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	On Linear Variational Surface Deformation Methods. IEEE Transactions on Visualization and Computer Graphics, 2008, 14, 213-230.	4.4	453
2	Polygon Mesh Processing. , 0, , .		412
3	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
4	A survey of point-based techniques in computer graphics. Computers and Graphics, 2004, 28, 801-814.	2.5	225
5	An intuitive framework for real-time freeform modeling. ACM Transactions on Graphics, 2004, 23, 630-634.	7.2	197
6	Robust Articulated‐ICP for Real‐Time Hand Tracking. Computer Graphics Forum, 2015, 34, 101-114.	3.0	153
7	Real-Time Shape Editing using Radial Basis Functions. Computer Graphics Forum, 2005, 24, 611-621.	3.0	136
8	Multi-scale capture of facial geometry and motion. ACM Transactions on Graphics, 2007, 26, 33.	7.2	116
9	Adaptive Space Deformations Based on Rigid Cells. Computer Graphics Forum, 2007, 26, 339-347.	3.0	105
10	Polyhedral Finite Elements Using Harmonic Basis Functions. Computer Graphics Forum, 2008, 27, 1521-1529.	3.0	91
11	A Finite Element Method on Convex Polyhedra. Computer Graphics Forum, 2007, 26, 355-364.	3.0	88
12	To stylize or not to stylize?. ACM Transactions on Graphics, 2015, 34, 1-12.	7.2	82
13	High-quality point-based rendering on modern GPUs. , 0, , .		80
14	Example‐Driven Deformations Based on Discrete Shells. Computer Graphics Forum, 2011, 30, 2246-2257.	3.0	75
15	Multiresolution Surface Representation Based on Displacement Volumes. Computer Graphics Forum, 2003, 22, 483-491.	3.0	72
16	High-quality surface splatting on today's GPUs. , 2005, , .		68
17	The impact of latency on perceptual judgments and motor performance in closed-loop interaction in virtual reality. , 2016, , .		65
18	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

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19	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
20	Enrichment textures for detailed cutting of shells. ACM Transactions on Graphics, 2009, 28, 1-10.	7.2	54
21	Fast generation of realistic virtual humans. , 2017, , .		53
22	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
23	Flexible simulation of deformable models using discontinuous Galerkin FEM. Graphical Models, 2009, 71, 153-167.	2.4	49
24	Using the virtual reality device Oculus Rift for neuropsychological assessment of visual processing capabilities. Scientific Reports, 2016, 6, 37016.	3.3	47
25	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
26	A method for automatic forensic facial reconstruction based on dense statistics of soft tissue thickness. PLoS ONE, 2019, 14, e0210257.	2.5	41
27	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
28	Resampling Feature and Blend Regions in Polygonal Meshes for Surface Anti-Aliasing. Computer Graphics Forum, 2001, 20, 402-410.	3.0	38
29	High Quality Mesh Morphing Using Triharmonic Radial Basis Functions. , 2013, , 1-15.		33
30	Realizing a low-latency virtual reality environment for motor learning. , 2015, , .		33
31	RBF morphing techniques for simulation-based design optimization. Engineering With Computers, 2014, 30, 161-174.	6.1	32
32	Optimizing Voronoi Diagrams for Polygonal Finite Element Computations. , 2010, , 335-350.		30
33	An intuitive framework for real-time freeform modeling. , 2004, , .		26
34	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
35	On Shape Deformation Techniques for Simulation-Based Design Optimization. SEMA SIMAI Springer Series, 2015, , 281-303.	0.7	20
36	Real-time hand tracking using synergistic inverse kinematics. , 2014, , .		19

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37	Deformable registration using patch-wise shape matching. Graphical Models, 2014, 76, 554-565.	2.4	19
38	Reduced marker layouts for optical motion capture of hands. , 2015, , .		19
39	Design, Implementation, and Evaluation of the Surface_mesh Data Structure. , 2011, , 533-550.		19
40	Robust and Efficient Wave Simulations on Deforming Meshes. Computer Graphics Forum, 2008, 27, 1895-1900.	3.0	18
41	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
42	Poly-Spline Finite-Element Method. ACM Transactions on Graphics, 2019, 38, 1-16.	7.2	18
43	An Interactive Approach to Point Cloud Triangulation. Computer Graphics Forum, 2000, 19, 479-487.	3.0	17
44	A Multimodal System for Real-Time Action Instruction in Motor Skill Learning. , 2015, , .		17
45	Neuropsychological assessment of visual selective attention and processing capacity with head-mounted displays.. Neuropsychology, 2019, 33, 309-318.	1.3	17
46	Body Weight Perception of Females using Photorealistic Avatars in Virtual and Augmented Reality. , 2020, , .		17
47	Ultrahigh temporal resolution of visual presentation using gaming monitors and G-Sync. Behavior Research Methods, 2018, 50, 26-38.	4.0	16
48	Projective Skinning. Proceedings of the ACM on Computer Graphics and Interactive Techniques, 2018, 1, 1-19.	1.6	16
49	The Embodiment of Photorealistic Avatars Influences Female Body Weight Perception in Virtual Reality. , 2021, , .		16
50	Realistic Virtual Humans from Smartphone Videos. , 2020, , .		15
51	Fully automatic optical motion tracking using an inverse kinematics approach. , 2015, , .		14
52	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
53	Constrained space deformation techniques for design optimization. CAD Computer Aided Design, 2016, 72, 40-51.	2.7	13
54	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

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55	Design and evaluation of reduced marker layouts for hand motion capture. Computer Animation and Virtual Worlds, 2018, 29, e1751.	1.2	11
56	Polygon Laplacian Made Simple. Computer Graphics Forum, 2020, 39, 303-313.	3.0	11
57	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
58	Virtual Reality for Mind and Body: Does the Sense of Embodiment Towards a Virtual Body Affect Physical Body Awareness?. , 2022, , .		10
59	Virtual Human Coherence and Plausibility â€" Towards a Validated Scale. , 2022, , .		9
60	A hardware architecture for surface splatting. , 2007, , .		8
61	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
62	The Diamond Laplace for Polygonal and Polyhedral Meshes. Computer Graphics Forum, 2021, 40, 217-230.	3.0	6
63	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
64	Freeform shape representations for efficient geometry processing. , 0, , .		4
65	GPU-based tolerance volumes for mesh processing. , 0, , .		4
66	A hardware architecture for surface splatting. ACM Transactions on Graphics, 2007, 26, 90.	7.2	4
67	Evolvability as a quality criterion for linear deformation representations in evolutionary optimization. , 2016, , .		4
68	Inside Humans: Creating a Simple Layered Anatomical Model from Human Surface Scans. Frontiers in Virtual Reality, 2021, 2, .	3.7	4
69	Non-negative Kernel Sparse Coding for the Analysis of Motion Data. Lecture Notes in Computer Science, 2016, , 506-514.	1.3	4
70	Constrained Space Deformation for Design Optimization. Procedia Engineering, 2014, 82, 114-126.	1.2	2
71	VR/AR Case Studies. , 2022, , 331-369.		2
72	Preference-guided adaptation of deformation representations for evolutionary design optimization. , 2017, , .		1

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73	Effects of variability in synthetic training data on convolutional neural networks for 3D head reconstruction. , 2017, , .		1
74	Self-Avatars in Virtual Reality: A Study Protocol for Investigating the Impact of the Deliberateness of Choice and the Context-Match. , 2021, , .		1
75	The Intelligent Coaching Space: A Demonstration. Lecture Notes in Computer Science, 2017, , 105-108.	1.3	1