

Pascal V Fua

List of Publications by Year in descending order

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246
papers

29,976
citations

36303

51
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9589

142
g-index

251
all docs

251
docs citations

251
times ranked

18912
citing authors

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| 1 | SLIC Superpixels Compared to State-of-the-Art Superpixel Methods. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 2274-2282. | 13.9 | 7,142 |
| 2 | EPnP: An Accurate O(n) Solution to the PnP Problem. International Journal of Computer Vision, 2009, 81, 155-166. | 15.6 | 2,101 |
| 3 | BRIEF: Binary Robust Independent Elementary Features. Lecture Notes in Computer Science, 2010, , 778-792. | 1.3 | 1,883 |
| 4 | DAISY: An Efficient Dense Descriptor Applied to Wide-Baseline Stereo. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2010, 32, 815-830. | 13.9 | 1,106 |
| 5 | Multiple Object Tracking Using K-Shortest Paths Optimization. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 1806-1819. | 13.9 | 849 |
| 6 | BRIEF: Computing a Local Binary Descriptor Very Fast. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 1281-1298. | 13.9 | 658 |
| 7 | Multicamera People Tracking with a Probabilistic Occupancy Map. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2008, 30, 267-282. | 13.9 | 619 |
| 8 | Keypoint recognition using randomized trees. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2006, 28, 1465-1479. | 13.9 | 585 |
| 9 | Monocular 3D Human Pose Estimation in the Wild Using Improved CNN Supervision. , 2017, , . | | 543 |
| 10 | LIFT: Learned Invariant Feature Transform. Lecture Notes in Computer Science, 2016, , 467-483. | 1.3 | 536 |
| 11 | Fast Keypoint Recognition Using Random Ferns. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2010, 32, 448-461. | 13.9 | 489 |
| 12 | Discriminative Learning of Deep Convolutional Feature Point Descriptors. , 2015, , . | | 486 |
| 13 | LDAHash: Improved Matching with Smaller Descriptors. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 66-78. | 13.9 | 483 |
| 14 | Monocular Model-Based 3D Tracking of Rigid Objects: A Survey. Foundations and Trends in Computer Graphics and Vision, 2005, 1, 1-89. | 4.5 | 437 |
| 15 | Gradient Response Maps for Real-Time Detection of Textureless Objects. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 876-888. | 13.9 | 431 |
| 16 | A fast local descriptor for dense matching. , 2008, , . | | 352 |
| 17 | A parallel stereo algorithm that produces dense depth maps and preserves image features. Machine Vision and Applications, 1993, 6, 35-49. | 2.7 | 330 |
| 18 | Fast Keypoint Recognition in Ten Lines of Code. , 2007, , . | | 295 |

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|----|--|------|-----------|
| 19 | Learning to Find Good Correspondences. , 2018, , . | | 282 |
| 20 | Beyond Sharing Weights for Deep Domain Adaptation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2019, 41, 801-814. | 13.9 | 270 |
| 21 | Stable real-time 3D tracking using online and offline information. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2004, 26, 1385-1391. | 13.9 | 257 |
| 22 | Efficient large-scale multi-view stereo for ultra high-resolution image sets. Machine Vision and Applications, 2012, 23, 903-920. | 2.7 | 217 |
| 23 | TILDE: A Temporally Invariant Learned DEtector. , 2015, , . | | 204 |
| 24 | Computational strategies for object recognition. ACM Computing Surveys, 1992, 24, 5-62. | 23.0 | 198 |
| 25 | Supervoxel-Based Segmentation of Mitochondria in EM Image Stacks With Learned Shape Features. IEEE Transactions on Medical Imaging, 2012, 31, 474-486. | 8.9 | 197 |
| 26 | Accurate Non-Iterative O(n) Solution to the PnP Problem. , 2007, , . | | 191 |
| 27 | XNect. ACM Transactions on Graphics, 2020, 39, . | 7.2 | 186 |
| 28 | Segmentation-Driven 6D Object Pose Estimation. , 2019, , . | | 183 |
| 29 | Pose estimation for category specific multiview object localization. , 2009, , . | | 172 |
| 30 | Image Matching Across Wide Baselines: From Paper to Practice. International Journal of Computer Vision, 2021, 129, 517-547. | 15.6 | 172 |
| 31 | Worldwide Pose Estimation Using 3D Point Clouds. Lecture Notes in Computer Science, 2012, , 15-29. | 1.3 | 162 |
| 32 | Estimation and Visualization of Sagittal Kinematics of Lower Limbs Orientation Using Body-Fixed Sensors. IEEE Transactions on Biomedical Engineering, 2006, 53, 1385-1393. | 4.2 | 160 |
| 33 | View-based Maps. International Journal of Robotics Research, 2010, 29, 941-957. | 8.5 | 160 |
| 34 | Dominant orientation templates for real-time detection of texture-less objects. , 2010, , . | | 157 |
| 35 | Learning Monocular 3D Human Pose Estimation from Multi-view Images. , 2018, , . | | 155 |
| 36 | Learning to Fuse 2D and 3D Image Cues for Monocular Body Pose Estimation. , 2017, , . | | 152 |

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| 37 | Fast Non-Rigid Surface Detection, Registration and Realistic Augmentation. International Journal of Computer Vision, 2008, 76, 109-122. | 15.6 | 150 |
| 38 | Learning Separable Filters. , 2013, , . | | 145 |
| 39 | Model driven edge detection. Machine Vision and Applications, 1990, 3, 45-56. | 2.7 | 137 |
| 40 | Boosting Binary Keypoint Descriptors. , 2013, , . | | 130 |
| 41 | Tracking multiple people under global appearance constraints. , 2011, , . | | 128 |
| 42 | Beyond the Pixel-Wise Loss for Topology-Aware Delineation. , 2018, , . | | 128 |
| 43 | Making Action Recognition Robust to Occlusions and Viewpoint Changes. Lecture Notes in Computer Science, 2010, , 635-648. | 1.3 | 123 |
| 44 | Automated Reconstruction of Dendritic and Axonal Trees by Global Optimization with Geometric Priors. Neuroinformatics, 2011, 9, 279-302. | 2.8 | 119 |
| 45 | DeepFly3D, a deep learning-based approach for 3D limb and appendage tracking in tethered, adult Drosophila. ELife, 2019, 8, . | 6.0 | 118 |
| 46 | Multi-Commodity Network Flow for Tracking Multiple People. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2014, 36, 1614-1627. | 13.9 | 115 |
| 47 | Tracking Interacting Objects Using Intertwined Flows. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2016, 38, 2312-2326. | 13.9 | 107 |
| 48 | Unsupervised Geometry-Aware Representation for 3D Human Pose Estimation. Lecture Notes in Computer Science, 2018, , 765-782. | 1.3 | 106 |
| 49 | Surface Deformation Models for Nonrigid 3D Shape Recovery. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2007, 29, 1481-1487. | 13.9 | 104 |
| 50 | Supervised Feature Learning for Curvilinear Structure Segmentation. Lecture Notes in Computer Science, 2013, 16, 526-533. | 1.3 | 100 |
| 51 | Tracking and Modeling People in Video Sequences. Computer Vision and Image Understanding, 2001, 81, 285-302. | 4.7 | 99 |
| 52 | Linear Local Models for Monocular Reconstruction of Deformable Surfaces. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 931-944. | 13.9 | 92 |
| 53 | Multiscale Centerline Detection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2016, 38, 1327-1341. | 13.9 | 88 |
| 54 | Convex Optimization for Deformable Surface 3-D Tracking. , 2007, , . | | 87 |

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| 55 | WILDTRACK: A Multi-camera HD Dataset for Dense Unscripted Pedestrian Detection. , 2018, , . | | 86 |
| 56 | Multiple object tracking using flow linear programming. , 2009, , . | | 85 |
| 57 | GarNet: A Two-Stream Network for Fast and Accurate 3D Cloth Draping. , 2019, , . | | 85 |
| 58 | Using skeleton-based tracking to increase the reliability of optical motion capture. Human Movement Science, 2001, 20, 313-341. | 1.4 | 84 |
| 59 | Flying objects detection from a single moving camera. , 2015, , . | | 84 |
| 60 | On rendering synthetic images for training an object detector. Computer Vision and Image Understanding, 2015, 137, 24-37. | 4.7 | 83 |
| 61 | Local and Global Skeleton Fitting Techniques for Optical Motion Capture. Lecture Notes in Computer Science, 1998, , 26-40. | 1.3 | 82 |
| 62 | Multiscale Centerline Detection by Learning a Scale-Space Distance Transform. , 2014, , . | | 76 |
| 63 | Local deformation models for monocular 3D shape recovery. , 2008, , . | | 73 |
| 64 | Template-free monocular reconstruction of deformable surfaces. , 2009, , . | | 70 |
| 65 | Temporal motion models for monocular and multiview 3D human body tracking. Computer Vision and Image Understanding, 2006, 104, 157-177. | 4.7 | 69 |
| 66 | Dynamic and scalable large scale image reconstruction. , 2010, , . | | 69 |
| 67 | Receptive Fields Selection for Binary Feature Description. IEEE Transactions on Image Processing, 2014, 23, 2583-2595. | 9.8 | 69 |
| 68 | Learning to Assign Orientations to Feature Points. , 2016, , . | | 66 |
| 69 | NeuroMorph: A Toolset for the Morphometric Analysis and Visualization of 3D Models Derived from Electron Microscopy Image Stacks. Neuroinformatics, 2015, 13, 83-92. | 2.8 | 64 |
| 70 | Style-Based Motion Synthesis+. Computer Graphics Forum, 2004, 23, 799-812. | 3.0 | 63 |
| 71 | A Fully Automated Approach to Segmentation of Irregularly Shaped Cellular Structures in EM Images. Lecture Notes in Computer Science, 2010, 13, 463-471. | 1.3 | 63 |
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| 73 | Learning Separable Filters. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2015, 37, 94-106. | 13.9 | 60 |
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| 76 | The effects of aging on neuropil structure in mouse somatosensory cortexâ€”A 3D electron microscopy analysis of layer 1. PLoS ONE, 2018, 13, e0198131. | 2.5 | 59 |
| 77 | Learning for Structured Prediction Using Approximate Subgradient Descent with Working Sets. , 2013, , . | | 58 |
| 78 | A Performance Evaluation of Local Features for Image-Based 3D Reconstruction. IEEE Transactions on Image Processing, 2019, 28, 4774-4789. | 9.8 | 57 |
| 79 | What Players do with the Ball: A Physically Constrained Interaction Modeling. , 2016, , . | | 56 |
| 80 | Automated reconstruction of tree structures using path classifiers and Mixed Integer Programming. , 2012, , . | | 55 |
| 81 | Closed-Form Solution to Non-rigid 3D Surface Registration. Lecture Notes in Computer Science, 2008, , 581-594. | 1.3 | 54 |
| 82 | Robust 3D Object Tracking from Monocular Images Using Stable Parts. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018, 40, 1465-1479. | 13.9 | 54 |
| 83 | Reconstructing Loopy Curvilinear Structures Using Integer Programming. , 2013, , . | | 53 |
| 84 | Learning Latent Representations of 3D Human Pose with Deep Neural Networks. International Journal of Computer Vision, 2018, 126, 1326-1341. | 15.6 | 53 |
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| 88 | Eliminating Exposure Bias and Metric Mismatch in Multiple Object Tracking. , 2019, , . | | 47 |
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| 91 | A Novel Representation of Parts for Accurate 3D Object Detection and Tracking in Monocular Images. , 2015, , . | | 44 |
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| 93 | Pose Priors for Simultaneously Solving Alignment and Correspondence. Lecture Notes in Computer Science, 2008, , 405-418. | 1.3 | 44 |
| 94 | Learning Context Cues for Synapse Segmentation. IEEE Transactions on Medical Imaging, 2013, 32, 1864-1877. | 8.9 | 42 |
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| 96 | Template-Based Monocular 3D Shape Recovery Using Laplacian Meshes. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2016, 38, 172-187. | 13.9 | 42 |
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| 109 | Automatic extraction of generic house roofs from high resolution aerial imagery. Lecture Notes in Computer Science, 1996, , 83-96. | 1.3 | 37 |
| 110 | Take your eyes off the ball: Improving ball-tracking by focusing on team play. Computer Vision and Image Understanding, 2014, 119, 102-115. | 4.7 | 37 |
| 111 | A Real-Time Deformable Detector. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 225-239. | 13.9 | 36 |
| 112 | Non-Rigid Graph Registration Using Active Testing Search. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2015, 37, 625-638. | 13.9 | 36 |
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| 133 | Masksembles for Uncertainty Estimation. , 2021, , . | | 26 |
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| 135 | Monocular 3D Reconstruction of Locally Textured Surfaces. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 1118-1130. | 13.9 | 25 |
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| 142 | Detecting Irregular Curvilinear Structures in Gray Scale and Color Imagery Using Multi-directional Oriented Flux. , 2013, , . | | 23 |
| 143 | Correlative In Vivo 2-Photon Imaging and Focused Ion Beam Scanning Electron Microscopy. Methods in Cell Biology, 2014, 124, 339-361. | 1.1 | 23 |
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| 147 | Eigendecomposition-Free Training of Deep Networks with Zero Eigenvalue-Based Losses. Lecture Notes in Computer Science, 2018, , 792-807. | 1.3 | 22 |
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| 154 | Real-time learning of accurate patch rectification. , 2009, , . | | 20 |
| 155 | From Canonical Poses to 3D Motion Capture Using a Single Camera. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2010, 32, 1165-1181. | 13.9 | 20 |
| 156 | Flight Dynamics-Based Recovery of a UAV Trajectory Using Ground Cameras. , 2017, , . | | 20 |
| 157 | Learning Context Cues for Synapse Segmentation in EM Volumes. Lecture Notes in Computer Science, 2012, 15, 585-592. | 1.3 | 20 |
| 158 | Tilt-less 3-D electron imaging and reconstruction of complex curvilinear structures. Scientific Reports, 2017, 7, 10630. | 3.3 | 19 |
| 159 | Free-Shape Polygonal Object Localization. Lecture Notes in Computer Science, 2014, , 317-332. | 1.3 | 19 |
| 160 | GarNet++: Improving Fast and Accurate Static 3D Cloth Draping by Curvature Loss. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 181-195. | 13.9 | 19 |
| 161 | Robust non-rigid registration of 2D and 3D graphs. , 2012, , . | | 18 |
| 162 | Multiple Human Pose Estimation with Temporally Consistent 3D Pictorial Structures. Lecture Notes in Computer Science, 2015, , 742-754. | 1.3 | 18 |

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| 163 | Fast Object Detection with Entropy-Driven Evaluation. , 2013, , . | | 17 |
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| 182 | Are Existing Monocular Computer Vision-Based 3D Motion Capture Approaches Ready for Deployment? A Methodological Study on the Example of Alpine Skiing. Sensors, 2019, 19, 4323. | 3.8 | 13 |
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| 197 | Eigendecomposition-Free Training of Deep Networks for Linear Least-Square Problems. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 3167-3182. | 13.9 | 8 |
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| 201 | Matching Seqlets: An Unsupervised Approach for Locality Preserving Sequence Matching. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 745-752. | 13.9 | 7 |
| 202 | Motion Prediction Using Temporal Inception Module. Lecture Notes in Computer Science, 2021, , 651-665. | 1.3 | 7 |
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