Dinesh Manocha

List of Publications by Year in descending order

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425 papers

17,346 citations

48 h-index

44042

81 g-index

433 all docs

433 docs citations

times ranked

433

7295 citing authors

#	Article	IF	CITATIONS
1	OBBTree., 1996,,.		1,266
2	Reciprocal n-Body Collision Avoidance. Springer Tracts in Advanced Robotics, 2011, , 3-19.	0.3	890
3	Reciprocal Velocity Obstacles for real-time multi-agent navigation. , 2008, , .		847
4	Fast computation of generalized Voronoi diagrams using graphics hardware. , 1999, , .		343
5	The Hybrid Reciprocal Velocity Obstacle. IEEE Transactions on Robotics, 2011, 27, 696-706.	7.3	306
6	FCL: A general purpose library for collision and proximity queries. , 2012, , .		300
7	GPUTeraSort., 2006, , .		274
8	Fast BVH Construction on GPUs. Computer Graphics Forum, 2009, 28, 375-384.	1.8	263
9	TrafficPredict: Trajectory Prediction for Heterogeneous Traffic-Agents. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 6120-6127.	3.6	248
10	Efficient inverse kinematics for general 6R manipulators. IEEE Transactions on Automation Science and Engineering, 1994, 10, 648-657.	2.4	226
11	Visibility culling using hierarchical occlusion maps. , 1997, , .		205
12	ClearPath., 2009,,.		205
13	Directing Crowd Simulations Using Navigation Fields. IEEE Transactions on Visualization and Computer Graphics, 2011, 17, 244-254.	2.9	163
14	Reciprocal collision avoidance with acceleration-velocity obstacles. , 2011, , .		150
15	Interactive navigation of multiple agents in crowded environments. , 2008, , .		146
16	Generalized velocity obstacles. , 2009, , .		144
17	TraPHic: Trajectory Prediction in Dense and Heterogeneous Traffic Using Weighted Interactions. , 2019, , .		144
18	Simulating heterogeneous crowd behaviors using personality trait theory. , 2011, , .		131

#	Article	IF	CITATIONS
19	Parameter estimation and comparative evaluation of crowd simulations. Computer Graphics Forum, 2014, 33, 303-312.	1.8	117
20	Interactive collision detection between deformable models using chromatic decomposition. ACM Transactions on Graphics, 2005, 24, 991-999.	4.9	115
21	M3ER: Multiplicative Multimodal Emotion Recognition using Facial, Textual, and Speech Cues. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 1359-1367.	3.6	115
22	PORCA: Modeling and Planning for Autonomous Driving Among Many Pedestrians. IEEE Robotics and Automation Letters, 2018, 3, 3418-3425.	3.3	112
23	An efficient surface intersection algorithm based on lower-dimensional formulation. ACM Transactions on Graphics, 1997, 16, 74-106.	4.9	111
24	Fast distance queries with rectangular swept sphere volumes. , 0, , .		110
25	DiFi: Fast 3D Distance Field Computation Using Graphics Hardware. Computer Graphics Forum, 2004, 23, 557-566.	1.8	106
26	Memory—A memory model for scientific algorithms on graphics processors. , 2006, , .		104
27	AADS: Augmented autonomous driving simulation using data-driven algorithms. Science Robotics, 2019, 4, .	9.9	103
28	LU-GPU: Efficient Algorithms for Solving Dense Linear Systems on Graphics Hardware., 0,,.		101
29	gProximity: Hierarchical GPUâ€based Operations for Collision and Distance Queries. Computer Graphics Forum, 2010, 29, 419-428.	1.8	99
30	An Efficient Acyclic Contact Planner for Multiped Robots. IEEE Transactions on Robotics, 2018, 34, 586-601.	7.3	99
31	Incremental algorithms for collision detection between polygonal models. IEEE Transactions on Visualization and Computer Graphics, 1997, 3, 51-64.	2.9	98
32	Real-Time Path Planning in Dynamic Virtual Environments Using Multiagent Navigation Graphs. IEEE Transactions on Visualization and Computer Graphics, 2008, 14, 526-538.	2.9	95
33	A statistical similarity measure for aggregate crowd dynamics. ACM Transactions on Graphics, 2012, 31, 1-11.	4.9	94
34	MMR., 1999,,.		93
35	MultiPolynomial Resultant Algorithms. Journal of Symbolic Computation, 1993, 15, 99-122.	0.5	91
36	Accurate Minkowski sum approximation of polyhedral models. Graphical Models, 2006, 68, 343-355.	1.1	91

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37	Forecasting Trajectory and Behavior of Road-Agents Using Spectral Clustering in Graph-LSTMs. IEEE Robotics and Automation Letters, 2020, 5, 4882-4890.	3.3	90
38	EmotiCon: Context-Aware Multimodal Emotion Recognition Using Frege's Principle. , 2020, , .		89
39	Fast and approximate stream mining of quantiles and frequencies using graphics processors., 2005,,.		88
40	Solving systems of polynomial equations. IEEE Computer Graphics and Applications, 1994, 14, 46-55.	1.0	86
41	Real-time navigation of independent agents using adaptive roadmaps. , 2007, , .		86
42	Fast collision detection for deformable models using representative-triangles. , 2008, , .		83
43	HLODs for faster display of large static and dynamic environments. , 2001, , .		78
44	Exact computation of the medial axis of a polyhedron. Computer Aided Geometric Design, 2004, 21, 65-98.	0.5	78
45	Fast GPU-based locality sensitive hashing for k-nearest neighbor computation. , 2011, , .		78
46	Interactive 3D distance field computation using linear factorization., 2006,,.		77
47	Collision-free and smooth trajectory computation in cluttered environments. International Journal of Robotics Research, 2012, 31, 1155-1175.	5 . 8	75
48	Interactive surface decomposition for polyhedral morphing. Visual Computer, 1999, 15, 453-470.	2.5	73
49	RT-DEFORM: Interactive Ray Tracing of Dynamic Scenes using BVHs., 2006,,.		73
50	ICCD: Interactive Continuous Collision Detection between Deformable Models Using Connectivity-Based Culling. IEEE Transactions on Visualization and Computer Graphics, 2009, 15, 544-557.	2.9	73
51	An efficient GPU-based time domain solver for the acoustic wave equation. Applied Acoustics, 2012, 73, 83-94.	1.7	73
52	Accelerated occlusion culling using shadow frusta. , 1997, , .		72
53	Six-Degree-of-Freedom Haptic Rendering Using Incremental and Localized Computations. Presence: Teleoperators and Virtual Environments, 2003, 12, 277-295.	0.3	72
54	Smooth and collision-free navigation for multiple robots under differential-drive constraints. , 2010, , .		72

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55	BRVO: Predicting pedestrian trajectories using velocity-space reasoning. International Journal of Robotics Research, 2015, 34, 201-217.	5.8	71
56	High-order diffraction and diffuse reflections for interactive sound propagation in large environments. ACM Transactions on Graphics, 2014, 33, 1-12.	4.9	70
57	Fast Continuous Collision Detection for Articulated Models. Journal of Computing and Information Science in Engineering, 2005, 5, 126-137.	1.7	69
58	Cache-oblivious mesh layouts. ACM Transactions on Graphics, 2005, 24, 886-893.	4.9	66
59	Collision-streams., 2011,,.		66
60	GPU-based parallel collision detection for fast motion planning. International Journal of Robotics Research, 2012, 31, 187-200.	5.8	66
61	Virtualized Traffic: Reconstructing Traffic Flows from Discrete Spatiotemporal Data. IEEE Transactions on Visualization and Computer Graphics, 2011, 17, 26-37.	2.9	65
62	Interactive simulation of dynamic crowd behaviors using general adaptation syndrome theory. , 2012, , .		65
63	Fast and exact continuous collision detection with Bernstein sign classification. ACM Transactions on Graphics, 2014, 33, 1-8.	4.9	63
64	Algorithm for implicitizing rational parametric surfaces. Computer Aided Geometric Design, 1992, 9, 25-50.	0.5	61
65	Generalized penetration depth computation. CAD Computer Aided Design, 2007, 39, 625-638.	1.4	61
66	AD-Frustum: Adaptive Frustum Tracing for Interactive Sound Propagation. IEEE Transactions on Visualization and Computer Graphics, 2008, 14, 1707-1722.	2.9	61
67	Continuous penalty forces. ACM Transactions on Graphics, 2012, 31, 1-9.	4.9	60
68	LQG-obstacles: Feedback control with collision avoidance for mobile robots with motion and sensing uncertainty. , $2012, \ldots$		59
69	Interactive motion planning using hardware-accelerated computation of generalized Voronoi diagrams. , 0, , .		58
70	Fast continuous collision detection using deforming non-penetration filters. , 2010, , .		58
71	SocioSense: Robot navigation amongst pedestrians with social and psychological constraints. , 2017, , .		57
72	A Voronoi-based hybrid motion planner. , 0, , .		56

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73	Wave-based sound propagation in large open scenes using an equivalent source formulation. ACM Transactions on Graphics, 2013, 32, 1-13.	4.9	55
74	RayCore. ACM Transactions on Graphics, 2014, 33, 1-15.	4.9	55
75	Accurate computation of the medial axis of a polyhedron. , 1999, , .		54
76	An autonomous excavator system for material loading tasks. Science Robotics, 2021, 6, .	9.9	54
77	Fast proximity computation among deformable models using discrete Voronoi diagrams. ACM Transactions on Graphics, 2006, 25, 1144-1153.	4.9	53
78	Real-time Path Planning for Virtual Agents in Dynamic Environments., 2007,,.		53
79	Real-time optimization-based planning in dynamic environments using GPUs. , 2013, , .		53
80	STEP: Spatial Temporal Graph Convolutional Networks for Emotion Perception from Gaits. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 1342-1350.	3.6	53
81	Cache-Efficient Layouts of Bounding Volume Hierarchies. Computer Graphics Forum, 2006, 25, 507-516.	1.8	52
82	3-D Deformable Object Manipulation Using Deep Neural Networks. IEEE Robotics and Automation Letters, 2019, 4, 4255-4261.	3.3	52
83	Algorithmic issues in modeling motion. ACM Computing Surveys, 2002, 34, 550-572.	16.1	51
84	RESound., 2009,,.		51
85	Implicit representation of rational parametric surfaces. Journal of Symbolic Computation, 1992, 13, 485-510.	0.5	50
86	Detecting cusps and inflection points in curves. Computer Aided Geometric Design, 1992, 9, 1-24.	0.5	50
87	Topology preserving surface extraction using adaptive subdivision. Eurographics Symposium on Geometry Processing, 2004, , .	0.0	50
88	Algorithms for intersecting parametric and algebraic curves I. ACM Transactions on Graphics, 1994, 13, 73-100.	4.9	49
89	Least-effort trajectories lead to emergent crowd behaviors. Physical Review E, 2012, 85, 016110.	0.8	49
90	Efficient rendering of trimmed nurbs surfaces. CAD Computer Aided Design, 1995, 27, 509-521.	1.4	48

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91	Independent navigation of multiple mobile robots with hybrid reciprocal velocity obstacles. , 2009, , .		48
92	MCCD: Multi-core collision detection between deformable models using front-based decomposition. Graphical Models, 2010, 72, 7-23.	1.1	47
93	VolCCD. ACM Transactions on Graphics, 2011, 30, 1-15.	4.9	47
94	Right of way. Visual Computer, 2013, 29, 1277-1292.	2.5	47
95	Quick-VDR: Out-of-Core View-Dependent Rendering of Gigantic Models. IEEE Transactions on Visualization and Computer Graphics, 2005, 11, 369-382.	2.9	46
96	Fast interference detection between geometric models. Visual Computer, 1995, 11, 542-561.	2.5	45
97	Model Synthesis: A General Procedural Modeling Algorithm. IEEE Transactions on Visualization and Computer Graphics, 2011, 17, 715-728.	2.9	45
98	I-Planner: Intention-aware motion planning using learning-based human motion prediction. International Journal of Robotics Research, 2019, 38, 23-39.	5.8	45
99	Six degree-of-freedom haptic display of polygonal models. , 0, , .		44
100	Interactive visibility culling in complex environments using occlusion-switches., 2003,,.		44
101	R-LODs: fast LOD-based ray tracing of massive models. Visual Computer, 2006, 22, 772-784.	2.5	44
102	Interactive sound rendering in complex and dynamic scenes using frustum tracing. IEEE Transactions on Visualization and Computer Graphics, 2007, 13, 1672-1679.	2.9	44
103	GLMP- realtime pedestrian path prediction using global and local movement patterns. , 2016, , .		44
104	Frozone: Freezing-Free, Pedestrian-Friendly Navigation in Human Crowds. IEEE Robotics and Automation Letters, 2020, 5, 4352-4359.	3.3	44
105	Algorithms for Intersecting Parametric and Algebraic Curves II: Multiple Intersections. Graphical Models, 1995, 57, 81-100.	1.4	43
106	Sounding liquids. ACM Transactions on Graphics, 2010, 29, 1-13.	4.9	43
107	Path Planning among Movable Obstacles: A Probabilistically Complete Approach. Springer Tracts in Advanced Robotics, 2009, , 599-614.	0.3	43
108	Rapid and Accurate Contact Determination between Spline Models using ShellTrees. Computer Graphics Forum, 1998, 17, 315-326.	1.8	42

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109	Incremental penetration depth estimation between convex polytopes using dual-space expansion. IEEE Transactions on Visualization and Computer Graphics, 2004, 10, 152-163.	2.9	42
110	Homotopy-preserving medial axis simplification., 2005,,.		42
111	Wave-ray coupling for interactive sound propagation in large complex scenes. ACM Transactions on Graphics, 2013, 32, 1-11.	4.9	42
112	Generating Grasp Poses for a High-DOF Gripper Using Neural Networks., 2019,,.		42
113	Efficient Computation of A Simplified Medial Axis. Journal of Computing and Information Science in Engineering, 2003, 3, 274-284.	1.7	41
114	Quick-VDR: interactive view-dependent rendering of massive models. , 0, , .		41
115	Multi-robot coordination using generalized social potential fields. , 2009, , .		41
116	GPU-based offset surface computation using point samples. CAD Computer Aided Design, 2013, 45, 321-330.	1.4	41
117	WAVE: Interactive Wave-based Sound Propagation for Virtual Environments. IEEE Transactions on Visualization and Computer Graphics, 2015, 21, 434-442.	2.9	41
118	DEEP: dual-space expansion for estimating penetration depth between convex polytopes. , 0, , .		40
119	Fast swept volume approximation of complex polyhedral models. , 2003, , .		40
120	Continuous model synthesis. ACM Transactions on Graphics, 2008, 27, 1-7.	4.9	40
121	Memory-Scalable GPU Spatial Hierarchy Construction. IEEE Transactions on Visualization and Computer Graphics, 2011, 17, 466-474.	2.9	40
122	Fast probabilistic collision checking for sampling-based motion planning using locality-sensitive hashing. International Journal of Robotics Research, 2016, 35, 1477-1496.	5.8	40
123	DenseCAvoid: Real-time Navigation in Dense Crowds using Anticipatory Behaviors. , 2020, , .		40
124	Interactive continuous collision detection between deformable models using connectivity-based culling. , 2008, , .		39
125	Guided Multiview Ray Tracing for Fast Auralization. IEEE Transactions on Visualization and Computer Graphics, 2012, 18, 1797-1810.	2.9	39
126	Fast swept volume approximation of complex polyhedral models. CAD Computer Aided Design, 2004, 36, 1013-1027.	1.4	38

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127	General-purpose computations using graphics processors. Computer, 2005, 38, 85-88.	1.2	38
128	Cache-efficient numerical algorithms using graphics hardware. Parallel Computing, 2007, 33, 663-684.	1.3	38
129	SGaze: A Data-Driven Eye-Head Coordination Model for Realtime Gaze Prediction. IEEE Transactions on Visualization and Computer Graphics, 2019, 25, 2002-2010.	2.9	38
130	DCAD: Decentralized Collision Avoidance With Dynamics Constraints for Agile Quadrotor Swarms. IEEE Robotics and Automation Letters, 2020, 5, 1191-1198.	3.3	38
131	DGaze: CNN-Based Gaze Prediction in Dynamic Scenes. IEEE Transactions on Visualization and Computer Graphics, 2020, 26, 1902-1911.	2.9	38
132	ARC: Alignment-based Redirection Controller for Redirected Walking in Complex Environments. IEEE Transactions on Visualization and Computer Graphics, 2021, 27, 2535-2544.	2.9	38
133	Spoken language interaction with robots: Recommendations for future research. Computer Speech and Language, 2022, 71, 101255.	2.9	38
134	COVID surveillance robot: Monitoring social distancing constraints in indoor scenarios. PLoS ONE, 2021, 16, e0259713.	1.1	38
135	PRVO: Probabilistic Reciprocal Velocity Obstacle for multi robot navigation under uncertainty. , 2017, , .		37
136	An efficient retraction-based RRT planner. , 2008, , .		36
137	Virtual Tawaf: A case study in simulating the behavior of dense, heterogeneous crowds. , 2011, , .		36
138	Efficient Configuration Space Construction and Optimization for Motion Planning. Engineering, 2015, 1, 046-057.	3.2	36
139	CAMA: Contactâ€Aware Matrix Assembly with Unified Collision Handling for GPUâ€based Cloth Simulation. Computer Graphics Forum, 2016, 35, 511-521.	1.8	36
140	Efficient and exact manipulation of algebraic points and curves. CAD Computer Aided Design, 2000, 32, 649-662.	1.4	35
141	Real-time reciprocal collision avoidance with elliptical agents. , 2016, , .		35
142	Getting Robots Unfrozen and Unlost in Dense Pedestrian Crowds. IEEE Robotics and Automation Letters, 2019, 4, 1178-1185.	3.3	35
143	Text2Gestures: A Transformer-Based Network for Generating Emotive Body Gestures for Virtual Agents. , 2021, , .		35
144	Source and Listener Directivity for Interactive Wave-Based Sound Propagation. IEEE Transactions on Visualization and Computer Graphics, 2014, 20, 495-503.	2.9	34

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145	Logarithmic perspective shadow maps. ACM Transactions on Graphics, 2008, 27, 1-32.	4.9	33
146	Interactive Navigation of Heterogeneous Agents Using Adaptive Roadmaps. IEEE Transactions on Visualization and Computer Graphics, 2009, 15, 34-48.	2.9	33
147	LSwarm: Efficient Collision Avoidance for Large Swarms With Coverage Constraints in Complex Urban Scenes. IEEE Robotics and Automation Letters, 2019, 4, 3940-3947.	3.3	33
148	RobustTP: End-to-End Trajectory Prediction for Heterogeneous Road-Agents in Dense Traffic with Noisy Sensor Inputs. , 2019 , , .		33
149	Bi-level Locality Sensitive Hashing for k-Nearest Neighbor Computation. , 2012, , .		32
150	Velocity-based modeling of physical interactions in multi-agent simulations. , 2013, , .		32
151	AutonoVi: Autonomous vehicle planning with dynamic maneuvers and traffic constraints., 2017,,.		32
152	GA-Nav: Efficient Terrain Segmentation for Robot Navigation in Unstructured Outdoor Environments. IEEE Robotics and Automation Letters, 2022, 7, 8138-8145.	3.3	32
153	A NEW APPROACH FOR SURFACE INTERSECTION. International Journal of Computational Geometry and Applications, 1991, 01, 491-516.	0.3	31
154	Feature-sensitive subdivision and isosurface reconstruction., 0,,.		31
155	Fast collision detection between massive models using dynamic simplification. Eurographics Symposium on Geometry Processing, 2004, , .	0.0	31
156	Reactive deformation roadmaps: motion planning of multiple robots in dynamic environments. , 2007, ,		31
157	Autonomous Social Distancing in Urban Environments Using a Quadruped Robot. IEEE Access, 2021, 9, 8392-8403.	2.6	31
158	ProxEmo: Gait-based Emotion Learning and Multi-view Proxemic Fusion for Socially-Aware Robot Navigation. , 2020, , .		31
159	Interactive display of large NURBS models. IEEE Transactions on Visualization and Computer Graphics, 1996, 2, 323-336.	2.9	30
160	Feature-based surface decomposition for correspondence and morphing between polyhedra. , 0, , .		30
161	ESOLID—a system for exact boundary evaluation. CAD Computer Aided Design, 2004, 36, 175-193.	1.4	30
162	GPU accelerated convex hull computation. Computers and Graphics, 2012, 36, 498-506.	1.4	30

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163	Heter-Sim: Heterogeneous Multi-Agent Systems Simulation by Interactive Data-Driven Optimization. IEEE Transactions on Visualization and Computer Graphics, 2021, 27, 1953-1966.	2.9	30
164	Efficient Algorithms for MultiPolynomial Resultant. Computer Journal, 1993, 36, 485-496.	1.5	29
165	Multi-core collision detection between deformable models. , 2009, , .		29
166	A GPUâ€based Streaming Algorithm for Highâ€Resolution Cloth Simulation. Computer Graphics Forum, 2013, 32, 21-30.	1.8	29
167	ACSEE: Antagonistic Crowd Simulation Model With Emotional Contagion and Evolutionary Game Theory. IEEE Transactions on Affective Computing, 2022, 13, 729-745.	5.7	29
168	Partitioning and Handling Massive Models for Interactive Collision Detection. Computer Graphics Forum, 1999, 18, 319-330.	1.8	28
169	Fast and reliable collision culling using graphics hardware. , 2004, , .		28
170	Improved Dynamic Cardiac Phantom Based on 4D NURBS and Tagged MRI. IEEE Transactions on Nuclear Science, 2009, 56, 2728-2738.	1.2	28
171	Real-time path planning for virtual agents in dynamic environments. , 2008, , .		27
172	Interactive sound propagation with bidirectional path tracing. ACM Transactions on Graphics, 2016, 35, 1-11.	4.9	27
173	Fast continuous collision detection among deformable models using graphics processors. Computers and Graphics, 2007, 31, 5-14.	1.4	26
174	Fast and Bounded Probabilistic Collision Detection for High-DOF Trajectory Planning in Dynamic Environments. IEEE Transactions on Automation Science and Engineering, 2018, 15, 980-991.	3.4	26
175	Cloth Manipulation Using Random-Forest-Based Imitation Learning. IEEE Robotics and Automation Letters, 2019, 4, 2086-2093.	3.3	26
176	Generating Pedestrian Trajectories Consistent with the Fundamental Diagram Based on Physiological and Psychological Factors. PLoS ONE, 2015, 10, e0117856.	1.1	26
177	MAPC., 1999,,.		25
178	ReduceM: Interactive and Memory Efficient Ray Tracing of Large Models. Computer Graphics Forum, 2008, 27, 1313-1321.	1.8	25
179	Efficient and accurate B-rep generation of low degree sculptured solids using exact arithmetic: $l\hat{a}\in$ "representations. Computer Aided Geometric Design, 1999, 16, 841-859.	0.5	24
180	Online parameter learning for data-driven crowd simulation and content generation. Computers and Graphics, 2016, 55, 68-79.	1.4	24

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181	Redirected Walking in Static and Dynamic Scenes Using Visibility Polygons. IEEE Transactions on Visualization and Computer Graphics, 2021, 27, 4267-4277.	2.9	24
182	Six-degree-of-freedom haptic display using localized contact computations. , 0, , .		23
183	FastV: Fromâ€point Visibility Culling on Complex Models. Computer Graphics Forum, 2009, 28, 1237-1246.	1.8	23
184	Real-time footstep planning for humanoid robots among 3D obstacles using a hybrid bounding box. , 2012, , .		23
185	Real-time collision detection and distance computation on point cloud sensor data. , 2013, , .		23
186	Diffraction Kernels for Interactive Sound Propagation in Dynamic Environments. IEEE Transactions on Visualization and Computer Graphics, 2018, 24, 1613-1622.	2.9	23
187	Manipulating Highly Deformable Materials Using a Visual Feedback Dictionary. , 2018, , .		23
188	Ray tracing dynamic scenes using selective restructuring., 2007,,.		23
189	Efficient and accurate B-rep generation of low degree sculptured solids using exact arithmetic: Ilâ€"computation. Computer Aided Geometric Design, 1999, 16, 861-882.	0.5	22
190	Out-of-core rendering of massive geometric environments. , 0, , .		22
191	D-Plan: Efficient Collision-Free Path Computation for Part Removal and Disassembly. Computer-Aided Design and Applications, 2008, 5, 774-786.	0.4	22
192	Interactive sound propagation using compact acoustic transfer operators. ACM Transactions on Graphics, 2012, 31, 1-12.	4.9	22
193	P-HRTF: Efficient personalized HRTF computation for high-fidelity spatial sound. , 2014, , .		22
194	Motion recognition of self and others on realistic 3D avatars. Computer Animation and Virtual Worlds, 2017, 28, e1762.	0.7	22
195	Emotion-Based Crowd Simulation Model Based on Physical Strength Consumption for Emergency Scenarios. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 6977-6991.	4.7	22
196	Scene-Aware Audio Rendering via Deep Acoustic Analysis. IEEE Transactions on Visualization and Computer Graphics, 2020, 26, 1991-2001.	2.9	22
197	DWA-RL: Dynamically Feasible Deep Reinforcement Learning Policy for Robot Navigation among Mobile Obstacles., 2021,,.		22
198	Constraint-Based Motion Planning of Deformable Robots., 0, , .		21

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199	Fast and reliable collision culling using graphics hardware. IEEE Transactions on Visualization and Computer Graphics, 2006, 12, 143-154.	2.9	21
200	Towards Target-Driven Visual Navigation in Indoor Scenes via Generative Imitation Learning. IEEE Robotics and Automation Letters, 2021, 6, 175-182.	3.3	21
201	Improved Speech Emotion Recognition using Transfer Learning and Spectrogram Augmentation. , 2021, , .		21
202	Take an Emotion Walk: Perceiving Emotions from Gaits Using Hierarchical Attention Pooling and Affective Mapping. Lecture Notes in Computer Science, 2020, , 145-163.	1.0	21
203	Algebraic pruning: a fast technique for curve and surface intersection. Computer Aided Geometric Design, 1997, 14, 823-845.	0.5	20
204	BOOLE: A BOUNDARY EVALUATION SYSTEM FOR BOOLEAN COMBINATIONS OF SCULPTURED SOLIDS. International Journal of Computational Geometry and Applications, 2001, 11, 105-144.	0.3	20
205	C-DIST., 2007,,.		20
206	Adjacency-based culling for continuous collision detection. Visual Computer, 2008, 24, 545-553.	2.5	20
207	On Computing Reliable Optimal Grasping Forces. IEEE Transactions on Robotics, 2012, 28, 619-633.	7.3	20
208	Exemplar-AMMs: Recognizing Crowd Movements From Pedestrian Trajectories. IEEE Transactions on Multimedia, 2016, 18, 2398-2406.	5.2	20
209	EVA: Generating Emotional Behavior of Virtual Agents using Expressive Features of Gait and Gaze. , 2019, , .		20
210	Pedestrian Dominance Modeling for Socially-Aware Robot Navigation., 2019,,.		20
211	Solving algebraic systems using matrix computations. SIGSAM Bulletin: A Quarterly Publication of the Special Interest Group on Symbolic & Algebraic Manipulation, 1996, 30, 4-21.	0.3	19
212	Hierarchical back-face computation. Computers and Graphics, 1999, 23, 681-692.	1.4	19
213	Interactive shadow generation in complex environments. , 2003, , .		19
214	Quick-VDR. , 2004, , .		19
215	Direct-to-Indirect Acoustic Radiance Transfer. IEEE Transactions on Visualization and Computer Graphics, 2012, 18, 261-269.	2.9	19
216	Proxemic group behaviors using reciprocal multi-agent navigation. , 2016, , .		19

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217	Efficient BVHâ€based Collision Detection Scheme with Ordering and Restructuring. Computer Graphics Forum, 2018, 37, 227-237.	1.8	19
218	Efficient and accurate interference detection for polynomial deformation. , 0, , .		18
219	C ² A: Controlled conservative advancement for continuous collision detection of polygonal models., 2009,,.		18
220	Navigating multiple simple-airplanes in 3D workspace. , 2010, , .		18
221	CMetric: A Driving Behavior Measure using Centrality Functions. , 2020, , .		18
222	TERP: Reliable Planning in Uneven Outdoor Environments using Deep Reinforcement Learning., 2022,,.		18
223	Interactive and continuous collision detection for avatars in virtual environments., 0,,.		17
224	Cache-oblivious mesh layouts. , 2005, , .		17
225	Efficient Motion Planning of Highly Articulated Chains using Physics-based Sampling. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	17
226	Ray-Strips: A Compact Mesh Representation for Interactive Ray Tracing. , 2007, , .		17
227	A walking pattern generator for biped robots on uneven terrains. , 2010, , .		17
228	Acoustic pulse propagation in an urban environment using a three-dimensional numerical simulation. Journal of the Acoustical Society of America, 2014, 135, 3231-3242.	0.5	17
229	A parallel time-domain wave simulator based on rectangular decomposition for distributed memory architectures. Applied Acoustics, 2015, 97, 104-114.	1.7	17
230	F2FCrowds: Planning Agent Movements to Enable Face-to-Face Interactions. Presence: Teleoperators and Virtual Environments, 2017, 26, 228-246.	0.3	17
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