

Cornelia Fermuller

List of Publications by Year in Descending Order

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Version: 2024-04-28

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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.

103
papers

1,815
citations

24
h-index

38
g-index

117
ext. papers

2,229
ext. citations

5.8
avg, IF

5.05
L-index

#	Paper	IF	Citations
103	Learning for action-based scene understanding 2022 , 373-403		
102	Deep-Readout Random Recurrent Neural Networks for Real-World Temporal Data. <i>SN Computer Science</i> , 2022 , 3, 1	2	
101	PRGFlow: Unified SWAP-aware deep global optical flow for aerial robot navigation. <i>Electronics Letters</i> , 2021 , 57, 614-617	1.1	0
100	Joint direct estimation of 3D geometry and 3D motion using spatio temporal gradients. <i>Pattern Recognition</i> , 2021 , 113, 107759	7.7	0
99	Topology-Aware Non-Rigid Point Cloud Registration. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2021 , 43, 1056-1069	13.3	6
98	Forecasting Action through Contact Representations from First Person Video. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2021 , PP,	13.3	5
97	Robust Nonlinear Control-Based Trajectory Tracking for Quadrotors Under Uncertainty 2021 , 5, 2042-2047		6
96	Symbolic Representation and Learning With Hyperdimensional Computing. <i>Frontiers in Robotics and AI</i> , 2020 , 7, 63	2.8	5
95	Unsupervised Learning of Dense Optical Flow, Depth and Egomotion with Event-Based Sensors 2020 ,		8
94	2020 ,		6
93	Learning sensorimotor control with neuromorphic sensors: Toward hyperdimensional active perception. <i>Science Robotics</i> , 2019 , 4,	18.6	27
92	Metaconcepts: Isolating Context in Word Embeddings 2019 ,		1
91	SalientDSO: Bringing Attention to Direct Sparse Odometry. <i>IEEE Transactions on Automation Science and Engineering</i> , 2019 , 16, 1619-1626	4.9	14
90	EV-IMO: Motion Segmentation Dataset and Learning Pipeline for Event Cameras 2019 ,		17
89	Image Understanding using vision and reasoning through Scene Description Graph. <i>Computer Vision and Image Understanding</i> , 2018 , 173, 33-45	4.3	18
88	Prediction of Manipulation Actions. <i>International Journal of Computer Vision</i> , 2018 , 126, 358-374	10.6	23
87	cilantro 2018 ,		6

86	Seeing Behind the Scene: Using Symmetry to Reason About Objects in Cluttered Environments 2018,		4
85	Real-Time Clustering and Multi-Target Tracking Using Event-Based Sensors 2018,		19
84	Event-Based Moving Object Detection and Tracking 2018,		80
83	Evenly Cascaded Convolutional Networks 2018,		2
82	GapFly: Active Vision Based Minimalist Structure-Less Gap Detection For Quadrotor Flight. <i>IEEE Robotics and Automation Letters</i> , 2018 , 3, 2799-2806	4.2	37
81	Computer Vision and Natural Language Processing. <i>ACM Computing Surveys</i> , 2017 , 49, 1-44	13.4	17
80	What can i do around here? Deep functional scene understanding for cognitive robots 2017,		14
79	Detecting Reflectional Symmetries in 3D Data Through Symmetrical Fitting 2017,		11
78	Reliable Attribute-Based Object Recognition Using High Predictive Value Classifiers. <i>Lecture Notes in Computer Science</i> , 2016 , 801-815	0.9	0
77	Cluttered scene segmentation using the symmetry constraint 2016,		10
76	A Dataset for Visual Navigation with Neuromorphic Methods. <i>Frontiers in Neuroscience</i> , 2016 , 10, 49	5.1	23
75	Co-active learning to adapt humanoid movement for manipulation 2016,		1
74	A Gestaltist approach to contour-based object recognition: Combining bottom-up and top-down cues. <i>International Journal of Robotics Research</i> , 2015 , 34, 627-652	5.7	8
73	The Cognitive Dialogue: A new model for vision implementing common sense reasoning. <i>Image and Vision Computing</i> , 2015 , 34, 42-44	3.7	3
72	Detection and Segmentation of 2D Curved Reflection Symmetric Structures 2015,		21
71	Contour Detection and Characterization for Asynchronous Event Sensors 2015,		7
70	Grasp type revisited: A modern perspective on a classical feature for vision 2015,		27
69	Fast 2D border ownership assignment 2015,		11

68	Bio-inspired Motion Estimation with Event-Driven Sensors. <i>Lecture Notes in Computer Science</i> , 2015 , 309-321	15
67	Shadow free segmentation in still images using local density measure 2014 ,	7
66	Contour Motion Estimation for Asynchronous Event-Driven Cameras. <i>Proceedings of the IEEE</i> , 2014 , 102, 1537-1556	14.3 31
65	Embedding high-level information into low level vision: Efficient object search in clutter 2013 ,	5
64	Robots with language: Multi-label visual recognition using NLP 2013 ,	3
63	Detection of Manipulation Action Consequences (MAC) 2013 ,	31
62	Towards a Watson that sees: Language-guided action recognition for robots 2012 ,	14
61	The image torque operator: A new tool for mid-level vision 2012 ,	6
60	Scale-space texture description on SIFT-like textons. <i>Computer Vision and Image Understanding</i> , 2012 , 116, 999-1013	4.3 72
59	Using a minimal action grammar for activity understanding in the real world 2012 ,	16
58	Active scene recognition with vision and language 2011 ,	1
57	Learning shift-invariant sparse representation of actions 2010 ,	27
56	Illusory motion due to causal time filtering. <i>Vision Research</i> , 2010 , 50, 315-29	2.1 17
55	Active segmentation for robotics 2009 ,	24
54	Viewpoint Invariant Texture Description Using Fractal Analysis. <i>International Journal of Computer Vision</i> , 2009 , 83, 85-100	10.6 203
53	Robust wavelet-based super-resolution reconstruction: theory and algorithm. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2009 , 31, 649-60	13.3 73
52	Noise causes slant underestimation in stereo and motion. <i>Vision Research</i> , 2006 , 46, 3105-20	2.1 8
51	A 3D shape constraint on video. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2006 , 28, 1018-23	13.3 6

50	Depth estimation using the compound eye of dipteran flies. <i>Biological Cybernetics</i> , 2006 , 95, 487-501	2.8	7
49	Motion segmentation using occlusions. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2005 , 27, 988-92	13.3	62
48	Detecting Independent 3D Movement 2005 , 383-401		3
47	The Argus eye: a new imaging system designed to facilitate robotic tasks of motion. <i>IEEE Robotics and Automation Magazine</i> , 2004 , 11, 31-38	3.4	6
46	A hierarchy of cameras for 3D photography. <i>Computer Vision and Image Understanding</i> , 2004 , 96, 274-293	4.3	7
45	Uncertainty in visual processes predicts geometrical optical illusions. <i>Vision Research</i> , 2004 , 44, 727-49	2.1	34
44	Bias in Shape Estimation. <i>Lecture Notes in Computer Science</i> , 2004 , 405-416	0.9	
43	Plenoptic video geometry. <i>Visual Computer</i> , 2003 , 19, 395-404	2.3	5
42	Self-Calibration from Image Derivatives. <i>International Journal of Computer Vision</i> , 2002 , 48, 91-114	10.6	7
41	Polydioptric Cameras: New Eyes for Structure from Motion. <i>Lecture Notes in Computer Science</i> , 2002 , 618-625	0.9	1
40	Visual space-time geometry - A tool for perception and the imagination. <i>Proceedings of the IEEE</i> , 2002 , 90, 1113-1135	14.3	4
39	The Statistics of Optical Flow. <i>Computer Vision and Image Understanding</i> , 2001 , 82, 1-32	4.3	46
38	Geometry of Eye Design: Biology and Technology. <i>Lecture Notes in Computer Science</i> , 2001 , 22-38	0.9	3
37	Eyes from Eyes. <i>Lecture Notes in Computer Science</i> , 2001 , 204-217	0.9	2
36	Statistics Explains Geometrical Optical Illusions 2001 , 409-445		3
35	New eyes for building models from video. <i>Computational Geometry: Theory and Applications</i> , 2000 , 15, 3-23	0.4	5
34	Structure from Motion: Beyond the Epipolar Constraint. <i>International Journal of Computer Vision</i> , 2000 , 37, 231-258	10.6	27
33	Observability of 3D Motion. <i>International Journal of Computer Vision</i> , 2000 , 37, 43-63	10.6	36

32	The Ouchi illusion as an artifact of biased flow estimation. <i>Vision Research</i> , 2000 , 40, 77-96	2.1	32
31	A New Framework for Multi-camera Structure from Motion. <i>Informatik Aktuell</i> , 2000 , 75-82	0.3	
30	Analyzing Action Representations. <i>Lecture Notes in Computer Science</i> , 2000 , 1-21	0.9	1
29	Visual space is not cognitively impenetrable. <i>Behavioral and Brain Sciences</i> , 1999 , 22, 366-367	0.9	18
28	Directions of Motion Fields are Hardly Ever Ambiguous. <i>International Journal of Computer Vision</i> , 1998 , 26, 5-24	10.6	26
27	Ambiguity in Structure from Motion: Sphere versus Plane. <i>International Journal of Computer Vision</i> , 1998 , 28, 137-154	10.6	29
26	Effects of Errors in the Viewing Geometry on Shape Estimation. <i>Computer Vision and Image Understanding</i> , 1998 , 71, 356-372	4.3	64
25	Simultaneous estimation of viewing geometry and structure. <i>Lecture Notes in Computer Science</i> , 1998 , 342-358	0.9	5
24	What is computed by structure from motion algorithms?. <i>Lecture Notes in Computer Science</i> , 1998 , 359-375		4
23	3D Motion and Shape Representations in Visual Servo Control. <i>International Journal of Robotics Research</i> , 1998 , 17, 4-18	5.7	2
22	The Video Yardstick. <i>Lecture Notes in Computer Science</i> , 1998 , 144-158	0.9	
21	Beyond the Epipolar Constraint: Integrating 3D Motion and Structure Estimation. <i>Lecture Notes in Computer Science</i> , 1998 , 109-123	0.9	1
20	Families of stationary patterns producing illusory movement: insights into the visual system. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 1997 , 264, 795-806	4.4	21
19	On the Geometry of Visual Correspondence. <i>International Journal of Computer Vision</i> , 1997 , 21, 223-247	10.6	26
18	Visual space distortion. <i>Biological Cybernetics</i> , 1997 , 77, 323-37	2.8	14
17	The geometry of visual space distortion. <i>Lecture Notes in Computer Science</i> , 1997 , 249-277	0.9	1
16	The Synthesis of Vision and Action. <i>Springer Series in Perception Engineering</i> , 1996 , 205-240		3
15	Passive navigation as a pattern recognition problem. <i>International Journal of Computer Vision</i> , 1995 , 14, 147-158	10.6	30

14	Vision and action. <i>Image and Vision Computing</i> , 1995 , 13, 725-744	3.7	20
13	Direct perception of three-dimensional motion from patterns of visual motion. <i>Science</i> , 1995 , 270, 1973-633	5.3	104
12	. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 1994 , 16, 748-751	13.3	5
11	The role of fixation in visual motion analysis. <i>International Journal of Computer Vision</i> , 1993 , 11, 165-186	10.6	40
10	Tracking facilitates 3-D motion estimation. <i>Biological Cybernetics</i> , 1992 , 67, 259-268	2.8	31
9	The confounding of translation and rotation in reconstruction from multiple views		2
8	A Projective Invariant for Textures		3
7	Polydioptric camera design and 3D motion estimation		19
6	A spherical eye from multiple cameras (makes better models of the world)		16
5	Eyes from eyes: new cameras for structure from motion		16
4	Multi-camera networks: eyes from eyes		13
3	Self-calibration from image derivatives		6
2			1
1			3