Craig Gotsman

List of Publications by Year
in descending order

122 papers	5,029 citations	117625 34 h-index	128289 60 g-index
126 all docs	126 docs citations	126 times ranked	2192 citing authors

#	ARTICLE	IF	CITATIONS
1	Spectral compression of mesh geometry. , 2000, , .		447
2	A Local/Global Approach to Mesh Parameterization. Computer Graphics Forum, 2008, 27, 1495-1504.	3.0	244
3	Mesh-based inverse kinematics. ACM Transactions on Graphics, 2005, 24, 488-495.	7.2	192
4	Compression of soft-body animation sequences. Computers and Graphics, 2004, 28, 25-34.	2.5	187
5	High-quality passive facial performance capture using anchor frames. ACM Transactions on Graphics, 2011, 30, 1-10.	7.2	181
6	Fundamentals of spherical parameterization for 3D meshes. ACM Transactions on Graphics, 2003, 22, 358-363.	7.2	178
7	On the metric properties of discrete space-filling curves. IEEE Transactions on Image Processing, 1996, 5, 794-797.	9.8	150
8	Recent Advances in Compression of 3D Meshes. , 2005, , 3-26.		143
9	Recent Advances in Remeshing of Surfaces. Mathematics and Visualization, 2008, , 53-82.	0.6	129
10	Conformal Flattening by Curvature Prescription and Metric Scaling. Computer Graphics Forum, 2008, 27, 449-458.	3.0	128
11	Contextâ€Aware Skeletal Shape Deformation. Computer Graphics Forum, 2007, 26, 265-274.	3.0	117
12	Variational harmonic maps for space deformation. ACM Transactions on Graphics, 2009, 28, 1-11.	7.2	101
13	Energyâ€Based Image Deformation. Computer Graphics Forum, 2009, 28, 1257-1268.	3.0	93
14	Fundamentals of spherical parameterization for 3D meshes. , 2003, , .		89
15	Articulated Object Reconstruction and Markerless Motion Capture from Depth Video. Computer Graphics Forum, 2008, 27, 399-408.	3.0	87
16	Discrete one-forms on meshes and applications to 3D mesh parameterization. Computer Aided Geometric Design, 2006, 23, 83-112.	1.2	83
17	Gaze correction for home video conferencing. ACM Transactions on Graphics, 2012, 31, 1-6.	7.2	83
18	Guaranteed intersection-free polygon morphing. Computers and Graphics, 2001, 25, 67-75.	2.5	82

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19	Complex Barycentric Coordinates with Applications to Planar Shape Deformation. Computer Graphics Forum, 2009, 28, 587-597.	3.0	79
20	Matchmaker. ACM Transactions on Graphics, 2003, 22, 326-333.	7.2	76
21	Universal Rendering Sequences for Transparent Vertex Caching of Progressive Meshes. Computer Graphics Forum, 2002, 21, 137-149.	3.0	75
22	Whatâ€™s in an image?. Visual Computer, 2005, 21, 840-847.	3.5	75
23	How to morph tilings injectively. Journal of Computational and Applied Mathematics, 1999, 101, 117-129.	2.0	67
24	Time/space tradeoffs for polygon mesh rendering. ACM Transactions on Graphics, 1996, 15, 141-152.	7.2	64
25	High-quality passive facial performance capture using anchor frames. , 2011, , .		63
26	Mesh-based inverse kinematics. , 2005, , .		62
27	Simplification and Compression of 3D Meshes. Mathematics and Visualization, 2002, , 319-361.	0.6	59
28	Smooth Rotation Enhanced As-Rigid-As-Possible Mesh Animation. IEEE Transactions on Visualization and Computer Graphics, 2015, 21, 264-277.	4.4	56
29	Antifaces: a novel, fast method for image detection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2001, 23, 747-761.	13.9	54
30	Fitting curves and surfaces with constrained implicit polynomials. IEEE Transactions on Pattern Analysis and Machine Intelligence, 1999, 21, 31-41.	13.9	53
31	Controllable conformal maps for shape deformation and interpolation. ACM Transactions on Graphics, 2010, 29, 1-11.	7.2	52
32	Matchmaker. , 2003, , .		49
33	Robust Spherical Parameterization of Triangular Meshes. Computing (Vienna/New York), 2004, 72, 185-193.	4.8	47
34	Spatial deformation transfer. , 2009, , .		47
35	An as-rigid-as-possible approach to sensor network localization. ACM Transactions on Sensor Networks, 2010, 6, 1-21.	3.6	47
36	Controllable morphing of compatible planar triangulations. ACM Transactions on Graphics, 2001, 20, 203-231.	7.2	45

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37	A multi-resolution approach to heat kernels on discrete surfaces. ACM Transactions on Graphics, 2010, 29, 1-10.	7.2	45
38	On the optimality of spectral compression of mesh data. ACM Transactions on Graphics, 2005, 24, 60-80.	7.2	44
39	Distortionâ€Free Steganography for Polygonal Meshes. Computer Graphics Forum, 2008, 27, 637-642.	3.0	44
40	Spectral properties of threshold functions. Combinatorica, 1994, 14, 35-50.	1.2	40
41	Texture Mapping with Hard Constraints. Computer Graphics Forum, 2001, 20, 95-104.	3.0	40
42	Meshing genus-1 point clouds using discrete one-forms. Computers and Graphics, 2006, 30, 917-926.	2.5	38
43	INTRINSIC MORPHING OF COMPATIBLE TRIANGULATIONS. International Journal of Shape Modeling, 2003, 09, 191-201.	0.2	37
44	Practical spherical embedding of manifold triangle meshes. , 0, , .		36
45	Biharmonic Coordinates. Computer Graphics Forum, 2012, 31, 2409-2422.	3.0	34
46	Capacity-Constrained Delaunay Triangulation for point distributions. Computers and Graphics, 2011, 35, 510-516.	2.5	32
47	Optimized occlusion culling using five-dimensional subdivision. Computers and Graphics, 1999, 23, 645-654.	2.5	31
48	Enhancement by image-dependent warping. IEEE Transactions on Image Processing, 1999, 8, 1063-1074.	9.8	29
49	Content-aware image resizing by quadratic programming. , 2010, , .		29
50	Blue noise sampling of surfaces. Computers and Graphics, 2012, 36, 232-240.	2.5	27
51	A Complex View of Barycentric Mappings. Computer Graphics Forum, 2011, 30, 1533-1542.	3.0	26
52	Optimized compression of triangle mesh geometry using prediction trees. , 0, , .		25
53	Embedding a triangular graph within a given boundary. Computer Aided Geometric Design, 2011, 28, 349-356.	1.2	25
54	Output-SensitiveVisibility Algorithms for Dynamic Scenes with Applications to Virtual Reality. Computer Graphics Forum, 1996, 15, 249-258.	3.0	24

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55	Distributed computation of virtual coordinates. , 2007, , .		24
56	On the Computation of Null Spaces of Sparse Rectangular Matrices. SIAM Journal on Matrix Analysis and Applications, 2008, 30, 445-463.	1.4	24
57	Mesh reconstruction by meshless denoising and parameterization. Computers and Graphics, 2010, 34, 198-208.	2.5	24
58	Interactive Planarization and Optimization of 3D Meshes. Computer Graphics Forum, 2013, 32, 152-163.	3.0	23
59	Efficient compression and rendering of multi-resolution meshes. , 0, , .		22
60	Single breath-hold 3D measurement of left atrial volume using compressed sensing cardiovascular magnetic resonance and a non-model-based reconstruction approach. Journal of Cardiovascular Magnetic Resonance, 2015, 17, 47.	3.3	22
61	Online reconstruction of 3D objects from arbitrary cross-sections. ACM Transactions on Graphics, 2011, 30, 1-11.	7.2	20
62	Distributed Graph Layout for Sensor Networks. Journal of Graph Algorithms and Applications, 2005, 9, 327-346.	0.4	20
63	The equivalence of two problems on the cube. Journal of Combinatorial Theory - Series A, 1992, 61, 142-146.	0.8	19
64	Halftoning of image sequences. Visual Computer, 1993, 9, 255-266.	3.5	19
65	Dynamic color quantization of video sequences. IEEE Transactions on Visualization and Computer Graphics, 1995, 1, 274-286.	4.4	17
66	On the Optimality of Valence-based Connectivity Coding. Computer Graphics Forum, 2003, 22, 99-102.	3.0	17
67	Parallel Progressive Ray-tracing. Computer Graphics Forum, 1997, 16, 43-55.	3.0	16
68	Dynamic scene occlusion culling. IEEE Transactions on Visualization and Computer Graphics, 1999, 5, 13-29.	4.4	16
69	Efficient coding of non-triangular mesh connectivity. , 0, , .		16
70	Efficient Coding of Nontriangular Mesh Connectivity. Graphical Models, 2001, 63, 263-275.	2.4	16
71	Visualization of large terrains in resource-limited computing environments. , 0, , .		15
72	Modeling and Rendering Escherâ€Like Impossible Scenes. Computer Graphics Forum, 1999, 18, 173-179.	3.0	15

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73	Constant-Time Filtering by Singular Value Decomposition+. Computer Graphics Forum, 1994, 13, 153-163.	3.0	14
74	On graph partitioning, spectral analysis, and digital mesh processing. , 0, , .		14
75	VIRTUAL WOODWORK: MAKING TOYS FROM GEOMETRIC MODELS. International Journal of Shape Modeling, 2004, 10, 1-29.	0.2	14
76	Variational harmonic maps for space deformation. , 2009, , .		14
77	ArtiSketch: A System for Articulated Sketch Modeling. Computer Graphics Forum, 2013, 32, 235-244.	3.0	14
78	Photorealistic terrain imaging and flight simulation. IEEE Computer Graphics and Applications, 1994, 14, 10-12.	1.2	13
79	A spectral characterization of the Delaunay triangulation. Computer Aided Geometric Design, 2010, 27, 295-300.	1.2	13
80	High quality compatible triangulations. Engineering With Computers, 2003, -1, 1-1.	6.1	10
81	On the metric properties of discrete space-filling curves. , 0, , .		9
82	Euclidean Voronoi labelling on the multidimensional grid. Pattern Recognition Letters, 1995, 16, 409-415.	4.2	9
83	Geometric Message-Filtering Protocols for Distributed Multiagent Environments. Presence: Teleoperators and Virtual Environments, 2004, 13, 279-295.	0.6	9
84	Free-boundary linear parameterization of 3D meshes in the presence of constraints. , 0, , .		9
85	D-Snake: Image Registration by As-Similar-As-Possible Template Deformation. IEEE Transactions on Visualization and Computer Graphics, 2013, 19, 331-343.	4.4	9
86	Efficient Path Generation with Reduced Coordinates. Computer Graphics Forum, 2018, 37, 37-48.	3.0	9
87	Algorithms for rendering realistic terrain image sequences and their parellel implementation. Visual Computer, 1995, 11, 455-464.	3.5	8
88	Cycle bases of graphs and sampled manifolds. Computer Aided Geometric Design, 2007, 24, 464-480.	1.2	8
89	Paper-craft from 3D polygonal models using generalized cylinders. Computer Aided Geometric Design, 2008, 25, 576-591.	1.2	8
90	Parallel Blueâ€noise Sampling by Constrained Farthest Point Optimization. Computer Graphics Forum, 2012, 31, 1775-1785.	3.0	8

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91	Reduced Depth and Visual Hulls of Complex 3D Scenes. Computer Graphics Forum, 2008, 27, 175-182.	3.0	7
92	A cluster detection algorithm based on percolation theory. Pattern Recognition Letters, 1991, 12, 199-202.	4.2	6
93	Mesh massage. Visual Computer, 2008, 24, 775-785.	3.5	6
94	On pseudo-harmonic barycentric coordinates. Computer Aided Geometric Design, 2016, 44, 15-35.	1.2	6
95	Path planning with divergence-based distance functions. Computer Aided Geometric Design, 2018, 66, 52-74.	1.2	6
96	Morphing stick figures using optimized compatible triangulations. , 0, , .		5
97	Distributed computation of virtual coordinates for greedy routing in sensor networks. Discrete Applied Mathematics, 2011, 159, 544-560.	0.9	5
98	On Linear Spaces of Polyhedral Meshes. IEEE Transactions on Visualization and Computer Graphics, 2015, 21, 652-662.	4.4	5
99	Generalized Asâ€Similarâ€Asâ€Possible Warping with Applications in Digital Photography. Computer Graphics Forum, 2016, 35, 81-92.	3.0	5
100	Complex Transfinite Barycentric Mappings with Similarity Kernels. Computer Graphics Forum, 2016, 35, 41-53.	3.0	5
101	Connectivity and dynamics for random subgraphs of the directed cube. Israel Journal of Mathematics, 1993, 83, 321-328.	0.8	4
102	RECOGNITION OF AFFINE TRANSFORMED PLANAR CURVES BY EXTREMAL GEOMETRIC PROPERTIES. International Journal of Computational Geometry and Applications, 1993, 03, 183-202.	0.5	4
103	Interactive-Rate Animation Generation by Parallel Progressive Ray-Tracing on Distributed-Memory Machines. Journal of Parallel and Distributed Computing, 2000, 60, 1074-1102.	4.1	4
104	Optimized triangle mesh compression using prediction trees. , 0, , .		4
105	3D Surface Reconstruction Using a Generalized Distance Function. Computer Graphics Forum, 2010, 29, 2479-2491.	3.0	4
106	On the most robust affine basis. Pattern Recognition Letters, 1993, 14, 647-650.	4.2	3
107	Parallel progressive rendering of animation sequences at interactive rates on distributed-memory machines. , 1997, , .		3
108	GPU-assisted Z-field simplification. , 0, , .		3

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109	On the Algorithmic Design of Architectural Configurations. Environment and Planning B: Planning and Design, 2006, 33, 131-140.	1.7	3
110	A DIRECT-type global optimization algorithm for image registration. Journal of Global Optimization, 2021, 79, 431-445.	1.8	3
111	Approximating Planar Conformal Maps Using Regular Polygonal Meshes. Computer Graphics Forum, 2017, 36, 629-642.	3.0	2
112	Anti-Faces for Detection. Lecture Notes in Computer Science, 2000, , 134-148.	1.3	2
113	Approximation of Smooth Surfaces and Adaptive Sampling by Piecewise-linear Interpolants. , 1995, , 17-27.		2
114	Acquisition and mosaicing of low–contrast background radiometric images for scene simulation. Optical Engineering, 1996, 35, 2583.	1.0	1
115	Parallel progressive rendering of animation sequences at interactive rates on distributed-memory machines. , 0, , .		1
116	Global optimization for image registration. AIP Conference Proceedings, 2019, , .	0.4	1
117	Left atrial adaptation in ischemic heart disease: insights from a cardiovascular magnetic resonance study. International Journal of Cardiovascular Imaging, 2022, , 1.	1.5	1
118	A note on functions governed by Walsh expressions. IEEE Transactions on Information Theory, 1991, 37, 694-695.	2.4	0
119	Geometry processing - a personal perspective. , 0, , .		0
120	What&#146;s in a Mesh? A Survey of 3D Mesh Representation Schemes. , 0, , .		0
121	On Landmark Distances in Polygons. Computer Graphics Forum, 2021, 40, 275-287.	3.0	0
122	Algorithms for rendering realistic terrain image sequences and their parallel implementation. Visual Computer, 1995, 11, 455-464.	3.5	0