

# Takeo Kanade

## List of Publications by Year in descending order

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136  
papers

19,234  
citations

81889

39  
h-index

64791

79  
g-index

137  
all docs

137  
docs citations

137  
times ranked

11321  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Extended Cohn-Kanade Dataset (CK+): A complete dataset for action unit and emotion-specified expression. , 2010, , .		2,498
2	Shape and motion from image streams under orthography: a factorization method. International Journal of Computer Vision, 1992, 9, 137-154.	15.6	2,381
3	Convolutional Pose Machines. , 2016, , .		1,746
4	Multi-PIE. Image and Vision Computing, 2010, 28, 807-813.	4.5	1,450
5	Recognizing action units for facial expression analysis. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2001, 23, 97-115.	13.9	1,304
6	Color information for region segmentation. Computer Graphics and Image Processing, 1980, 13, 222-241.	0.8	727
7	Kalman filter-based algorithms for estimating depth from image sequences. International Journal of Computer Vision, 1989, 3, 209-238.	15.6	593
8	A Multibody Factorization Method for Independently Moving Objects. International Journal of Computer Vision, 1998, 29, 159-179.	15.6	513
9	A physical approach to color image understanding. International Journal of Computer Vision, 1990, 4, 7-38.	15.6	343
10	The measurement of highlights in color images. International Journal of Computer Vision, 1988, 2, 7-32.	15.6	306
11	Cell population tracking and lineage construction with spatiotemporal context. Medical Image Analysis, 2008, 12, 546-566.	11.6	304
12	Geometric reasoning for single image structure recovery. , 2009, , .		297
13	Multi-PIE. , 2008, , .		290
14	Analysis of Rain and Snow in Frequency Space. International Journal of Computer Vision, 2010, 86, 256-274.	15.6	273
15	Parameter identification of robot dynamics. , 1985, , .		261
16	Object Detection Using the Statistics of Parts. International Journal of Computer Vision, 2004, 56, 151-177.	15.6	255
17	Panoptic Studio: A Massively Multiview System for Social Motion Capture. , 2015, , .		254
18	Detection, tracking, and classification of action units in facial expression. Robotics and Autonomous Systems, 2000, 31, 131-146.	5.1	251

#	ARTICLE	IF	CITATIONS
19	Background Subtraction for Freely Moving Cameras. , 2009, , .		225
20	Automated face analysis by feature point tracking has high concurrent validity with manual FACS coding. <i>Psychophysiology</i> , 1999, 36, 35-43.	2.4	218
21	Experimental Evaluation of Nonlinear Feedback and Feedforward Control Schemes for Manipulators. <i>International Journal of Robotics Research</i> , 1988, 7, 18-28.	8.5	213
22	Shape from interreflections. <i>International Journal of Computer Vision</i> , 1991, 6, 173-195.	15.6	185
23	System Identification Modeling of a Small-Scale Unmanned Rotorcraft for Flight Control Design. <i>Journal of the American Helicopter Society</i> , 2002, 47, 50-63.	0.8	184
24	Panoptic Studio: A Massively Multiview System for Social Interaction Capture. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2019, 41, 190-204.	13.9	152
25	Robust full-motion recovery of head by dynamic templates and re-registration techniques. <i>International Journal of Imaging Systems and Technology</i> , 2003, 13, 85-94.	4.1	149
26	Video OCR: indexing digital news libraries by recognition of superimposed captions. <i>Multimedia Systems</i> , 1999, 7, 385-395.	4.7	145
27	Tracking in unstructured crowded scenes. , 2009, , .		135
28	A Closed-Form Solution to Non-Rigid Shape and Motion Recovery. <i>International Journal of Computer Vision</i> , 2006, 67, 233-246.	15.6	130
29	Dense 3D face alignment from 2D videos in real-time. , 2015, 1, .		128
30	A visual odometer for autonomous helicopter flight. <i>Robotics and Autonomous Systems</i> , 1999, 28, 185-193.	5.1	126
31	A locally adaptive window for signal matching. <i>International Journal of Computer Vision</i> , 1992, 7, 143-162.	15.6	124
32	Real-time topometric localization. , 2012, , .		123
33	Understanding the phase contrast optics to restore artifact-free microscopy images for segmentation. <i>Medical Image Analysis</i> , 2012, 16, 1047-1062.	11.6	119
34	Shape-From-Silhouette Across Time Part II: Applications to Human Modeling and Markerless Motion Tracking. <i>International Journal of Computer Vision</i> , 2005, 63, 225-245.	15.6	109
35	An Image Overlay system for medical data visualization. <i>Medical Image Analysis</i> , 2000, 4, 67-72.	11.6	101
36	Mode-seeking by Medoidshifts. , 2007, , .		100

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37	Shape-From-Silhouette Across Time Part I: Theory and Algorithms. <i>International Journal of Computer Vision</i> , 2005, 62, 221-247.	15.6	98
38	Ultrasound Registration of the Bone Surface for Surgical Navigation. <i>Computer Aided Surgery</i> , 2003, 8, 1-16.	1.8	95
39	Learning scene-specific pedestrian detectors without real data. , 2015, , .		88
40	GPU-accelerated real-time 3D tracking for humanoid locomotion and stair climbing. , 2007, , .		86
41	Volumetric object modeling for surgical simulation. <i>Medical Image Analysis</i> , 1998, 2, 121-132.	11.6	85
42	Spatially directed guidance of stem cell population migration by immobilized patterns of growth factors. <i>Biomaterials</i> , 2011, 32, 2775-2785.	11.4	85
43	Visual Odometry by Multi-frame Feature Integration. , 2013, , .		79
44	Efficient Two-phase 3D Motion Planning for Small Fixed-wing UAVs. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , 2007, , .	0.0	78
45	Region segmentation: Signal vs semantics. <i>Computer Graphics and Image Processing</i> , 1980, 13, 279-297.	0.8	75
46	Cell segmentation in phase contrast microscopy images via semi-supervised classification over optics-related features. <i>Medical Image Analysis</i> , 2013, 17, 746-765.	11.6	74
47	Pose Robust Face Tracking by Combining Active Appearance Models and Cylinder-Head Models. <i>International Journal of Computer Vision</i> , 2008, 80, 260-274.	15.6	72
48	Using shadows in finding surface orientations. <i>Computer Vision, Graphics, and Image Processing</i> , 1983, 22, 145-176.	1.0	68
49	Dense 3D face alignment from 2D video for real-time use. <i>Image and Vision Computing</i> , 2017, 58, 13-24.	4.5	68
50	Image Registration Using Wavelet-Based Motion Model. <i>International Journal of Computer Vision</i> , 2000, 38, 129-152.	15.6	65
51	Meticulously detailed eye region model and its application to analysis of facial images. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2006, 28, 738-752.	13.9	65
52	WYSIWYF Display: A Visual/Haptic Interface to Virtual Environment. <i>Presence: Teleoperators and Virtual Environments</i> , 1999, 8, 412-434.	0.6	60
53	Techniques for fast and accurate intrasurgical registration. <i>Journal of Image Guided Surgery</i> , 1995, 1, 17-29.	0.3	59
54	Dynamic seethroughs: Synthesizing hidden views of moving objects. , 2009, , .		43

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55	Gyro-aided feature tracking for a moving camera: fusion, auto-calibration and GPU implementation. International Journal of Robotics Research, 2011, 30, 1755-1774.	8.5	40
56	IMU Self-Calibration Using Factorization. IEEE Transactions on Robotics, 2013, 29, 493-507.	10.3	39
57	Augmented reality imaging technology for orthopaedic surgery. Operative Techniques in Orthopaedics, 2000, 10, 82-86.	0.1	38
58	Modelling sensors: Toward automatic generation of object recognition program. Computer Vision, Graphics, and Image Processing, 1989, 48, 50-79.	1.0	37
59	Tracking Human Pose by Tracking Symmetric Parts. , 2013, , .		36
60	Measurement and comparison of humanoid H7 walking with human being. Robotics and Autonomous Systems, 2004, 48, 177-187.	5.1	35
61	Robustly Aligning a Shape Model and Its Application to Car Alignment of Unknown Pose. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 1860-1876.	13.9	34
62	Phase contrast time-lapse microscopy datasets with automated and manual cell tracking annotations. Scientific Data, 2018, 5, 180237.	5.3	33
63	Type classification, color estimation, and specific target detection of moving targets on public streets. Machine Vision and Applications, 2005, 16, 116-121.	2.7	32
64	6D pose estimation of textureless shiny objects using random ferns for bin-picking. , 2012, , .		32
65	Virtualized Reality: Perspectives on 4D Digitization of Dynamic Events. IEEE Computer Graphics and Applications, 2007, 27, 32-40.	1.2	31
66	Integrating LIDAR into Stereo for Fast and Improved Disparity Computation. , 2011, , .		30
67	A Unified Gradient-Based Approach for Combining ASM into AAM. International Journal of Computer Vision, 2007, 75, 297-309.	15.6	29
68	Synthesizing a Scene-Specific Pedestrian Detector and Pose Estimator for Static Video Surveillance. International Journal of Computer Vision, 2018, 126, 1027-1044.	15.6	28
69	The Asymmetry of Image Registration and Its Application to Face Tracking. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2007, 29, 807-823.	13.9	27
70	Multi-View AAM Fitting and Construction. International Journal of Computer Vision, 2008, 76, 183-204.	15.6	25
71	Gradient space under orthography and perspective. Computer Vision, Graphics, and Image Processing, 1983, 24, 182-199.	1.0	24
72	Reconstruction of a Scene with Multiple Linearly Moving Objects. International Journal of Computer Vision, 2004, 59, 285-300.	15.6	24

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73	Multiaperture telecentric lens for 3D reconstruction. Optics Letters, 2011, 36, 1050.	3.3	24
74	Mobility and manipulation of a light-weight space robot. Robotics and Autonomous Systems, 1994, 13, 1-12.	5.1	23
75	Geometric reasoning for single image structure recovery. , 2009, , .		23
76	An Engineered Approach to Stem Cell Culture: Automating the Decision Process for Real-Time Adaptive Subculture of Stem Cells. PLoS ONE, 2011, 6, e27672.	2.5	23
77	Locomotion among dynamic obstacles for the honda ASIMO. , 2007, , .		21
78	Heterogeneous Conditional Random Field: Realizing joint detection and segmentation of cell regions in microscopic images. , 2010, , .		19
79	Fast reactive control for illumination through rain and snow. , 2012, , .		19
80	Gaussian process motion graph models for smooth transitions among multiple actions. Computer Vision and Image Understanding, 2012, 116, 500-509.	4.7	19
81	Spatio-temporal Event Classification Using Time-Series Kernel Based Structured Sparsity. Lecture Notes in Computer Science, 2014, 2014, 135-150.	1.3	19
82	Visual-inertial UAV attitude estimation using urban scene regularities. , 2011, , .		18
83	Unwrapping the eye for visible-spectrum gaze tracking on wearable devices. , 2013, , .		18
84	Anomaly detection through registration. Pattern Recognition, 1999, 32, 113-128.	8.1	17
85	Factorization-based calibration method for MEMS inertial measurement unit. , 2008, , .		17
86	3D measurement of feature cross-sections of foot while walking. Machine Vision and Applications, 2011, 22, 377-388.	2.7	17
87	Experimental Evaluation of the Feedforward Compensation and Computed-Torque Control Schemes. , 1986, , .		16
88	Spherical approximation for multiple cameras in motion estimation: Its applicability and advantages. Computer Vision and Image Understanding, 2010, 114, 1068-1083.	4.7	16
89	Mechanical characterization of adult stem cells from bone marrow and perivascular niches. Journal of Biomechanics, 2012, 45, 1280-1287.	2.1	16
90	Linear motion estimation for systems of articulated planes. , 2008, , .		14

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91	Optimal placement of a two-link manipulator for door opening. , 2009, , .		14
92	Mitosis detection for stem cell tracking in phase-contrast microscopy images. , 2011, , .		14
93	Techniques for Fast and Accurate Intrasurgical Registration. Computer Aided Surgery, 1995, 1, 17-29.	1.8	12
94	Degeneracy of the Linear Seventeen-Point Algorithm for Generalized Essential Matrix. Journal of Mathematical Imaging and Vision, 2010, 37, 40-48.	1.3	12
95	Model based recognition of specular objects using sensor models. CVGIP Image Understanding, 1992, 55, 155-169.	1.3	10
96	People detection based on co-occurrence of appearance and spatiotemporal features. , 2008, , .		10
97	Integrating grasp planning and visual feedback for reliable manipulation. , 2009, , .		10
98	Restoring artifact-free microscopy image sequences. , 2011, , .		10
99	Picture processing system using a computer complex. Computer Graphics and Image Processing, 1973, 2, 207-215.	0.8	9
100	Efficient pulling motion of a two-link robot arm near singular configuration. , 2010, , .		8
101	Detection of hematopoietic stem cells in microscopy images using a bank of ring filters. , 2010, , .		8
102	Recognizing Action Units for Facial Expression Analysis. Series in Machine Perception and Artificial Intelligence, 2002, , 32-66.	0.1	8
103	Discriminative Data Transform for Image Feature Extraction and Classification. Lecture Notes in Computer Science, 2013, 16, 452-459.	1.3	8
104	Modeling and Representations of Large-Scale 3D Scenes. International Journal of Computer Vision, 2008, 78, 119-120.	15.6	7
105	Realtime affine-photometric KLT feature tracker on GPU in CUDA framework. , 2009, , .		7
106	Tailoring the Trajectory of Cell Rolling with Cytotactic Surfaces. Langmuir, 2011, 27, 15345-15351.	3.5	7
107	Interactive cell segmentation based on correction propagation. , 2014, , .		7
108	Development of a Video-Rate Stereo Machine.. Journal of the Robotics Society of Japan, 1997, 15, 261-267.	0.1	6

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109	Modeling the product manifold of posture and motion. , 2009, , .		6
110	Automatic Clustering of Faces in Meetings. , 2006, , .		5
111	On the sustained tracking of human motion. , 2008, , .		5
112	Mitosis detection of hematopoietic stem cell populations in time-lapse phase-contrast microscopy images. , 2012, , .		5
113	Active sample selection and correction propagation on a gradually-augmented graph. , 2015, , .		5
114	Automated Individualization of Deformable Eye Region Model and Its Application to Eye Motion Analysis. , 2007, , .		4
115	Motion estimation using multiple non-overlapping cameras for small unmanned aerial vehicles. , 2008, , .		4
116	Analysis of task feasibility for a home robot using prismatic joints. , 2010, , .		4
117	Appropriate lengths between phalanges of multijointed fingers for stable grasping. Journal of Field Robotics, 1984, 1, 223-234.	0.7	3
118	PARES: A prototyping and reverse engineering system for mechanical parts-on-demand on the national network. Journal of Manufacturing Systems, 1993, 12, 269-281.	13.9	3
119	Segmentation and Recognition of Serial Numbers in License Plate. IEEJ Transactions on Electronics, Information and Systems, 2001, 121, 1354-1361.	0.2	3
120	Cell segmentation via spectral analysis on phase retardation features. , 2013, , .		3
121	Apoptosis Detection for Non-adherent Cells in Time-lapse Phase Contrast Microscopy. Lecture Notes in Computer Science, 2013, 16, 59-66.	1.3	3
122	Area extraction of license plates using an artificial neural network. Systems and Computers in Japan, 1998, 29, 55-64.	0.2	2
123	Predicting driver operations inside vehicles. , 2008, , .		2
124	Humanoid navigation planning using future perceptive capability. , 2008, , .		2
125	Parallel algorithms to a parallel hardware: Designing vision algorithms for a GPU. , 2009, , .		2
126	Maneuver-based autonomous navigation of a small fixed-wing UAV. , 2013, , .		2



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127	Real-time dense 3D face alignment from 2D video with automatic facial action unit coding. , 2015, , .		2
128	Face Alignment Refinement. , 2015, , .		2
129	Recognition of Road Contours Based on Extraction of 3D Positions of Delineators. , 2007, , .		1
130	Capturability of a simple guidance law with angular acceleration input. , 2009, , .		1
131	Capturability analysis of a three-dimensional guidance law with angular acceleration input. , 2012, , .		1
132	3D Measurement of Anatomical Cross-sections of Foot while Walking. Transactions of the Society of Instrument and Control Engineers, 2009, 45, 199-207.	0.2	1
133	Multi-subregion-based probabilistic approach to pose-invariant face recognition. Systems and Computers in Japan, 2006, 37, 68-76.	0.2	0
134	Singularity-based mechanism with high responsiveness. , 2010, , .		0
135	Physical querying with multi-modal sensing. , 2014, , .		0
136	Recognition of Road Contours Using Delineators at Night. IEEJ Transactions on Electronics, Information and Systems, 2009, 129, 932-939.	0.2	0