Mario Botsch

List of Publications by Year
in descending order

75 papers	3,948 citations	236925 25 h-index	197818 49 g-index
76 all docs	76 docs citations	76 times ranked	2569 citing authors

#	Article	IF	Citations
1	Motor imagery during action observation in virtual reality: the impact of watching myself performing at a level I have not yet achieved. International Journal of Sport and Exercise Psychology, 2023, 21, 401-427.	2.1	8
2	VR/AR Case Studies. , 2022, , 331-369.		2
3	Virtual Human Coherence and Plausibility â€“ Towards a Validated Scale. , 2022, , .		9
4	Virtual Reality for Mind and Body: Does the Sense of Embodiment Towards a Virtual Body Affect Physical Body Awareness?. , 2022, , .		10
5	Self-Avatars in Virtual Reality: A Study Protocol for Investigating the Impact of the Deliberateness of Choice and the Context-Match. , 2021, , .		1
6	The Embodiment of Photorealistic Avatars Influences Female Body Weight Perception in Virtual Reality. , 2021, , .		16
7	Marker-Less Motion Capture of Insect Locomotion With Deep Neural Networks Pre-trained on Synthetic Videos. Frontiers in Behavioral Neuroscience, 2021, 15, 637806.	2.0	5
8	Inside Humans: Creating a Simple Layered Anatomical Model from Human Surface Scans. Frontiers in Virtual Reality, 2021, 2, .	3.7	4
9	The Diamond Laplace for Polygonal and Polyhedral Meshes. Computer Graphics Forum, 2021, 40, 217-230.	3.0	6
10	Affordable But Not Cheap: A Case Study of the Effects of Two 3D-Reconstruction Methods of Virtual Humans. Frontiers in Virtual Reality, 2021, 2, .	3.7	14
11	Polygon Laplacian Made Simple. Computer Graphics Forum, 2020, 39, 303-313.	3.0	11
12	Cognitive training in an everyday-like virtual reality enhances visual-spatial memory capacities in stroke survivors with visual field defects. Topics in Stroke Rehabilitation, 2020, 27, 442-452.	1.9	12
13	Body Weight Perception of Females using Photorealistic Avatars in Virtual and Augmented Reality. , 2020, , .		17
14	Realistic Virtual Humans from Smartphone Videos. , 2020, , .		15
15	A method for automatic forensic facial reconstruction based on dense statistics of soft tissue thickness. PLoS ONE, 2019, 14, e0210257.	2.5	41
16	Superimposed Skilled Performance in a Virtual Mirror Improves Motor Performance and Cognitive Representation of a Full Body Motor Action. Frontiers in Robotics and AI, 2019, 6, 43.	3.2	18
17	Not Alone Here?! Scalability and User Experience of Embodied Ambient Crowds in Distributed Social Virtual Reality. IEEE Transactions on Visualization and Computer Graphics, 2019, 25, 2134-2144.	4.4	61
18	Poly-Spline Finite-Element Method. ACM Transactions on Graphics, 2019, 38, 1-16.	7.2	18

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19	Neuropsychological assessment of visual selective attention and processing capacity with head-mounted displays.. Neuropsychology, 2019, 33, 309-318.	1.3	17
20	The Impact of Avatar Personalization and Immersion on Virtual Body Ownership, Presence, and Emotional Response. IEEE Transactions on Visualization and Computer Graphics, 2018, 24, 1643-1652.	4.4	295
21	Ultrahigh temporal resolution of visual presentation using gaming monitors and G-Sync. Behavior Research Methods, 2018, 50, 26-38.	4.0	16
22	Design and evaluation of reduced marker layouts for hand motion capture. Computer Animation and Virtual Worlds, 2018, 29, e1751.	1.2	11
23	Training in a comprehensive everyday-like virtual reality environment compared to computerized cognitive training for patients with depression. Computers in Human Behavior, 2018, 79, 40-52.	8.5	44
24	Classification of motor errors to provide real-time feedback for sports coaching in virtual reality â€" A case study in squats and Tai Chi pushes. Computers and Graphics, 2018, 76, 47-59.	2.5	24
25	Projective Skinning. Proceedings of the ACM on Computer Graphics and Interactive Techniques, 2018, 1, 1-19.	1.6	16
26	Differential effects of face-realism and emotion on event-related brain potentials and their implications for the uncanny valley theory. Scientific Reports, 2017, 7, 45003.	3.3	58
27	Preference-guided adaptation of deformation representations for evolutionary design optimization. , 2017, , .		1
28	Fast generation of realistic virtual humans. , 2017, , .		53
29	Effects of variability in synthetic training data on convolutional neural networks for 3D head reconstruction. , 2017, , .		1
30	The Intelligent Coaching Space: A Demonstration. Lecture Notes in Computer Science, 2017, , 105-108.	1.3	1
31	Evolvability as a quality criterion for linear deformation representations in evolutionary optimization. , 2016, , .		4
32	The impact of latency on perceptual judgments and motor performance in closed-loop interaction in virtual reality. , 2016, , .		65
33	Using the virtual reality device Oculus Rift for neuropsychological assessment of visual processing capabilities. Scientific Reports, 2016, 6, 37016.	3.3	47
34	Constrained space deformation techniques for design optimization. CAD Computer Aided Design, 2016, 72, 40-51.	2.7	13
35	Multi-Level Analysis of Motor Actions as a Basis for Effective Coaching in Virtual Reality. Advances in Intelligent Systems and Computing, 2016, , 211-214.	0.6	10
36	Non-negative Kernel Sparse Coding for the Analysis of Motion Data. Lecture Notes in Computer Science, 2016, , 506-514.	1.3	4

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37	A Multimodal System for Real-Time Action Instruction in Motor Skill Learning. , 2015, , .		17
38	Reduced marker layouts for optical motion capture of hands. , 2015, , .		19
39	Realizing a low-latency virtual reality environment for motor learning. , 2015, , .		33
40	Robust Articulatedâ€ICP for Realâ€Time Hand Tracking. Computer Graphics Forum, 2015, 34, 101-114.	3.0	153
41	Fully automatic optical motion tracking using an inverse kinematics approach. , 2015, , .		14
42	On Shape Deformation Techniques for Simulation-Based Design Optimization. SEMA SIMAI Springer Series, 2015, , 281-303.	0.7	20
43	To stylize or not to stylize?. ACM Transactions on Graphics, 2015, 34, 1-12.	7.2	82
44	Real-time hand tracking using synergistic inverse kinematics. , 2014, , .		19
45	Constrained Space Deformation for Design Optimization. Procedia Engineering, 2014, 82, 114-126.	1.2	2
46	Real-life memory and spatial navigation in patients with focal epilepsy: Ecological validity of a virtual reality supermarket task. Epilepsy and Behavior, 2014, 31, 57-66.	1.7	52
47	RBF morphing techniques for simulation-based design optimization. Engineering With Computers, 2014, 30, 161-174.	6.1	32
48	Deformable registration using patch-wise shape matching. Graphical Models, 2014, 76, 554-565.	2.4	19
49	Learning real-life cognitive abilities in a novel 360Â°-virtual reality supermarket: a neuropsychological study of healthy participants and patients with epilepsy. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 42.	4.6	40
50	High Quality Mesh Morphing Using Triharmonic Radial Basis Functions. , 2013, , 1-15.		33
51	Exampleâ€Driven Deformations Based on Discrete Shells. Computer Graphics Forum, 2011, 30, 2246-2257.	3.0	75
52	Design, Implementation, and Evaluation of the Surface_mesh Data Structure. , 2011, , 533-550.		19
53	Optimizing Voronoi Diagrams for Polygonal Finite Element Computations. , 2010, , 335-350.		30
54	Enrichment textures for detailed cutting of shells. ACM Transactions on Graphics, 2009, 28, 1-10.	7.2	54

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55	Flexible simulation of deformable models using discontinuous Galerkin FEM. Graphical Models, 2009, 71, 153-167.	2.4	49
56	Polyhedral Finite Elements Using Harmonic Basis Functions. Computer Graphics Forum, 2008, 27, 1521-1529.	3.0	91
57	Robust and Efficient Wave Simulations on Deforming Meshes. Computer Graphics Forum, 2008, 27, 1895-1900.	3.0	18
58	On Linear Variational Surface Deformation Methods. IEEE Transactions on Visualization and Computer Graphics, 2008, 14, 213-230.	4.4	453
59	Multi-scale capture of facial geometry and motion. ACM Transactions on Graphics, 2007, 26, 33.	7.2	116
60	A hardware architecture for surface splatting. , 2007, , .		8
61	A hardware architecture for surface splatting. ACM Transactions on Graphics, 2007, 26, 90.	7.2	4
62	Adaptive Space Deformations Based on Rigid Cells. Computer Graphics Forum, 2007, 26, 339-347.	3.0	105
63	A Finite Element Method on Convex Polyhedra. Computer Graphics Forum, 2007, 26, 355-364.	3.0	88
64	Real-Time Shape Editing using Radial Basis Functions. Computer Graphics Forum, 2005, 24, 611-621.	3.0	136
65	High-quality surface splatting on today's GPUs. , 2005, , .		68
66	An intuitive framework for real-time freeform modeling. ACM Transactions on Graphics, 2004, 23, 630-634.	7.2	197
67	An intuitive framework for real-time freeform modeling. , 2004, , .		26
68	A survey of point-based techniques in computer graphics. Computers and Graphics, 2004, 28, 801-814.	2.5	225
69	Multiresolution Surface Representation Based on Displacement Volumes. Computer Graphics Forum, 2003, 22, 483-491.	3.0	72
70	Resampling Feature and Blend Regions in Polygonal Meshes for Surface Anti-Aliasing. Computer Graphics Forum, 2001, 20, 402-410.	3.0	38
71	An Interactive Approach to Point Cloud Triangulation. Computer Graphics Forum, 2000, 19, 479-487.	3.0	17
72	High-quality point-based rendering on modern GPUs. , 0, , .		80

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73	Freeform shape representations for efficient geometry processing. , 0, , .		4
74	GPU-based tolerance volumes for mesh processing. , 0, , .		4
75	Polygon Mesh Processing. , 0, , .		412