

Luis Paya

List of Publications by Year in descending order

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Version: 2024-02-01

110
papers

670
citations

687220

13
h-index

677027

22
g-index

114
all docs

114
docs citations

114
times ranked

428
citing authors

#	ARTICLE	IF	CITATIONS
1	A state-of-the-art review on mobile robotics tasks using artificial intelligence and visual data. Expert Systems With Applications, 2021, 167, 114195.	4.4	65
2	An improved Monte Carlo method based on Gaussian growth to calculate the workspace of robots. Engineering Applications of Artificial Intelligence, 2017, 64, 197-207.	4.3	54
3	Development and deployment of a new robotics toolbox for education. Computer Applications in Engineering Education, 2015, 23, 443-454.	2.2	35
4	Map Building and Monte Carlo Localization Using Global Appearance of Omnidirectional Images. Sensors, 2010, 10, 11468-11497.	2.1	32
5	Performance of Global-Appearance Descriptors in Map Building and Localization Using Omnidirectional Vision. Sensors, 2014, 14, 3033-3064.	2.1	32
6	A State-of-the-Art Review on Mapping and Localization of Mobile Robots Using Omnidirectional Vision Sensors. Journal of Sensors, 2017, 2017, 1-20.	0.6	31
7	A hybrid solution to the multi-robot integrated exploration problem. Engineering Applications of Artificial Intelligence, 2010, 23, 473-486.	4.3	27
8	Visual Information Fusion through Bayesian Inference for Adaptive Probability-Oriented Feature Matching. Sensors, 2018, 18, 2041.	2.1	24
9	Estimation of Visual Maps with a Robot Network Equipped with Vision Sensors. Sensors, 2010, 10, 5209-5232.	2.1	22
10	Robust Visual Localization with Dynamic Uncertainty Management in Omnidirectional SLAM. Applied Sciences (Switzerland), 2017, 7, 1294.	1.3	22
11	Using Omnidirectional Vision to Create a Model of the Environment: A Comparative Evaluation of Global-Appearance Descriptors. Journal of Sensors, 2016, 2016, 1-21.	0.6	21
12	Position Estimation and Local Mapping Using Omnidirectional Images and Global Appearance Descriptors. Sensors, 2015, 15, 26368-26395.	2.1	20
13	Modeling Environments Hierarchically with Omnidirectional Imaging and Global-Appearance Descriptors. Remote Sensing, 2018, 10, 522.	1.8	14
14	Evaluation of Clustering Methods in Compression of Topological Models and Visual Place Recognition Using Global Appearance Descriptors. Applied Sciences (Switzerland), 2019, 9, 377.	1.3	14
15	Mapping and localization module in a mobile robot for insulating building crawl spaces. Automation in Construction, 2018, 87, 248-262.	4.8	13
16	Hierarchical Localization in Topological Models Under Varying Illumination Using Holistic Visual Descriptors. IEEE Access, 2019, 7, 49580-49595.	2.6	11
17	A method based on the vanishing of self-motion manifolds to determine the collision-free workspace of redundant robots. Mechanism and Machine Theory, 2018, 128, 84-109.	2.7	10
18	Relative Altitude Estimation Using Omnidirectional Imaging and Holistic Descriptors. Remote Sensing, 2019, 11, 323.	1.8	10

#	ARTICLE	IF	CITATIONS
19	Special Issue on Mobile Robots Navigation. Applied Sciences (Switzerland), 2020, 10, 1317.	1.3	10
20	A Virtual Laboratory to Simulate the Control of Parallel Robots. IFAC-PapersOnLine, 2015, 48, 19-24.	0.5	9
21	Trajectory estimation and optimization through loop closure detection, using omnidirectional imaging and global-appearance descriptors. Expert Systems With Applications, 2018, 102, 273-290.	4.4	9
22	Special Issue on Visual Sensors. Sensors, 2020, 20, 910.	2.1	9
23	A CNN Regression Approach to Mobile Robot Localization Using Omnidirectional Images. Applied Sciences (Switzerland), 2021, 11, 7521.	1.3	8
24	Estimating the position and orientation of a mobile robot with respect to a trajectory using omnidirectional imaging and global appearance. PLoS ONE, 2017, 12, e0175938.	1.1	8
25	Mechanisms for collaborative teleoperation with a team of cooperative robots. Industrial Robot, 2008, 35, 27-36.	1.2	7
26	Analysing Studentsâ€™ Achievement in the Learning of Electronics Supported by ICT Resources. Electronics (Switzerland), 2019, 8, 264.	1.8	7
27	Holistic Descriptors of Omnidirectional Color Images and Their Performance in Estimation of Position and Orientation. IEEE Access, 2020, 8, 81822-81848.	2.6	6
28	Analysis of Map Alignment techniques in visual SLAM systems. , 2008, , .		5
29	Disassembly planning strategies for automatic material removal. International Journal of Advanced Manufacturing Technology, 2010, 46, 339-350.	1.5	5
30	Appearanceâ€based approach to hybrid metricâ€topological simultaneous localisation and mapping. IET Intelligent Transport Systems, 2014, 8, 688-699.	1.7	5
31	A Simulation Tool to Study the Kinematics and Control of 2RPR-PR Parallel Robots. IFAC-PapersOnLine, 2016, 49, 268-273.	0.5	5
32	Deployment of a Software to Simulate Control Systems in the State-Space. Electronics (Switzerland), 2019, 8, 1205.	1.8	5
33	Creating Incremental Models of Indoor Environments through Omnidirectional Imaging. Applied Sciences (Switzerland), 2020, 10, 6480.	1.3	5
34	Development and use of a convolutional neural network for hierarchical appearance-based localization. Artificial Intelligence Review, 2022, 55, 2847-2874.	9.7	5
35	Monte-Carlo Workspace Calculation of a Serial-Parallel Biped Robot. Advances in Intelligent Systems and Computing, 2016, , 157-169.	0.5	5
36	A Deep Learning Tool to Solve Localization in Mobile Autonomous Robotics. , 2020, , .		5

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37	Active Learning Program Supported by Online Simulation Applet in Engineering Education. , 2019, , .		5
38	An educational tool for mobile robots remote interaction. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 42, 180-185.	0.4	4
39	m-PaRoLa: a Mobile Virtual Laboratory for Studying the Kinematics of Five-bar and 3RRR Planar Parallel Robots – Work supported by the Spanish Ministries of Education (grant No. FPU13/00413) and Economy (project No. DPI 2016-78361-R).. IFAC-PapersOnLine, 2018, 51, 178-183.	0.5	4
40	Trajectory Analysis for the MASAR: A New Modular and Single-Actuator Robot. Robotics, 2019, 8, 78.	2.1	4
41	Appearance-Based Multi-robot Following Routes Using Incremental PCA. Lecture Notes in Computer Science, 2007, , 1170-1178.	1.0	4
42	Plataforma Distribuida para la Realización de Prácticas de Robótica Móvil a través de Internet. Informacion Tecnologica (discontinued), 2007, 18, .	0.1	3
43	A Novel Method to Estimate the Position of a Mobile Robot in Underfloor Environments Using RGB-D Point Clouds. IEEE Access, 2020, 8, 9084-9101.	2.6	3
44	The Role of Global Appearance of Omnidirectional Images in Relative Distance and Orientation Retrieval. Sensors, 2021, 21, 3327.	2.1	3
45	Visual Hybrid SLAM: An Appearance-Based Approach to Loop Closure. Advances in Intelligent Systems and Computing, 2014, , 693-701.	0.5	3
46	DEVELOPMENT OF A PLATFORM TO SIMULATE VIRTUAL ENVIRONMENTS FOR ROBOT LOCALIZATION. , 2018, , .		3
47	Efficient probability-oriented feature matching using wide field-of-view imaging. Engineering Applications of Artificial Intelligence, 2022, 107, 104539.	4.3	3
48	Training, Optimization and Validation of a CNN for Room Retrieval and Description of Omnidirectional Images. SN Computer Science, 2022, 3, 1.	2.3	3
49	3D Object Recognition from Appearance: PCA Versus ICA Approaches. Lecture Notes in Computer Science, 2004, , 547-555.	1.0	2
50	Assessing the influence in the parameters of a Rao-Blackwellised particle filter to solve the SLAM problem. IEEE Latin America Transactions, 2008, 6, 18-27.	1.2	2
51	A Study of Visual Descriptors for Outdoor Navigation Using Google Street View Images. Journal of Sensors, 2016, 2016, 1-12.	0.6	2
52	Compression of topological models and localization using the global appearance of visual information. , 2017, , .		2
53	An Evaluation between Global Appearance Descriptors based on Analytic Methods and Deep Learning Techniques for Localization in Autonomous Mobile Robots. , 2019, , .		2
54	Evaluating the Robustness of Global Appearance Descriptors in a Visual Localization Task, under Changing Lighting Conditions. , 2018, , .		2

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55	Parallelisms Between Planar and Spatial Tricept-Like Parallel Robots. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2019, , 155-162.	0.3	2
56	Multi-robot Route Following Using Omnidirectional Vision and Appearance-Based Representation of the Environment. Lecture Notes in Computer Science, 2008, , 680-687.	1.0	2
57	Design of a mobile binary parallel robot that exploits nonsingular transitions. Mechanism and Machine Theory, 2022, 171, 104733.	2.7	2
58	DESIGN OF A SIMULATION TOOL TO STUDY THE CONTROLLABILITY AND STATE-SPACE CONTROL OF A PARALLEL ROBOT. INTED Proceedings, 2022, , .	0.0	2
59	Global Appearance Applied to Visual Map Building and Path Estimation Using Multiscale Analysis. Mathematical Problems in Engineering, 2014, 2014, 1-23.	0.6	1
60	Development of a graphical interface to simulate control systems using modern control techniques. , 2016, , .		1
61	On the Stability of the Quadruple Solutions of the Forward Kinematic Problem in Analytic Parallel Robots. Journal of Intelligent and Robotic Systems: Theory and Applications, 2017, 86, 381-396.	2.0	1
62	Development of Height Indicators using Omnidirectional Images and Global Appearance Descriptors. Applied Sciences (Switzerland), 2017, 7, 482.	1.3	1
63	Dynamic Catadioptric Sensory Data Fusion for Visual Localization in Mobile Robotics. Proceedings (mdpi), 2019, 15, .	0.2	1
64	Simulation Tool for Analyzing the Kinetostatic Effects of Singularities in Parallel Robots. , 2019, , .		1
65	A Robust CNN Training Approach to Address Hierarchical Localization with Omnidirectional Images. , 2021, , .		1
66	A study of traffic accidents in Spanish intercity roads by means of feature vectors. International Journal of Design and Nature and Ecodynamics, 2016, 11, 317-327.	0.3	1
67	Second-order Taylor Stability Analysis of Isolated Kinematic Singularities of Closed-chain Mechanisms. , 2017, , .		1
68	Evaluation of Aligning Methods for Landmark-Based Maps in Visual SLAM. , 0, , .		1
69	Probabilistic Map Building, Localization and Navigation of a Team of Mobile Robots. Application to Route Following. , 0, , .		1
70	Nearest Position Estimation Using Omnidirectional Images and Global Appearance Descriptors. Advances in Intelligent Systems and Computing, 2016, , 517-529.	0.5	1
71	Calculation of the Boundaries and Barriers of the Workspace of a Redundant Serial-parallel Robot using the Inverse Kinematics. , 2016, , .		1
72	Using Global Appearance Descriptors to Solve Topological Visual SLAM. , 2018, , 6894-6905.		1

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73	Environment Virtualization for Visual Localization and Mapping. Advances in Intelligent Systems and Computing, 2020, , 209-221.	0.5	1
74	Solution of the Forward Kinematic Problem of 3UPS-PU Parallel Manipulators based on Constraint Curves. , 2020, , .		1
75	An Evaluation of New Global Appearance Descriptor Techniques for Visual Localization in Mobile Robots under Changing Lighting Conditions. , 2020, , .		1
76	Evaluating the Influence of Feature Matching on the Performance of Visual Localization with Fisheye Images. , 2021, , .		1
77	A Robust CNN Training Approach to Address Hierarchical Localization with Omnidirectional Images. , 2021, , .		1
78	A Localization Approach Based on Omnidirectional Vision and Deep Learning. Lecture Notes in Electrical Engineering, 2022, , 226-246.	0.3	1
79	Subspace Reduction for Appearance-Based Navigation of a Mobile Robot. , 2007, , .		0
80	Improving Appearance-Based Following Routes with a Probabilistic Approach. , 2008, , .		0
81	Comparison of mapping techniques in appearance-based topological maps creation. , 2010, , .		0
82	An educational software to develop robot mapping and localization practices using visual information. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 174-179.	0.4	0
83	Visual Odometry using the Global-appearance of Omnidirectional Images. , 2014, , .		0
84	A Simulation Tool for Visualizing the Assembly Modes and Singularity Locus of 3RPR Planar Parallel Robots. Advances in Intelligent Systems and Computing, 2018, , 516-528.	0.5	0
85	Evaluating the Influence of Feature Matching on the Performance of Visual Localization with Fisheye Images. , 2021, , .		0
86	DESIGN OF A VIRTUAL LABORATORY AND A SET OF PRACTICAL SESSIONS IN STATE-SPACE CONTROL. , 2021, , .		0
87	NEW PRACTICAL APPROACH TO CIRCUIT ANALYSIS IN DUAL-MODE TEACHING. , 2021, , .		0
88	Evaluaci3n de descriptores locales en localizaci3n visual con im3genes ojo de pez. , 2021, , 507-514.		0
89	Entrenamiento, optimizaci3n y validaci3n de una CNN para localizaci3n jer3rquica mediante im3genes omnidireccionales.. , 2021, , 640-647.		0
90	Development of a Web-Based Educational Platform to Interact with Remote Mobile Robots. , 2011, , 46-65.		0

#	ARTICLE	IF	CITATIONS
91	Topological Height Estimation Using Global Appearance of Images. Advances in Intelligent Systems and Computing, 2014, , 77-89.	0.5	0
92	Relative Height Estimation using Omnidirectional Images and a Global Appearance Approach. , 2015, , .		0
93	A Comparison of Appearance-Based Descriptors in a Visual SLAM Approach. , 2015, , 3187-3196.		0
94	Generation of Data Sets Simulating Different Kinds of Cameras in Virtual Environments. , 2016, , .		0
95	SLAM Algorithm by using Global Appearance of Omnidirectional Images. , 2017, , .		0
96	Movement Direction Estimation Using Omnidirectional Images in a SLAM Algorithm. Advances in Intelligent Systems and Computing, 2018, , 640-651.	0.5	0
97	Fusing Omnidirectional Visual Data for Probability Matching Prediction. Lecture Notes in Computer Science, 2018, , 571-583.	1.0	0
98	Evaluating the Robustness of Global Appearance Descriptors in a Visual Localization Task, under Changing Lighting Conditions. , 2018, , .		0
99	A MULTI-PERSPECTIVE SIMULATOR FOR VISUALIZING AND ANALYZING THE KINEMATICS AND SINGULARITIES OF 2UPS/U PARALLEL MECHANISMS. INTED Proceedings, 2018, , .	0.0	0
100	Using Global Appearance Descriptors to Solve Topological Visual SLAM. Advances in Computer and Electrical Engineering Book Series, 2019, , 1127-1140.	0.2	0
101	Performance of New Global Appearance Description Methods in Localization of Mobile Robots. Advances in Intelligent Systems and Computing, 2020, , 351-363.	0.5	0
102	Laboratorio virtual móvil de robots paralelos. , 0, , .		0
103	Uso de técnicas de machine learning para realizar mapping en robótica móvil. , 0, , .		0
104	Planificación de trayectorias de un robot móvil modular con un único actuador. , 0, , .		0
105	Evaluación de nuevos modos de empleo de los descriptores de apariencia global en tareas de localización. , 0, , .		0
106	Algoritmo de SLAM utilizando apariencia global de imágenes omnidireccionales. , 0, , .		0
107	Análisis de estabilidad de singularidades aisladas en robots paralelos mediante desarrollos de Taylor de segundo orden. , 0, , .		0
108	Evaluación de descriptores de apariencia global en tareas de localización bajo cambios de iluminación. , 0, , .		0

#	ARTICLE	IF	CITATIONS
109	Evaluating the Robustness of New Holistic Description Methods in Position Estimation of Mobile Robots. Lecture Notes in Electrical Engineering, 2022, , 207-225.	0.3	0
110	Generation and Quality Evaluation of a 360-degree View from Dual Fisheye Images. , 2022, , .		0