Luis Paya

List of Publications by Year
in descending order

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	Development and use of a convolutional neural network for hierarchical appearance-based localization. Artificial Intelligence Review, 2022, 55, 2847-2874.	9.7	5
2	Efficient probability-oriented feature matching using wide field-of-view imaging. Engineering Applications of Artificial Intelligence, 2022, 107, 104539.	4.3	3
3	A Localization Approach Based on Omnidirectional Vision and Deep Learning. Lecture Notes in Electrical Engineering, 2022, , 226-246.	0.3	1
4	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
5	Design of a mobile binary parallel robot that exploits nonsingular transitions. Mechanism and Machine Theory, 2022, 171, 104733.	2.7	2
6	DESIGN OF A SIMULATION TOOL TO STUDY THE CONTROLLABILITY AND STATE-SPACE CONTROL OF A PARALLEL ROBOT. INTED Proceedings, 2022, , .	0.0	2
7	Training, Optimization and Validation of a CNN for Room Retrieval and Description of Omnidirectional Images. SN Computer Science, 2022, 3, 1.	2.3	3
8	Generation and Quality Evaluation of a 360-degree View from Dual Fisheye Images. , 2022, , .		0
9	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
10	A Robust CNN Training Approach to Address Hierarchical Localization with Omnidirectional Images. , 2021, , .		1
11	Evaluating the Influence of Feature Matching on the Performance of Visual Localization with Fisheye Images. , 2021, , .		0
12	DESIGN OF A VIRTUAL LABORATORY AND A SET OF PRACTICAL SESSIONS IN STATE-SPACE CONTROL. , 2021, , .		0
13	NEW PRACTICAL APPROACH TO CIRCUIT ANALYSIS IN DUAL-MODE TEACHING. , 2021, , .		0
14	The Role of Global Appearance of Omnidirectional Images in Relative Distance and Orientation Retrieval. Sensors, 2021, 21, 3327.	2.1	3
15	A CNN Regression Approach to Mobile Robot Localization Using Omnidirectional Images. Applied Sciences (Switzerland), 2021, 11, 7521.	1.3	8
16	EvaluaciÃ³n de descriptores locales en localizaciÃ³n visual con imÃ¡genes ojo de pez. , 2021, , 507-514.		0
17	Entrenamiento, optimizaciÃ³n y validaciÃ³n de una CNN para localizaciÃ³n jerÃ¡rquica mediante imÃ¡genes omnidireccionales.. , 2021, , 640-647.		0
18	Evaluating the Influence of Feature Matching on the Performance of Visual Localization with Fisheye Images. , 2021, , .		1

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19	A Robust CNN Training Approach to Address Hierarchical Localization with Omnidirectional Images. , 2021, , .		1
20	Creating Incremental Models of Indoor Environments through Omnidirectional Imaging. Applied Sciences (Switzerland), 2020, 10, 6480.	1.3	5
21	Holistic Descriptors of Omnidirectional Color Images and Their Performance in Estimation of Position and Orientation. IEEE Access, 2020, 8, 81822-81848.	2.6	6
22	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
23	Special Issue on Mobile Robots Navigation. Applied Sciences (Switzerland), 2020, 10, 1317.	1.3	10
24	Special Issue on Visual Sensors. Sensors, 2020, 20, 910.	2.1	9
25	A Deep Learning Tool to Solve Localization in Mobile Autonomous Robotics. , 2020, , .		5
26	Environment Virtualization for Visual Localization and Mapping. Advances in Intelligent Systems and Computing, 2020, , 209-221.	0.5	1
27	Performance of New Global Appearance Description Methods in Localization ofÂMobile Robots. Advances in Intelligent Systems and Computing, 2020, , 351-363.	0.5	0
28	Solution of the Forward Kinematic Problem of 3UPS-PU Parallel Manipulators based on Constraint Curves. , 2020, , .		1
29	An Evaluation of New Global Appearance Descriptor Techniques for Visual Localization in Mobile Robots under Changing Lighting Conditions. , 2020, , .		1
30	Dynamic Catadioptric Sensory Data Fusion for Visual Localization in Mobile Robotics. Proceedings (mdpi), 2019, 15, .	0.2	1
31	Hierarchical Localization in Topological Models Under Varying Illumination Using Holistic Visual Descriptors. IEEE Access, 2019, 7, 49580-49595.	2.6	11
32	Simulation Tool for Analyzing the Kinetostatic Effects of Singularities in Parallel Robots. , 2019, , .		1
33	Trajectory Analysis for the MASAR: A New Modular and Single-Actuator Robot. Robotics, 2019, 8, 78.	2.1	4
34	Analysing Studentsâ€™ Achievement in the Learning of Electronics Supported by ICT Resources. Electronics (Switzerland), 2019, 8, 264.	1.8	7
35	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
36	Relative Altitude Estimation Using Omnidirectional Imaging and Holistic Descriptors. Remote Sensing, 2019, 11, 323.	1.8	10

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37	Deployment of a Software to Simulate Control Systems in the State-Space. Electronics (Switzerland), 2019, 8, 1205.	1.8	5
38	An Evaluation between Global Appearance Descriptors based on Analytic Methods and Deep Learning Techniques for Localization in Autonomous Mobile Robots. , 2019, , .		2
39	Parallelisms Between Planar and Spatial Tricept-Like Parallel Robots. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2019, , 155-162.	0.3	2
40	Active Learning Program Supported by Online Simulation Applet in Engineering Education. , 2019, , .		5
41	Using Global Appearance Descriptors to Solve Topological Visual SLAM. Advances in Computer and Electrical Engineering Book Series, 2019, , 1127-1140.	0.2	0
42	Mapping and localization module in a mobile robot for insulating building crawl spaces. Automation in Construction, 2018, 87, 248-262.	4.8	13
43	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
44	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
45	m-PaRoLa: a Mobile Virtual Laboratory for Studying the Kinematics of Five-bar and 3RRR Planar Parallel Robots âŽ âŽWork 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
46	Visual Information Fusion through Bayesian Inference for Adaptive Probability-Oriented Feature Matching. Sensors, 2018, 18, 2041.	2.1	24
47	Modeling Environments Hierarchically with Omnidirectional Imaging and Global-Appearance Descriptors. Remote Sensing, 2018, 10, 522.	1.8	14
48	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
49	Movement Direction Estimation Using Omnidirectional Images in a SLAM Algorithm. Advances in Intelligent Systems and Computing, 2018, , 640-651.	0.5	0
50	Fusing Omnidirectional Visual Data forÂProbability Matching Prediction. Lecture Notes in Computer Science, 2018, , 571-583.	1.0	0
51	Evaluating the Robustness of Global Appearance Descriptors in a Visual Localization Task, under Changing Lighting Conditions. , 2018, , .		2
52	Evaluating the Robustness of Global Appearance Descriptors in a Visual Localization Task, under Changing Lighting Conditions. , 2018, , .		0
53	Using Global Appearance Descriptors to Solve Topological Visual SLAM. , 2018, , 6894-6905.		1
54	A MULTI-PERSPECTIVE SIMULATOR FOR VISUALIZING AND ANALYZING THE KINEMATICS AND SINGULARITIES OF 2UPS/U PARALLEL MECHANISMS. INTED Proceedings, 2018, , .	0.0	0

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55	DEVELOPMENT OF A PLATFORM TO SIMULATE VIRTUAL ENVIRONMENTS FOR ROBOT LOCALIZATION. , 2018, , .		3
56	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
57	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
58	Compression of topological models and localization using the global appearance of visual information. , 2017, , .		2
59	Development of Height Indicators using Omnidirectional Images and Global Appearance Descriptors. Applied Sciences (Switzerland), 2017, 7, 482.	1.3	1
60	Robust Visual Localization with Dynamic Uncertainty Management in Omnidirectional SLAM. Applied Sciences (Switzerland), 2017, 7, 1294.	1.3	22
61	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
62	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
63	Second-order Taylor Stability Analysis of Isolated Kinematic Singularities of Closed-chain Mechanisms. , 2017, , .		1
64	SLAM Algorithm by using Global Appearance of Omnidirectional Images. , 2017, , .		0
65	A Study of Visual Descriptors for Outdoor Navigation Using Google Street View Images. Journal of Sensors, 2016, 2016, 1-12.	0.6	2
66	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
67	A Simulation Tool to Study the Kinematics and Control of 2RPR-PR Parallel Robots. IFAC-PapersOnLine, 2016, 49, 268-273.	0.5	5
68	Development of a graphical interface to simulate control systems using modern control techniques. , 2016, , .		1
69	Monte-Carlo Workspace Calculation of a Serial-Parallel Biped Robot. Advances in Intelligent Systems and Computing, 2016, , 157-169.	0.5	5
70	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
71	Nearest Position Estimation Using Omnidirectional Images and Global Appearance Descriptors. Advances in Intelligent Systems and Computing, 2016, , 517-529.	0.5	1
72	Calculation of the Boundaries and Barriers of the Workspace of a Redundant Serial-parallel Robot using the Inverse Kinematics. , 2016, , .		1

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73	Generation of Data Sets Simulating Different Kinds of Cameras in Virtual Environments. , 2016, , .		0
74	Position Estimation and Local Mapping Using Omnidirectional Images and Global Appearance Descriptors. Sensors, 2015, 15, 26368-26395.	2.1	20
75	A Virtual Laboratory to Simulate the Control of Parallel Robots. IFAC-PapersOnLine, 2015, 48, 19-24.	0.5	9
76	Development and deployment of a new robotics toolbox for education. Computer Applications in Engineering Education, 2015, 23, 443-454.	2.2	35
77	Relative Height Estimation using Omnidirectional Images and a Global Appearance Approach. , 2015, , .		0
78	A Comparison of Appearance-Based Descriptors in a Visual SLAM Approach. , 2015, , 3187-3196.		0
79	Global Appearance Applied to Visual Map Building and Path Estimation Using Multiscale Analysis. Mathematical Problems in Engineering, 2014, 2014, 1-23.	0.6	1
80	Performance of Global-Appearance Descriptors in Map Building and Localization Using Omnidirectional Vision. Sensors, 2014, 14, 3033-3064.	2.1	32
81	Appearanceâ€based approach to hybrid metricâ€topological simultaneous localisation and mapping. IET Intelligent Transport Systems, 2014, 8, 688-699.	1.7	5
82	Visual Odometry using the Global-appearance of Omnidirectional Images. , 2014, , .		0
83	Visual Hybrid SLAM: An Appearance-Based Approach to Loop Closure. Advances in Intelligent Systems and Computing, 2014, , 693-701.	0.5	3
84	Topological Height Estimation Using Global Appearance of Images. Advances in Intelligent Systems and Computing, 2014, , 77-89.	0.5	0
85	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
86	Development of a Web-Based Educational Platform to Interact with Remote Mobile Robots. , 2011, , 46-65.		0
87	An educational tool for mobile robots remote interaction. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 42, 180-185.	0.4	4
88	Disassembly planning strategies for automatic material removal. International Journal of Advanced Manufacturing Technology, 2010, 46, 339-350.	1.5	5
89	A hybrid solution to the multi-robot integrated exploration problem. Engineering Applications of Artificial Intelligence, 2010, 23, 473-486.	4.3	27
90	Map Building and Monte Carlo Localization Using Global Appearance of Omnidirectional Images. Sensors, 2010, 10, 11468-11497.	2.1	32

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91	Estimation of Visual Maps with a Robot Network Equipped with Vision Sensors. Sensors, 2010, 10, 5209-5232.	2.1	22
92	Comparison of mapping techniques in appearance-based topological maps creation. , 2010, , .		0
93	Analysis of Map Alignment techniques in visual SLAM systems. , 2008, , .		5
94	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
95	Mechanisms for collaborative teleoperation with a team of cooperative robots. Industrial Robot, 2008, 35, 27-36.	1.2	7
96	Improving Appearance-Based Following Routes with a Probabilistic Approach. , 2008, , .		0
97	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
98	Subspace Reduction for Appearance-Based Navigation of a Mobile Robot. , 2007, , .		0
99	Plataforma Distribuida para la RealizaciÃ³n de PrÃ¡cticas de RobÃ³tica MÃ³vil a travÃ©s de Internet. Informacion Tecnologica (discontinued), 2007, 18, .	0.1	3
100	Appearance-Based Multi-robot Following Routes Using Incremental PCA. Lecture Notes in Computer Science, 2007, , 1170-1178.	1.0	4
101	3D Object Recognition from Appearance: PCA Versus ICA Approaches. Lecture Notes in Computer Science, 2004, , 547-555.	1.0	2
102	Evaluation of Aligning Methods for Landmark-Based Maps in Visual SLAM. , 0, , .		1
103	Probabilistic Map Building, Localization and Navigation of a Team of Mobile Robots. Application to Route Following. , 0, , .		1
104	Laboratorio virtual mÃ³vil de robots paralelos. , 0, , .		0
105	Uso de tÃ©cnicas de machine learning para realizar mapping en robÃ³tica mÃ³vil. , 0, , .		0
106	PlanificaciÃ³n de trayectorias de un robot mÃ³vil modular con un Ãºnico actuador. , 0, , .		0
107	EvaluaciÃ³n de nuevos modos de empleo de los descriptores de apariencia global en tareas de localizaciÃ³n. , 0, , .		0
108	Algoritmo de SLAM utilizando apariencia global de imÃ¡genes omnidireccionales. , 0, , .		0

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109	AnÃ¡lisis de estabilidad de singularidades aisladas en robots paralelos mediante desarrollos de Taylor de segundo orden. , 0, , .		0
110	EvaluaciÃ³n de descriptores de apariencia global en tareas de localizaciÃ³n bajo cambios de iluminaciÃ³n. , 0, , .		0