Nuno M Vasconcelos

List of Publications by Year
in descending order

144	16,288	126907	110387
papers	citations	33	64
		h-index	g-index
145	145	145	9852
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cascade R-CNN: Delving Into High Quality Object Detection. , 2018, , .		3,013
2	Anomaly detection in crowded scenes. , 2010, , .		1,008
3	A new approach to cross-modal multimedia retrieval. , 2010, , .		912
4	A Unified Multi-scale Deep Convolutional Neural Network for Fast Object Detection. Lecture Notes in Computer Science, 2016, , 354-370.	1.3	790
5	Privacy preserving crowd monitoring: Counting people without people models or tracking. , 2008, , .		764
6	Supervised Learning of Semantic Classes for Image Annotation and Retrieval. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2007, 29, 394-410.	13.9	731
7	Cascade R-CNN: High Quality Object Detection and Instance Segmentation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 1483-1498.	13.9	637
8	Anomaly Detection and Localization in Crowded Scenes. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2014, 36, 18-32.	13.9	589
9	Bidirectional Learning for Domain Adaptation of Semantic Segmentation. , 2019, , .		391
10	Counting People With Low-Level Features and Bayesian Regression. IEEE Transactions on Image Processing, 2012, 21, 2160-2177.	9.8	374
11	Modeling, Clustering, and Segmenting Video with Mixtures of Dynamic Textures. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2008, 30, 909-926.	13.9	349
12	Spatiotemporal Saliency in Dynamic Scenes. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2010, 32, 171-177.	13.9	347
13	On the Role of Correlation and Abstraction in Cross-Modal Multimedia Retrieval. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2014, 36, 521-535.	13.9	347
14	Bayesian Poisson regression for crowd counting. , 2009, , .		292
15	Deep Learning with Low Precision by Half-Wave Gaussian Quantization. , 2017, , .		264
16	Discriminant Saliency, the Detection of Suspicious Coincidences, and Applications to Visual Recognition. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2009, 31, 989-1005.	13.9	248
17	On the plausibility of the discriminant center-surround hypothesis for visual saliency. Journal of Vision, 2008, 8, 13.	0.3	239
18	Learning Complexity-Aware Cascades for Deep Pedestrian Detection. , 2015, , .		214

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19	Bridging the Gap: Query by Semantic Example. IEEE Transactions on Multimedia, 2007, 9, 923-938.	7.2	200
20	Bottom-up saliency is a discriminant process. , 2007, , .		173
21	Peak-Piloted Deep Network for Facial Expression Recognition. Lecture Notes in Computer Science, 2016, , 425-442.	1.3	167
22	Saliency-based discriminant tracking. , 2009, , .		166
23	Cost-Sensitive Boosting. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 294-309.	13.9	138
24	Cost-sensitive support vector machines. Neurocomputing, 2019, 343, 50-64.	5.9	124
25	Towards Universal Object Detection by Domain Attention. , 2019, , .		123
26	RESOUND: Towards Action Recognition Without Representation Bias. Lecture Notes in Computer Science, 2018, , 520-535.	1.3	119
27	Biologically Inspired Object Tracking Using Center-Surround Saliency Mechanisms. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 541-554.	13.9	115
28	REPAIR: Removing Representation Bias by Dataset Resampling. , 2019, , .		114
29	Classifying Video with Kernel Dynamic Textures. , 2007, , .		112
30	Fluoroscopic tumor tracking for image-guided lung cancer radiotherapy. Physics in Medicine and Biology, 2009, 54, 981-992.	3.0	108
31	Statistical models of video structure for content analysis and characterization. IEEE Transactions on Image Processing, 2000, 9, 3-19.	9.8	107
32	Scene classification with semantic Fisher vectors. , 2015, , .		101
33	Learning Optimal Seeds for Diffusion-Based Salient Object Detection. , 2014, , .		93
34	Semantically Consistent Regularization for Zero-Shot Recognition. , 2017, , .		91
35	Latent Dirichlet Allocation Models for Image Classification. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 2665-2679.	13.9	80
36	Background subtraction in highly dynamic scenes. , 2008, , .		76

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37	Decision-Theoretic Saliency: Computational Principles, Biological Plausibility, and Implications for Neurophysiology and Psychophysics. Neural Computation, 2009, 21, 239-271.	2.2	73
38	Robust Deformable and Occluded Object Tracking With Dynamic Graph. IEEE Transactions on Image Processing, 2014, 23, 5497-5509.	9.8	71
39	On the Efficient Evaluation of Probabilistic Similarity Functions for Image Retrieval. IEEE Transactions on Information Theory, 2004, 50, 1482-1496.	2.4	70
40	How many bits does it take for a stimulus to be salient?. , 2015, , .		69
41	Scene classification with low-dimensional semantic spaces and weak supervision. , 2008, , .		64
42	Layered Dynamic Textures. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2009, 31, 1862-1879.	13.9	64
43	Boosted Convolutional Neural Networks. , 2016, , .		63
44	AGA: Attribute-Guided Augmentation. , 2017, , .		62
45	Generalized Staufferâ€"Grimson background subtraction for dynamic scenes. Machine Vision and Applications, 2011, 22, 751-766.	2.7	61
46	Holistic Context Models for Visual Recognition. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 902-917.	13.9	61
47	Feature Space Transfer for Data Augmentation. , 2018, , .		60
48	Minimum Probability of Error Image Retrieval. IEEE Transactions on Signal Processing, 2004, 52, 2322-2336.	5.3	59
49	Biologically plausible saliency mechanisms improve feedforward object recognition. Vision Research, 2010, 50, 2295-2307.	1.4	56
50	Asymmetric boosting. , 2007, , .		54
51	From Pixels to Semantic Spaces: Advances in Content-Based Image Retrieval. Computer, 2007, 40, 20-26.	1.1	53
52	Rethinking Differentiable Search for Mixed-Precision Neural Networks. , 2020, , .		52
53	VLAD3: Encoding Dynamics of Deep Features for Action Recognition. , 2016, , .		49
54	A Novel Approach to FRUC Using Discriminant Saliency and Frame Segmentation. IEEE Transactions on Image Processing, 2010, 19, 2924-2934.	9.8	48

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55	Scene Recognition on the Semantic Manifold. Lecture Notes in Computer Science, 2012, , 359-372.	1.3	48
56	Few-Shot Open-Set Recognition Using Meta-Learning. , 2020, , .		47
57	Direct convex relaxations of sparse SVM. , 2007, , .		45
58	Bayesian Model Adaptation for Crowd Counts. , 2015, , .		43
59	A database centric view of semantic image annotation and retrieval. , 2005, , .		42
60	Multiple instance learning for soft bags via top instances. , 2015, , .		41
61	Explainable Object-Induced Action Decision for Autonomous Vehicles. , 2020, , .		41
62	On the design of robust classifiers for computer vision. , 2010, , .		40
63	Generic Promotion of Diffusion-Based Salient Object Detection. , 2015, , .		40
64	Dynamic Transfer for Multi-Source Domain Adaptation. , 2021, , .		40
65	A multiresolution manifold distance for invariant image similarity. IEEE Transactions on Multimedia, 2005, 7, 127-142.	7.2	39
66	Adapted Gaussian models for image classification. , 2011, , .		39
67	Robust Deep Sensing Through Transfer Learning in Cognitive Radio. IEEE Wireless Communications Letters, 2020, 9, 38-41.	5.0	39
68	Learning of Visual Relations: The Devil is in the Tails. , 2021, , .		39
69	Volumetric Attention for 3D Medical Image Segmentation and Detection. Lecture Notes in Computer Science, 2019, , 175-184.	1.3	38
70	Empirical Bayesian motion segmentation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2001, 23, 217-221.	13.9	37
71	Natural Image Statistics and Low-Complexity Feature Selection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2009, 31, 228-244.	13.9	37
72	SCOUT: Self-Aware Discriminant Counterfactual Explanations. , 2020, , .		37

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73	Dynamic Pooling for Complex Event Recognition. , 2013, , .		34
74	Deep Scene Image Classification with the MFAFVNet. , 2017, , .		32
75	Holistic context modeling using semantic co-occurrences. , 2009, , .		31
76	Localizing target structures in ultrasound video â€" A phantom study. Medical Image Analysis, 2013, 17, 712-722.	11.6	31
77	The Kullback-Leibler Kernel as a Framework for Discriminant and Localized Representations for Visual Recognition. Lecture Notes in Computer Science, 2004, , 430-441.	1.3	30
78	Recognizing Activities via Bag of Words for Attribute Dynamics. , 2013, , .		29
79	Background Data Resampling for Outlier-Aware Classification. , 2020, , .		26
80	Cross-modal domain adaptation for text-based regularization of image semantics in image retrieval systems. Computer Vision and Image Understanding, 2014, 124, 123-135.	4.7	23
81	Learning Complexity-Aware Cascades for Pedestrian Detection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 2195-2211.	13.9	23
82	TaylorBoost: First and second-order boosting algorithms with explicit margin control. , 2011, , .		21
83	Learning Optimal Embedded Cascades. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 2005-2018.	13.9	21
84	Endoscopic image analysis in semantic space. Medical Image Analysis, 2012, 16, 1415-1422.	11.6	20
85	GistNet: a Geometric Structure Transfer Network for Long-Tailed Recognition. , 2021, , .		20
86	High Detection-rate Cascades for Real-Time Object Detection. , 2007, , .		19
87	Variational layered dynamic textures. , 2009, , .		19
88	Efficient Multi-Domain Learning by Covariance Normalization. , 2019, , .		19
89	Query by Semantic Example. Lecture Notes in Computer Science, 2006, , 51-60.	1.3	17
90	NetTailor: Tuning the Architecture, Not Just the Weights. , 2019, , .		17

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91	Image Compression using Object-Based Regions of Interest. , 2006, , .		15
92	Object-Based Regions of Interest for Image Compression. Proceedings of the Data Compression Conference, 2008, , .	0.0	15
93	Towards Realistic Predictors. Lecture Notes in Computer Science, 2018, , 37-53.	1.3	15
94	Geodesic Regression on the Grassmannian. Lecture Notes in Computer Science, 2014, , 632-646.	1.3	15
95	Solving Long-Tailed Recognition withÂDeep Realistic Taxonomic Classifier. Lecture Notes in Computer Science, 2020, , 171-189.	1.3	14
96	<title>Embedded mixture modeling for efficient probabilistic content-based indexing and retrieval</title>. , 1998, 3527, 134.		13
97	On the regularization of image semantics by modal expansion. , 2012, , .		13
98	Object recognition with hierarchical discriminant saliency networks. Frontiers in Computational Neuroscience, 2014, 8, 109.	2.1	12
99	Parametric Regression on the Grassmannian. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2016, 38, 2284-2297.	13.9	12
100	Automated Ecological Assessment of Physical Activity: Advancing Direct Observation. International Journal of Environmental Research and Public Health, 2017, 14, 1487.	2.6	12
101	ComplexÂActivityÂRecognition Via AttributeÂDynamics. International Journal of Computer Vision, 2017, 122, 334-370.	15.6	11
102	Saliency-based discriminant tracking. , 2009, , .		11
103	PIEs: Pose Invariant Embeddings. , 2019, , .		10
104	Semantic Fisher Scores for Task Transfer: Using Objects to Classify Scenes. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 3102-3118.	13.9	10
105	Super Diffusion for Salient Object Detection. IEEE Transactions on Image Processing, 2020, 29, 2903-2917.	9.8	10
106	Discriminant Interest Points are Stable. , 2007, , .		8
107	Boosting algorithms for simultaneous feature extraction and selection. , 2012, , .		8
108	Person-following UAVs. , 2016, , .		8

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109	What Is the Role of Independence for Visual Recognition?. Lecture Notes in Computer Science, 2002, , 297-311.	1.3	8
110	A study of query by semantic example. , 2008, , .		7
111	Automated High-Frequency Observations of Physical Activity Using Computer Vision. Medicine and Science in Sports and Exercise, 2020, 52, 2029-2036.	0.4	7
112	SPOT: Selective Point Cloud Voting for Better Proposal in Point Cloud Object Detection. Lecture Notes in Computer Science, 2020, , 230-247.	1.3	7
113	Semantic Clustering for Robust Fine-Grained Scene Recognition. Lecture Notes in Computer Science, 2016, , 783-798.	1.3	6
114	Learning Receptive Fields for Pooling from Tensors of Feature Response. , 2014, , .		5
115	Deep Hashing with Hash-Consistent Large Margin Proxy Embeddings. International Journal of Computer Vision, 2021, 129, 419-438.	15.6	5
116	IMAGINE: Image Synthesis by Image-Guided Model Inversion. , 2021, , .		5
117	Image retrieval using query by contextual example. , 2008, , .		4
118	FPGA implementation of HOG based pedestrian detector. , 2015, , .		4
119	Exploit Clues From Views: Self-Supervised and Regularized Learning for Multiview Object Recognition. , 2020, , .		4
120	Learning Pit Pattern Concepts for Gastroenterological Training. Lecture Notes in Computer Science, 2011, 14, 280-287.	1.3	4
121	BEV-Net: Assessing Social Distancing Compliance by Joint People Localization and Geometric Reasoning. , 2021, , .		4
122	A Machine Teaching Framework for Scalable Recognition. , 2021, , .		4
123	Biologically plausible detection of amorphous objects in the wild. , 2011, , .		3
124	Automatic initialization and tracking using attentional mechanisms. , 2011, , .		3
125	A real-time cascade pedestrian detection based on heterogeneous features. , 2015, , .		3
126	Catastrophic Child's Play: Easy to Perform, Hard to Defend Adversarial Attacks. , 2019, , .		3

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127	Variational layered dynamic textures. , 2009, , .		3
128	Tumor Targeting for Lung Cancer Radiotherapy Using Machine Learning Techniques. , 2008, , .		2
129	Minimum Bayes error features for visual recognition. Image and Vision Computing, 2009, 27, 131-140.	4.5	2
130	Class-Specific Simplex-Latent Dirichlet Allocation for Image Classification. , 2013, , .		2
131	Guest Editorial Special Section on Visual Saliency Computing and Learning. IEEE Transactions on Neural Networks and Learning Systems, 2016, 27, 1118-1121.	11.3	2
132	Some relationships between minimum Bayes error and information theoretical feature extraction. , 2005, , .		1
133	Complex discriminant features for object classification. , 2008, , .		1
134	Motion vector refinement for FRUC using saliency and segmentation. , 2010, , .		1
135	Minimum Probability of Error Image Retrieval: From Visual Features to Image Semantics. Foundations and Trends in Signal Processing, 2012, 5, 265-389.	18.0	1
136	Using context to improve cascaded pedestrian detection. , 2014, , .		1
137	Recognition in Ultrasound Videos: Where Am I?. Lecture Notes in Computer Science, 2012, 15, 83-90.	1.3	1
138	Holistic context modeling using semantic co-occurrences. , 2009, , .		1
139	An Experimental Comparison of Three Guiding Principles for the Detection of Salient Image Locations: Stability, Complexity, and Discrimination. Lecture Notes in Computer Science, 2007, , 184-197.	1.3	1
140	<title>Decision-theoretic image retrieval</title>. , 2002, 4862, 114.		0
141	A systematic study of the role of context on image classification. , 2008, , .		0
142	Pedestrian detection aided by temporal prior. , 2016, , .		0
143	Surveillance of Crowded Environments: Modeling the Crowd by Its Global Properties. The Kluwer International Series in Video Computing, 2013, , 295-324.	0.7	0
144	Advanced methods for robust object detection. , 2022, , 93-117.		0