## Pascal V Fua

#### List of Publications by Citations

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| #   | Paper   | IF           | Citations   |
|-----|---|--------------|-------------|
| 243 | SLIC superpixels compared to state-of-the-art superpixel methods. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2012</b> , 34, 2274-82     | 13.3         | 4964        |
| 242 | EPnP: An Accurate O(n) Solution to the PnP Problem. <i>International Journal of Computer Vision</i> , <b>2009</b> , 81, 155-166   | 10.6         | 1296        |
| 241 | BRIEF: Binary Robust Independent Elementary Features. Lecture Notes in Computer Science, 2010, 778-   | <b>792</b> 9 | 985         |
| 240 | DAISY: an efficient dense descriptor applied to wide-baseline stereo. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2010</b> , 32, 815-30  | 13.3         | 842         |
| 239 | Multiple Object Tracking Using K-Shortest Paths Optimization. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2011</b> , 33, 1806-19         | 13.3         | 636         |
| 238 | Keypoint recognition using randomized trees. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2006</b> , 28, 1465-79                          | 13.3         | 469         |
| 237 | Multicamera people tracking with a probabilistic occupancy map. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2008</b> , 30, 267-82        | 13.3         | 468         |
| 236 | BRIEF: Computing a Local Binary Descriptor Very Fast. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2012</b> , 34, 1281-98                 | 13.3         | 465         |
| 235 | LDAHash: Improved Matching with Smaller Descriptors. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2012</b> , 34, 66-78                    | 13.3         | 407         |
| 234 | Monocular Model-Based 3D Tracking of Rigid Objects: A Survey. <i>Foundations and Trends in Computer Graphics and Vision</i> , <b>2005</b> , 1, 1-89                     | 12           | 369         |
| 233 | Fast keypoint recognition using random ferns. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2010</b> , 32, 448-61                          | 13.3         | 367         |
| 232 | Discriminative Learning of Deep Convolutional Feature Point Descriptors 2015,   |              | 341         |
| 231 | Gradient response maps for real-time detection of textureless objects. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2012</b> , 34, 876-88 | 13.3         | <b>2</b> 80 |
| 230 | LIFT: Learned Invariant Feature Transform. Lecture Notes in Computer Science, 2016, 467-483   | 0.9          | 271         |
| 229 | A fast local descriptor for dense matching 2008,  |              | 264         |
| 228 | Monocular 3D Human Pose Estimation in the Wild Using Improved CNN Supervision 2017,   |              | 240         |
| 227 | A parallel stereo algorithm that produces dense depth maps and preserves image features. <i>Machine Vision and Applications</i> , <b>1993</b> , 6, 35-49                | 2.8          | 227         |

| 226 | Fast Keypoint Recognition in Ten Lines of Code <b>2007</b> ,  |      | 211 |
|-----|---|------|-----|
| 225 | Stable real-time 3D tracking using online and offline information. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2004</b> , 26, 1385-91                    | 13.3 | 200 |
| 224 | Computational strategies for object recognition. ACM Computing Surveys, 1992, 24, 5-62  | 13.4 | 159 |
| 223 | Supervoxel-based segmentation of mitochondria in em image stacks with learned shape features. <i>IEEE Transactions on Medical Imaging</i> , <b>2012</b> , 31, 474-86                    | 11.7 | 149 |
| 222 | Beyond Sharing Weights for Deep Domain Adaptation. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2019</b> , 41, 801-814                                    | 13.3 | 147 |
| 221 | Learning to Find Good Correspondences 2018,   |      | 137 |
| 220 | Pose estimation for category specific multiview object localization 2009,   |      | 135 |
| 219 | Accurate Non-Iterative ?(?) Solution to the P?P Problem 2007,   |      | 133 |
| 218 | Estimation and visualization of sagittal kinematics of lower limbs orientation using body-fixed sensors. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2006</b> , 53, 1385-93 | 5    | 131 |
| 217 | Efficient large-scale multi-view stereo for ultra high-resolution image sets. <i>Machine Vision and Applications</i> , <b>2012</b> , 23, 903-920  | 2.8  | 130 |
| 216 | View-based Maps. International Journal of Robotics Research, 2010, 29, 941-957  | 5.7  | 122 |
| 215 | Fast Non-Rigid Surface Detection, Registration and Realistic Augmentation. <i>International Journal of Computer Vision</i> , <b>2008</b> , 76, 109-122                                  | 10.6 | 119 |
| 214 | Dominant orientation templates for real-time detection of texture-less objects 2010,  |      | 118 |
| 213 | TILDE: A Temporally Invariant Learned DEtector 2015,  |      | 115 |
| 212 | Boosting Binary Keypoint Descriptors <b>2013</b> ,  |      | 105 |
| 211 | Worldwide Pose Estimation Using 3D Point Clouds. Lecture Notes in Computer Science, <b>2012</b> , 15-29   | 0.9  | 103 |
| 210 | Learning to Fuse 2D and 3D Image Cues for Monocular Body Pose Estimation 2017,  |      | 96  |
| 209 | Automated reconstruction of dendritic and axonal trees by global optimization with geometric priors. <i>Neuroinformatics</i> , <b>2011</b> , 9, 279-302                                 | 3.2  | 95  |

| 208                      | Multi-Commodity Network Flow for Tracking Multiple People. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2014</b> , 36, 1614-27  | 13.3 | 93                         |
|--------------------------|---|------|----------------------------|
| 207                      | Model driven edge detection. <i>Machine Vision and Applications</i> , <b>1990</b> , 3, 45-56  | 2.8  | 91                         |
| 206                      | Tracking multiple people under global appearance constraints 2011,  |      | 90                         |
| 205                      | Learning Monocular 3D Human Pose Estimation from Multi-view Images 2018,  |      | 90                         |
| 204                      | Learning Separable Filters <b>2013</b> ,  |      | 89                         |
| 203                      | Surface deformation models for nonrigid 3D shape recovery. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2007</b> , 29, 1481-7   | 13.3 | 89                         |
| 202                      | Making Action Recognition Robust to Occlusions and Viewpoint Changes. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 635-648  | 0.9  | 85                         |
| 201                      | Tracking Interacting Objects Using Intertwined Flows. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2016</b> , 38, 2312-2326   | 13.3 | 79                         |
| 200                      | Linear local models for monocular reconstruction of deformable surfaces. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2011</b> , 33, 931-44   | 13.3 | 77                         |
|                          |   |      |                            |
| 199                      | 2019,   |      | 76                         |
| 199                      | Supervised feature learning for curvilinear structure segmentation. Lecture Notes in Computer Science, 2013, 16, 526-33   | 0.9  | 76<br>74                   |
|                          | Supervised feature learning for curvilinear structure segmentation. Lecture Notes in Computer   | 0.9  |                            |
| 198                      | Supervised feature learning for curvilinear structure segmentation. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 16, 526-33  Tracking and Modeling People in Video Sequences. <i>Computer Vision and Image Understanding</i> , <b>2001</b> ,  |      | 74                         |
| 198                      | Supervised feature learning for curvilinear structure segmentation. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 16, 526-33  Tracking and Modeling People in Video Sequences. <i>Computer Vision and Image Understanding</i> , <b>2001</b> , 81, 285-302  | 4.3  | 74                         |
| 198<br>197<br>196        | Supervised feature learning for curvilinear structure segmentation. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 16, 526-33  Tracking and Modeling People in Video Sequences. <i>Computer Vision and Image Understanding</i> , <b>2001</b> , 81, 285-302  XNect. <i>ACM Transactions on Graphics</i> , <b>2020</b> , 39,  | 4.3  | 74<br>73<br>73             |
| 198<br>197<br>196        | Supervised feature learning for curvilinear structure segmentation. Lecture Notes in Computer Science, 2013, 16, 526-33  Tracking and Modeling People in Video Sequences. Computer Vision and Image Understanding, 2001, 81, 285-302  XNect. ACM Transactions on Graphics, 2020, 39,  Multiple object tracking using flow linear programming 2009,  | 4.3  | 74<br>73<br>73<br>71       |
| 198<br>197<br>196<br>195 | Supervised feature learning for curvilinear structure segmentation. Lecture Notes in Computer Science, 2013, 16, 526-33  Tracking and Modeling People in Video Sequences. Computer Vision and Image Understanding, 2001, 81, 285-302  XNect. ACM Transactions on Graphics, 2020, 39,  Multiple object tracking using flow linear programming 2009,  Beyond the Pixel-Wise Loss for Topology-Aware Delineation 2018, | 4.3  | 74<br>73<br>73<br>71<br>69 |

## (2013-2019)

| 190 | DeepFly3D, a deep learning-based approach for 3D limb and appendage tracking in tethered, adult. <i>ELife</i> , <b>2019</b> , 8,                       | 62 |  |
|-----|--|----|--|
| 189 | Receptive fields selection for binary feature description. <i>IEEE Transactions on Image Processing</i> , <b>2014</b> , 23, 2583-95                    | 60 |  |
| 188 | Local deformation models for monocular 3D shape recovery <b>2008</b> ,   | 60 |  |
| 187 | Multiscale Centerline Detection by Learning a Scale-Space Distance Transform 2014,   | 59 |  |
| 186 | Image Matching Across Wide Baselines: From Paper to Practice. <i>International Journal of Computer Vision</i> , <b>2021</b> , 129, 517-547             | 59 |  |
| 185 | Template-free monocular reconstruction of deformable surfaces 2009,  | 58 |  |
| 184 | Flying objects detection from a single moving camera <b>2015</b> ,   | 55 |  |
| 183 | Dynamic and scalable large scale image reconstruction <b>2010</b> ,  | 55 |  |
| 182 | Unsupervised Geometry-Aware Representation for 3D Human Pose Estimation. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 765-782              | 54 |  |
| 181 | Style-Based Motion Synthesis [Computer Graphics Forum, 2004, 23, 799-812 2.4   | 52 |  |
| 180 | A constrained latent variable model <b>2012</b> ,  | 50 |  |
| 179 | Automated reconstruction of tree structures using path classifiers and Mixed Integer Programming <b>2012</b> ,   | 49 |  |
| 178 | Temporal motion models for monocular and multiview 3D human body tracking. <i>Computer Vision and Image Understanding</i> , <b>2006</b> , 104, 157-177 | 49 |  |
| 177 | GarNet: A Two-Stream Network for Fast and Accurate 3D Cloth Draping <b>2019</b> ,  | 49 |  |
| 176 | Learning Separable Filters. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2015</b> , 37, 94-106.3                         | 48 |  |
| 175 | Local and Global Skeleton Fitting Techniques for Optical Motion Capture. <i>Lecture Notes in Computer Science</i> , <b>1998</b> , 26-40                | 47 |  |
| 174 | Non-Markovian Globally Consistent Multi-object Tracking <b>2017</b> ,  | 45 |  |
| 173 | Reconstructing Loopy Curvilinear Structures Using Integer Programming 2013,  | 45 |  |
|     |  |    |  |

| 172 | A fully automated approach to segmentation of irregularly shaped cellular structures in EM images. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 13, 463-71                  | 0.9             | 44 |
|-----|---|-----------------|----|
| 171 | Learning to Assign Orientations to Feature Points <b>2016</b> ,   |                 | 43 |
| 170 | On rendering synthetic images for training an object detector. <i>Computer Vision and Image Understanding</i> , <b>2015</b> , 137, 24-37  | 4.3             | 42 |
| 169 | What Players do with the Ball: A Physically Constrained Interaction Modeling 2016,  |                 | 41 |
| 168 | Network Flow Integer Programming to Track Elliptical Cells in Time-Lapse Sequences. <i>IEEE Transactions on Medical Imaging</i> , <b>2017</b> , 36, 942-951                             | 11.7            | 39 |
| 167 | NeuroMorph: a toolset for the morphometric analysis and visualization of 3D models derived from electron microscopy image stacks. <i>Neuroinformatics</i> , <b>2015</b> , 13, 83-92     | 3.2             | 39 |
| 166 | Learning for Structured Prediction Using Approximate Subgradient Descent with Working Sets <b>2013</b> ,  |                 | 37 |
| 165 | Learning to Match Aerial Images with Deep Attentive Architectures 2016,   |                 | 37 |
| 164 | Learning Latent Representations of 3D Human Pose with Deep Neural Networks. <i>International Journal of Computer Vision</i> , <b>2018</b> , 126, 1326-1341                              | 10.6            | 36 |
| 163 | Learning context cues for synapse segmentation. <i>IEEE Transactions on Medical Imaging</i> , <b>2013</b> , 32, 1864-   | ·7 <b>7</b> 1.7 | 36 |
| 162 | Capturing 3D stretchable surfaces from single images in closed form <b>2009</b> ,   |                 | 35 |
| 161 | Closed-Form Solution to Non-rigid 3D Surface Registration. <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 581-594   | 0.9             | 35 |
| 160 | Tracking Interacting Objects Optimally Using Integer Programming. <i>Lecture Notes in Computer Science</i> , <b>2014</b> , 17-32  | 0.9             | 35 |
| 159 | Robust 3D Object Tracking from Monocular Images Using Stable Parts. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2018</b> , 40, 1465-1479                 | 13.3            | 34 |
| 158 | A Novel Representation of Parts for Accurate 3D Object Detection and Tracking in Monocular Images <b>2015</b> ,   |                 | 34 |
| 157 | Are spatial and global constraints really necessary for segmentation? 2011,   |                 | 33 |
| 156 | Reconstructing Curvilinear Networks Using Path Classifiers and Integer Programming. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2016</b> , 38, 2515-2530 | 13.3            | 32 |
| 155 | A Performance Evaluation of Local Features for Image-Based 3D Reconstruction. <i>IEEE Transactions on Image Processing</i> , <b>2019</b> , 28, 4774-4789                                | 8.7             | 32 |

## (2008-2014)

| 154 | Take your eyes off the ball: Improving ball-tracking by focusing on team play. <i>Computer Vision and Image Understanding</i> , <b>2014</b> , 119, 102-115          | 4.3  | 32 |
|-----|---|------|----|
| 153 | Fast part-based classification for instrument detection in minimally invasive surgery. <i>Lecture Notes in Computer Science</i> , <b>2014</b> , 17, 692-9           | 0.9  | 32 |
| 152 | Simultaneous Recognition and Pose Estimation of Instruments in Minimally Invasive Surgery. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 505-513         | 0.9  | 32 |
| 151 | Data-driven visual tracking in retinal microsurgery. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 15, 568-75  | 0.9  | 32 |
| 150 | Template-Based Monocular 3D Shape Recovery Using Laplacian Meshes. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2016</b> , 38, 172-87 | 13.3 | 31 |
| 149 | A real-time deformable detector. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2012</b> , 34, 225-39                                   | 13.3 | 31 |
| 148 | Eliminating Exposure Bias and Metric Mismatch in Multiple Object Tracking 2019,   |      | 31 |
| 147 | WILDTRACK: A Multi-camera HD Dataset for Dense Unscripted Pedestrian Detection 2018,  |      | 31 |
| 146 | Non-Rigid Graph Registration Using Active Testing Search. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2015</b> , 37, 625-38          | 13.3 | 29 |
| 145 | Structured Image Segmentation Using Kernelized Features. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 400-413   | 0.9  | 29 |
| 144 | Deformable Surface Tracking Ambiguities 2007,   |      | 29 |
| 143 | Live texturing of augmented reality characters from colored drawings. <i>IEEE Transactions on Visualization and Computer Graphics</i> , <b>2015</b> , 21, 1201-10   | 4    | 28 |
| 142 | Real-time vehicle tracking for driving assistance. <i>Machine Vision and Applications</i> , <b>2011</b> , 22, 439-448   | 2.8  | 27 |
| 141 | Compact signatures for high-speed interest point description and matching 2009,   |      | 27 |
| 140 | 3D Human Body Tracking Using Deterministic Temporal Motion Models. <i>Lecture Notes in Computer Science</i> , <b>2004</b> , 92-106                                  | 0.9  | 27 |
| 139 | Vision-based Unmanned Aerial Vehicle detection and tracking for sense and avoid systems <b>2016</b> ,   |      | 27 |
| 138 | The effects of aging on neuropil structure in mouse somatosensory cortex-A 3D electron microscopy analysis of layer 1. <i>PLoS ONE</i> , <b>2018</b> , 13, e0198131 | 3.7  | 26 |
| 137 | Pose Priors for Simultaneously Solving Alignment and Correspondence. <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 405-418                               | 0.9  | 26 |

| 136 | Laplacian Meshes for Monocular 3D Shape Recovery. Lecture Notes in Computer Science, 2012, 412-425  | 0.9  | 26 |
|-----|---|------|----|
| 135 | The haunted book <b>2008</b> ,  |      | 25 |
| 134 | Delineating trees in noisy 2D images and 3D image-stacks <b>2010</b> ,  |      | 24 |
| 133 | Online learning of patch perspective rectification for efficient object detection 2008,   |      | 24 |
| 132 | Residual Parameter Transfer for Deep Domain Adaptation 2018,  |      | 24 |
| 131 | Learning structured models for segmentation of 2-D and 3-D imagery. <i>IEEE Transactions on Medical Imaging</i> , <b>2015</b> , 34, 1096-110      | 11.7 | 23 |
| 130 | Keypoint Signatures for Fast Learning and Recognition. <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 58-71                             | 0.9  | 23 |
| 129 | Steerable features for statistical 3D dendrite detection. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 12, 625-32                     | 0.9  | 22 |
| 128 | Every Smile is Unique: Landmark-Guided Diverse Smile Generation 2018,   |      | 22 |
| 127 | Parsing human skeletons in an operating room. <i>Machine Vision and Applications</i> , <b>2016</b> , 27, 1035-1046                                | 2.8  | 21 |
| 126 | Simultaneous segmentation and anatomical labeling of the cerebral vasculature. <i>Medical Image Analysis</i> , <b>2016</b> , 32, 201-15           | 15.4 | 21 |
| 125 | Beyond Cartesian Representations for Local Descriptors 2019,  |      | 21 |
| 124 | Introducing Geometry in Active Learning for Image Segmentation 2015,  |      | 20 |
| 123 | Probability occupancy maps for occluded depth images 2015,  |      | 20 |
| 122 | Thick boundaries in binary space and their influence on nearest-neighbor search. <i>Pattern Recognition Letters</i> , <b>2012</b> , 33, 2173-2180 | 4.7  | 20 |
| 121 | Deformable Surface 3D Reconstruction from Monocular Images. <i>Synthesis Lectures on Computer Vision</i> , <b>2010</b> , 2, 1-113                 | 1    | 20 |
| 120 | Implicit meshes for surface reconstruction. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2006</b> , 28, 328-33      | 13.3 | 20 |
| 119 | A domain-adaptive two-stream U-Net for electron microscopy image segmentation 2018,   |      | 19 |

# (2011-2012)

| 118 | Monocular 3D reconstruction of locally textured surfaces. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2012</b> , 34, 1118-30                                | 13.3 | 19 |  |
|-----|--|------|----|--|
| 117 | Learning Real-Time Perspective Patch Rectification. <i>International Journal of Computer Vision</i> , <b>2011</b> , 91, 107-130  | 10.6 | 19 |  |
| 116 | Simultaneous point matching and 3D deformable surface reconstruction <b>2010</b> ,   |      | 19 |  |
| 115 | Feature Harvesting for Tracking-by-Detection. <i>Lecture Notes in Computer Science</i> , <b>2006</b> , 592-605   | 0.9  | 19 |  |
| 114 | Multi-camera Tracking and Atypical Motion Detection with Behavioral Maps. <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 112-125   | 0.9  | 19 |  |
| 113 | Learning context cues for synapse segmentation in EM volumes. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 15, 585-92  | 0.9  | 19 |  |
| 112 | Geometric and Physical Constraints for Drone-Based Head Plane Crowd Density Estimation 2019,   |      | 19 |  |
| 111 | Correlative in vivo 2-photon imaging and focused ion beam scanning electron microscopy: 3D analysis of neuronal ultrastructure. <i>Methods in Cell Biology</i> , <b>2014</b> , 124, 339-61 | 1.8  | 18 |  |
| 110 | Detecting Irregular Curvilinear Structures in Gray Scale and Color Imagery Using Multi-directional Oriented Flux <b>2013</b> ,   |      | 18 |  |
| 109 | Dense Image Registration and Deformable Surface Reconstruction in Presence of Occlusions and Minimal Texture <b>2015</b> ,   |      | 17 |  |
| 108 | Simultaneous pose, correspondence and non-rigid shape <b>2010</b> ,  |      | 17 |  |
| 107 | From canonical poses to 3D motion capture using a single camera. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2010</b> , 32, 1165-81                         | 13.3 | 17 |  |
| 106 | An all-in-one solution to geometric and photometric calibration 2006,  |      | 17 |  |
| 105 | Resegmentation using generic shape: Locating general cultural objects. <i>Pattern Recognition Letters</i> , <b>1987</b> , 5, 243-252   | 4.7  | 17 |  |
| 104 | Implicit Meshes for Effective Silhouette Handling. <i>International Journal of Computer Vision</i> , <b>2007</b> , 72, 159-178   | 10.6 | 16 |  |
| 103 | 2019,  |      | 16 |  |
| 102 | Combining Geometric and Appearance Priors for Robust Homography Estimation. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 58-72   | 0.9  | 15 |  |
| 101 | Conditional Random Fields for multi-camera object detection 2011,  |      | 15 |  |

| 100 | Robust non-rigid registration of 2D and 3D graphs <b>2012</b> ,   |      | 15 |
|-----|---|------|----|
| 99  | Real-time learning of accurate patch rectification 2009,  |      | 15 |
| 98  | Pose estimation for category specific multiview object localization   |      | 15 |
| 97  | Domain adaptation for microscopy imaging. IEEE Transactions on Medical Imaging, 2015, 34, 1125-39   | 11.7 | 14 |
| 96  | Flight Dynamics-Based Recovery of a UAV Trajectory Using Ground Cameras 2017,   |      | 14 |
| 95  | Projection onto the Manifold of Elongated Structures for Accurate Extraction 2015,  |      | 14 |
| 94  | Fast Object Detection with Entropy-Driven Evaluation 2013,  |      | 14 |
| 93  | Learning rotational features for filament detection 2009,   |      | 14 |
| 92  | Automatic extraction of generic house roofs from high resolution aerial imagery. <i>Lecture Notes in Computer Science</i> , <b>1996</b> , 83-96                               | 0.9  | 14 |
| 91  | Scalable Unsupervised Domain Adaptation for Electron Microscopy. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 326-334   | 0.9  | 14 |
| 90  | Training for Task Specific Keypoint Detection. Lecture Notes in Computer Science, 2009, 151-160   | 0.9  | 14 |
| 89  | Computer vision profiling of neurite outgrowth dynamics reveals spatiotemporal modularity of Rho GTPase signaling. <i>Journal of Cell Biology</i> , <b>2016</b> , 212, 91-111 | 7.3  | 13 |
| 88  | Stochastic exploration of ambiguities for nonrigid shape recovery. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2013</b> , 35, 463-75           | 13.3 | 13 |
| 87  | Tilt-less 3-D electron imaging and reconstruction of complex curvilinear structures. <i>Scientific Reports</i> , <b>2017</b> , 7, 10630                                       | 4.9  | 13 |
| 86  | On the relevance of sparsity for image classification. <i>Computer Vision and Image Understanding</i> , <b>2014</b> , 125, 115-127  | 4.3  | 13 |
| 85  | Bridging the Gap between Detection and Tracking for 3D Monocular Video-Based Motion Capture <b>2007</b> ,   |      | 13 |
| 84  | Voxel2Mesh: 3D Mesh Model Generation from Volumetric Data. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 299-308   | 0.9  | 13 |
| 83  | Geometry in active learning for binary and multi-class image segmentation. <i>Computer Vision and Image Understanding</i> , <b>2019</b> , 182, 1-16                           | 4.3  | 12 |

| 82 | 3D pose refinement from reflections <b>2008</b> ,   |      | 12 |
|----|---|------|----|
| 81 | Free-Shape Polygonal Object Localization. <i>Lecture Notes in Computer Science</i> , <b>2014</b> , 317-332  | 0.9  | 12 |
| 80 | Joint Segmentation and Path Classification of Curvilinear Structures. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2020</b> , 42, 1515-1521       | 13.3 | 12 |
| 79 | Eigendecomposition-Free Training of Deep Networks with Zero Eigenvalue-Based Losses. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 792-807                           | 0.9  | 12 |
| 78 | LiftPose3D, a deep learning-based approach for transforming two-dimensional to three-dimensional poses in laboratory animals. <i>Nature Methods</i> , <b>2021</b> , 18, 975-981 | 21.6 | 12 |
| 77 | Stereo-vision three-dimensional reconstruction of curvilinear structures imaged with a TEM. <i>Ultramicroscopy</i> , <b>2018</b> , 184, 116-124                                 | 3.1  | 11 |
| 76 | Exploiting enclosing membranes and contextual cues for mitochondria segmentation. <i>Lecture Notes in Computer Science</i> , <b>2014</b> , 17, 65-72                            | 0.9  | 11 |
| 75 | Multiple Human Pose Estimation with Temporally Consistent 3D Pictorial Structures. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 742-754                             | 0.9  | 11 |
| 74 | What Face and Body Shapes Can Tell Us About Height <b>2019</b> ,  |      | 11 |
| 73 | Principled Parallel Mean-Field Inference for Discrete Random Fields <b>2016</b> ,   |      | 10 |
| 72 | Hot or Not: Exploring Correlations between Appearance and Temperature 2015,   |      | 10 |
| 71 | Retexturing in the Presence of Complex Illumination and Occlusions 2007,  |      | 10 |
| 70 | Exploring Ambiguities for Monocular Non-rigid Shape Estimation. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 370-383  | 0.9  | 10 |
| 69 | Real-time landing place assessment in man-made environments. <i>Machine Vision and Applications</i> , <b>2014</b> , 25, 211-227   | 2.8  | 9  |
| 68 | Modeling human bodies from video sequences <b>1998</b> , 3641, 36   |      | 9  |
| 67 | Learning to Reconstruct Texture-Less Deformable Surfaces from a Single View 2018,   |      | 9  |
| 66 | Non-Linear Beam Model for Tracking Large Deformations 2007,   |      | 8  |
| 65 | Reconstructing sharply folding surfaces: A convex formulation   |      | 8  |

| 64 | Estimating People Flows to Better Count Them in Crowded Scenes. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 723-740   | 0.9              | 8                  |
|----|--|------------------|--------------------|
| 63 | Shape Reconstruction by Learning Differentiable Surface Representations <b>2020</b> ,  |                  | 8                  |
| 62 | Retrieving multiple light sources in the presence of specular reflections and texture. <i>Computer Vision and Image Understanding</i> , <b>2008</b> , 111, 207-218                 | 4.3              | 7                  |
| 61 | GarNet++: Improving Fast and Accurate Static 3D Cloth Draping by Curvature Loss. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2022</b> , 44, 181-195 | 13.3             | 7                  |
| 60 | Wide-Depth-Range 6D Object Pose Estimation in Space <b>2021</b> ,  |                  | 7                  |
| 59 | Worldwide Pose Estimation Using 3D Point Clouds. <i>Advances in Computer Vision and Pattern Recognition</i> , <b>2016</b> , 147-163  | 1.1              | 7                  |
| 58 | Tracing in 2D to reduce the annotation effort for 3D deep delineation of linear structures. <i>Medical Image Analysis</i> , <b>2020</b> , 60, 101590                               | 15.4             | 7                  |
| 57 | Visual Correspondences for Unsupervised Domain Adaptation on Electron Microscopy Images. <i>IEEE Transactions on Medical Imaging</i> , <b>2020</b> , 39, 1256-1267                 | 11.7             | 7                  |
| 56 | Drainage Canals in Southeast Asian Peatlands Increase Carbon Emissions. <i>AGU Advances</i> , <b>2021</b> , 2, e202  | 0 <i>4</i> 51400 | 03 <del>/</del> 21 |
| 55 | Using Dirichlet Free Form Deformation to Fit Deformable Models to Noisy 3-D Data. <i>Lecture Notes in Computer Science</i> , <b>2002</b> , 704-717                                 | 0.9              | 7                  |
| 54 | Real-time camera pose estimation for sports fields. <i>Machine Vision and Applications</i> , <b>2020</b> , 31, 1   | 2.8              | 6                  |
| 53 | Caenorhabditis elegans segmentation using texture-based models for motility phenotyping. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2014</b> , 61, 2278-89            | 5                | 6                  |
| 52 | Re-identification for Improved People Tracking <b>2014</b> , 309-330   |                  | 6                  |
| 51 | An Investigation of Model Bias in 3D Face Tracking. <i>Lecture Notes in Computer Science</i> , <b>2005</b> , 125-139   | 0.9              | 6                  |
| 50 | Refining Mitochondria Segmentation in Electron Microscopy Imagery with Active Surfaces. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 367-379                           | 0.9              | 6                  |
| 49 | Dendritic tree extraction from noisy maximum intensity projection images in C. elegans. <i>BioMedical Engineering OnLine</i> , <b>2014</b> , 13, 74                                | 4.1              | 5                  |
| 48 | Modeling brain circuitry over a wide range of scales. Frontiers in Neuroanatomy, 2015, 9, 42   | 3.6              | 5                  |
| 47 | Robust elastic 2D/3D geometric graph matching <b>2012</b> ,  |                  | 5                  |

## (2013-2014)

| 46 | Simultaneous segmentation and anatomical labeling of the cerebral vasculature. <i>Lecture Notes in Computer Science</i> , <b>2014</b> , 17, 307-14   | 0.9  | 5 |
|----|--|------|---|
| 45 | Automated Delineation of Dendritic Networks in Noisy Image Stacks. <i>Lecture Notes in Computer Science</i> , <b>2008</b> , 214-227  | 0.9  | 5 |
| 44 | LiftPose3D, a deep learning-based approach for transforming 2D to 3D pose in laboratory animals  |      | 5 |
| 43 | Analyzing Volleyball Match Data from the 2014 World Championships Using Machine Learning Techniques <b>2016</b> ,  |      | 5 |
| 42 | Do We Need Binary Features for 3D Reconstruction? <b>2016</b> ,  |      | 5 |
| 41 | Eigendecomposition-Free Training of Deep Networks for Linear Least-Square Problems. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2021</b> , 43, 3167-3182                          | 13.3 | 4 |
| 40 | Reconstructing Evolving Tree Structures in Time Lapse Sequences by Enforcing Time-Consistency. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2018</b> , 40, 755-761                 | 13.3 | 4 |
| 39 | Are Existing Monocular Computer Vision-Based 3D Motion Capture Approaches Ready for Deployment? A Methodological Study on the Example of Alpine Skiing. <i>Sensors</i> , <b>2019</b> , 19,                       | 3.8  | 4 |
| 38 | Reconstructing Evolving Tree Structures in Time Lapse Sequences 2014,  |      | 4 |
| 37 | Pareto-optimal dictionaries for signatures <b>2010</b> ,   |      | 4 |
| 36 | Classification-based probabilistic modeling of texture transition for fast line search tracking and delineation. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2009</b> , 31, 570-6 | 13.3 | 4 |
| 35 | Learning rotational features for filament detection  |      | 4 |
| 34 | Capturing 3D stretchable surfaces from single images in closed form <b>2009</b> ,  |      | 4 |
| 33 | Active Learning and Proofreading for Delineation of Curvilinear Structures. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 165-173   | 0.9  | 4 |
| 32 | Reconstructing geometrically consistent tree structures from noisy images. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 13, 291-9  | 0.9  | 4 |
| 31 | Long Term Real Trajectory Reuse through Region Goal Satisfaction. <i>Lecture Notes in Computer Science</i> , <b>2011</b> , 412-423   | 0.9  | 4 |
| 30 | ActiveMoCap: Optimized Viewpoint Selection for Active Human Motion Capture 2020,   |      | 4 |
| 29 | Automated quantification of morphodynamics for high-throughput live cell time-lapse datasets <b>2013</b> ,   |      | 3 |

| 28 | Spatio-chromatic decorrelation by shift-invariant filtering <b>2011</b> ,   |      | 3 |
|----|---|------|---|
| 27 | Souvenirs du monde des montagnes <b>2009</b> ,  |      | 3 |
| 26 | Souvenirs du monde des montagnes. <i>Leonardo</i> , <b>2009</b> , 42, 350-355   | 0.1  | 3 |
| 25 | Masksembles for Uncertainty Estimation 2021,  |      | 3 |
| 24 | Real-time learning of accurate patch rectification 2009,  |      | 3 |
| 23 | Vision Based 3D Tracking and Pose Estimation for Mixed Reality <b>2007</b> , 1-22   |      | 3 |
| 22 | Linking Pose and Motion. Lecture Notes in Computer Science, 2008, 200-213   | 0.9  | 3 |
| 21 | Active testing search for point cloud matching. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 23, 572-83   | 0.9  | 3 |
| 20 | Matching Seqlets: An Unsupervised Approach for Locality Preserving Sequence Matching. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2021</b> , 43, 745-752 | 13.3 | 3 |
| 19 | Learning to Segment 3D Linear Structures Using Only 2D Annotations. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 283-291  | 0.9  | 3 |
| 18 | Multi-modal Mean-Fields via Cardinality-Based Clamping 2017,  |      | 2 |
| 17 | 2011,   |      | 2 |
| 16 | Image summaries using database saliency <b>2009</b> ,   |      | 2 |
| 15 | Deep Active Surface Models <b>2021</b> ,  |      | 2 |
| 14 | TopoAL: An Adversarial Learning Approach for Topology-Aware Road Segmentation. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 224-240   | 0.9  | 2 |
| 13 | Flash scanning electron microscopy. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 16, 413-20   | 0.9  | 2 |
| 12 | Measuring the accuracy of softball impact simulations. <i>Sports Engineering</i> , <b>2016</b> , 19, 265-272  | 1.4  | 2 |
| 11 | Motion Prediction Using Temporal Inception Module. Lecture Notes in Computer Science, 2021, 651-665   | 0.9  | 2 |

#### LIST OF PUBLICATIONS

| 10 | Hybrid Algorithms for the Minimum-Weight Rooted Arborescence Problem. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 61-72   | 0.9  | 1 |
|----|--|------|---|
| 9  | Turning Augmented Reality into a media: Design exploration to build a dedicated visual language <b>2011</b> ,  |      | 1 |
| 8  | Body Cloning and Body Motion Capture <b>2006</b> , 52-74   |      | 1 |
| 7  | 3D reconstruction of curvilinear structures with stereo matching deep convolutional neural networks <i>Ultramicroscopy</i> , <b>2022</b> , 234, 113460                                     | 3.1  | 1 |
| 6  | Efficient scanning for EM based target localization. Lecture Notes in Computer Science, 2012, 15, 337-44   | 0.9  | 1 |
| 5  | Towards Reliable Evaluation of Algorithms for Road Network Reconstruction from Aerial Images. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 703-719                             | 0.9  | Ο |
| 4  | Computer Vision Techniques Applied to the Reconstruction of the 3-D Structure Dislocations. <i>Microscopy and Microanalysis</i> , <b>2017</b> , 23, 102-103                                | 0.5  |   |
| 3  | TPAMI CVPR Special Section. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2013</b> , 35, 2819-2820  | 13.3 |   |
| 2  | Using Differential Constraints to Generate a 3D Face Model from Stereo <b>1998</b> , 556-567   |      |   |
| 1  | Computer vision profiling of neurite outgrowth dynamics reveals spatiotemporal modularity of Rho GTPase signaling. <i>Journal of Experimental Medicine</i> , <b>2016</b> , 213, 21310IA128 | 16.6 |   |