

Nuno M Vasconcelos

List of Publications by Year in descending order

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Version: 2024-02-01

144
papers

16,288
citations

126708

33
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110170

64
g-index

145
all docs

145
docs citations

145
times ranked

9852
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. | 1.0 | 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. | 9.7 | 731 |
| 7 | Cascade R-CNN: High Quality Object Detection and Instance Segmentation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 1483-1498. | 9.7 | 637 |
| 8 | Anomaly Detection and Localization in Crowded Scenes. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2014, 36, 18-32. | 9.7 | 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. | 6.0 | 374 |
| 11 | Modeling, Clustering, and Segmenting Video with Mixtures of Dynamic Textures. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2008, 30, 909-926. | 9.7 | 349 |
| 12 | Spatiotemporal Saliency in Dynamic Scenes. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2010, 32, 171-177. | 9.7 | 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. | 9.7 | 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. | 9.7 | 248 |
| 17 | On the plausibility of the discriminant center-surround hypothesis for visual saliency. Journal of Vision, 2008, 8, 13. | 0.1 | 239 |
| 18 | Learning Complexity-Aware Cascades for Deep Pedestrian Detection. , 2015, , . | | 214 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Bridging the Gap: Query by Semantic Example. IEEE Transactions on Multimedia, 2007, 9, 923-938. | 5.2 | 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. | 1.0 | 167 |
| 22 | Saliency-based discriminant tracking. , 2009, , . | | 166 |
| 23 | Cost-Sensitive Boosting. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 294-309. | 9.7 | 138 |
| 24 | Cost-sensitive support vector machines. Neurocomputing, 2019, 343, 50-64. | 3.5 | 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. | 1.0 | 119 |
| 27 | Biologically Inspired Object Tracking Using Center-Surround Saliency Mechanisms. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 541-554. | 9.7 | 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. | 1.6 | 108 |
| 31 | Statistical models of video structure for content analysis and characterization. IEEE Transactions on Image Processing, 2000, 9, 3-19. | 6.0 | 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. | 9.7 | 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. <i>Neural Computation</i> , 2009, 21, 239-271. | 1.3 | 73 |
| 38 | Robust Deformable and Occluded Object Tracking With Dynamic Graph. <i>IEEE Transactions on Image Processing</i> , 2014, 23, 5497-5509. | 6.0 | 71 |
| 39 | On the Efficient Evaluation of Probabilistic Similarity Functions for Image Retrieval. <i>IEEE Transactions on Information Theory</i> , 2004, 50, 1482-1496. | 1.5 | 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. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2009, 31, 1862-1879. | 9.7 | 64 |
| 43 | Boosted Convolutional Neural Networks. , 2016, , . | | 63 |
| 44 | AGA: Attribute-Guided Augmentation. , 2017, , . | | 62 |
| 45 | Generalized Stauffer&Grimson background subtraction for dynamic scenes. <i>Machine Vision and Applications</i> , 2011, 22, 751-766. | 1.7 | 61 |
| 46 | Holistic Context Models for Visual Recognition. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2012, 34, 902-917. | 9.7 | 61 |
| 47 | Feature Space Transfer for Data Augmentation. , 2018, , . | | 60 |
| 48 | Minimum Probability of Error Image Retrieval. <i>IEEE Transactions on Signal Processing</i> , 2004, 52, 2322-2336. | 3.2 | 59 |
| 49 | Biologically plausible saliency mechanisms improve feedforward object recognition. <i>Vision Research</i> , 2010, 50, 2295-2307. | 0.7 | 56 |
| 50 | Asymmetric boosting. , 2007, , . | | 54 |
| 51 | From Pixels to Semantic Spaces: Advances in Content-Based Image Retrieval. <i>Computer</i> , 2007, 40, 20-26. | 1.2 | 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. <i>IEEE Transactions on Image Processing</i> , 2010, 19, 2924-2934. | 6.0 | 48 |

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|----|---|-----|-----------|
| 55 | Scene Recognition on the Semantic Manifold. Lecture Notes in Computer Science, 2012, , 359-372. | 1.0 | 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. | 5.2 | 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. | 3.2 | 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. | 1.0 | 38 |
| 70 | Empirical Bayesian motion segmentation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2001, 23, 217-221. | 9.7 | 37 |
| 71 | Natural Image Statistics and Low-Complexity Feature Selection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2009, 31, 228-244. | 9.7 | 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. | 7.0 | 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. | 1.0 | 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. | 3.0 | 23 |
| 81 | Learning Complexity-Aware Cascades for Pedestrian Detection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 2195-2211. | 9.7 | 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. | 9.7 | 21 |
| 84 | Endoscopic image analysis in semantic space. Medical Image Analysis, 2012, 16, 1415-1422. | 7.0 | 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. | 1.0 | 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. | 1.0 | 15 |
| 94 | Geodesic Regression on the Grassmannian. Lecture Notes in Computer Science, 2014, , 632-646. | 1.0 | 15 |
| 95 | Solving Long-Tailed Recognition with Deep Realistic Taxonomic Classifier. Lecture Notes in Computer Science, 2020, , 171-189. | 1.0 | 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. | 1.2 | 12 |
| 99 | Parametric Regression on the Grassmannian. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2016, 38, 2284-2297. | 9.7 | 12 |
| 100 | Automated Ecological Assessment of Physical Activity: Advancing Direct Observation. International Journal of Environmental Research and Public Health, 2017, 14, 1487. | 1.2 | 12 |
| 101 | Complex Activity Recognition Via Attribute Dynamics. International Journal of Computer Vision, 2017, 122, 334-370. | 10.9 | 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. | 9.7 | 10 |
| 105 | Super Diffusion for Salient Object Detection. IEEE Transactions on Image Processing, 2020, 29, 2903-2917. | 6.0 | 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. | 1.0 | 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. | 0.2 | 7 |
| 112 | SPOT: Selective Point Cloud Voting for Better Proposal in Point Cloud Object Detection. Lecture Notes in Computer Science, 2020, , 230-247. | 1.0 | 7 |
| 113 | Semantic Clustering for Robust Fine-Grained Scene Recognition. Lecture Notes in Computer Science, 2016, , 783-798. | 1.0 | 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. | 10.9 | 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. | 1.0 | 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. | 2.7 | 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. | 7.2 | 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. | 12.0 | 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. | 1.0 | 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. | 1.0 | 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 |