

# Takeo Kanade

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

129  
papers

13,800  
citations

48  
h-index

117  
g-index

137  
ext. papers

16,770  
ext. citations

6.5  
avg, IF

6.52  
L-index

#	Paper	IF	Citations
129	Panoptic Studio: A Massively Multiview System for Social Interaction Capture. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2019</b> , 41, 190-204	13.3	67
128	Synthesizing a Scene-Specific Pedestrian Detector and Pose Estimator for Static Video Surveillance. <i>International Journal of Computer Vision</i> , <b>2018</b> , 126, 1027-1044	10.6	17
127	Phase contrast time-lapse microscopy datasets with automated and manual cell tracking annotations. <i>Scientific Data</i> , <b>2018</b> , 5, 180237	8.2	16
126	Dense 3D Face Alignment from 2D Video for Real-Time Use. <i>Image and Vision Computing</i> , <b>2017</b> , 58, 13-24	5.7	45
125	Convolutional Pose Machines <b>2016</b> ,		1075
124	Face Alignment Refinement <b>2015</b> ,		2
123	Dense 3D Face Alignment from 2D Videos in Real-Time <b>2015</b> , 1,		97
122	Active sample selection and correction propagation on a gradually-augmented graph <b>2015</b> ,		5
121	Panoptic Studio: A Massively Multiview System for Social Motion Capture <b>2015</b> ,		139
120	Learning scene-specific pedestrian detectors without real data <b>2015</b> ,		67
119	Real-time dense 3D face alignment from 2D video with automatic facial action unit coding <b>2015</b> ,		2
118	Interactive cell segmentation based on correction propagation <b>2014</b> ,		7
117	Spatio-temporal Event Classification using Time-series Kernel based Structured Sparsity. <i>Lecture Notes in Computer Science</i> , <b>2014</b> , 2014, 135-140	0.9	17
116	Maneuver-based autonomous navigation of a small fixed-wing UAV <b>2013</b> ,		1
115	Unwrapping the eye for visible-spectrum gaze tracking on wearable devices <b>2013</b> ,		13
114	Visual Odometry by Multi-frame Feature Integration <b>2013</b> ,		52
113	IMU Self-Calibration Using Factorization. <i>IEEE Transactions on Robotics</i> , <b>2013</b> , 29, 493-507	6.5	27

112	Cell segmentation in phase contrast microscopy images via semi-supervised classification over optics-related features. <i>Medical Image Analysis</i> , <b>2013</b> , 17, 746-65	15.4	58
111	Tracking Human Pose by Tracking Symmetric Parts <b>2013</b> ,		30
110	Cell segmentation via spectral analysis on phase retardation features <b>2013</b> ,		1
109	Apoptosis detection for non-adherent cells in time-lapse phase contrast microscopy. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 16, 59-66	0.9	2
108	Discriminative data transform for image feature extraction and classification. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 16, 452-9	0.9	5
107	Gaussian process motion graph models for smooth transitions among multiple actions. <i>Computer Vision and Image Understanding</i> , <b>2012</b> , 116, 500-509	4.3	13
106	Fast reactive control for illumination through rain and snow <b>2012</b> ,		12
105	Mitosis detection of hematopoietic stem cell populations in time-lapse phase-contrast microscopy images <b>2012</b> ,		3
104	Understanding the phase contrast optics to restore artifact-free microscopy images for segmentation. <i>Medical Image Analysis</i> , <b>2012</b> , 16, 1047-62	15.4	90
103	Mechanical characterization of adult stem cells from bone marrow and perivascular niches. <i>Journal of Biomechanics</i> , <b>2012</b> , 45, 1280-7	2.9	14
102	Real-time topometric localization <b>2012</b> ,		91
101	6D pose estimation of textureless shiny objects using random ferns for bin-picking <b>2012</b> ,		22
100	Multiaperture telecentric lens for 3D reconstruction. <i>Optics Letters</i> , <b>2011</b> , 36, 1050-2	3	18
99	Robustly Aligning a Shape Model and Its Application to Car Alignment of Unknown Pose. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2011</b> , 33, 1860-76	13.3	24
98	3D measurement of feature cross-sections of foot while walking. <i>Machine Vision and Applications</i> , <b>2011</b> , 22, 377-388	2.8	14
97	Gyro-aided feature tracking for a moving camera: fusion, auto-calibration and GPU implementation. <i>International Journal of Robotics Research</i> , <b>2011</b> , 30, 1755-1774	5.7	35
96	Tailoring the trajectory of cell rolling with cytotactic surfaces. <i>Langmuir</i> , <b>2011</b> , 27, 15345-51	4	6
95	Visual-inertial UAV attitude estimation using urban scene regularities <b>2011</b> ,		11

94	Spatially directed guidance of stem cell population migration by immobilized patterns of growth factors. <i>Biomaterials</i> , <b>2011</b> , 32, 2775-85	15.6	79
93	Restoring artifact-free microscopy image sequences <b>2011</b> ,		10
92	Integrating LIDAR into Stereo for Fast and Improved Disparity Computation <b>2011</b> ,		22
91	Mitosis detection for stem cell tracking in phase-contrast microscopy images <b>2011</b> ,		11
90	An engineered approach to stem cell culture: automating the decision process for real-time adaptive subculture of stem cells. <i>PLoS ONE</i> , <b>2011</b> , 6, e27672	3.7	19
89	Heterogeneous Conditional Random Field: Realizing joint detection and segmentation of cell regions in microscopic images <b>2010</b> ,		17
88	The Extended Cohn-Kanade Dataset (CK+): A complete dataset for action unit and emotion-specified expression <b>2010</b> ,		1600
87	Efficient pulling motion of a two-link robot arm near singular configuration <b>2010</b> ,		6
86	Analysis of task feasibility for a home robot using prismatic joints <b>2010</b> ,		2
85	Detection of hematopoietic stem cells in microscopy images using a bank of ring filters <b>2010</b> ,		6
84	Degeneracy of the Linear Seventeen-Point Algorithm for Generalized Essential Matrix. <i>Journal of Mathematical Imaging and Vision</i> , <b>2010</b> , 37, 40-48	1.6	8
83	Analysis of Rain and Snow in Frequency Space. <i>International Journal of Computer Vision</i> , <b>2010</b> , 86, 256-274	40.6	209
82	Spherical approximation for multiple cameras in motion estimation: Its applicability and advantages. <i>Computer Vision and Image Understanding</i> , <b>2010</b> , 114, 1068-1083	4.3	12
81	Multi-PIE. <i>Image and Vision Computing</i> , <b>2010</b> , 28, 807-813	3.7	1116
80	Modeling the product manifold of posture and motion <b>2009</b> ,		4
79	Optimal placement of a two-link manipulator for door opening <b>2009</b> ,		10
78	Integrating grasp planning and visual feedback for reliable manipulation <b>2009</b> ,		7
77	Geometric reasoning for single image structure recovery <b>2009</b> ,		218

76	Tracking in unstructured crowded scenes <b>2009</b> ,		105
75	Background Subtraction for Freely Moving Cameras <b>2009</b> ,		172
74	Realtime affine-photometric KLT feature tracker on GPU in CUDA framework <b>2009</b> ,		1
73	Dynamic seethroughs: Synthesizing hidden views of moving objects <b>2009</b> ,		31
72	3D Measurement of Anatomical Cross-sections of Foot while Walking. <i>Transactions of the Society of Instrument and Control Engineers</i> , <b>2009</b> , 45, 199-207	0.1	1
71	Recognition of Road Contours Using Delineators at Night. <i>IEEJ Transactions on Electronics, Information and Systems</i> , <b>2009</b> , 129, 932-939	0.1	
70	On the sustained tracking of human motion <b>2008</b> ,		4
69	Predicting driver operations inside vehicles <b>2008</b> ,		2
68	Factorization-based calibration method for MEMS inertial measurement unit <b>2008</b> ,		12
67	Multi-PIE <b>2008</b> ,		218
66	Humanoid navigation planning using future perceptive capability <b>2008</b> ,		1
65	Linear motion estimation for systems of articulated planes <b>2008</b> ,		14
64	People detection based on co-occurrence of appearance and spatiotemporal features <b>2008</b> ,		7
63	Motion estimation using multiple non-overlapping cameras for small unmanned aerial vehicles <b>2008</b> ,		1
62	Multi-View AAM Fitting and Construction. <i>International Journal of Computer Vision</i> , <b>2008</b> , 76, 183-204	10.6	16
61	Pose Robust Face Tracking by Combining Active Appearance Models and Cylinder Head Models. <i>International Journal of Computer Vision</i> , <b>2008</b> , 80, 260-274	10.6	59
60	Cell population tracking and lineage construction with spatiotemporal context. <i>Medical Image Analysis</i> , <b>2008</b> , 12, 546-66	15.4	256
59	Mode-seeking by Medoidshifts <b>2007</b> ,		71

58	A Unified Gradient-Based Approach for Combining ASM into AAM. <i>International Journal of Computer Vision</i> , <b>2007</b> , 75, 297-309	10.6	23
57	Locomotion among dynamic obstacles for the honda ASIMO <b>2007</b> ,		11
56	GPU-accelerated real-time 3D tracking for humanoid locomotion and stair climbing <b>2007</b> ,		69
55	Automated Individualization of Deformable Eye Region Model and Its Application to Eye Motion Analysis <b>2007</b> ,		2
54	The asymmetry of image registration and its application to face tracking. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2007</b> , 29, 807-23	13.3	19
53	Virtualized reality: perspectives on 4D digitization of dynamic events. <i>IEEE Computer Graphics and Applications</i> , <b>2007</b> , 27, 32-40	1.7	23
52	Efficient Two-phase 3D Motion Planning for Small Fixed-wing UAVs. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , <b>2007</b> ,		54
51	Automatic Clustering of Faces in Meetings <b>2006</b> ,		5
50	Meticulously detailed eye region model and its application to analysis of facial images. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2006</b> , 28, 738-52	13.3	53
49	Multi-subregion-based probabilistic approach to pose-invariant face recognition. <i>Systems and Computers in Japan</i> , <b>2006</b> , 37, 68-76		
48	A Closed-Form Solution to Non-Rigid Shape and Motion Recovery. <i>International Journal of Computer Vision</i> , <b>2006</b> , 67, 233-246	10.6	111
47	Type classification, color estimation, and specific target detection of moving targets on public streets. <i>Machine Vision and Applications</i> , <b>2005</b> , 16, 116-121	2.8	26
46	Shape-From-Silhouette Across Time Part I: Theory and Algorithms. <i>International Journal of Computer Vision</i> , <b>2005</b> , 62, 221-247	10.6	72
45	Shape-From-Silhouette Across Time Part II: Applications to Human Modeling and Markerless Motion Tracking. <i>International Journal of Computer Vision</i> , <b>2005</b> , 63, 225-245	10.6	90
44	Object Detection Using the Statistics of Parts. <i>International Journal of Computer Vision</i> , <b>2004</b> , 56, 151-177	10.6	188
43	Reconstruction of a Scene with Multiple Linearly Moving Objects. <i>International Journal of Computer Vision</i> , <b>2004</b> , 59, 285-300	10.6	16
42	Measurement and comparison of humanoid H7 walking with human being. <i>Robotics and Autonomous Systems</i> , <b>2004</b> , 48, 177-187	3.5	23
41	Robust Full-Motion Recovery of Head by Dynamic Templates and Re-registration Techniques. <i>International Journal of Imaging Systems and Technology</i> , <b>2003</b> , 13, 85-94	2.5	108

40	Ultrasound registration of the bone surface for surgical navigation. <i>Computer Aided Surgery</i> , <b>2003</b> , 8, 1-16		85
39	System Identification Modeling of a Small-Scale Unmanned Rotorcraft for Flight Control Design. <i>Journal of the American Helicopter Society</i> , <b>2002</b> , 47, 50-63	1.2	141
38	Recognizing Action Units for Facial Expression Analysis. <i>Series in Machine Perception and Artificial Intelligence</i> , <b>2002</b> , 32-66	0.3	5
37	Recognizing Action Units for Facial Expression Analysis. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2001</b> , 23, 97-115	13.3	925
36	Segmentation and Recognition of Serial Numbers in License Plate. <i>IEEJ Transactions on Electronics, Information and Systems</i> , <b>2001</b> , 121, 1354-1361	0.1	2
35	Detection, tracking, and classification of action units in facial expression. <i>Robotics and Autonomous Systems</i> , <b>2000</b> , 31, 131-146	3.5	200
34	An image overlay system for medical data visualization. <i>Medical Image Analysis</i> , <b>2000</b> , 4, 67-72	15.4	79
33	Image Registration Using Wavelet-Based Motion Model. <i>International Journal of Computer Vision</i> , <b>2000</b> , 38, 129-152	10.6	48
32	Augmented reality imaging technology for orthopaedic surgery. <i>Operative Techniques in Orthopaedics</i> , <b>2000</b> , 10, 82-86	0.3	30
31	WYSIWYF Display: A Visual/Haptic Interface to Virtual Environment. <i>Presence: Teleoperators and Virtual Environments</i> , <b>1999</b> , 8, 412-434	2.9	46
30	Automated face analysis by feature point tracking has high concurrent validity with manual FACS coding. <i>Psychophysiology</i> , <b>1999</b> , 36, 35-43	4.1	164
29	A visual odometer for autonomous helicopter flight. <i>Robotics and Autonomous Systems</i> , <b>1999</b> , 28, 185-193	3.5	102
28	Anomaly detection through registration. <i>Pattern Recognition</i> , <b>1999</b> , 32, 113-128	7.7	10
27	Video OCR: indexing digital news libraries by recognition of superimposed captions. <i>Multimedia Systems</i> , <b>1999</b> , 7, 385-395	2.2	115
26	A Multibody Factorization Method for Independently Moving Objects. <i>International Journal of Computer Vision</i> , <b>1998</b> , 29, 159-179	10.6	397
25	Area extraction of license plates using an artificial neural network. <i>Systems and Computers in Japan</i> , <b>1998</b> , 29, 55-64		2
24	Volumetric object modeling for surgical simulation. <i>Medical Image Analysis</i> , <b>1998</b> , 2, 121-32	15.4	71
23	Development of a Video-Rate Stereo Machine.. <i>Journal of the Robotics Society of Japan</i> , <b>1997</b> , 15, 261-267	1	3

22	Techniques for Fast and Accurate Intrasurgical Registration. <i>Computer Aided Surgery</i> , <b>1995</b> , 1, 17-29		12
21	Techniques for fast and accurate intrasurgical registration. <i>Journal of Image Guided Surgery</i> , <b>1995</b> , 1, 17-29		40
20	Mobility and manipulation of a light-weight space robot. <i>Robotics and Autonomous Systems</i> , <b>1994</b> , 13, 1-12	3.5	16
19	PARES: A prototyping and reverse engineering system for mechanical parts-on-demand on the national network. <i>Journal of Manufacturing Systems</i> , <b>1993</b> , 12, 269-281	9.1	3
18	A locally adaptive window for signal matching. <i>International Journal of Computer Vision</i> , <b>1992</b> , 7, 143-162	10.6	91
17	Shape and motion from image streams under orthography: a factorization method. <i>International Journal of Computer Vision</i> , <b>1992</b> , 9, 137-154	10.6	1763
16	Model based recognition of specular objects using sensor models. <i>CVGIP Image Understanding</i> , <b>1992</b> , 55, 155-169		8
15	Shape from interreflections. <i>International Journal of Computer Vision</i> , <b>1991</b> , 6, 173-195	10.6	125
14	A physical approach to color image understanding. <i>International Journal of Computer Vision</i> , <b>1990</b> , 4, 7-38	10.6	253
13	Modelling sensors: Toward automatic generation of object recognition program. <i>Computer Vision, Graphics, and Image Processing</i> , <b>1989</b> , 48, 50-79		26
12	Kalman filter-based algorithms for estimating depth from image sequences. <i>International Journal of Computer Vision</i> , <b>1989</b> , 3, 209-238	10.6	436
11	The measurement of highlights in color images. <i>International Journal of Computer Vision</i> , <b>1988</b> , 2, 7-32	10.6	234
10	Experimental Evaluation of Nonlinear Feedback and Feedforward Control Schemes for Manipulators. <i>International Journal of Robotics Research</i> , <b>1988</b> , 7, 18-28	5.7	152
9	Experimental Evaluation of the Feedforward Compensation and Computed-Torque Control Schemes <b>1986</b> ,		5
8	Parameter identification of robot dynamics <b>1985</b> ,		163
7	Appropriate lengths between phalanges of multijointed fingers for stable grasping. <i>Journal of Field Robotics</i> , <b>1984</b> , 1, 223-234		1
6	Gradient space under orthography and perspective. <i>Computer Vision, Graphics, and Image Processing</i> , <b>1983</b> , 24, 182-199		17
5	Using shadows in finding surface orientations. <i>Computer Vision, Graphics, and Image Processing</i> , <b>1983</b> , 22, 145-176		45



- 4 Region segmentation: Signal vs semantics. *Computer Graphics and Image Processing*, **1980**, 13, 279-297 50
- 3 Color information for region segmentation. *Computer Graphics and Image Processing*, **1980**, 13, 222-241 562
- 2 Picture processing system using a computer complex. *Computer Graphics and Image Processing*, **1973**, 2, 207-215 6
- 1 Geometric reasoning for single image structure recovery 23