

Jack Scott Snoeyink

List of Publications by Year in descending order

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104
papers

9,103
citations

236612

25
h-index

60497

81
g-index

110
all docs

110
docs citations

110
times ranked

14089
citing authors

#	ARTICLE	IF	CITATIONS
1	MolProbity: all-atom contacts and structure validation for proteins and nucleic acids. <i>Nucleic Acids Research</i> , 2007, 35, W375-W383.	6.5	3,443
2	MolProbity: More and better reference data for improved all-atom structure validation. <i>Protein Science</i> , 2018, 27, 293-315.	3.1	2,776
3	Computing contour trees in all dimensions. <i>Computational Geometry: Theory and Applications</i> , 2003, 24, 75-94.	0.3	345
4	Combined Covalent-Electrostatic Model of Hydrogen Bonding Improves Structure Prediction with Rosetta. <i>Journal of Chemical Theory and Computation</i> , 2015, 11, 609-622.	2.3	204
5	Scientific Benchmarks for Guiding Macromolecular Energy Function Improvement. <i>Methods in Enzymology</i> , 2013, 523, 109-143.	0.4	195
6	Computing minimum length paths of a given homotopy class. <i>Computational Geometry: Theory and Applications</i> , 1994, 4, 63-97.	0.3	148
7	Face fixer. , 2000, , .		85
8	APPROXIMATING POLYGONS AND SUBDIVISIONS WITH MINIMUM-LINK PATHS. <i>International Journal of Computational Geometry and Applications</i> , 1993, 03, 383-415.	0.3	82
9	Flexible isosurfaces: Simplifying and displaying scalar topology using the contour tree. <i>Computational Geometry: Theory and Applications</i> , 2010, 43, 42-58.	0.3	82
10	Streaming computation of Delaunay triangulations. <i>ACM Transactions on Graphics</i> , 2006, 25, 1049-1056.	4.9	81
11	Mining protein family specific residue packing patterns from protein structure graphs. , 2004, , .		80
12	Lossless compression of predicted floating-point geometry. <i>CAD Computer Aided Design</i> , 2005, 37, 869-877.	1.4	74
13	Comparing Graph Representations of Protein Structure for Mining Family-Specific Residue-Based Packing Motifs. <i>Journal of Computational Biology</i> , 2005, 12, 657-671.	0.8	67
14	Implicitly representing arrangements of lines or segments. <i>Discrete and Computational Geometry</i> , 1989, 4, 433-466.	0.4	51
15	Generating random polygons with given vertices. <i>Computational Geometry: Theory and Applications</i> , 1996, 6, 277-290.	0.3	51
16	Algorithmic issues in modeling motion. <i>ACM Computing Surveys</i> , 2002, 34, 550-572.	16.1	51
17	Artifacts caused by simplicial subdivision. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2006, 12, 231-242.	2.9	51
18	Time-varying Reeb graphs for continuous space-time data. <i>Computational Geometry: Theory and Applications</i> , 2008, 41, 149-166.	0.3	48

#	ARTICLE	IF	CITATIONS
19	Counting and cutting cycles of lines and rods in space. Computational Geometry: Theory and Applications, 1992, 1, 305-323.	0.3	47
20	Ununfoldable polyhedra with convex faces. Computational Geometry: Theory and Applications, 2003, 24, 51-62.	0.3	44
21	Computing a Face in an Arrangement of Line Segments and Related Problems. SIAM Journal on Computing, 1993, 22, 1286-1302.	0.8	43
22	Structure-based function inference using protein family-specific fingerprints. Protein Science, 2006, 15, 1537-1543.	3.1	39
23	ON THE TIME BOUND FOR CONVEX DECOMPOSITION OF SIMPLE POLYGONS. International Journal of Computational Geometry and Applications, 2002, 12, 181-192.	0.3	38
24	Two-Dimensional and Three-Dimensional Point Location in Rectangular Subdivisions. Journal of Algorithms, 1995, 18, 256-277.	0.9	34
25	Streaming computation of Delaunay triangulations. , 2006, , .		34
26	Generating Raster DEM from Mass Points Via TIN Streaming. Lecture Notes in Computer Science, 2006, , 186-198.	1.0	33
27	A lower bound for multicast key distribution. Computer Networks, 2005, 47, 429-441.	3.2	30
28	Delaunay triangulation of imprecise points in linear time after preprocessing. Computational Geometry: Theory and Applications, 2010, 43, 234-242.	0.3	29
29	An efficient algorithm for finding the CSG representation of a simple polygon. Algorithmica, 1993, 10, 1-23.	1.0	27
30	TENTATIVE PRUNE-AND-SEARCH FOR COMPUTING FIXED-POINTS WITH APPLICATIONS TO GEOMETRIC COMPUTATION. Fundamenta Informaticae, 1995, 22, 353-370.	0.3	26
31	Testing Homotopy for Paths in the Plane. Discrete and Computational Geometry, 2004, 31, 61-81.	0.4	26
32	RNABC: forward kinematics to reduce all-atom steric clashes in RNA backbone. Journal of Mathematical Biology, 2007, 56, 253-278.	0.8	24
33	Almost all Delaunay triangulations have stretch factor greater than $\sqrt{3}$. Computational Geometry: Theory and Applications, 2011, 44, 121-127.	0.3	24
34	Efficient algorithms for line and curve segment intersection using restricted predicates. Computational Geometry: Theory and Applications, 2000, 16, 35-52.	0.3	23
35	Implementations of the LMT heuristic for minimum weight triangulation. , 1998, , .		22
36	Mesh collapse compression. , 1999, , .		22

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37	The Safari interface for visualizing time-dependent volume data using iso-surfaces and contour spectra. <i>Computational Geometry: Theory and Applications</i> , 2003, 25, 97-116.	0.3	22
38	Counting and Reporting Red/Blue Segment Intersections. <i>Graphical Models</i> , 1994, 56, 304-310.	0.7	20
39	Spirale Reversi: Reverse decoding of the Edgebreaker encoding. <i>Computational Geometry: Theory and Applications</i> , 2001, 20, 39-52.	0.3	19
40	Counting and Enumerating Pointed Pseudotriangulations with the Greedy Flip Algorithm. <i>SIAM Journal on Computing</i> , 2006, 36, 721-739.	0.8	19
41	On arrangements of Jordan arcs with three intersections per pair. <i>Discrete and Computational Geometry</i> , 1989, 4, 523-539.	0.4	18
42	DISTANCE-BASED IDENTIFICATION OF STRUCTURE MOTIFS IN PROTEINS USING CONSTRAINED FREQUENT SUBGRAPH MINING. , 2006, , .		18
43	Coding polygon meshes as compressable ASCII. , 2002, , .		17
44	Tight degree bounds for pseudo-triangulations of points. <i>Computational Geometry: Theory and Applications</i> , 2003, 25, 3-12.	0.3	17
45	Representing Interpolant Topology for Contour Tree Computation. <i>Mathematics and Visualization</i> , 2009, , 59-73.	0.4	17
46	Objects that cannot be taken apart with two hands. <i>Discrete and Computational Geometry</i> , 1994, 12, 367-384.	0.4	16
47	Queries with segments in Voronoi diagrams. <i>Computational Geometry: Theory and Applications</i> , 2000, 16, 23-33.	0.3	16
48	The Size of Spanning Disks for Polygonal Curves. <i>Discrete and Computational Geometry</i> , 2002, 29, 1-17.	0.4	16
49	Lossless Compression of Floating-Point Geometry. <i>Computer-Aided Design and Applications</i> , 2004, 1, 495-501.	0.4	16
50	Reconstructing polygons from scanner data. <i>Theoretical Computer Science</i> , 2011, 412, 4161-4172.	0.5	16
51	An adaptive dynamic programming algorithm for the side chain placement problem. <i>Pacific Symposium on Biocomputing Pacific Symposium on Biocomputing</i> , 2005, , 16-27.	0.7	16
52	Cartographic line simplification and polygon CSG formulÃ in $O(n \log \hat{n} - n)$ time. <i>Computational Geometry: Theory and Applications</i> , 1998, 11, 175-185.	0.3	15
53	Flooding Triangulated Terrain. , 2005, , 137-148.		15
54	Maintaining solvent accessible surface area under rotamer substitution for protein design. <i>Journal of Computational Chemistry</i> , 2007, 28, 1336-1341.	1.5	15

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55	Identification of family-specific residue packing motifs and their use for structure-based protein function prediction: I. Method development. <i>Journal of Computer-Aided Molecular Design</i> , 2009, 23, 773-784.	1.3	15
56	Efficient algorithms for line and curve segment intersection using restricted predicates. , 1999, , .		13
57	Number of Crossing-Free Geometric Graphs vs. Triangulations. <i>Electronic Notes in Discrete Mathematics</i> , 2008, 31, 195-200.	0.4	13
58	Computing a $(1+\hat{\mu})$ -Approximate Geometric Minimum-Diameter Spanning Tree. <i>Algorithmica</i> , 2004, 38, 577-589.	1.0	12
59	Rotamer-Pair Energy Calculations Using a Trie Data Structure. <i>Lecture Notes in Computer Science</i> , 2005, , 389-400.	1.0	12
60	Almost-Delaunay simplices: Robust neighbor relations for imprecise 3D points using CGAL. <i>Computational Geometry: Theory and Applications</i> , 2007, 38, 4-15.	0.3	11
61	Defining and Computing Optimum RMSD for Gapped and Weighted Multiple-Structure Alignment. <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , 2008, 5, 525-533.	1.9	11
62	On exclusion regions for optimal triangulations. <i>Discrete Applied Mathematics</i> , 2001, 109, 49-65.	0.5	10
63	Delineating Boundaries for Imprecise Regions. <i>Algorithmica</i> , 2008, 50, 386-414.	1.0	10
64	Distance-based identification of structure motifs in proteins using constrained frequent subgraph mining. <i>Computational Systems Bioinformatics / Life Sciences Society Computational Systems Bioinformatics Conference</i> , 2006, , 227-38.	0.4	10
65	Functional Neighbors: Inferring Relationships between Nonhomologous Protein Families Using Family-Specific Packing Motifs. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2010, 14, 1137-1143.	3.6	9
66	Cartographic line simplification and polygon CSG formulae in $O(n \log^* n)$ time. <i>Lecture Notes in Computer Science</i> , 1997, , 93-103.	1.0	9
67	On-the-Fly Rotamer Pair Energy Evaluation in Protein Design. , 2008, , 343-354.		9
68	MULTIPLE STRUCTURE ALIGNMENT BY OPTIMAL RMSD IMPLIES THAT THE AVERAGE STRUCTURE IS A CONSENSUS. , 2006, , .		9
69	Removing Degeneracies by Perturbing the Problem or Perturbing the World. <i>Reliable Computing</i> , 2000, 6, 61-79.	0.8	8
70	Spanning Trees Crossing Few Barriers. <i>Discrete and Computational Geometry</i> , 2003, 30, 591-606.	0.4	8
71	Polygonal path simplification with angle constraints. <i>Computational Geometry: Theory and Applications</i> , 2005, 32, 173-187.	0.3	8
72	Quadratic and cubic b-splines by generalizing higher-order voronoi diagrams. , 2007, , .		8

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73	Identification of family-specific residue packing motifs and their use for structure-based protein function prediction: II. Case studies and applications. <i>Journal of Computer-Aided Molecular Design</i> , 2009, 23, 785-797.	1.3	8
74	Easy triangle strips for TIN terrain models. <i>International Journal of Geographical Information Science</i> , 2001, 15, 379-386.	2.2	7
75	Computing common tangents without a separating line. <i>Lecture Notes in Computer Science</i> , 1995, , 183-193.	1.0	7
76	Isocontour based Visualization of Time-varying Scalar Fields. <i>Mathematics and Visualization</i> , 2009, , 41-68.	0.4	7
77	Compressing the Property Mapping of Polygon Meshes. <i>Graphical Models</i> , 2002, 64, 114-127.	1.1	6
78	Delaunay triangulations of imprecise points in linear time after preprocessing. , 2008, , .		6
79	MINIMUM-LINK C-ORIENTED PATHS: SINGLE-SOURCE QUERIES. <i>International Journal of Computational Geometry and Applications</i> , 1994, 04, 39-51.	0.3	5
80	On the bit complexity of minimum link paths: Superquadratic algorithms for problem solvable in linear time. <i>Computational Geometry: Theory and Applications</i> , 1999, 12, 33-44.	0.3	5
81	Interlocked open and closed linkages with few joints. <i>Computational Geometry: Theory and Applications</i> , 2003, 26, 37-45.	0.3	5
82	VisTRE: A Visualization Tool to Evaluate Errors in Terrain Representation. , 2006, , .		5
83	Modestly faster histogram computations on GPUs. , 2012, , .		5
84	THE REFLEX-FREE HULL. <i>International Journal of Computational Geometry and Applications</i> , 2004, 14, 453-474.	0.3	4
85	Implementing time-varying contour trees. , 2005, , .		4
86	Maximum independent set for intervals by divide and conquer with pruning. <i>Networks</i> , 2007, 49, 158-159.	1.6	4
87	FARAWAY POINT: A SENTINEL POINT FOR DELAUNAY COMPUTATION. <i>International Journal of Computational Geometry and Applications</i> , 2008, 18, 343-355.	0.3	4
88	Reducing the memory required to find a geodesic shortest path on a large mesh. , 2009, , .		4
89	Reconstructing Polygons from Scanner Data. <i>Lecture Notes in Computer Science</i> , 2009, , 862-871.	1.0	4
90	The problem of managing a strategic reserve. <i>Mathematical Modelling</i> , 1985, 6, 549-560.	0.2	3

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91	Computation of Non-dominated Points Using Compact Voronoi Diagrams. Lecture Notes in Computer Science, 2010, , 82-93.	1.0	3
92	Efficient Algorithms for Maximum Regression Depth. Discrete and Computational Geometry, 2008, 39, 656-677.	0.4	2
93	Computing planar Voronoi diagrams in double precision. , 2010, , .		2
94	Computing the Nearest Neighbor Transform Exactly with Only Double Precision. , 2012, , .		2
95	Computing the Implicit Voronoi Diagram in Triple Precision. Lecture Notes in Computer Science, 2009, , 495-506.	1.0	2
96	Point location in zones of k-flats in arrangements. Computational Geometry: Theory and Applications, 1996, 6, 131-143.	0.3	1
97	Sphere-based Computation of Delaunay Diagrams on Points from 4d Grids. , 2006, , .		0
98	Capturing crossings: Convex hulls of segment and plane intersections. Information Processing Letters, 2008, 107, 194-197.	0.4	0
99	Functional Neighbors: Inferring Relationships between Non-Homologous Protein Families Using Family-Specific Packing Motifs. , 2008, , .		0
100	Bio-geometry. , 2008, , .		0
101	Faster placement of hydrogens in protein structures by dynamic programming. Journal of Experimental Algorithmics, 2008, 12, 1-16.	0.7	0
102	On the energy of bifurcated hydrogen bonds for protein structure prediction. , 2011, , .		0
103	Fitting spheres to electron density. , 2011, , .		0
104	Optimal Algorithms to Embed Trees in a Point Set. , 2002, , 29-43.		0