

Hyunchul Shim

List of Publications by Year in descending order

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Version: 2024-02-01

90
papers

2,312
citations

304743

22
h-index

243625

44
g-index

92
all docs

92
docs citations

92
times ranked

2031
citing authors

#	ARTICLE	IF	CITATIONS
1	Probabilistic pursuit-evasion games: theory, implementation, and experimental evaluation. IEEE Transactions on Automation Science and Engineering, 2002, 18, 662-669.	2.3	394
2	A flight control system for aerial robots: algorithms and experiments. Control Engineering Practice, 2003, 11, 1389-1400.	5.5	168
3	Perception, Guidance, and Navigation for Indoor Autonomous Drone Racing Using Deep Learning. IEEE Robotics and Automation Letters, 2018, 3, 2539-2544.	5.1	122
4	Robotic Herding of a Flock of Birds Using an Unmanned Aerial Vehicle. IEEE Transactions on Robotics, 2018, 34, 901-915.	10.3	99
5	An Integral Framework of Task Assignment and Path Planning for Multiple Unmanned Aerial Vehicles in Dynamic Environments. Journal of Intelligent and Robotic Systems: Theory and Applications, 2013, 70, 303-313.	3.4	92
6	Conflict-free navigation in unknown urban environments. IEEE Robotics and Automation Magazine, 2006, 13, 27-33.	2.0	85
7	Challenges and implemented technologies used in autonomous drone racing. Intelligent Service Robotics, 2019, 12, 137-148.	2.6	76
8	Autonomous Vision-based Landing and Terrain Mapping Using an MPC-controlled Unmanned Rotorcraft. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	70
9	Development and Application of Controller for Transition Flight of Tail-Sitter UAV. Journal of Intelligent and Robotic Systems: Theory and Applications, 2012, 65, 137-152.	3.4	64
10	A Vision-Based Automatic Landing Method for Fixed-Wing UAVs. Journal of Intelligent and Robotic Systems: Theory and Applications, 2010, 57, 217-231.	3.4	49
11	Vision-based UAV landing on the moving vehicle. , 2016, , .		48
12	A direct visual servoing-based framework for the 2016 IROS Autonomous Drone Racing Challenge. Journal of Field Robotics, 2018, 35, 146-166.	6.0	44
13	Persistent UAV Service: An Improved Scheduling Formulation and Prototypes of System Components. Journal of Intelligent and Robotic Systems: Theory and Applications, 2014, 74, 221-232.	3.4	42
14	An Evasive Maneuvering Algorithm for UAVs in See-and-Avoid Situations. Proceedings of the American Control Conference, 2007, , .	0.0	40
15	An Autonomous Driving System for Unknown Environments Using a Unified Map. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 1999-2013.	8.0	40
16	An autonomous aerial combat framework for two-on-two engagements based on basic fighter maneuvers. Aerospace Science and Technology, 2018, 72, 305-315.	4.8	39
17	A vision-based landing system for small unmanned aerial vehicles using an airbag. Control Engineering Practice, 2010, 18, 812-823.	5.5	38
18	Indoor UAV Control Using Multi-Camera Visual Feedback. Journal of Intelligent and Robotic Systems: Theory and Applications, 2011, 61, 57-84.	3.4	34

#	ARTICLE	IF	CITATIONS
19	Local path planning in a complex environment for self-driving car. , 2014, , .		34
20	Outdoor autonomous landing on a moving platform for quadrotors using an omnidirectional camera. , 2014, , .		33
21	Real-time Traffic Sign Recognition system with deep convolutional neural network. , 2016, , .		33
22	Recursive Path Planning Using Reduced States for Car-Like Vehicles on Grid Maps. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 2797-2813.	8.0	32
23	Development of a self-driving car that can handle the adverse weather. International Journal of Automotive Technology, 2018, 19, 191-197.	1.4	29
24	A vision-based target tracking control system of a quadrotor by using a tablet computer. , 2013, , .		28
25	Precise Localization and Mapping in Indoor Parking Structures via Parameterized SLAM. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 4415-4426.	8.0	28
26	V2X-Communication-Aided Autonomous Driving: System Design and Experimental Validation. Sensors, 2020, 20, 2903.	3.8	27
27	Autonomous Shipboard Landing Algorithm for Unmanned Helicopters in Crosswind. Journal of Intelligent and Robotic Systems: Theory and Applications, 2014, 74, 347-361.	3.4	23
28	Spline-based RRT ⁺ — Using Piecewise Continuous Collision-checking Algorithm for Car-like Vehicles. Journal of Intelligent and Robotic Systems: Theory and Applications, 2018, 90, 537-549.	3.4	22
29	Design of an aerial combat guidance law using virtual pursuit point concept. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2015, 229, 792-813.	1.3	21
30	Landing Control on a Mobile Platform for Multi-copters using an Omnidirectional Image Sensor. Journal of Intelligent and Robotic Systems: Theory and Applications, 2016, 84, 529-541.	3.4	21
31	Autonomous Formation Flight Test of Multi-Micro Aerial Vehicles. Journal of Intelligent and Robotic Systems: Theory and Applications, 2011, 61, 321-337.	3.4	20
32	EureCar turbo: A self-driving car that can handle adverse weather conditions. , 2016, , .		20
33	A Guidance and Control Law Design for Precision Automatic Take-off and Landing of Fixed-Wing UAVs. , 2012, , .		19
34	Vision-based sense-and-avoid framework for unmanned aerial vehicles. IEEE Transactions on Aerospace and Electronic Systems, 2015, 51, 3427-3439.	4.7	19
35	Cooperative Task Assignment and Path Planning for Multiple UAVs. , 2015, , 1547-1576.		19
36	Vision-Based Detection and Tracking of Airborne Obstacles in a Cluttered Environment. Journal of Intelligent and Robotic Systems: Theory and Applications, 2013, 69, 475-488.	3.4	18

#	ARTICLE	IF	CITATIONS
37	Optimal path planning based on spline-RRT* for fixed-wing UAVs operating in three-dimensional environments. , 2014, , .		18
38	Fault Tolerant Control of Hexacopter for Actuator Faults using Time Delay Control Method. International Journal of Aeronautical and Space Sciences, 2016, 17, 54-63.	2.0	18
39	Assistive Delivery Robot Application for Real-World Postal Services. IEEE Access, 2021, 9, 141981-141998.	4.2	18
40	Incorporating Multi-Context Into the Traversability Map for Urban Autonomous Driving Using Deep Inverse Reinforcement Learning. IEEE Robotics and Automation Letters, 2021, 6, 1662-1669.	5.1	17
41	Dynamics and Simulation of the Effects of Wind on UAVs and Airborne Wind Measurement. Transactions of the Japan Society for Aeronautical and Space Sciences, 2015, 58, 187-192.	0.7	15
42	Path planner based on bidirectional spline-RRT* for fixed-wing UAVs. , 2016, , .		15
43	Mixed-Objective Optimization of a Track-Following Controller Using Linear Matrix Inequalities. IEEE/ASME Transactions on Mechatronics, 2004, 9, 636-643.	5.8	14
44	Toward Robotic Sensor Webs: Algorithms, Systems, and Experiments. Proceedings of the IEEE, 2011, 99, 1562-1586.	21.3	14
45	RRT-based path planning for fixed-wing UAVs with arrival time and approach direction constraints. , 2014, , .		13
46	Learning to Drive at Unsignalized Intersections using Attention-based Deep Reinforcement Learning. , 2021, , .		13
47	A Development of Unmanned Helicopters for Industrial Applications. Journal of Intelligent and Robotic Systems: Theory and Applications, 2009, 54, 407-421.	3.4	12
48	Integrated navigation system using camera and gimbaled laser scanner for indoor and outdoor autonomous flight of UAVs. , 2013, , .		11
49	Tablet PC-based Visual Target-Following System for Quadrotors. Journal of Intelligent and Robotic Systems: Theory and Applications, 2014, 74, 85-95.	3.4	11
50	SLPA \mathcal{A}^* : Shape-Aware Lifelong Planning A \mathcal{A}^* for Differential Wheeled Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 730-740.	8.0	11
51	Design, Implementation, and Flight Tests of a Feedback Linearization Controller for Multirotor UAVs. International Journal of Aeronautical and Space Sciences, 2017, 18, 740-756.	2.0	11
52	Aircraft Longitudinal Auto-landing Guidance Law Using Time Delay Control Scheme. Transactions of the Japan Society for Aeronautical and Space Sciences, 2010, 53, 207-214.	0.7	9
53	A trajectory-tracking controller design using L_1 adaptive control for multi-rotor UAVs. , 2015, , .		9
54	A flight control system design for highly unstable unmanned combat aerial vehicles. , 2014, , .		6

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55	Development of a Vision-enabled Aerial Manipulator using a Parallel Robot. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2017, 15, a27-a36.	0.2	6
56	A Dynamic Path Generation Method for a UAV Swarm in the Urban Environment. , 2008, , .		5
57	Visual Detection and Servoing for Automated Docking of Unmanned Spacecraft. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2014, 12, a107-a116.	0.2	5
58	Decentralized information-theoretic task assignment for searching and tracking of moving targets. , 2015, , .		5
59	Fault Tolerant Adaptive Control using Time Delay Control Scheme under Motor Faults of Octocopter. , 2018, , .		5
60	A Mini-drone Development, Genetic Vector Field-Based Multi-agent Path Planning, and Flight Tests. International Journal of Aeronautical and Space Sciences, 2018, 19, 785-797.	2.0	5
61	Comparison of Visual Inertial Odometry using FlightGoggles Simulator for UAV. , 2019, , .		5
62	Deep Reinforcement Learning based Autonomous Air-to-Air Combat using Target Trajectory Prediction. , 2021, , .		5
63	Spline-RRT* based optimal path planning of terrain following flights for fixed-wing UAVs. , 2014, , .		4
64	A Vision-Based Automatic Landing Method for Fixed-Wing UAVs. , 2009, , 217-231.		4
65	Design and Validation of Low-cost Flight Control Computer for Multi-rotor UAVs. Journal of the Korean Society for Aeronautical & Space Sciences, 2017, 45, 401-408.	0.1	4
66	Multiple UAVs tracking algorithm with a multi-camera system. , 2010, , .		3
67	An image processing algorithm for detection and tracking of aerial vehicles. , 2011, , .		3
68	A Robot-Machine Interface for full-functionality automation using a humanoid. , 2014, , .		3
69	Toward autonomous aircraft piloting by a humanoid robot: Hardware and control algorithm design. , 2016, , .		3
70	Consideration of Airborne Detection System for DAA Technology in Remote Pilot Aircraft Systems. , 2018, , .		3
71	3D Multi-floor Precision Mapping and Localization for Indoor Autonomous Robots. The Journal of Korea Robotics Society, 2022, 17, 25-31.	0.4	3
72	Autopilot Design Using Hybrid PSO-SQP Algorithm. , 2007, , 596-604.		2

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73	Study on real-time obstacle avoidance for unmanned ground vehicles. , 2010, , .		2
74	Efficient Graph-SLAM optimization using unit dual-quaternions. , 2015, , .		2
75	A Hybrid Control Architecture For Autonomous Driving In Urban Environment. , 2018, , .		2
76	Improvements in Small-scale Helicopter Rotor Modeling for the Real-time Simulation of Hovering Flight. Transactions of the Japan Society for Aeronautical and Space Sciences, 2011, 54, 229-237.	0.7	2
77	Development of an exploration rover platform for sample return mission. , 2014, , .		1
78	Development of an Aircraft Auto-landing Guidance System using Time Delay Control, and Simulation with Crosswind and Aileron Fault. Transactions of the Japan Society for Aeronautical and Space Sciences, 2015, 58, 23-29.	0.7	1
79	Quaternion based attitude control and suboptimal rendezvous guidance on satellite proximity operation. , 2016, , .		1
80	Diurnal Motion of Constellations using 150 Drones. , 2019, , .		1
81	A general-purpose task execution framework for manipulation mission of the 2017 Mohamed Bin Zayed International Robotics Challenge. Journal of Field Robotics, 2019, 36, 149-169.	6.0	1
82	Shape-Aware and G2 Continuous Path Planning Based on Bidirectional Hybrid A ⁺ — for Car-Like Vehicles. Journal of Intelligent and Robotic Systems: Theory and Applications, 2021, 103, 1.	3.4	1
83	An autonomous shipboard landing algorithm for unmanned helicopters. , 2013, , .		0
84	Rich feature hierarchies from omni-directional RGB-DI information for pedestrian detection. , 2015, , .		0
85	Optimal Rendezvous Guidance Using Linear Quadratic Control. MATEC Web of Conferences, 2016, 54, 09002.	0.2	0
86	Occlusion Robust Object Detection and Tracking on a Real-time Drone. , 2019, , .		0
87	Handling Quality Improvements of Fly-By-Wire Helicopter using Combined Model Following Controller with Decoupler. International Journal of Aeronautical and Space Sciences, 2017, 18, 378-387.	2.0	0
88	Heterogeneous sensor fusion based omnidirectional object detection. , 2020, , .		0
89	Time-to-Line Crossing Enhanced End-to-End Autonomous Driving Framework. , 2020, , .		0
90	Lane Level Path Planning for Urban Autonomous Driving using Vector Map. , 2020, , .		0