	ANN-based method for fast optimization of Jovian-moon gravity-assisted trajectories in CR3BP. Advances in Space Research, 2022, 69, 2865-2882.	2.6	3
87	Hybrid method for accurate multi-gravity-assist trajectory design using pseudostate theory and deep neural networks. Science China Technological Sciences, 2022, 65, 595-610.	4.0	3
88	Comparison of continuity equation and Gaussian mixture model for long-term density propagation using semi-analytical methods. Celestial Mechanics and Dynamical Astronomy, 2022, 134, .	1.4	3
89	Mixed uncertainty quantification for terminal flight state of Mars atmospheric entry. Acta Astronautica, 2022, 199, 183-194.	3.2	3
90	Next-generation Mars EDL GNC: Challenges and solutions. , 2014, , .		2

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91	Improved semi-analytical computation of center manifolds near collinear libration points. Research in Astronomy and Astrophysics, 2018, 18, 138.	1.7	2
92	Inertial parameter estimation and control of non-cooperative target with unilateral contact constraint. Chinese Journal of Aeronautics, 2021, 34, 225-240.	5.3	2
93	FADS based aerodynamic parameters estimation for mars entry considering fault detection and tolerance. Acta Astronautica, 2021, 180, 243-259.	3.2	2
94	Effects of solar radiation pressure on asteroid surface hopping transfers for high area/mass ratio rovers. Research in Astronomy and Astrophysics, 2021, 21, 146.	1.7	2
95	Antiwindup Terminal Sliding Mode Control for Mars Entry Using Supertwisting Sliding Mode Disturbance Observer. Journal of Aerospace Engineering, 2018, 31, 06018002.	1.4	1
96	Feedback Linearization with Active Disturbance Rejection for Entry Guidance. , 2019, , .		1
97	Integration of gradient guidance and edge enhancement into super-resolution for small object detection in aerial images. IET Image Processing, 2021, 15, 3037-3052.	2.5	1
98	Multi-information fusion based localization algorithm for Mars rover. Advances in Aircraft and Spacecraft Science, 2014, 1, 455-469.	0.5	1
99	Editorial: Special Section on 9th China Trajectory Optimization Competition (CTOC). Acta Astronautica, 2018, 150, 177.	3.2	0
100	Robust Flight Envelope Generation Approach for Mars Entry using Uncertainty Quantification and Reachable Controllable Sets. , 2018, , .		0
101	Configuration optimization of multi-optical sensors with complex pointing constraints. Acta Astronautica, 2019, 155, 302-312.	3.2	0
102	Hierarchical approach for fast searching optimal launch opportunity in a wide range. Advances in Space Research, 2019, 63, 572-588.	2.6	0
103	Comparative study on autonomous navigation for Mars cruise probe based on observability analysis. Journal of Astronomical Telescopes, Instruments, and Systems, 2018, 4, 1.	1.8	0
104	A greedy-based hybrid trajectory optimization method for the â€œDyson Ringâ€•building problem. Acta Astronautica, 2022, , .	3.2	0