

# Jack Scott Snoeyink

## List of Publications by Year in descending order

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104  
papers

9,103  
citations

236925

25  
h-index

60623

81  
g-index

110  
all docs

110  
docs citations

110  
times ranked

14089  
citing authors

#	ARTICLE	IF	CITATIONS
1	MolProbity: More and better reference data for improved all-atom structure validation. Protein Science, 2018, 27, 293-315.	7.6	2,776
2	Combined Covalent-Electrostatic Model of Hydrogen Bonding Improves Structure Prediction with Rosetta. Journal of Chemical Theory and Computation, 2015, 11, 609-622.	5.3	204
3	Scientific Benchmarks for Guiding Macromolecular Energy Function Improvement. Methods in Enzymology, 2013, 523, 109-143.	1.0	195
4	Modestly faster histogram computations on GPUs. , 2012, , .		5
5	Computing the Nearest Neighbor Transform Exactly with Only Double Precision. , 2012, , .		2
6	On the energy of bifurcated hydrogen bonds for protein structure prediction. , 2011, , .		0
7	Almost all Delaunay triangulations have stretch factor greater than $\sqrt{3}$ . Computational Geometry: Theory and Applications, 2011, 44, 121-127.	0.5	24
8	Reconstructing polygons from scanner data. Theoretical Computer Science, 2011, 412, 4161-4172.	0.9	16
9	Fitting spheres to electron density. , 2011, , .		0
10	Flexible isosurfaces: Simplifying and displaying scalar topology using the contour tree. Computational Geometry: Theory and Applications, 2010, 43, 42-58.	0.5	82
11	Functional Neighbors: Inferring Relationships between Nonhomologous Protein Families Using Family-Specific Packing Motifs. IEEE Transactions on Information Technology in Biomedicine, 2010, 14, 1137-1143.	3.2	9
12	Delaunay triangulation of imprecise points in linear time after preprocessing. Computational Geometry: Theory and Applications, 2010, 43, 234-242.	0.5	29
13	Computing planar Voronoi diagrams in double precision. , 2010, , .		2
14	Computation of Non-dominated Points Using Compact Voronoi Diagrams. Lecture Notes in Computer Science, 2010, , 82-93.	1.3	3
15	Identification of family-specific residue packing motifs and their use for structure-based protein function prediction: I. Method development. Journal of Computer-Aided Molecular Design, 2009, 23, 773-784.	2.9	15
16	Identification of family-specific residue packing motifs and their use for structure-based protein function prediction: II. Case studies and applications. Journal of Computer-Aided Molecular Design, 2009, 23, 785-797.	2.9	8
17	Reducing the memory required to find a geodesic shortest path on a large mesh. , 2009, , .		4
18	Representing Interpolant Topology for Contour Tree Computation. Mathematics and Visualization, 2009, , 59-73.	0.6	17

#	ARTICLE	IF	CITATIONS
19	Reconstructing Polygons from Scanner Data. Lecture Notes in Computer Science, 2009, , 862-871.	1.3	4
20	Isocontour based Visualization of Time-varying Scalar Fields. Mathematics and Visualization, 2009, , 41-68.	0.6	7
21	Computing the Implicit Voronoi Diagram in Triple Precision. Lecture Notes in Computer Science, 2009, , 495-506.	1.3	2
22	Delineating Boundaries for Imprecise Regions. Algorithmica, 2008, 50, 386-414.	1.3	10
23	Efficient Algorithms for Maximum Regression Depth. Discrete and Computational Geometry, 2008, 39, 656-677.	0.6	2
24	Number of Crossing-Free Geometric Graphs vs. Triangulations. Electronic Notes in Discrete Mathematics, 2008, 31, 195-200.	0.4	13
25	Time-varying Reeb graphs for continuous space-time data. Computational Geometry: Theory and Applications, 2008, 41, 149-166.	0.5	48
26	Capturing crossings: Convex hulls of segment and plane intersections. Information Processing Letters, 2008, 107, 194-197.	0.6	0
27	Functional Neighbors: Inferring Relationships between Non-Homologous Protein Families Using Family-Specific Packing Motifs. , 2008, , .		0
28	Defining and Computing Optimum RMSD for Gapped and Weighted Multiple-Structure Alignment. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2008, 5, 525-533.	3.0	11
29	Bio-geometry. , 2008, , .		0
30	FARAWAY POINT: A SENTINEL POINT FOR DELAUNAY COMPUTATION. International Journal of Computational Geometry and Applications, 2008, 18, 343-355.	0.5	4
31	Faster placement of hydrogens in protein structures by dynamic programming. Journal of Experimental Algorithmics, 2008, 12, 1-16.	1.0	0
32	Delaunay triangulations of imprecise points in linear time after preprocessing. , 2008, , .		6
33	On-the-Fly Rotamer Pair Energy Evaluation in Protein Design. , 2008, , 343-354.		9
34	Quadratic and cubic b-splines by generalizing higher-order voronoi diagrams. , 2007, , .		8
35	MolProbity: all-atom contacts and structure validation for proteins and nucleic acids. Nucleic Acids Research, 2007, 35, W375-W383.	14.5	3,443
36	Maximum independent set for intervals by divide and conquer with pruning. Networks, 2007, 49, 158-159.	2.7	4

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37	Maintaining solvent accessible surface area under rotamer substitution for protein design. Journal of Computational Chemistry, 2007, 28, 1336-1341.	3.3	15
38	Almost-Delaunay simplices: Robust neighbor relations for imprecise 3D points using CGAL. Computational Geometry: Theory and Applications, 2007, 38, 4-15.	0.5	11
39	RNABC: forward kinematics to reduce all-atom steric clashes in RNA backbone. Journal of Mathematical Biology, 2007, 56, 253-278.	1.9	24
40	Artifacts caused by simplicial subdivision. IEEE Transactions on Visualization and Computer Graphics, 2006, 12, 231-242.	4.4	51
41	Counting and Enumerating Pointed Pseudotriangulations with the Greedy Flip Algorithm. SIAM Journal on Computing, 2006, 36, 721-739.	1.0	19
42	Sphere-based Computation of Delaunay Diagrams on Points from 4d Grids. , 2006, , .		0
43	VisTRE: A Visualization Tool to Evaluate Errors in Terrain Representation. , 2006, , .		5
44	Structure-based function inference using protein family-specific fingerprints. Protein Science, 2006, 15, 1537-1543.	7.6	39
45	Streaming computation of Delaunay triangulations. , 2006, , .		34
46	Streaming computation of Delaunay triangulations. ACM Transactions on Graphics, 2006, 25, 1049-1056.	7.2	81
47	Generating Raster DEM from Mass Points Via TIN Streaming. Lecture Notes in Computer Science, 2006, , 186-198.	1.3	33
48	MULTIPLE STRUCTURE ALIGNMENT BY OPTIMAL RMSD IMPLIES THAT THE AVERAGE STRUCTURE IS A CONSENSUS. , 2006, , .		9
49	DISTANCE-BASED IDENTIFICATION OF STRUCTURE MOTIFS IN PROTEINS USING CONSTRAINED FREQUENT SUBGRAPH MINING. , 2006, , .		18
50	Distance-based identification of structure motifs in proteins using constrained frequent subgraph mining. Computational Systems Bioinformatics / Life Sciences Society Computational Systems Bioinformatics Conference, 2006, , 227-38.	0.4	10
51	Flooding Triangulated Terrain. , 2005, , 137-148.		15
52	Lossless compression of predicted floating-point geometry. CAD Computer Aided Design, 2005, 37, 869-877.	2.7	74
53	A lower bound for multicast key distribution. Computer Networks, 2005, 47, 429-441.	5.1	30
54	Polygonal path simplification with angle constraints. Computational Geometry: Theory and Applications, 2005, 32, 173-187.	0.5	8

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55	Rotamer-Pair Energy Calculations Using a Trie Data Structure. Lecture Notes in Computer Science, 2005, , 389-400.	1.3	12
56	Implementing time-varying contour trees. , 2005, , .		4
57	Comparing Graph Representations of Protein Structure for Mining Family-Specific Residue-Based Packing Motifs. Journal of Computational Biology, 2005, 12, 657-671.	1.6	67
58	An adaptive dynamic programming algorithm for the side chain placement problem. Pacific Symposium on Biocomputing Pacific Symposium on Biocomputing, 2005, , 16-27.	0.7	16
59	Mining protein family specific residue packing patterns from protein structure graphs. , 2004, , .		80
60	THE REFLEX-FREE HULL. International Journal of Computational Geometry and Applications, 2004, 14, 453-474.	0.5	4
61	Computing a $(1+\hat{\mu})$ -Approximate Geometric Minimum-Diameter Spanning Tree. Algorithmica, 2004, 38, 577-589.	1.3	12
62	Testing Homotopy for Paths in the Plane. Discrete and Computational Geometry, 2004, 31, 61-81.	0.6	26
63	Lossless Compression of Floating-Point Geometry. Computer-Aided Design and Applications, 2004, 1, 495-501.	0.6	16
64	Spanning Trees Crossing Few Barriers. Discrete and Computational Geometry, 2003, 30, 591-606.	0.6	8
65	Ununfoldable polyhedra with convex faces. Computational Geometry: Theory and Applications, 2003, 24, 51-62.	0.5	44
66	Computing contour trees in all dimensions. Computational Geometry: Theory and Applications, 2003, 24, 75-94.	0.5	345
67	Tight degree bounds for pseudo-triangulations of points. Computational Geometry: Theory and Applications, 2003, 25, 3-12.	0.5	17
68	The Safari interface for visualizing time-dependent volume data using iso-surfaces and contour spectra. Computational Geometry: Theory and Applications, 2003, 25, 97-116.	0.5	22
69	Interlocked open and closed linkages with few joints. Computational Geometry: Theory and Applications, 2003, 26, 37-45.	0.5	5
70	ON THE TIME BOUND FOR CONVEX DECOMPOSITION OF SIMPLE POLYGONS. International Journal of Computational Geometry and Applications, 2002, 12, 181-192.	0.5	38
71	Coding polygon meshes as compressable ASCII. , 2002, , .		17
72	Algorithmic issues in modeling motion. ACM Computing Surveys, 2002, 34, 550-572.	23.0	51

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73	Compressing the Property Mapping of Polygon Meshes. Graphical Models, 2002, 64, 114-127.	2.4	6
74	The Size of Spanning Disks for Polygonal Curves. Discrete and Computational Geometry, 2002, 29, 1-17.	0.6	16
75	Optimal Algorithms to Embed Trees in a Point Set. , 2002, , 29-43.		0
76	Easy triangle strips for TIN terrain models. International Journal of Geographical Information Science, 2001, 15, 379-386.	4.8	7
77	On exclusion regions for optimal triangulations. Discrete Applied Mathematics, 2001, 109, 49-65.	0.9	10
78	Spirale Reversi: Reverse decoding of the Edgebreaker encoding. Computational Geometry: Theory and Applications, 2001, 20, 39-52.	0.5	19
79	Queries with segments in Voronoi diagrams. Computational Geometry: Theory and Applications, 2000, 16, 23-33.	0.5	16
80	Efficient algorithms for line and curve segment intersection using restricted predicates. Computational Geometry: Theory and Applications, 2000, 16, 35-52.	0.5	23
81	Removing Degeneracies by Perturbing the Problem or Perturbing the World. Reliable Computing, 2000, 6, 61-79.	0.8	8
82	Face fixer. , 2000, , .		85
83	Mesh collapse compression. , 1999, , .		22
84	Efficient algorithms for line and curve segment intersection using restricted predicates. , 1999, , .		13
85	On the bit complexity of minimum link paths: Superquadratic algorithms for problem solvable in linear time. Computational Geometry: Theory and Applications, 1999, 12, 33-44.	0.5	5
86	Cartographic line simplification and polygon CSG formulae in $O(n \log^* n)$ time. Computational Geometry: Theory and Applications, 1998, 11, 175-185.	0.5	15
87	Implementations of the LMT heuristic for minimum weight triangulation. , 1998, , .		22
88	Cartographic line simplification and polygon CSG formulae in $O(n \log^* n)$ time. Lecture Notes in Computer Science, 1997, , 93-103.	1.3	9
89	Point location in zones of $k$ -flats in arrangements. Computational Geometry: Theory and Applications, 1996, 6, 131-143.	0.5	1
90	Generating random polygons with given vertices. Computational Geometry: Theory and Applications, 1996, 6, 277-290.	0.5	51

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91	Two-Dimensional and Three-Dimensional Point Location in Rectangular Subdivisions. Journal of Algorithms, 1995, 18, 256-277.	0.9	34
92	TENTATIVE PRUNE-AND-SEARCH FOR COMPUTING FIXED-POINTS WITH APPLICATIONS TO GEOMETRIC COMPUTATION. Fundamenta Informaticae, 1995, 22, 353-370.	0.4	26
93	Computing common tangents without a separating line. Lecture Notes in Computer Science, 1995, , 183-193.	1.3	7
94	MINIMUM-LINK C-ORIENTED PATHS: SINGLE-SOURCE QUERIES. International Journal of Computational Geometry and Applications, 1994, 04, 39-51.	0.5	5
95	Objects that cannot be taken apart with two hands. Discrete and Computational Geometry, 1994, 12, 367-384.	0.6	16
96	Counting and Reporting Red/Blue Segment Intersections. Graphical Models, 1994, 56, 304-310.	0.6	20
97	Computing minimum length paths of a given homotopy class. Computational Geometry: Theory and Applications, 1994, 4, 63-97.	0.5	148
98	An efficient algorithm for finding the CSG representation of a simple polygon. Algorithmica, 1993, 10, 1-23.	1.3	27
99	Computing a Face in an Arrangement of Line Segments and Related Problems. SIAM Journal on Computing, 1993, 22, 1286-1302.	1.0	43
100	APPROXIMATING POLYGONS AND SUBDIVISIONS WITH MINIMUM-LINK PATHS. International Journal of Computational Geometry and Applications, 1993, 03, 383-415.	0.5	82
101	Counting and cutting cycles of lines and rods in space. Computational Geometry: Theory and Applications, 1992, 1, 305-323.	0.5	47
102	Implicitly representing arrangements of lines or segments. Discrete and Computational Geometry, 1989, 4, 433-466.	0.6	51
103	On arrangements of Jordan arcs with three intersections per pair. Discrete and Computational Geometry, 1989, 4, 523-539.	0.6	18
104	The problem of managing a strategic reserve. Mathematical Modelling, 1985, 6, 549-560.	0.2	3