

Gonzalo Pajares

List of Publications by Year in descending order

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140
papers

6,072
citations

109137

35
h-index

76769

74
g-index

144
all docs

144
docs citations

144
times ranked

5246
citing authors

#	ARTICLE	IF	CITATIONS
1	A wavelet-based image fusion tutorial. Pattern Recognition, 2004, 37, 1855-1872.	5.1	1,117
2	Overview and Current Status of Remote Sensing Applications Based on Unmanned Aerial Vehicles (UAVs). Photogrammetric Engineering and Remote Sensing, 2015, 81, 281-330.	0.3	552
3	Parameter identification of solar cells using artificial bee colony optimization. Energy, 2014, 72, 93-102.	4.5	375
4	Automatic segmentation of relevant textures in agricultural images. Computers and Electronics in Agriculture, 2011, 75, 75-83.	3.7	257
5	Real-time image processing for crop/weed discrimination in maize fields. Computers and Electronics in Agriculture, 2011, 75, 337-346.	3.7	222
6	Support Vector Machines for crop/weeds identification in maize fields. Expert Systems With Applications, 2012, 39, 11149-11155.	4.4	191
7	Cross entropy based thresholding for magnetic resonance brain images using Crow Search Algorithm. Expert Systems With Applications, 2017, 79, 164-180.	4.4	162
8	Automatic detection of crop rows in maize fields with high weeds pressure. Expert Systems With Applications, 2012, 39, 11889-11897.	4.4	144
9	Fleets of robots for environmentally-safe pest control in agriculture. Precision Agriculture, 2017, 18, 574-614.	3.1	140
10	A Multilevel Thresholding algorithm using electromagnetism optimization. Neurocomputing, 2014, 139, 357-381.	3.5	137
11	A vision-based method for weeds identification through the Bayesian decision theory. Pattern Recognition, 2008, 41, 521-530.	5.1	121
12	A computer vision approach for weeds identification through Support Vector Machines. Applied Soft Computing Journal, 2011, 11, 908-915.	4.1	112
13	Multilevel Thresholding Segmentation Based on Harmony Search Optimization. Journal of Applied Mathematics, 2013, 2013, 1-24.	0.4	110
14	A new vision-based approach to differential spraying in precision agriculture. Computers and Electronics in Agriculture, 2008, 60, 144-155.	3.7	106
15	New Trends in Robotics for Agriculture: Integration and Assessment of a Real Fleet of Robots. Scientific World Journal, The, 2014, 2014, 1-21.	0.8	91
16	Automatic expert system based on images for accuracy crop row detection in maize fields. Expert Systems With Applications, 2013, 40, 656-664.	4.4	86
17	Multi-UAV target search using decentralized gradient-based negotiation with expected observation. Information Sciences, 2014, 282, 92-110.	4.0	80
18	A Hopfield Neural Network for Image Change Detection. IEEE Transactions on Neural Networks, 2006, 17, 1250-1264.	4.8	79

#	ARTICLE	IF	CITATIONS
19	Automatic expert system for weeds/crops identification in images from maize fields. Expert Systems With Applications, 2013, 40, 75-82.	4.4	71
20	A new Expert System for greenness identification in agricultural images. Expert Systems With Applications, 2013, 40, 2275-2286.	4.4	64
21	Automatic detection of curved and straight crop rows from images in maize fields. Biosystems Engineering, 2017, 156, 61-79.	1.9	62
22	Improving weed pressure assessment using digital images from an experience-based reasoning approach. Computers and Electronics in Agriculture, 2009, 65, 176-185.	3.7	59
23	Analysis of natural images processing for the extraction of agricultural elements. Image and Vision Computing, 2010, 28, 138-149.	2.7	59
24	Mix-opt: A new route operator for optimal coverage path planning for a fleet in an agricultural environment. Expert Systems With Applications, 2016, 54, 364-378.	4.4	58
25	Curved and straight crop row detection by accumulation of green pixels from images in maize fields. Precision Agriculture, 2018, 19, 18-41.	3.1	56
26	Digital Image Sensor-Based Assessment of the Status of Oat (<i>Avena sativa</i> L.) Crops after Frost Damage. Sensors, 2011, 11, 6015-6036.	2.1	47
27	Relaxation by Hopfield network in stereo image matching. Pattern Recognition, 1998, 31, 561-574.	5.1	45
28	Improving multi-criterion optimization with chaos: a novel Multi-Objective Chaotic Crow Search Algorithm. Neural Computing and Applications, 2018, 29, 319-335.	3.2	45
29	Machine-Vision Systems Selection for Agricultural Vehicles: A Guide. Journal of Imaging, 2016, 2, 34.	1.7	44
30	Crop Row Detection in Maize Fields Inspired on the Human Visual Perception. Scientific World Journal, The, 2012, 2012, 1-10.	0.8	43
31	Noniterative Interpolation-Based Super-Resolution Minimizing Aliasing in the Reconstructed Image. IEEE Transactions on Image Processing, 2008, 17, 1817-1826.	6.0	42
32	A Hopfield Neural Network for combining classifiers applied to textured images. Neural Networks, 2010, 23, 144-153.	3.3	41
33	Integrating Sensory/Actuation Systems in Agricultural Vehicles. Sensors, 2014, 14, 4014-4049.	2.1	39
34	Crop rows and weeds detection in maize fields applying a computer vision system based on geometry. Computers and Electronics in Agriculture, 2017, 142, 461-472.	3.7	38
35	Discrete wavelets transform for improving greenness image segmentation in agricultural images. Computers and Electronics in Agriculture, 2015, 118, 396-407.	3.7	37
36	On-line crop/weed discrimination through the Mahalanobis distance from images in maize fields. Biosystems Engineering, 2018, 166, 28-43.	1.9	37

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37	Mapping Wide Row Crops with Video Sequences Acquired from a Tractor Moving at Treatment Speed. Sensors, 2011, 11, 7095-7109.	2.1	35
38	A Multi-Agent System Architecture for Sensor Networks. Sensors, 2009, 9, 10244-10269.	2.1	30
39	Fleets of robots for precision agriculture: a simulation environment. Industrial Robot, 2013, 40, 41-58.	1.2	30
40	Automatic expert system for 3D terrain reconstruction based on stereo vision and histogram matching. Expert Systems With Applications, 2014, 41, 2043-2051.	4.4	29
41	An instance-based learning approach for thresholding in crop images under different outdoor conditions. Computers and Electronics in Agriculture, 2016, 127, 669-679.	3.7	29
42	Spatio-temporal analysis for obstacle detection in agricultural videos. Applied Soft Computing Journal, 2016, 45, 86-97.	4.1	28
43	Recognition of a landing platform for unmanned aerial vehicles by using computer vision-based techniques. Expert Systems With Applications, 2017, 76, 152-165.	4.4	27
44	Structural correlates of apathy in Alzheimer's disease: a multimodal MRI study. International Journal of Geriatric Psychiatry, 2017, 32, 922-930.	1.3	27
45	Fuzzy Cognitive Maps for stereovision matching. Pattern Recognition, 2006, 39, 2101-2114.	5.1	25
46	Minimum time search for lost targets using cross entropy optimization. , 2012, , .		25
47	Camera Sensor Arrangement for Crop/Weed Detection Accuracy in Agronomic Images. Sensors, 2013, 13, 4348-4366.	2.1	25
48	Sensors in Agriculture and Forestry. Sensors, 2013, 13, 12132-12139.	2.1	25
49	Stereo matching technique based on the perceptron criterion function. Pattern Recognition Letters, 1995, 16, 933-944.	2.6	23
50	Improving segmentation velocity using an evolutionary method. Expert Systems With Applications, 2015, 42, 5874-5886.	4.4	23
51	White Blood Cell Segmentation by Circle Detection Using Electromagnetism-Like Optimization. Computational and Mathematical Methods in Medicine, 2013, 2013, 1-15.	0.7	21
52	A Neural Network model in stereovision matching. Neural Networks, 1995, 8, 805-813.	3.3	20
53	Data mining technique for fast retrieval of similar waveforms in Fusion massive databases. Fusion Engineering and Design, 2008, 83, 132-139.	1.0	20
54	Automatic computation of mandibular indices in dental panoramic radiographs for early osteoporosis detection. Artificial Intelligence in Medicine, 2020, 103, 101816.	3.8	20

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55	On Combining Support Vector Machines and Simulated Annealing in Stereovision Matching. IEEE Transactions on Systems, Man, and Cybernetics, 2004, 34, 1646-1657.	5.5	19
56	A segmentation method using Otsu and fuzzy k-Means for stereovision matching in hemispherical images from forest environments. Applied Soft Computing Journal, 2011, 11, 4738-4747.	4.1	19
57	Advances in Sensors Applied to Agriculture and Forestry. Sensors, 2011, 11, 8930-8932.	2.1	19
58	A Vision-Based Hybrid Classifier for Weeds Detection in Precision Agriculture Through the Bayesian and Fuzzy k-Means Paradigms. Advances in Intelligent and Soft Computing, 2007, , 72-79.	0.2	19
59	Using MILP for UAVs Trajectory Optimization under Radar Detection Risk. , 2006, , .		18
60	Search and retrieval of plasma wave forms: Structural pattern recognition approach. Review of Scientific Instruments, 2006, 77, 10F514.	0.6	18
61	Evaluation of a Change Detection Methodology by Means of Binary Thresholding Algorithms and Informational Fusion Processes. Sensors, 2012, 12, 3528-3561.	2.1	18
62	A Featured-Based Strategy for Stereovision Matching in Sensors with Fish-Eye Lenses for Forest Environments. Sensors, 2009, 9, 9468-9492.	2.1	17
63	A Stereovision Matching Strategy for Images Captured with Fish-Eye Lenses in Forest Environments. Sensors, 2011, 11, 1756-1783.	2.1	17
64	An Image Segmentation Based on a Genetic Algorithm for Determining Soil Coverage by Crop Residues. Sensors, 2011, 11, 6480-6492.	2.1	16
65	Improving Wishart Classification of Polarimetric SAR Data Using the Hopfield Neural Network Optimization Approach. Remote Sensing, 2012, 4, 3571-3595.	1.8	16
66	Local stereovision matching through the ADALINE neural network. Pattern Recognition Letters, 2001, 22, 1457-1473.	2.6	15
67	On combining classifiers through a fuzzy multicriteria decision making approach: Applied to natural textured images. Expert Systems With Applications, 2009, 36, 7262-7269.	4.4	15
68	Grapheme-color synesthetes show peculiarities in their emotional brain: cortical and subcortical evidence from VBM analysis of 3D-T1 and DTI data. Experimental Brain Research, 2013, 227, 343-353.	0.7	15
69	Searching for patterns in TJ-II time evolution signals. Fusion Engineering and Design, 2006, 81, 1993-1997.	1.0	14
70	Unassisted thresholding based on multi-objective evolutionary algorithms. Knowledge-Based Systems, 2018, 159, 221-232.	4.0	14
71	Stereo matching based on the self-organizing feature-mapping algorithm. Pattern Recognition Letters, 1998, 19, 319-330.	2.6	13
72	Relaxation labeling in stereo image matching. Pattern Recognition, 2000, 33, 53-68.	5.1	13

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73	Hyperparameter Optimization in a Convolutional Neural Network Using Metaheuristic Algorithms. <i>Studies in Computational Intelligence</i> , 2021, , 37-59.	0.7	13
74	Decision making among alternative routes for UAVs in dynamic environments. , 2007, , .		12
75	Template matching using an improved electromagnetism-like algorithm. <i>Applied Intelligence</i> , 2014, 41, 791-807.	3.3	12
76	Comparative analysis of texture descriptors in maize fields with plants, soil and object discrimination. <i>Precision Agriculture</i> , 2017, 18, 717-735.	3.1	12
77	Stereovision matching through support vector machines. <i>Pattern Recognition Letters</i> , 2003, 24, 2575-2583.	2.6	11
78	Performance Analysis of Homomorphic Systems for Image Change Detection. <i>Lecture Notes in Computer Science</i> , 2005, , 563-570.	1.0	11
79	Minimum Time Search in Real-World Scenarios Using Multiple UAVs with Onboard Orientable Cameras. <i>Journal of Sensors</i> , 2019, 2019, 1-22.	0.6	11
80	Automatic image segmentation of greenness in crop fields. , 2010, , .		10
81	Combining Support Vector Machines and simulated annealing for stereovision matching with fish eye lenses in forest environments. <i>Expert Systems With Applications</i> , 2011, 38, 8622-8631.	4.4	10
82	Reducing overlapped pixels: a multi-objective color thresholding approach. <i>Soft Computing</i> , 2020, 24, 6787-6807.	2.1	10
83	Fuzzy Cognitive Maps Applied to Computer Vision Tasks. <i>Studies in Fuzziness and Soft Computing</i> , 2010, , 259-289.	0.6	10
84	Stereo matching using Hebbian learning. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 1999, 29, 553-559.	5.5	9
85	Real-time image processing for the guidance of a small agricultural field inspection vehicle. <i>International Journal of Intelligent Systems Technologies and Applications</i> , 2010, 8, 434.	0.2	9
86	Improving the Wishart Synthetic Aperture Radar image classifications through Deterministic Simulated Annealing. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2011, 66, 845-857.	4.9	9
87	On Combining Convolutional Autoencoders and Support Vector Machines for Fault Detection in Industrial Textures. <i>Sensors</i> , 2021, 21, 3339.	2.1	9
88	Design of a computer vision system for a differential spraying operation in precision agriculture using Hebbian learning. <i>IET Computer Vision</i> , 2007, 1, 93-99.	1.3	8
89	Generaci3n de trayectorias y toma de decisiones para uavs. <i>RIAI - Revista Iberoamericana De Automatica E Informatica Industrial</i> , 2008, 5, 83-92.	0.6	8
90	Combining classifiers through fuzzy cognitive maps in natural images. <i>IET Computer Vision</i> , 2009, 3, 112.	1.3	8

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91	Sensors for Fluid Leak Detection. <i>Sensors</i> , 2015, 15, 3830-3833.	2.1	8
92	The non-parametric Parzen's window in stereo vision matching. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2002, 32, 225-230.	5.5	7
93	Automated clustering procedure for TJ-II experimental signals. <i>Fusion Engineering and Design</i> , 2006, 81, 1987-1991.	1.0	7
94	First applications of structural pattern recognition methods to the investigation of specific physical phenomena at JET. <i>Fusion Engineering and Design</i> , 2008, 83, 467-470.	1.0	7
95	A Multi-Agent System Architecture for Sensor Networks. , 2011, , .		7
96	Modelling knowledge strategy for solving the DNA sequence annotation problem through CommonKADS methodology. <i>Expert Systems With Applications</i> , 2013, 40, 3943-3952.	4.4	7
97	A computational approach inspired by simulated annealing to study the stability of protein interaction networks in cancer and neurological disorders. <i>Data Mining and Knowledge Discovery</i> , 2016, 30, 226-242.	2.4	7
98	Acquisition of Agronomic Images with Sufficient Quality by Automatic Exposure Time Control and Histogram Matching. <i>Lecture Notes in Computer Science</i> , 2013, , 37-48.	1.0	7
99	Image change detection from difference image through deterministic simulated annealing. <i>Pattern Analysis and Applications</i> , 2009, 12, 137-150.	3.1	6
100	Sensors and Technologies in Spain: State-of-the-Art. <i>Sensors</i> , 2014, 14, 15282-15303.	2.1	6
101	Improving stereovision matching through supervised learning. <i>Pattern Analysis and Applications</i> , 1998, 1, 105-120.	3.1	5
102	A Vision-based Classifier in Precision Agriculture Combining Bayes and Support Vector Machines. , 2007, , .		5
103	Real-time Image Processing for the Guidance of a Small Agricultural Field Inspection Vehicle. , 2008, , .		5
104	Fuzzy Multi-Criteria Decision Making in Stereovision Matching for Fish-Eye Lenses in Forest Analysis. <i>Lecture Notes in Computer Science</i> , 2009, , 325-332.	1.0	5
105	Image-Based Airborne Sensors: A Combined Approach for Spectral Signatures Classification through Deterministic Simulated Annealing. <i>Sensors</i> , 2009, 9, 7132-7149.	2.1	5
106	Vertical rotor for the implementation of control laws. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012, 45, 224-229.	0.4	5
107	Expert system for clustering prokaryotic species by their metabolic features. <i>Expert Systems With Applications</i> , 2013, 40, 6185-6194.	4.4	5
108	Combination of Attributes in Stereovision Matching for Fish-Eye Lenses in Forest Analysis. <i>Lecture Notes in Computer Science</i> , 2009, , 277-287.	1.0	5

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109	A Stereovision Sensor for Forest Inventories. , 2010, , .		4
110	Visual Control of a Remote Vehicle. Lecture Notes in Computer Science, 2011, , 579-588.	1.0	4
111	A new learning strategy for stereo matching derived from a fuzzy clustering method. Fuzzy Sets and Systems, 2000, 110, 413-427.	1.6	3
112	Optimisation of natural images processing using different evolutionary algorithms. , 2008, , .		3
113	Sensors in Collaboration Increase Individual Potentialities. Sensors, 2012, 12, 4892-4896.	2.1	3
114	A new Concentric Circles Detection method for Object Detection applied to Radar Images. Journal of Navigation, 2019, 72, 1070-1088.	1.0	3
115	Choquet Fuzzy Integral Applied to Stereovision Matching for Fish-Eye Lenses in Forest Analysis. Advances in Intelligent and Soft Computing, 2009, , 179-187.	0.2	3
116	Robust Super-Resolution Using a Median Filter for Irregular Samples. Lecture Notes in Computer Science, 2009, , 298-305.	1.0	2
117	Combining Stereovision Matching Constraints for Solving the Correspondence Problem. , 0, , .		2
118	New unsupervised hybrid classifier based on the fuzzy integral: applied to natural textured images. IET Computer Vision, 2013, 7, 272-278.	1.3	2
119	Unmanned Aerial Vehicles in Geomatics. ISPRS International Journal of Geo-Information, 2016, 5, 147.	1.4	2
120	A Matlab-Based Testbed for Integration, Evaluation and Comparison of Heterogeneous Stereo Vision Matching Algorithms. Robotics, 2016, 5, 24.	2.1	2
121	Vegetation Segmentation in Cornfield Images Using Bag of Words. Lecture Notes in Computer Science, 2016, , 193-204.	1.0	2
122	Computational Intelligence in Image Processing 2018. Mathematical Problems in Engineering, 2018, 2018, 1-3.	0.6	2
123	A Neural Network Model for Image Change Detection Based on Fuzzy Cognitive Maps. Lecture Notes in Computer Science, 2007, , 595-602.	1.0	2
124	A Probabilistic Neural Network for Attribute Selection in Stereovision Matching. Neural Computing and Applications, 2002, 11, 83-89.	3.2	1
125	A New Unsupervised Hybrid Classifier for Natural Textures in Images. Advances in Intelligent and Soft Computing, 2007, , 280-287.	0.2	1
126	Design of a Hybrid Classifier for Natural Textures in Images from the Bayesian and Fuzzy Paradigms. , 2007, , .		1

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127	Environmental surface boundary tracking and description using a UAV with vision. , 2009, , .		1
128	Autonomy for ground-level robotic space exploration: framework, simulation, architecture, algorithms and experiments. Robotica, 2016, 34, 274-305.	1.3	1
129	Fuzzy Cognitive Maps Applied to Synthetic Aperture Radar Image Classifications. Lecture Notes in Computer Science, 2011, , 103-114.	1.0	1
130	The Effect of the Normalization Strategy on Voxel-Based Analysis of DTI Images: A Pattern Recognition Based Assessment. Lecture Notes in Computer Science, 2010, , 78-88.	1.0	1
131	Pattern recognition learning applied to stereovision matching. Lecture Notes in Computer Science, 1998, , 997-1004.	1.0	1
132	On Combining Classifiers by Relaxation for Natural Textures in Images. Lecture Notes in Computer Science, 2008, , 345-352.	1.0	1
133	On combining vision-based hybrid classifiers for weeds detection in precision agriculture. International Journal of Reasoning-based Intelligent Systems, 2010, 2, 100.	0.1	0
134	Sensors: New Challenges in Spain. Sensors, 2010, 10, 5028-5030.	2.1	0
135	A motivational teaching-learning process based on the student's interest: High level of education. , 2011, , .		0
136	Computational Intelligence in Image Processing. Mathematical Problems in Engineering, 2013, 2013, 1-3.	0.6	0
137	Journal of Imaging: Multidisciplinary Open Access in Image Acquisition, Processing and Understanding. Journal of Imaging, 2015, 1, 1-3.	1.7	0
138	Computational Intelligence in Image Processing 2014. Mathematical Problems in Engineering, 2015, 2015, 1-3.	0.6	0
139	Computational Intelligence in Image Processing 2016. Mathematical Problems in Engineering, 2016, 2016, 1-3.	0.6	0
140	Performance Analysis of Fuzzy Aggregation Operations for Combining Classifiers for Natural Textures in Images. Lecture Notes in Computer Science, 2011, , 180-188.	1.0	0