Michael J Black

List of Publications by Year
in descending order

85 papers	17,875 citations	81743 39 h-index	98622 67 g-index
87 all docs	87 docs citations	87 times ranked	9270 citing authors

#	Article	IF	Citations
1	SMPL. ACM Transactions on Graphics, 2015, 34, 1-16.	4.9	2,002
2	A Database and Evaluation Methodology for Optical Flow. International Journal of Computer Vision, 2011, 92, 1-31.	10.9	1,565
3	The Robust Estimation of Multiple Motions: Parametric and Piecewise-Smooth Flow Fields. Computer Vision and Image Understanding, 1996, 63, 75-104.	3.0	1,326
4	HumanEva: Synchronized Video and Motion Capture Dataset and Baseline Algorithm for Evaluation of Articulated HumanÂMotion. International Journal of Computer Vision, 2010, 87, 4-27.	10.9	851
5	Title is missing!. International Journal of Computer Vision, 1998, 26, 63-84.	10.9	816
6	Fields of Experts. International Journal of Computer Vision, 2009, 82, 205-229.	10.9	728
7	On the unification of line processes, outlier rejection, and robust statistics with applications in early vision. International Journal of Computer Vision, 1996, 19, 57-91.	10.9	681
8	Keep It SMPL: Automatic Estimation of 3D Human Pose and Shape from a Single Image. Lecture Notes in Computer Science, 2016, , 561-578.	1.0	564
9	Learning from Synthetic Humans. , 2017, , .		541
10	Learning to Reconstruct 3D Human Pose and Shape via Model-Fitting in the Loop. , 2019, , .		541
11	Towards Understanding Action Recognition. , 2013, , .		531
12	Embodied hands. ACM Transactions on Graphics, 2017, 36, 1-17.	4.9	519
13	A Quantitative Analysis of Current Practices in Optical Flow Estimation and the Principles Behind Them. International Journal of Computer Vision, 2014, 106, 115-137.	10.9	476
14	A Framework for Robust Subspace Learning. International Journal of Computer Vision, 2003, 54, 117-142.	10.9	466
15	Learning a model of facial shape and expression from 4D scans. ACM Transactions on Graphics, 2017, 36, 1-17.	4.9	412
16	Bayesian Population Decoding of Motor Cortical Activity Using a Kalman Filter. Neural Computation, 2006, 18, 80-118.	1.3	380
17	Recognizing Facial Expressions in Image Sequences Using Local Parameterized Models of Image Motion. International Journal of Computer Vision, 1997, 25, 23-48.	10.9	368
18	Neural control of computer cursor velocity by decoding motor cortical spiking activity in humans with tetraplegia. Journal of Neural Engineering, 2008, 5, 455-476.	1.8	342

#	Article	IF	Citations
19	Decoding Complete Reach and Grasp Actions from Local Primary Motor Cortex Populations. Journal of Neuroscience, 2010, 30, 9659-9669.	1.7	300
20	ClothCap. ACM Transactions on Graphics, 2017, 36, 1-15.	4.9	280
21	Pose-conditioned joint angle limits for 3D human pose reconstruction. , 2015, , .		254
22	Dyna. ACM Transactions on Graphics, 2015, 34, 1-14.	4.9	232
23	Home 3D body scans from noisy image and range data. , 2011, , .		220
24	Parameterized Modeling and Recognition of Activities. Computer Vision and Image Understanding, 1999, 73, 232-247.	3.0	202
25	OpenDR: An Approximate Differentiable Renderer. Lecture Notes in Computer Science, 2014, , 154-169.	1.0	188
26	Dynamic FAUST: Registering Human Bodies in Motion. , 2017, , .		187
27	Modeling and Decoding Motor Cortical Activity Using a Switching Kalman Filter. IEEE Transactions on Biomedical Engineering, 2004, 51, 933-942.	2.5	185
28	3D Menagerie: Modeling the 3D Shape and Pose of Animals. , 2017, , .		178
29	Detailed, Accurate, Human Shape Estimation from Clothed 3D Scan Sequences. , 2017, , .		172
30	Assistive technology and robotic control using motor cortex ensemble-based neural interface systems in humans with tetraplegia. Journal of Physiology, 2007, 579, 603-611.	1.3	166
31	Detailed Full-Body Reconstructions of Moving People from Monocular RGB-D Sequences. , 2015, , .		142
32	On the Variability of Manual Spike Sorting. IEEE Transactions on Biomedical Engineering, 2004, 51, 912-918.	2.5	140
33	On the Spatial Statistics of Optical Flow. International Journal of Computer Vision, 2007, 74, 33-50.	10.9	134
34	Loose-limbed People: Estimating 3D Human Pose and Motion Using Non-parametric Belief Propagation. International Journal of Computer Vision, 2012, 98, 15-48.	10.9	120
35	Robustly Estimating Changes in Image Appearance. Computer Vision and Image Understanding, 2000, 78, 8-31.	3.0	111
36	Assessing body image in anorexia nervosa using biometric self-avatars in virtual reality: Attitudinal components rather than visual body size estimation are distorted. Psychological Medicine, 2018, 48, 642-653.	2.7	106

#	Article	IF	Citations
37	Coregistration: Simultaneous Alignment and Modeling of Articulated 3D Shape. Lecture Notes in Computer Science, 2012, , 242-255.	1.0	105
38	Probabilistic Detection and Tracking of Motion Boundaries. International Journal of Computer Vision, 2000, 38, 231-245.	10.9	103
39	A nonparametric Bayesian alternative to spike sorting. Journal of Neuroscience Methods, 2008, 173, 1-12.	1.3	90
40	Design and Use of Linear Models for Image Motion Analysis. International Journal of Computer Vision, 2000, 36, 171-193.	10.9	82
41	Guest Editorial: State of the Art in Image- and Video-Based Human Pose and Motion Estimation. International Journal of Computer Vision, 2010, 87, 1-3.	10.9	77
42	Data-driven physics for human soft tissue animation. ACM Transactions on Graphics, 2017, 36, 1-12.	4.9	68
43	Visual Orientation and Directional Selectivity through Thalamic Synchrony. Journal of Neuroscience, 2012, 32, 9073-9088.	1.7	57
44	Slow Flow: Exploiting High-Speed Cameras for Accurate and Diverse Optical Flow Reference Data. , 2017, , .		54
45	Body size estimation of self and others in females varying in BMI. PLoS ONE, 2018, 13, e0192152.	1.1	48
46	Representing cyclic human motion using functional analysis. Image and Vision Computing, 2005, 23, 1264-1276.	2.7	46
47	Deep Neural Network-Based Cooperative Visual Tracking Through Multiple Micro Aerial Vehicles. IEEE Robotics and Automation Letters, 2018, 3, 3193-3200.	3.3	46
48	Spike Train SIMilarity Space (SSIMS): A Framework for Single Neuron and Ensemble Data Analysis. Neural Computation, 2015, 27, 1-31.	1.3	43
49	Towards Probabilistic Volumetric Reconstruction Using Ray Potentials. , 2015, , .		42
50	Chapter 63 Development of neuromotor prostheses for humans. Supplements To Clinical Neurophysiology, 2004, 57, 592-606.	2.1	41
51	Active Perception Based Formation Control for Multiple Aerial Vehicles. IEEE Robotics and Automation Letters, 2019, 4, 4491-4498.	3.3	41
52	Robust parameterized component analysis: theory and applications to 2D facial appearance models. Computer Vision and Image Understanding, 2003, 91, 53-71.	3.0	39
53	The Virtual Caliper: Rapid Creation of Metrically Accurate Avatars from 3D Measurements. IEEE Transactions on Visualization and Computer Graphics, 2019, 25, 1887-1897.	2.9	39
54	Learning and Tracking the 3D Body Shape of Freely Moving Infants from RGB-D sequences. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 2540-2551.	9.7	39

#	Article	IF	Citations
55	Learning an Infant Body Model from RGB-D Data for Accurate Full Body Motion Analysis. Lecture Notes in Computer Science, 2018, , 792-800.	1.0	36
56	Linking Objects to Actions: Encoding of Target Object and Grasping Strategy in Primate Ventral Premotor Cortex. Journal of Neuroscience, 2015, 35, 10888-10897.	1.7	33
57	Learning Multi-human Optical Flow. International Journal of Computer Vision, 2020, 128, 873-890.	10.9	26
58	Weight bias and linguistic body representation in anorexia nervosa: Findings from the BodyTalk project. European Eating Disorders Review, 2021, 29, 204-215.	2.3	26
59	Resisting Adversarial Attacks Using Gaussian Mixture Variational Autoencoders. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 541-548.	3.6	23
60	Decentralized MPC based Obstacle Avoidance for Multi-Robot Target Tracking Scenarios. , 2018, , .		22
61	Markerless Outdoor Human Motion Capture Using Multiple Autonomous Micro Aerial Vehicles. , 2019, , .		22
62	General Movement Assessment from videos of computed 3D infant body models is equally effective compared to conventional RGB video rating. Early Human Development, 2020, 144, 104967.	0.8	22
63	Investigating Body Image Disturbance in Anorexia Nervosa Using Novel Biometric Figure Rating Scales: A Pilot Study. European Eating Disorders Review, 2017, 25, 607-612.	2.3	19
64	A poseâ€independent method for accurate and precise body composition from 3D optical scans. Obesity, 2021, 29, 1835-1847.	1.5	18
65	Model Transport: Towards Scalable Transfer Learning on Manifolds. , 2014, , .		14
66	AirCapRL: Autonomous Aerial Human Motion Capture Using Deep Reinforcement Learning. IEEE Robotics and Automation Letters, 2020, 5, 6678-6685.	3.3	14
67	Body Image Disturbances and Weight Bias After Obesity Surgery: Semantic and Visual Evaluation in a Controlled Study, Findings from the BodyTalk Project. Obesity Surgery, 2021, 31, 1625-1634.	1.1	13
68	AirPose: Multi-View Fusion Network for Aerial 3D Human Pose and Shape Estimation. IEEE Robotics and Automation Letters, 2022, 7, 4805-4812.	3.3	13
69	Robust Physicsâ€based Motion Retargeting with Realistic Body Shapes. Computer Graphics Forum, 2018, 37, 81-92.	1.8	12
70	Chained Representation Cycling: Learning to Estimate 3D Human Pose and Shape by Cycling Between Representations. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 5561-5569.	3.6	11
71	Viewpoint and Pose in Body-Form Adaptation. Perception, 2013, 42, 176-186.	0.5	10
72	Separated and overlapping neural coding of face and body identity. Human Brain Mapping, 2021, 42, 4242-4260.	1.9	9

#	Article	IF	Citations
73	Decoding subcategories of human bodies from both body- and face-responsive cortical regions. NeuroImage, 2019, 202, 116085.	2.1	8
74	Evaluating the Automated Alignment of 3D Human Body Scans. , 2011, , .		8
75	Perception of strength and power of realistic male characters. , 2015, , .		5
76	Exploring the relationship between body shapes and descriptions by linking similarity spaces. Journal of Vision, 2015, 15, 931.	0.1	5
77	Perception of others' body sizes is predicted by own body size. Journal of Vision, 2017, 17, 843.	0.1	4
78	Simulation andÂControl ofÂDeformable Autonomous Airships inÂTurbulent Wind. Lecture Notes in Networks and Systems, 2022, , 608-626.	0.5	4
79	Is Body Size Estimation Viewpoint Invariant?. Journal of Vision, 2018, 18, 165.	0.1	3
80	Guest Editorial: Computational Vision at Brown. International Journal of Computer Vision, 2003, 54, 5-11.	10.9	2
81	Investigating the influence of personal BMI on own body size perception in females using self-avatars. Journal of Vision, 2016, 16, 1400.	0.1	2
82	Appealing Avatars from 3D Body Scans: Perceptual Effects of Stylization. Communications in Computer and Information Science, 2017, , 175-196.	0.4	1
83	The Role of Sexual Dimorphism in the Perception of Attractiveness and Confidence. Journal of Vision, 2020, 20, 878.	0.1	1
84	People perception: Attractiveness from shape and motion. Journal of Vision, 2016, 16, 393.	0.1	0
85	Decoding the Viewpoint and Identity of Faces and Bodies. Journal of Vision, 2019, 19, 54c.	0.1	0