

# Ezequiel LÃ³pez-Rubio

## List of Publications by Year in descending order

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138  
papers

1,393  
citations

361413  
20  
h-index

454955  
30  
g-index

146  
all docs

146  
docs citations

146  
times ranked

1237  
citing authors

#	ARTICLE	IF	CITATIONS
1	Foreground Segmentation Improvement by Image Denoising Preprocessing Applied to Noisy Video Sequences. Advances in Intelligent Systems and Computing, 2022, , 388-397.	0.6	0
2	Hierarchical Color Quantization with a Neural Gas Model Based on Bregman Divergences. Advances in Intelligent Systems and Computing, 2022, , 327-337.	0.6	1
3	Improved detection of small objects in road network sequences using <scp>CNN</scp> and super resolution. Expert Systems, 2022, 39, .	4.5	8
4	Anomalous Trajectory Detection for Automated Traffic Video Surveillance. Lecture Notes in Computer Science, 2022, , 173-182.	1.3	1
5	Feature Density as an Uncertainty Estimator Method in the Binary Classification Mammography Images Task for a Supervised Deep Learning Model. Lecture Notes in Computer Science, 2022, , 375-388.	1.3	2
6	Throwing light on black boxes: emergence of visual categories from deep learning. Synthese, 2021, 198, 10021-10041.	1.1	3
7	Data science and molecular biology: prediction and mechanistic explanation. Synthese, 2021, 198, 3131-3156.	1.1	15
8	The Effect of Noise and Brightness on Convolutional Deep Neural Networks. Lecture Notes in Computer Science, 2021, , 639-654.	1.3	3
9	Improving Uncertainty Estimation With Semi-Supervised Deep Learning for COVID-19 Detection Using Chest X-Ray Images. IEEE Access, 2021, 9, 85442-85454.	4.2	31
10	Classification of Images as Photographs or Paintings by Using Convolutional Neural Networks. Lecture Notes in Computer Science, 2021, , 432-442.	1.3	3
11	Adaptive estimation of optimal color transformations for deep convolutional network based homography estimation. , 2021, , .		0
12	Improving Uncertainty Estimations for Mammogram Classification using Semi-Supervised Learning. , 2021, , .		14
13	Enhanced transfer learning model by image shifting on a square lattice for skin lesion malignancy assessment. , 2021, , .		1
14	Test time augmentation by regular shifting for deep denoising autoencoder networks. , 2021, , .		0
15	Histopathological image analysis for breast cancer diagnosis by ensembles of convolutional neural networks and genetic algorithms. , 2021, , .		2
16	Dynamic selection of classifiers for Content Based Image Retrieval. , 2021, , .		0
17	Deep learning-based anomalous object detection system for panoramic cameras managed by a Jetson TX2 board. , 2021, , .		3
18	Ensemble ellipse fitting by spatial median consensus. Information Sciences, 2021, 579, 310-324.	6.9	2

#	ARTICLE	IF	CITATIONS
19	Anomalous object detection by active search with PTZ cameras. Expert Systems With Applications, 2021, 181, 115150.	7.6	6
20	Skin Lesion Classification by Ensembles of Deep Convolutional Networks and Regularly Spaced Shifting. IEEE Access, 2021, 9, 112193-112205.	4.2	25
21	The effect of image enhancement algorithms on convolutional neural networks. , 2021, , .		3
22	The Impact of Linear Motion Blur on the Object Recognition Efficiency of Deep Convolutional Neural Networks. Lecture Notes in Computer Science, 2021, , 611-622.	1.3	2
23	Road pollution estimation from vehicle tracking in surveillance videos by deep convolutional neural networks. Applied Soft Computing Journal, 2021, 113, 107950.	7.2	10
24	The Forbidden Region Self-Organizing Map Neural Network. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 201-211.	11.3	15
25	Deep learning-based super-resolution of 3D magnetic resonance images by regularly spaced shifting. Neurocomputing, 2020, 398, 314-327.	5.9	9
26	Foreground detection by ensembles of random polygonal tilings. Expert Systems With Applications, 2020, 161, 113518.	7.6	1
27	Exploratory Data Analysis and Foreground Detection with the Growing Hierarchical Neural Forest. Neural Processing Letters, 2020, 52, 2537-2563.	3.2	0
28	Super-Resolution of 3D MRI Corrupted by Heavy Noise With the Median Filter Transform. , 2020, , .		1
29	Deep Autoencoder Architectures For Foreground Object Detection In Video Sequences Based On Probabilistic Mixture Models. , 2020, , .		1
30	Deep learning-based video surveillance system managed by low cost hardware and panoramic cameras. Integrated Computer-Aided Engineering, 2020, 27, 373-387.	4.6	22
31	Multiobjective optimization of deep neural networks with combinations of Lp-norm cost functions for 3D medical image super-resolution. Integrated Computer-Aided Engineering, 2020, 27, 233-251.	4.6	21
32	Aggregation of Convolutional Neural Network Estimations of Homographies by Color Transformations of the Inputs. IEEE Access, 2020, 8, 79552-79560.	4.2	5
33	The effect of downsamplingâ€“upsampling strategy on foreground detection algorithms. Artificial Intelligence Review, 2020, 53, 4935-4965.	15.7	2
34	Content based image retrieval by ensembles of deep learning object classifiers. Integrated Computer-Aided Engineering, 2020, 27, 317-331.	4.6	26
35	The Big Data razor. European Journal for Philosophy of Science, 2020, 10, 1.	1.1	23
36	Ellipse fitting by spatial averaging of random ensembles. Pattern Recognition, 2020, 106, 107406.	8.1	11

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37	Background subtraction by probabilistic modeling of patch features learned by deep autoencoders. Integrated Computer-Aided Engineering, 2020, 27, 253-265.	4.6	13
38	Optimization of Convolutional Neural Network Ensemble Classifiers by Genetic Algorithms. Lecture Notes in Computer Science, 2019, , 163-173.	1.3	3
39	Foreground detection by probabilistic modeling of the features discovered by stacked denoising autoencoders in noisy video sequences. Pattern Recognition Letters, 2019, 125, 481-487.	4.2	17
40	Content Based Image Retrieval by Convolutional Neural Networks. Lecture Notes in Computer Science, 2019, , 277-286.	1.3	4
41	Deep Learning Networks with p-norm Loss Layers for Spatial Resolution Enhancement of 3D Medical Images. Lecture Notes in Computer Science, 2019, , 287-296.	1.3	0
42	Background Modeling by Shifted Tilings of Stacked Denoising Autoencoders. Lecture Notes in Computer Science, 2019, , 307-316.	1.3	3
43	Diabetic Wound Segmentation using Convolutional Neural Networks. , 2019, 2019, 1002-1005.		19
44	Piecewise Polynomial Activation Functions for Feedforward Neural Networks. Neural Processing Letters, 2019, 50, 121-147.	3.2	6
45	Deep Learning-Based Security System Powered by Low Cost Hardware and Panoramic Cameras. Lecture Notes in Computer Science, 2019, , 317-326.	1.3	0
46	Panorama construction for PTZ camera surveillance with the neural gas network. Expert Systems, 2018, 35, e12249.	4.5	3
47	Unsupervised learning by cluster quality optimization. Information Sciences, 2018, 436-437, 31-55.	6.9	12
48	Foreground Detection by Competitive Learning for Varying Input Distributions. International Journal of Neural Systems, 2018, 28, 1750056.	5.2	24
49	The effect of noise on foreground detection algorithms. Artificial Intelligence Review, 2018, 49, 407-438.	15.7	9
50	Vehicle type detection by ensembles of convolutional neural networks operating on super resolved images. Integrated Computer-Aided Engineering, 2018, 25, 321-333.	4.6	56
51	A New Self-Organizing Neural Gas Model based on Bregman Divergences. , 2018, , .		4
52	Road Pollution Estimation Using Static Cameras And Neural Networks. , 2018, , .		2
53	Deep learning-based anomalous object detection system powered by microcontroller for PTZ cameras. , 2018, , .		3
54	Super-resolution of 3D Magnetic Resonance Images by Random Shifting and Convolutional Neural Networks. , 2018, , .		2

#	ARTICLE	IF	CITATIONS
55	Computational Functionalism for the Deep Learning Era. Minds and Machines, 2018, 28, 667-688.	4.8	9
56	Motion detection with low cost hardware for PTZ cameras. Integrated Computer-Aided Engineering, 2018, 26, 21-36.	4.6	7
57	Foreground object detection for video surveillance by fuzzy logic based estimation of pixel illumination states. Logic Journal of the IGPL, 2018, , .	1.5	5
58	A fast robust geometric fitting method for parabolic curves. Pattern Recognition, 2018, 84, 301-316.	8.1	9
59	Background Modeling for Video Sequences by Stacked Denoising Autoencoders. Lecture Notes in Computer Science, 2018, , 341-350.	1.3	5
60	THE ROLE OF THE LATTICE DIMENSIONALITY IN THE SELF-ORGANIZING MAP. Neural Network World, 2018, 28, 57-85.	0.8	1
61	Developing Cooperative Evaluation Methodologies in Higher Education. Advances in Intelligent Systems and Computing, 2018, , 706-711.	0.6	0
62	Foreground Detection Enhancement Using Pearson Correlation Filtering. Communications in Computer and Information Science, 2018, , 417-428.	0.5	0
63	Dynamic tree topology learning by self-organization. Neural Computing and Applications, 2017, 28, 911-924.	5.6	3
64	Vehicle Type Detection by Convolutional Neural Networks. Lecture Notes in Computer Science, 2017, , 268-278.	1.3	6
65	Robust Fitting of Ellipsoids by Separating Interior and Exterior Points During Optimization. Journal of Mathematical Imaging and Vision, 2017, 58, 189-210.	1.3	6
66	Panoramic background modeling for PTZ cameras with competitive learning neural networks. , 2017, , .		5
67	Neural controller for PTZ cameras based on nonpanoramic foreground detection. , 2017, , .		4
68	Unsupervised Color Quantization with the Growing Neural Forest. Lecture Notes in Computer Science, 2017, , 306-316.	1.3	1
69	Motion Detection by Microcontroller for Panning Cameras. Lecture Notes in Computer Science, 2017, , 279-288.	1.3	2
70	Vehicle Classification in Traffic Environments Using the Growing Neural Gas. Lecture Notes in Computer Science, 2017, , 225-234.	1.3	2
71	Growing Neural Forest-Based Color Quantization Applied to RGB Images. International Journal of Computer Vision and Image Processing, 2017, 7, 13-25.	0.4	0
72	A Growing Neural Gas Approach to Classify Vehicles in Traffic Environments. International Journal of Computer Vision and Image Processing, 2017, 7, 1-12.	0.4	1

#	ARTICLE	IF	CITATIONS
73	Learning Topologies with the Growing Neural Forest. International Journal of Neural Systems, 2016, 26, 1650019.	5.2	20
74	Smart motion detection sensor based on video processing using self-organizing maps. Expert Systems With Applications, 2016, 64, 476-489.	7.6	17
75	Continuous chemical classification in uncontrolled environments with sliding windows. Chemometrics and Intelligent Laboratory Systems, 2016, 158, 117-129.	3.5	13
76	Extended abstract: A color quantization approach based on the Growing Neural Forest. , 2016, , .		2
77	Selecting the Color Space for Self-Organizing Map Based Foreground Detection in Video. Neural Processing Letters, 2016, 43, 345-361.	3.2	8
78	The Growing Hierarchical Neural Gas Self-Organizing Neural Network. IEEE Transactions on Neural Networks and Learning Systems, 2016, 28, 1-10.	11.3	22
79	Superresolution from a Single Noisy Image by the Median Filter Transform. SIAM Journal on Imaging Sciences, 2016, 9, 82-115.	2.2	17
80	Frame Size Reduction for Foreground Detection in Video Sequences. Lecture Notes in Computer Science, 2016, , 3-12.	1.3	2
81	Computational Intelligence Techniques in Medicine. Computational and Mathematical Methods in Medicine, 2015, 2015, 1-2.	1.3	14
82	Foreground detection for moving cameras with stochastic approximation. Pattern Recognition Letters, 2015, 68, 161-168.	4.2	21
83	Features for stochastic approximation based foreground detection. Computer Vision and Image Understanding, 2015, 133, 30-50.	4.7	26
84	Local color transformation analysis for sudden illumination change detection. Image and Vision Computing, 2015, 37, 31-47.	4.5	10
85	A self-organizing map to improve vehicle detection in flow monitoring systems. Soft Computing, 2015, 19, 2499-2509.	3.6	20
86	Probability density function estimation with the frequency polygon transform. Information Sciences, 2015, 298, 136-158.	6.9	6
87	Robust self-organization with M-estimators. Neurocomputing, 2015, 151, 408-423.	5.9	6
88	Visualization of Complex Datasets with the Self-Organizing Spanning Tree. Lecture Notes in Computer Science, 2015, , 209-217.	1.3	1
89	BREGMAN DIVERGENCES FOR GROWING HIERARCHICAL SELF-ORGANIZING NETWORKS. International Journal of Neural Systems, 2014, 24, 1450016.	5.2	14
90	Grid topologies for the self-organizing map. Neural Networks, 2014, 56, 35-48.	5.9	8

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91	A Histogram Transform for ProbabilityDensity Function Estimation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2014, 36, 644-656.	13.9	70
92	Color space selection for self-organizing map based foreground detection in video sequences. , 2014, , .		6
93	An adaptive system for compressed video deblocking. Signal Processing, 2014, 103, 415-425.	3.7	3
94	Online Learning by Stochastic Approximation for Background Modeling. , 2014, , 8-1-8-23.		0
95	A Competitive Neural Network for Multiple Object Tracking in Video Sequence Analysis. Neural Processing Letters, 2013, 37, 47-67.	3.2	14
96	Improving the Quality of Self-Organizing Maps by Self-Intersection Avoidance. IEEE Transactions on Neural Networks and Learning Systems, 2013, 24, 1253-1265.	11.3	11
97	Assessment of geometric features for individual identification and verification in biometric hand systems. Expert Systems With Applications, 2013, 40, 3580-3594.	7.6	47
98	Adaptive kernel regression and probabilistic self-organizing maps for JPEG image deblocking. Neurocomputing, 2013, 121, 32-39.	5.9	10
99	A Self-organizing Map for Traffic Flow Monitoring. Lecture Notes in Computer Science, 2013, , 458-466.	1.3	0
100	Hierarchical Self-Organizing Networks for Multispectral Data Visualization. Lecture Notes in Computer Science, 2013, , 449-457.	1.3	0
101	Feature Selection of Hand Biometrical Traits Based on Computational Intelligence Techniques. Studies in Computational Intelligence, 2012, , 159-180.	0.9	0
102	Growing Hierarchical Probabilistic Self-Organizing Graphs. IEEE Transactions on Neural Networks, 2011, 22, 997-1008.	4.2	14
103	GA-based feature selection approach in biometric hand systems. , 2011, , .		6
104	Dynamic topology learning with the probabilistic self-organizing graph. Neurocomputing, 2011, 74, 2633-2648.	5.9	9
105	Stochastic approximation learning for mixtures of multivariate elliptical distributions. Neurocomputing, 2011, 74, 2972-2984.	5.9	2
106	Stochastic approximation for background modelling. Computer Vision and Image Understanding, 2011, 115, 735-749.	4.7	30
107	Kernel regression based feature extraction for 3D MR image denoising. Medical Image Analysis, 2011, 15, 498-513.	11.6	36
108	FOREGROUND DETECTION IN VIDEO SEQUENCES WITH PROBABILISTIC SELF-ORGANIZING MAPS. International Journal of Neural Systems, 2011, 21, 225-246.	5.2	62

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109	Feature Weighting in Competitive Learning for Multiple Object Tracking in Video Sequences. Lecture Notes in Computer Science, 2011, , 17-24.	1.3	0
110	Reduction of JPEG Compression Artifacts by Kernel Regression and Probabilistic Self-Organizing Maps. Lecture Notes in Computer Science, 2011, , 34-41.	1.3	0
111	Probabilistic self-organizing maps for qualitative data. Neural Networks, 2010, 23, 1208-1225.	5.9	14
112	Restoration of images corrupted by Gaussian and uniform impulsive noise. Pattern Recognition, 2010, 43, 1835-1846.	8.1	84
113	Probabilistic Self-Organizing Maps for Continuous Data. IEEE Transactions on Neural Networks, 2010, 21, 1543-1554.	4.2	32
114	ROBUST LOCATION AND SPREAD MEASURES FOR NONPARAMETRIC PROBABILITY DENSITY FUNCTION ESTIMATION. International Journal of Neural Systems, 2009, 19, 345-357.	5.2	9
115	DYNAMIC COMPETITIVE PROBABILISTIC PRINCIPAL COMPONENTS ANALYSIS. International Journal of Neural Systems, 2009, 19, 91-103.	5.2	16
116	Automatic Model Selection by Cross-Validation for Probabilistic PCA. Neural Processing Letters, 2009, 30, 113-132.	3.2	5
117	Multivariate Student- $t$ self-organizing maps. Neural Networks, 2009, 22, 1432-1447.	5.9	18
118	Probabilistic PCA Self-Organizing Maps. IEEE Transactions on Neural Networks, 2009, 20, 1474-1489.	4.2	33
119	Object Tracking in Video Sequences by Unsupervised Learning. Lecture Notes in Computer Science, 2009, , 1070-1077.	1.3	6
120	Nonparametric Location Estimation for Probability Density Function Learning. Lecture Notes in Computer Science, 2009, , 106-113.	1.3	0
121	Probabilistic Self-Organizing Graphs. Lecture Notes in Computer Science, 2009, , 180-187.	1.3	1
122	Soft clustering for nonparametric probability density function estimation. Pattern Recognition Letters, 2008, 29, 2085-2091.	4.2	16
123	Robust Nonparametric Probability Density Estimation by Soft Clustering. Lecture Notes in Computer Science, 2008, , 155-164.	1.3	0
124	Self-organization of Probabilistic PCA Models. Lecture Notes in Computer Science, 2007, , 211-218.	1.3	1
125	Automatic Model Selection for Probabilistic PCA. Lecture Notes in Computer Science, 2007, , 127-134.	1.3	0
126	Image Compression by Vector Quantization with Recurrent Discrete Networks. Lecture Notes in Computer Science, 2006, , 595-605.	1.3	6



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127	Local Selection of Model Parameters in Probability Density Function Estimation. Lecture Notes in Computer Science, 2006, , 292-301.	1.3	0
128	Intrinsic Dimensionality Maps with the PCASOM. Lecture Notes in Computer Science, 2005, , 750-757.	1.3	0
129	Principal Components Analysis Competitive Learning. Neural Computation, 2004, 16, 2459-2481.	2.2	15
130	A principal components analysis self-organizing map. Neural Networks, 2004, 17, 261-270.	5.9	34
131	New learning rules for the ASSOM network. Neural Computing and Applications, 2003, 12, 109-118.	5.6	1
132	A four-stage system for blind colour image segmentation. Integrated Computer-Aided Engineering, 2003, 10, 127-137.	4.6	2
133	Principal Components Analysis Competitive Learning. Lecture Notes in Computer Science, 2003, , 318-325.	1.3	3
134	Expansive and Competitive Learning for Vector Quantization. Neural Processing Letters, 2002, 15, 261-273.	3.2	6
135	Self-Organizing Dynamic Graphs. Neural Processing Letters, 2002, 16, 93-109.	3.2	7
136	The Principal Components Analysis Self-Organizing Map. Lecture Notes in Computer Science, 2002, , 865-870.	1.3	0
137	Invariant pattern identification by self-organising networks. Pattern Recognition Letters, 2001, 22, 983-990.	4.2	10
138	Dynamic Topology Networks for Colour Image Compression. Lecture Notes in Computer Science, 2001, , 168-175.	1.3	0