

Vishal M Patel

List of Publications by Year in descending order

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106
papers

9,704
citations

159585
30
h-index

138484
58
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106
all docs

106
docs citations

106
times ranked

6959
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | HyperFace: A Deep Multi-Task Learning Framework for Face Detection, Landmark Localization, Pose Estimation, and Gender Recognition. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2019, 41, 121-135. | 13.9 | 744 |
| 2 | Densely Connected Pyramid Dehazing Network. , 2018, , . | | 642 |
| 3 | Visual Domain Adaptation: A survey of recent advances. IEEE Signal Processing Magazine, 2015, 32, 53-69. | 5.6 | 636 |
| 4 | Density-Aware Single Image De-raining Using a Multi-stream Dense Network. , 2018, , . | | 519 |
| 5 | Image De-Raining Using a Conditional Generative Adversarial Network. IEEE Transactions on Circuits and Systems for Video Technology, 2020, 30, 3943-3956. | 8.3 | 517 |
| 6 | Generating High-Quality Crowd Density Maps Using Contextual Pyramid CNNs. , 2017, , . | | 433 |
| 7 | A survey of recent advances in CNN-based single image crowd counting and density estimation. Pattern Recognition Letters, 2018, 107, 3-16. | 4.2 | 413 |
| 8 | Frontal to profile face verification in the wild. , 2016, , . | | 410 |
| 9 | Medical Transformer: Gated Axial-Attention for Medical Image Segmentation. Lecture Notes in Computer Science, 2021, , 36-46. | 1.3 | 356 |
| 10 | CNN-Based cascaded multi-task learning of high-level prior and density estimation for crowd counting. , 2017, , . | | 321 |
| 11 | Joint Sparse Representation for Robust Multimodal Biometrics Recognition. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2014, 36, 113-126. | 13.9 | 288 |
| 12 | SAR Image Despeckling Using a Convolutional Neural Network. IEEE Signal Processing Letters, 2017, 24, 1763-1767. | 3.6 | 270 |
| 13 | Continuous User Authentication on Mobile Devices: Recent progress and remaining challenges. IEEE Signal Processing Magazine, 2016, 33, 49-61. | 5.6 | 245 |
| 14 | Learning Deep Features for One-Class Classification. IEEE Transactions on Image Processing, 2019, 28, 5450-5463. | 9.8 | 214 |
| 15 | C2AE: Class Conditioned Auto-Encoder for Open-Set Recognition. , 2019, , . | | 183 |
| 16 | Unconstrained face verification using deep CNN features. , 2016, , . | | 180 |
| 17 | Uncertainty Guided Multi-Scale Residual Learning-Using a Cycle Spinning CNN for Single Image De-Raining. , 2019, , . | | 169 |
| 18 | HA-CCN: Hierarchical Attention-Based Crowd Counting Network. IEEE Transactions on Image Processing, 2020, 29, 323-335. | 9.8 | 149 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | Deep Learning for Understanding Faces: Machines May Be Just as Good, or Better, than Humans. IEEE Signal Processing Magazine, 2018, 35, 66-83. | 5.6 | 148 |
| 20 | Kernel sparse subspace clustering. , 2014, , . | | 144 |
| 21 | Design of Non-Linear Kernel Dictionaries for Object Recognition. IEEE Transactions on Image Processing, 2013, 22, 5123-5135. | 9.8 | 138 |
| 22 | Multiple Kernel Learning for Sparse Representation-Based Classification. IEEE Transactions on Image Processing, 2014, 23, 3013-3024. | 9.8 | 132 |
| 23 | Sparse Representation-Based Open Set Recognition. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2017, 39, 1690-1696. | 13.9 | 124 |
| 24 | Syn2Real Transfer Learning for Image Deraining Using Gaussian Processes. , 2020, , . | | 112 |
| 25 | Improving the Performance of Unimodal Dynamic Hand-Gesture Recognition With Multimodal Training. , 2019, , . | | 109 |
| 26 | Deep Multimodal Subspace Clustering Networks. IEEE Journal on Selected Topics in Signal Processing, 2018, 12, 1601-1614. | 10.8 | 107 |
| 27 | Multi-scale Single Image Dehazing Using Perceptual Pyramid Deep Network. , 2018, , . | | 106 |
| 28 | One-Class Convolutional Neural Network. IEEE Signal Processing Letters, 2019, 26, 277-281. | 3.6 | 106 |
| 29 | Generative-Discriminative Feature Representations for Open-Set Recognition. , 2020, , . | | 94 |
| 30 | KiU-Net: Overcomplete Convolutional Architectures for Biomedical Image and Volumetric Segmentation. IEEE Transactions on Medical Imaging, 2022, 41, 965-976. | 8.9 | 94 |
| 31 | Convolutional Sparse and Low-Rank Coding-Based Rain Streak Removal. , 2017, , . | | 91 |
| 32 | Latent Space Sparse and Low-Rank Subspace Clustering. IEEE Journal on Selected Topics in Signal Processing, 2015, 9, 691-701. | 10.8 | 77 |
| 33 | KiU-Net: Towards Accurate Segmentation of Biomedical Images Using Over-Complete Representations. Lecture Notes in Computer Science, 2020, , 363-373. | 1.3 | 77 |
| 34 | Multimodal sparse and low-rank subspace clustering. Information Fusion, 2018, 39, 168-177. | 19.1 | 74 |
| 35 | Active user authentication for smartphones: A challenge data set and benchmark results. , 2016, , . | | 71 |
| 36 | Disentangled Variational Representation for Heterogeneous Face Recognition. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 9005-9012. | 4.9 | 70 |

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|----|---|------|-----------|
| 37 | Synthesis of High-Quality Visible Faces from Polarimetric Thermal Faces using Generative Adversarial Networks. International Journal of Computer Vision, 2019, 127, 845-862. | 15.6 | 59 |
| 38 | Deep Transfer Learning for Multiple Class Novelty Detection. , 2019, , . | | 59 |
| 39 | Confidence Measure Guided Single Image De-Raining. IEEE Transactions on Image Processing, 2020, 29, 4544-4555. | 9.8 | 49 |
| 40 | Deblurring Face Images Using Uncertainty Guided Multi-Stream Semantic Networks. IEEE Transactions on Image Processing, 2020, 29, 6251-6263. | 9.8 | 46 |
| 41 | Generative adversarial network-based synthesis of visible faces from polarimetric thermal faces. , 2017, , . | | 43 |
| 42 | Generating high quality visible images from SAR images using CNNs. , 2018, , . | | 43 |
| 43 | Automatic segmentation of bone surfaces from ultrasound using a filter-layer-guided CNN. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 775-783. | 2.8 | 39 |
| 44 | Convolutional Sparse and Low-Rank Coding-Based Image Decomposition. IEEE Transactions on Image Processing, 2018, 27, 2121-2133. | 9.8 | 38 |
| 45 | Unconstrained Still/Video-Based Face Verification with Deep Convolutional Neural Networks. International Journal of Computer Vision, 2018, 126, 272-291. | 15.6 | 38 |
| 46 | Face-Based Multiple User Active Authentication on Mobile Devices. IEEE Transactions on Information Forensics and Security, 2019, 14, 1240-1250. | 6.9 | 38 |
| 47 | Learning to Count in the Crowd from Limited Labeled Data. Lecture Notes in Computer Science, 2020, , 212-229. | 1.3 | 35 |
| 48 | Efficient and Low Latency Detection of Intruders in Mobile Active Authentication. IEEE Transactions on Information Forensics and Security, 2018, 13, 1392-1405. | 6.9 | 30 |
| 49 | Deep Sparse Representation-Based Classification. IEEE Signal Processing Letters, 2019, 26, 948-952. | 3.6 | 30 |
| 50 | Joint Transmission Map Estimation and Dehazing using Deep Networks. IEEE Transactions on Circuits and Systems for Video Technology, 2019, , 1-1. | 8.3 | 29 |
| 51 | Multidimensional Sparse Fourier Transform Based on the Fourier Projection-Slice Theorem. IEEE Transactions on Signal Processing, 2019, 67, 54-69. | 5.3 | 27 |
| 52 | Hyperspectral Pansharpening Based on Improved Deep Image Prior and Residual Reconstruction. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-16. | 6.3 | 27 |
| 53 | Polarimetric Thermal to Visible Face Verification via Attribute Preserved Synthesis. , 2018, , . | | 26 |
| 54 | Polarimetric Thermal to Visible Face Verification via Self-Attention Guided Synthesis. , 2019, , . | | 25 |

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| 55 | Multi-Scale Thermal to Visible Face Verification via Attribute Guided Synthesis. IEEE Transactions on Biometrics, Behavior, and Identity Science, 2021, 3, 266-280. | 4.4 | 24 |
| 56 | Dictionary-Based Face and Person Recognition From Unconstrained Video. IEEE Access, 2015, 3, 1783-1798. | 4.2 | 22 |
| 57 | Exploring Body Shape From mmW Images for Person Recognition. IEEE Transactions on Information Forensics and Security, 2017, 12, 2078-2089. | 6.9 | 19 |
| 58 | Over-and-Under Complete Convolutional RNN for MRI Reconstruction. Lecture Notes in Computer Science, 2021, 12906, 13-23. | 1.3 | 19 |
| 59 | Hierarchical Multimodal Metric Learning for Multimodal Classification. , 2017, , . | | 18 |
| 60 | In2I: Unsupervised Multi-Image-to-Image Translation Using Generative Adversarial Networks. , 2018, , . | | 18 |
| 61 | Exploring Overcomplete Representations for Single Image Deraining Using CNNs. IEEE Journal on Selected Topics in Signal Processing, 2021, 15, 229-239. | 10.8 | 18 |
| 62 | Learning to Segment Brain Anatomy From 2D Ultrasound With Less Data. IEEE Journal on Selected Topics in Signal Processing, 2020, 14, 1221-1234. | 10.8 | 17 |
| 63 | Facial Synthesis From Visual Attributes via Sketch Using Multiscale Generators. IEEE Transactions on Biometrics, Behavior, and Identity Science, 2020, 2, 55-67. | 4.4 | 17 |
| 64 | Anomaly Detection-Based Unknown Face Presentation Attack Detection. , 2020, , . | | 17 |
| 65 | Active Authentication using an Autoencoder regularized CNN-based One-Class Classifier. , 2019, , . | | 16 |
| 66 | Low-Rank and Joint Sparse Representations for Multi-Modal Recognition. IEEE Transactions on Image Processing, 2017, 26, 4741-4752. | 9.8 | 14 |
| 67 | Bone shadow segmentation from ultrasound data for orthopedic surgery using GAN. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 1477-1485. | 2.8 | 14 |
| 68 | Anatomic and Molecular MR Image Synthesis Using Confidence Guided CNNs. IEEE Transactions on Medical Imaging, 2021, 40, 2832-2844. | 8.9 | 14 |
| 69 | Automatic real-time CNN-based neonatal brain ventricles segmentation. , 2018, , . | | 13 |
| 70 | Open-Set Adversarial Defense. Lecture Notes in Computer Science, 2020, , 682-698. | 1.3 | 13 |
| 71 | Dual-Minimax Probability Machines for One-class Mobile Active Authentication. , 2018, , . | | 11 |
| 72 | Confidence Guided Network For Atmospheric Turbulence Mitigation. , 2021, , . | | 11 |

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| 73 | Multiple Class Novelty Detection Under Data Distribution Shift. Lecture Notes in Computer Science, 2020, , 432-449. | 1.3 | 11 |
| 74 | Towards Multiple User Active Authentication in Mobile Devices. , 2017, , . | | 10 |
| 75 | Extreme Value Analysis for Mobile Active User Authentication. , 2017, , . | | 10 |
| 76 | Semi-Supervised Image Deraining Using Gaussian Processes. IEEE Transactions on Image Processing, 2021, 30, 6570-6582. | 9.8 | 10 |
| 77 | Simultaneous Face Hallucination and Translation for Thermal to Visible Face Verification using Axial-GAN. , 2021, , . | | 9 |
| 78 | Multimodal Face Synthesis From Visual Attributes. IEEE Transactions on Biometrics, Behavior, and Identity Science, 2021, 3, 427-439. | 4.4 | 8 |
| 79 | Open-Set Adversarial Defense with Clean-Adversarial Mutual Learning. International Journal of Computer Vision, 2022, 130, 1070-1087. | 15.6 | 8 |
| 80 | Heterogeneous Face Frontalization via Domain Agnostic Learning. , 2021, , . | | 8 |
| 81 | CNN-Based Restoration of a Single Face Image Degraded by Atmospheric Turbulence. IEEE Transactions on Biometrics, Behavior, and Identity Science, 2022, 4, 222-233. | 4.4 | 8 |
| 82 | Adversarial domain adaptive subspace clustering. , 2018, , . | | 7 |
| 83 | Overcomplete Deep Subspace Clustering Networks. , 2021, , . | | 7 |
| 84 | Federated Generalized Face Presentation Attack Detection. IEEE Transactions on Neural Networks and Learning Systems, 2024, 35, 103-116. | 11.3 | 7 |
| 85 | Large Margin Multi-Modal Triplet Metric Learning. , 2017, , . | | 6 |
| 86 | Quickest Intruder Detection For Multiple User Active Authentication. , 2020, , . | | 6 |
| 87 | Utilizing Patch-Level Category Activation Patterns for Multiple Class Novelty Detection. Lecture Notes in Computer Science, 2020, , 421-437. | 1.3 | 6 |
| 88 | Defending Against Multiple and Unforeseen Adversarial Videos. IEEE Transactions on Image Processing, 2022, 31, 962-973. | 9.8 | 6 |
| 89 | Federated Test-Time Adaptive Face Presentation Attack Detection with Dual-Phase Privacy Preservation. , 2021, , . | | 5 |
| 90 | Improving Amide Proton Transfer-Weighted MRI Reconstruction Using T2-Weighted Images. Lecture Notes in Computer Science, 2020, 12262, 3-12. | 1.3 | 4 |

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| 91 | Lesion Mask-Based Simultaneous Synthesis of Anatomic and Molecular MR Images Using a GAN. Lecture Notes in Computer Science, 2020, 12262, 104-113. | 1.3 | 4 |
| 92 | Adversarially Robust One-class Novelty Detection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, , 1-12. | 13.9 | 4 |
| 93 | Spaceborne SAR antenna size reduction enabled by compressive sampling. , 2016, , . | | 3 |
| 94 | MIMO-RSFT radar: A reduced complexity MIMO radar based on the Sparse Fourier Transform. , 2017, , . | | 3 |
| 95 | Extracting Fourier descriptors from compressive measurements. , 2017, , . | | 3 |
| 96 | Exploring Body Texture From mmW Images for Person Recognition. IEEE Transactions on Biometrics, Behavior, and Identity Science, 2019, 1, 139-151. | 4.4 | 3 |
| 97 | RSFT: A realistic high dimensional sparse fourier transform and its application in radar signal processing. , 2016, , . | | 2 |
| 98 | Two-Dimensional Beamforming Automotive Radar with Orthogonal Linear Arrays. , 2019, , . | | 2 |
| 99 | A practical high-dimensional Sparse Fourier Transform. , 2017, , . | | 1 |
| 100 | Fps-Sft: A Multi-Dimensional Sparse Fourier Transform Based on the Fourier Projection-Slice Theorem. , 2018, , . | | 1 |
| 101 | Person Recognition beyond the Visible Spectrum: Combining Body Shape and Texture from mmW Images. , 2018, , . | | 1 |
| 102 | A Joint Representation Learning and Feature Modeling Approach for One-class Recognition. , 2021, , . | | 1 |
| 103 | Quickest Multiple User Active Authentication. Advanced Sciences and Technologies for Security Applications, 2020, , 179-196. | 0.5 | 1 |
| 104 | Deep Multimodal Sparse Representation-Based Classification. , 2020, , . | | 0 |
| 105 | Thermal-to-Visible Face Synthesis and Recognition. Advances in Computer Vision and Pattern Recognition, 2021, , 233-246. | 1.3 | 0 |
| 106 | Active Authentication on Mobile Devices. Advances in Computer Vision and Pattern Recognition, 2019, , 243-257. | 1.3 | 0 |