Giulio Reina

List of Publications by Year
in descending order

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103	1,921	279487	315357
papers	citations	23 h-index	38 g-index

105	105	105	1387
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Current-Based Slippage Detection and Odometry Correction for Mobile Robots and Planetary Rovers. , 2006, 22, 366-378.		113
2	Wheel slippage and sinkage detection for planetary rovers. IEEE/ASME Transactions on Mechatronics, 2006, 11, 185-195.	3.7	107
3	In-field high throughput grapevine phenotyping with a consumer-grade depth camera. Computers and Electronics in Agriculture, 2019, 156, 293-306.	3.7	103
4	A Survey of Ranging and Imaging Techniques for Precision Agriculture Phenotyping. IEEE/ASME Transactions on Mechatronics, 2017, 22, 2428-2439.	3.7	92
5	Vehicle dynamics estimation via augmented Extended Kalman Filtering. Measurement: Journal of the International Measurement Confederation, 2019, 133, 383-395.	2.5	80
6	Ambient awareness for agricultural robotic vehicles. Biosystems Engineering, 2016, 146, 114-132.	1.9	78
7	Agricultural robot for radicchio harvesting. Journal of Field Robotics, 2006, 23, 363-377.	3.2	76
8	Vehicle parameter estimation using a model-based estimator. Mechanical Systems and Signal Processing, 2017, 87, 227-241.	4.4	64
9	Radar Sensing for Intelligent Vehicles in Urban Environments. Sensors, 2015, 15, 14661-14678.	2.1	61
10	Towards Autonomous Agriculture: Automatic Ground Detection Using Trinocular Stereovision. Sensors, 2012, 12, 12405-12423.	2.1	56
11	Terrain assessment for precision agriculture using vehicle dynamic modelling. Biosystems Engineering, 2017, 162, 124-139.	1.9	51
12	Adaptive Kalman Filtering for GPS-based Mobile Robot Localization. , 2007, , .		48
13	Radarâ€based perception for autonomous outdoor vehicles. Journal of Field Robotics, 2011, 28, 894-913.	3.2	48
14	A multi-sensor robotic platform for ground mapping and estimation beyond the visible spectrum. Precision Agriculture, 2019, 20, 423-444.	3.1	43
15	A Selfâ€learning Framework for Statistical Ground Classification using Radar and Monocular Vision. Journal of Field Robotics, 2015, 32, 20-41.	3.2	41
16	Odometry Correction Using Visual Slip Angle Estimation for Planetary Exploration Rovers. Advanced Robotics, 2010, 24, 359-385.	1.1	40
17	Dynamic Simulation-Based Action Planner for a Reconfigurable Hybrid Legâ€“Wheel Planetary Exploration Rover. Advanced Robotics, 2010, 24, 1219-1238.	1.1	35
18	Self-learning classification of radar features for scene understanding. Robotics and Autonomous Systems, 2012, 60, 1377-1388.	3.0	34

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19	3D traversability awareness for rough terrain mobile robots. Sensor Review, 2014, 34, 220-232.	1.0	32
20	Tyre pressure monitoring using a dynamical model-based estimator. Vehicle System Dynamics, 2015, 53, 568-586.	2.2	32
21	Vision-based estimation of slip angle for mobile robots and planetary rovers. , 2008, , .		27
22	On the mobility of allâ€terrain rovers. Industrial Robot, 2013, 40, 121-131.	1.2	27
23	Slip-based terrain estimation with a skid-steer vehicle. Vehicle System Dynamics, 2016, 54, 1384-1404.	2.2	27
24	Learning Traversability From Point Clouds in Challenging Scenarios. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 296-305.	4.7	27
25	Dual-Motor Planetary Transmission to Improve Efficiency in Electric Vehicles. Machines, 2021, 9, 58.	1.2	27
26	Computer Vision Methods for Improved Mobile Robot State Estimation in Challenging Terrains. Journal of Multimedia, 2006, 1, .	0.3	25
27	3D reconstruction and classification of natural environments by an autonomous vehicle using multi-baseline stereo. Intelligent Service Robotics, 2014, 7, 79-92.	1.6	24
28	The FLEXnav precision dead-reckoning system. International Journal of Vehicle Autonomous Systems, 2006, 4, 173.	0.2	23
29	Experimental results from FLEXnav: an expert rule-based dead-reckoning system for mars rovers. , 0, , .		20
30	An application of mobile robotics for olfactory monitoring of hazardous industrial sites. Industrial Robot, 2009, 36, 51-59.	1.2	20
31	Recurrent and convolutional neural networks for deep terrain classification by autonomous robots. Journal of Terramechanics, 2021, 96, 119-131.	1.4	20
32	Visual ground segmentation by radar supervision. Robotics and Autonomous Systems, 2014, 62, 696-706.	3.0	19
33	Terrain Awareness Using a Tracked Skid-Steering Vehicle With Passive Independent Suspensions. Frontiers in Robotics and AI, 2019, 6, 46.	2.0	18
34	Unevenness Point Descriptor for Terrain Analysis in Mobile Robot Applications. International Journal of Advanced Robotic Systems, 2013, 10, 284.	1.3	17
35	LIDAR and stereo combination for traversability assessment of off-road robotic vehicles. Robotica, 2016, 34, 2823-2841.	1.3	17
36	Mind the ground: A power spectral density-based estimator for all-terrain rovers. Measurement: Journal of the International Measurement Confederation, 2020, 151, 107136.	2.5	16

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37	A new approach for terrain analysis in mobile robot applications. , 2013, , .		15
38	On the vibration analysis of off-road vehicles: Influence of terrain deformation and irregularity. JVC/Journal of Vibration and Control, 2018, 24, 5418-5436.	1.5	15
39	Terrain estimation via vehicle vibration measurement and cubature Kalman filtering. JVC/Journal of Vibration and Control, 2020, 26, 885-898.	1.5	15
40	Cross-Coupled Control for All-Terrain Rovers. Sensors, 2013, 13, 785-800.	2.1	13
41	Action planner of hybrid leg-wheel robots for lunar and planetary exploration. , 2008, , .		12
42	Active vibration absorber for automotive suspensions: a theoretical study. International Journal of Heavy Vehicle Systems, 2016, 23, 21.	0.1	12
43	Design and Development of a Tracked Robot to Increase Bulk Density of Flax Fibers. Journal of Mechanisms and Robotics, 2021, 13, .	1.5	12
44	A multi-baseline stereo system for scene segmentation in natural environments. , 2013, , .		11
45	Introducing POLYPUS: A novel adaptive vacuum gripper. Mechanism and Machine Theory, 2022, 167, 104483.	2.7	11
46	On the role of feature and signal selection for terrain learning in planetary exploration robots. Journal of Field Robotics, 2022, 39, 355-370.	3.2	11
47	Traversability analysis for off-road vehicles using stereo and radar data. , 2015, , .		9
48	Terrain Estimation for Planetary Exploration Robots. Applied Sciences (Switzerland), 2020, 10, 6044.	1.3	9
49	Modelling and handling dynamics of a wind-driven vehicle. Vehicle System Dynamics, 2019, 57, 697-720.	2.2	8
50	Comparison of 3D scan matching techniques for autonomous robot navigation in urban and agricultural environments. Journal of Applied Remote Sensing, 2021, 15, .	0.6	8
51	Dynamic Handling Characterization and Set-Up Optimization for a Formula SAE Race Car via Multi-Body Simulation. Machines, 2021, 9, 126.	1.2	8
52	Rolling resistance and sinkage analysis by comparing FEM and experimental data for a grape transporting vehicle. Journal of Terramechanics, 2021, 97, 59-70.	1.4	8
53	Vision-based Wheel Sinkage Estimation for Rough-Terrain Mobile Robots. , 2008, , .		7
54	LIDAR and stereo imagery integration for safe navigation in outdoor settings. , 2013, , .		7

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55	Advances in Finger and Partial Hand Prosthetic Mechanisms. Robotics, 2020, 9, 80.	2.1	7
56	A novel optimal path-planning and following algorithm for wheeled robots on deformable terrains. Journal of Terramechanics, 2021, 96, 147-157.	1.4	7
57	Clustering and PCA for Reconstructing Two Perpendicular Planes Using Ultrasonic Sensors. International Journal of Advanced Robotic Systems, 2013, 10, 210.	1.3	7
58	Computer vision technology for agricultural robotics. Sensor Review, 2006, 26, 290-300.	1.0	6
59	Pavement distress detection and avoidance for intelligent vehicles. International Journal of Vehicle Autonomous Systems, 2016, 13, 152.	0.2	6
60	A Factor-Graph-Based Approach to Vehicle Sideslip Angle Estimation. Sensors, 2021, 21, 5409.	2.1	6
61	Influence of the Dynamic Effects and Grasping Location on the Performance of an Adaptive Vacuum Gripper. Actuators, 2022, 11, 55.	1.2	6
62	A theoretical model for multi-layer jamming systems. Mechanism and Machine Theory, 2022, 172, 104788.	2.7	6
63	Visual and Tactile-Based Terrain Analysis Using a Cylindrical Mobile Robot. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2006, 128, 165-170.	0.9	5
64	Performance of Greekâ€“Roman Artillery. Arms and Armour, 2015, 12, 67-89.	0.3	5
65	Survey and navigation in agricultural environments using robotic technologies. , 2017, , .		5
66	A Toolbox for the Analysis of the Grasp Stability of Underactuated Fingers. Robotics, 2019, 8, 26.	2.1	5
67	Model-based observers for vehicle dynamics and tyre force prediction. Vehicle System Dynamics, 2022, 60, 2845-2870.	2.2	5
68	A general framework for modeling and dynamic simulation of multibody systems using factor graphs. Nonlinear Dynamics, 2021, 105, 2031-2053.	2.7	5
69	Performance Evaluation of a Compound Power-Split CVT for Hybrid Powertrains. Applied Sciences (Switzerland), 2021, 11, 8749.	1.3	5
70	Combining radar and vision for self-supervised ground segmentation in outdoor environments. , 2011, , .		5
71	Mobile Robotics for Sustainable Development: Two Case Studies. Mechanisms and Machine Science, 2022, , 372-382.	0.3	5
72	Three Different Approaches for Localization in a Corridor Environment by Means of an Ultrasonic Wide Beam. International Journal of Advanced Robotic Systems, 2013, 10, 163.	1.3	4

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73	An improved active drag reduction system for formula race cars. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2020, 234, 1460-1471.	1.1	4
74	Short-Range Radar Perception in Outdoor Environments. Lecture Notes in Computer Science, 2011, , 265-276.	1.0	4
75	Measures for Wheel Slippage and Sinkage Detection in Rough-Terrain Mobile Robots. , 2005, , 1379.		3
76	Robotics for Agricultural Systems. , 2008, , 313-332.		3
77	Adaptive Multi-Sensor Perception for Driving Automation in Outdoor Contexts. International Journal of Advanced Robotic Systems, 2014, 11, 135.	1.3	3
78	Laser based driving assistance for smart robotic wheelchairs. , 2015, , .		3
79	A multisensor platform for comprehensive detection of crop status: Results from two case studies. , 2017, , .		3
80	Mobile robot perception using an inexpensive 3-D laser rangefinder. , 2010, , .		2
81	FLane: An Adaptive Fuzzy Logic Lane Tracking System for Driver Assistance. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2011, 133, .	0.9	2
82	All-terrain estimation for mobile robots in precision agriculture. , 2018, , .		2
83	On the frequency range of Timoshenko beam theory. Mechanics of Advanced Materials and Structures, 2020, 27, 1387-1399.	1.5	2
84	A Proposed Software Framework Aimed at Energy-Efficient Autonomous Driving of Electric Vehicles. Lecture Notes in Computer Science, 2014, , 219-230.	1.0	2
85	Dynamic Modeling for a Cylindrical Mobile Robot on Rough-Terrain. , 2004, , 1147.		1
86	Special Section: Mobile Robots and Unmanned Ground Vehicles. Journal of Mechanisms and Robotics, 2021, 13, .	1.5	1
87	The SNAP: A Novel Four-Wheel Pedal-Assisted Electric Lightweight Vehicle. Mechanisms and Machine Science, 2022, , 110-117.	0.3	1
88	A Fuzzy Lane Tracking System for Driver Assistance. , 2006, , .		1
89	Wind Propulsion for Robot Surface Mobility. Mechanisms and Machine Science, 2017, , 363-370.	0.3	1
90	Sailmast Setup for a Wind Wheeled Robot. Mechanisms and Machine Science, 2019, , 83-90.	0.3	1

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91	Increasing autonomy in agricultural robots: unevenness estimation of the terrain ahead. , 2021, , .		1
92	Semi - Autonomous Olfactive Environment Inspection by a Mobile Robot. , 0, , .		0
93	A Novel Teleoperated Hybrid Wheel-Limb Hexapod for Lunar Craters' Exploration. Transactions of the Japan Society for Aeronautical and Space Sciences Space Technology Japan, 2009, 7, Tk_71-Tk_76.	0.2	0
94	An Airborne Camera Simulator for Aerial Mapping Applications. , 2016, , .		0
95	Guest Editorial Focused Section on Mechatronics Applications in Agriculture. IEEE/ASME Transactions on Mechatronics, 2017, 22, 2397-2400.	3.7	0
96	A Proposed Software Framework for Studying the Grasp Stability of Underactuated Fingers. Mechanisms and Machine Science, 2019, , 202-210.	0.3	0
97	Learning and prediction of vehicle-terrain interaction from 3D vision. , 2021, , .		0
98	Rough Terrain Mobile Robot Localization Using Stereovision. , 2007, , .		0
99	Vision-Based Methods for Mobile Robot Localization and Wheel Sinkage Estimation. , 2008, , .		0
100	Experimental Assessment of Fatigue Reliability for High-Pressure Plunger Pumps. , 2009, , .		0
101	A Self-Learning Ground Classifier Using Radar Features. Springer Tracts in Advanced Robotics, 2014, , 629-642.	0.3	0
102	A Path Tracking Algorithm for an Autonomous Wind-Driven Robot. Mechanisms and Machine Science, 2021, , 542-550.	0.3	0
103	Terrain Sensing for Planetary Rovers. Mechanisms and Machine Science, 2021, , 269-277.	0.3	0