Yiannis Aloimonos

List of Publications by Year in descending order

134 papers	3,290 citations	186254 28 h-index	243610 44 g-index
135 all docs	135 docs citations	135 times ranked	2258 citing authors

#	Article	IF	Citations
1	Deep-Readout Random Recurrent Neural Networks for Real-World Temporal Data. SN Computer Science, 2022, 3, 1.	3.6	1
2	Joint direct estimation of 3D geometry and 3D motion using spatio temporal gradients. Pattern Recognition, 2021, 113, 107759.	8.1	4
3	Topology-Aware Non-Rigid Point Cloud Registration. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 1056-1069.	13.9	13
4	PRGFlow: Unified SWAPâ€aware deep global optical flow for aerial robot navigation. Electronics Letters, 2021, 57, 614-617.	1.0	7
5	Robust Nonlinear Control-Based Trajectory Tracking for Quadrotors Under Uncertainty. , 2021, 5, 2042-2047.		12
6	MorphEyes: Variable Baseline Stereo For Quadrotor Navigation. , 2021, , .		3
7	0-MMS: Zero-Shot Multi-Motion Segmentation With A Monocular Event Camera. , 2021, , .		11
8	Detecting and Counting Oysters. , 2021, , .		5
9	SpikeMS: Deep Spiking Neural Network for Motion Segmentation. , 2021, , .		9
10	NudgeSeg: Zero-Shot Object Segmentation by Repeated Physical Interaction. , 2021, , .		3
11	EVDodgeNet: Deep Dynamic Obstacle Dodging with Event Cameras. , 2020, , .		38
12	A bugâ€™s-eye view. Science Robotics, 2020, 5, .	17.6	1
13	Learning Visual Motion Segmentation Using Event Surfaces. , 2020, , .		26
14	Symbolic Representation and Learning With Hyperdimensional Computing. Frontiers in Robotics and AI, 2020, 7, 63.	3.2	13
15	The Language of Motion MoCap Ontology. Advances in Intelligent Systems and Computing, 2020, , 710-723.	0.6	1
16	Vision During Action: Extracting Contact and Motion from Manipulation Videosâ€”Toward Parsing Human Activity. , 2020, , 163-186.		0
17	Unsupervised Learning of Dense Optical Flow, Depth and Egomotion with Event-Based Sensors. , 2020, , .		23
18	Metaconcepts: Isolating Context in Word Embeddings. , 2019, , .		2

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19	SalientDSO: Bringing Attention to Direct Sparse Odometry. IEEE Transactions on Automation Science and Engineering, 2019, 16, 1619-1626.	5.2	34
20	EV-IMO: Motion Segmentation Dataset and Learning Pipeline for Event Cameras. , 2019, , .		43
21	Image Understanding using vision and reasoning through Scene Description Graph. Computer Vision and Image Understanding, 2018, 173, 33-45.	4.7	46
22	Revisiting active perception. Autonomous Robots, 2018, 42, 177-196.	4.8	171
23	Seeing Behind the Scene: Using Symmetry to Reason About Objects in Cluttered Environments. , 2018, , .		10
24	Event-Based Moving Object Detection and Tracking. , 2018, , .		170
25	An Embodied Tutoring System for Literal vs. Metaphorical Concepts. Frontiers in Psychology, 2018, 9, 2254.	2.1	6
26	Similarity Learning and Generalization with Limited Data: A Reservoir Computing Approach. Complexity, 2018, 2018, 1-15.	1.6	13
27	Evenly Cascaded Convolutional Networks. , 2018, , .		2
28	GapFlyt: Active Vision Based Minimalist Structure-Less Gap Detection For Quadrotor Flight. IEEE Robotics and Automation Letters, 2018, 3, 2799-2806.	5.1	71
29	cilantro. , 2018, , .		10
30	Computer Vision and Natural Language Processing. ACM Computing Surveys, 2017, 49, 1-44.	23.0	33
31	What can i do around here? Deep functional scene understanding for cognitive robots. , 2017, , .		23
32	Detecting Reflectional Symmetries in 3D Data Through Symmetrical Fitting. , 2017, , .		19
33	A Dataset for Visual Navigation with Neuromorphic Methods. Frontiers in Neuroscience, 2016, 10, 49.	2.8	31
34	Cluttered scene segmentation using the symmetry constraint. , 2016, , .		12
35	Affordance detection of tool parts from geometric features. , 2015, , .		161
36	Detection and Segmentation of 2D Curved Reflection Symmetric Structures. , 2015, , .		26

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37	The SB-ST decomposition in the study of Developmental Coordination Disorder. , 2015, , .		0
38	Contour Detection and Characterization for Asynchronous Event Sensors. , 2015, , .		10
39	Grasp type revisited: A modern perspective on a classical feature for vision. , 2015, , .		42
40	Fast 2D border ownership assignment. , 2015, , .		15
41	Learning the spatial semantics of manipulation actions through preposition grounding. , 2015, , .		28
42	A Gestaltist approach to contour-based object recognition: Combining bottom-up and top-down cues. International Journal of Robotics Research, 2015, 34, 627-652.	8.5	8
43	The Cognitive Dialogue: A new model for vision implementing common sense reasoning. Image and Vision Computing, 2015, 34, 42-44.	4.5	6
44	Bio-inspired Motion Estimation with Event-Driven Sensors. Lecture Notes in Computer Science, 2015, , 309-321.	1.3	23
45	Learning the Semantics of Manipulation Action. , 2015, , .		8
46	Manipulation action tree bank: A knowledge resource for humanoids. , 2014, , .		12
47	Studying human behavior from infancy: On the acquisition of infant postural data. , 2014, , .		1
48	Learning hand movements from markerless demonstrations for humanoid tasks. , 2014, , .		14
49	Shadow free segmentation in still images using local density measure. , 2014, , .		11
50	Contour Motion Estimation for Asynchronous Event-Driven Cameras. Proceedings of the IEEE, 2014, 102, 1537-1556.	21.3	40
51	Minimalist plans for interpreting manipulation actions. , 2013, , .		11
52	Embedding high-level information into low level vision: Efficient object search in clutter. , 2013, , .		6
53	Robots with language: Multi-label visual recognition using NLP. , 2013, , .		4
54	Detection of Manipulation Action Consequences (MAC). , 2013, , .		39

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55	Action Attribute Detection from Sports Videos with Contextual Constraints. , 2013, , .		1
56	Using a minimal action grammar for activity understanding in the real world. , 2012, , .		20
57	The minimalist grammar of action. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 103-117.	4.0	82
58	Towards a Watson that sees: Language-guided action recognition for robots. , 2012, , .		15
59	The syntax of human actions and interactions. Journal of Neurolinguistics, 2012, 25, 500-514.	1.1	8
60	Active Visual Segmentation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 639-653.	13.9	81
61	Leadership in Orchestra Emerges from the Causal Relationships of Movement Kinematics. PLoS ONE, 2012, 7, e35757.	2.5	94
62	Active scene recognition with vision and language. , 2011, , .		7
63	The Language of Action. , 2010, , 95-131.		4
64	Moving obstacle detection using cameras for driver assistance system. , 2010, , .		8
65	Learning shift-invariant sparse representation of actions. , 2010, , .		34
66	Attribute-Based Transfer Learning for Object Categorization with Zero/One Training Example. Lecture Notes in Computer Science, 2010, , 127-140.	1.3	79
67	Sensory grammars for sensor networks. Journal of Ambient Intelligence and Smart Environments, 2009, 1, 15-21.	1.4	3
68	Real-time shape retrieval for robotics using skip Tri-Grams. , 2009, , .		0
69	Active segmentation for robotics. , 2009, , .		31
70	The action synergies: Building blocks for understanding human behavior. , 2009, , .		1
71	ACTIVE SEGMENTATION. International Journal of Humanoid Robotics, 2009, 06, 361-386.	1.1	25
72	Active segmentation with fixation. , 2009, , .		77

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73	Image Transformations and Blurring. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2009, 31, 1000-9999.	13.9	4
74	Who killed the directed model?. , 2008, , .		11
75	Grounding Concrete Motion Concepts with a Linguistic Framework. Lecture Notes in Computer Science, 2008, , 1-12.	1.3	0
76	Multiple View Image Reconstruction: A Harmonic Approach. , 2007, , .		7
77	Signals on Pencils of Lines. , 2007, , .		0
78	A Language for Human Action. Computer, 2007, 40, 42-51.	1.1	68
79	A Roadmap to the Integration of Early Visual Modules. International Journal of Computer Vision, 2007, 72, 9-25.	15.6	62
80	A Sensory-Motor Language for Human Activity Understanding. , 2006, , .		11
81	A Probabilistic Notion of Correspondence and the Epipolar Constraint. , 2006, , .		16
82	Understanding visuo-motor primitives for motion synthesis and analysis. Computer Animation and Virtual Worlds, 2006, 17, 207-217.	1.2	17
83	A sensory grammar for inferring behaviors in sensor networks. , 2006, , .		32
84	A Probabilistic Framework for Correspondence and Egomotion. , 2006, , 232-242.		8
85	View-Invariant Modeling and Recognition of Human Actions Using Grammars. , 2006, , 115-126.		47
86	Human Activity Language: Grounding Concepts with a Linguistic Framework. Lecture Notes in Computer Science, 2006, , 86-100.	1.3	2
87	Shape and the Stereo Correspondence Problem. International Journal of Computer Vision, 2005, 65, 147-162.	15.6	104
88	Motion segmentation using occlusions. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2005, 27, 988-992.	13.9	74
89	Detecting Independent 3D Movement. , 2005, , 383-401.		5
90	A hierarchy of cameras for 3D photography. Computer Vision and Image Understanding, 2004, 96, 274-293.	4.7	8

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91	Structure from Motion of Parallel Lines. Lecture Notes in Computer Science, 2004, , 229-240.	1.3	5
92	Computational video. Visual Computer, 2003, 19, 355-359.	3.5	0
93	Polydioptric Cameras: New Eyes for Structure from Motion. Lecture Notes in Computer Science, 2002, , 618-625.	1.3	2
94	Spatio-Temporal Stereo Using Multi-Resolution Subdivision Surfaces. International Journal of Computer Vision, 2002, 47, 181-193.	15.6	61
95	The Statistics of Optical Flow. Computer Vision and Image Understanding, 2001, 82, 1-32.	4.7	62
96	Geometry of Eye Design: Biology and Technology. Lecture Notes in Computer Science, 2001, , 22-38.	1.3	8
97	Eyes from Eyes. Lecture Notes in Computer Science, 2001, , 204-217.	1.3	3
98	Animated Heads: From 3D Motion Fields to Action Descriptions. , 2001, , 1-11.		2
99	Statistics Explains Geometrical Optical Illusions. , 2001, , 409-445.		5
100	Towards the Ultimate Motion Capture Technology. , 2001, , 143-157.		1
101	New eyes for building models from video. Computational Geometry: Theory and Applications, 2000, 15, 3-23.	0.5	7
102	Structure from Motion: Beyond the Epipolar Constraint. International Journal of Computer Vision, 2000, 37, 231-258.	15.6	32
103	Observability of 3D Motion. International Journal of Computer Vision, 2000, 37, 43-63.	15.6	47
104	The Ouchi illusion as an artifact of biased flow estimation. Vision Research, 2000, 40, 77-95.	1.4	36
105	New Eyes for Shape and Motion Estimation. Lecture Notes in Computer Science, 2000, , 118-128.	1.3	7
106	A New Framework for Multi-camera Structure from Motion. Informatik Aktuell, 2000, , 75-82.	0.6	0
107	Visual space is not cognitively impenetrable. Behavioral and Brain Sciences, 1999, 22, 366-367.	0.7	20
108	Directions of Motion Fields are Hardly Ever Ambiguous. International Journal of Computer Vision, 1998, 26, 5-24.	15.6	35

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109	Ambiguity in Structure from Motion: Sphere versus Plane. International Journal of Computer Vision, 1998, 28, 137-154.	15.6	45
110	Effects of Errors in the Viewing Geometry on Shape Estimation. Computer Vision and Image Understanding, 1998, 71, 356-372.	4.7	74
111	Changes in surface convexity and topology caused by distortions of stereoscopic visual space. Lecture Notes in Computer Science, 1998, , 226-240.	1.3	10
112	Simultaneous estimation of viewing geometry and structure. Lecture Notes in Computer Science, 1998, , 342-358.	1.3	8
113	3D Motion and Shape Representations in Visual Servo Control. International Journal of Robotics Research, 1998, 17, 4-18.	8.5	6
114	Beyond the Epipolar Constraint: Integrating 3D Motion and Structure Estimation. Lecture Notes in Computer Science, 1998, , 109-123.	1.3	2
115	The Video Yardstick. Lecture Notes in Computer Science, 1998, , 144-158.	1.3	0
116	Families of stationary patterns producing illusory movement: insights into the visual system. Proceedings of the Royal Society B: Biological Sciences, 1997, 264, 795-806.	2.6	24
117	On the Geometry of Visual Correspondence. International Journal of Computer Vision, 1997, 21, 223-247.	15.6	31
118	Visual space distortion. Biological Cybernetics, 1997, 77, 323-337.	1.3	20
119	The geometry of visual space distortion. Lecture Notes in Computer Science, 1997, , 249-277.	1.3	1
120	Spatiotemporal representations for visual navigation. Lecture Notes in Computer Science, 1996, , 671-684.	1.3	0
121	Directions of motion fields are hardly ever ambiguous. Lecture Notes in Computer Science, 1996, , 119-128.	1.3	5
122	The Synthesis of Vision and Action. Springer Series in Perception Engineering, 1996, , 205-240.	0.2	3
123	Qualitative egomotion. International Journal of Computer Vision, 1995, 15, 7-29.	15.6	71
124	Vision and action. Image and Vision Computing, 1995, 13, 725-744.	4.5	33
125	Seeing and understanding. ACM Computing Surveys, 1995, 27, 307-309.	23.0	49
126	Estimating the heading direction using normal flow. International Journal of Computer Vision, 1994, 13, 33-56.	15.6	52

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127	How normal flow constrains relative depth for an active observer. Image and Vision Computing, 1994, 12, 435-445.	4.5	1
128	The role of fixation in visual motion analysis. International Journal of Computer Vision, 1993, 11, 165-186.	15.6	53
129	<title>Purposive recognition: an active and qualitative approach</title>. , 1992, 1611, 225.		6
130	Tracking facilitates 3-D motion estimation. Biological Cybernetics, 1992, 67, 259-268.	1.3	36
131	Purposive, qualitative, active vision. CVGIP Image Understanding, 1992, 56, 1-2.	1.3	22
132	Is visual reconstruction necessary? obstacle avoidance without passive ranging. Journal of Field Robotics, 1992, 9, 843-858.	0.7	17
133	A response to â€œignorance, myopia, and naivetÃ© in computer vision systemsâ€•by R. C. Jain and T. O. Binford. CVGIP Image Understanding, 1991, 53, 120-124.	1.3	10
134	Semantic Clusters Combined with Kinematics: The Case of English and Modern Greek Motion Verbs. , 0, , .		1