David Eppstein

Professor
Computer Science Department
Donald Bren School of Information & Computer Sciences
Univ. of California, Irvine, CA 92697-3425

(949) 854-6594 eppstein@ics.uci.edu
Fax (949) 854-4056 http://www.ics.uci.edu/∼eppstein/

Research Interests

Most of my research has been in the areas of computational geometry and graph algorithms, including finite element meshing, minimum spanning trees, shortest paths, dynamic graph data structures, graph coloring, graph drawing, geometric optimization, computational robust statistics, and geometric optimization.

Education

Columbia University, Computer Science Dept., M.S. May 1985; Ph.D. May 1989.

Stanford University, B.S. in Mathematics, with distinction, 1984.

Research Employment

Computer Science Department, Donald Bren School of Information and Computer Sciences, University of California, Irvine. Assistant professor 1990 – 1994; associate professor 1994 – 1998; full professor 1998 – present. Department co-chair, 2002 – 2005.

Post-doctoral researcher, Xerox Palo Alto Research Center, 1989 – 1990.

Awards and Honors

NSF Young Investigator award, 1992 – 1999.

NSF graduate fellowship, 1984 – 1987.

National Merit scholarship, 1981 – 1984.

Students Advised

Jeff Erickson (M.S., 1992).

David Hart (Ph.D., 2002).

Joseph Wang (Ph.D., 2003).

Josiah Carlson (Ph.D., 2007)

Currently advising Kevin Wortman (Ph.D. expected 2009)

Journal editing

Editorial boards: J. Algorithms, 1994 – 2004; Chicago J. Theor. Comp. Sci., 1994 – present; SIAM J. Comput., 1995 – 2004; J. Graph Algorith. & Appl., 1995 – present. ACM Trans. Algorith., 2004 – present.

Guest editor: J. Comp. Sys. Sci., special issue for 34th FOCS; Algorithmica, special issue on dynamic graph algorithms; J. Complexity, special issue for Zvi Galil. Discrete & Computational Geometry, special issue for SoCG 2001. J. Algorithms, special issue for SODA 2002.

Conference reviewing

ACM Symposium on Computational Geometry (SoCG), program committee, 1995 and 1999; program chair for theory track, 2001.

ACM Symposium on Theory of Computing (STOC), program committee, 1994, 2000, 2003, 2006, and 2009.

ACM-SIAM Symposium on Discrete Algorithms, program committee, 1996 and 2000; program chair, 2002.

Algorithms and Data Structures Symposium (WADS, formerly Workshop on Algorithms and Data Structures), program committee, 1997 and 2007.

Computing and Combinatorics (COCOON), program committee, 1999.

European Symposium on Algorithms, steering committee, 2008 – present.

IEEE Symposia on Foundations of Computer Science (FOCS), 1993 and 2001.

International Colloquium on. Automata, Languages and. Programming (ICALP), program committee, 2005 and 2008.

International Symposium on Algorithms and Computation (ISAAC), program committee, 1998.

International Symposium on Graph Drawing, program committee, 2006 and 2008; program co-chair, 2009; steering committee, 2008 – present.

NSF Workshop on Computational Topology, co-chair, 1999.

Other editorial service

Moderator for cs.DS (data structures and algorithms), arxiv.org electronic preprint repository, 2006 – present.

Administrator on English Wikipedia, 2007 – present.

Invited lectures

"Dynamic geometric optimization." 3rd MSI Works. Computational Geometry, Stony Brook, NY, 1993.

"Computational geometry and parametric matroid optimization." 5th Int. Symp. Parametric Optimization, Chiba, Japan, 1997.

"Graphs for dynamic geometry." Worksh. Dynamic Graph Algorithms, Victoria, Canada, 2000.

"Triangles and squares." 1st European Conf. Combinatorics, Graph Theory, and Applications, Bellaterra, Spain, 2001.

"Topological issues in hexahedral meshing." Conf. Algebraic Topology Methods in Computer Science, Stanford, CA, 2001.

"Depth and arrangements." MSRI Introductory Worksh. Discrete & Computational Geometry, Berkeley, CA, 2003, and opening keynote, DIMACS Worksh. on Data Depth, New Brunswick, NJ, 2003.

"Hyperbolic geometry, Möbius transformations, and geometric optimization." MSRI Introductory Worksh. Discrete & Computational Geometry, Berkeley, CA, 2003.

"Quasiconvex programming." DIMACS Worksh. on Geometric Optimization, New Brunswick, NJ, 2003, and ALGO 2004, Bergen, Norway, 2004.

"Geometry of partial cubes." 6th Slovenian International Conference on Graph Theory, Bled, Slovenia, 2007.

35th International Workshop on Graph-Theoretic Methods in Computer Science, Montpellier, France, June 2009.

5th William Rowan Hamilton Geometry and Topology Workshop, Dublin, Ireland, September 2009.

Workshop on Combinatorial Geometry, Institute for Pure and Applied Mathematics, Univ. of California, Los Angeles, October 2009.

Books

D. Eppstein, J.-Cl. Falmagne, and S. Ovchinnikov. *Media Theory*. Springer-Verlag, 2008.

Refereed Journal Articles

J1. D. Eppstein. Sequence comparison with mixed convex and concave costs. *J. Algorithms* 11(1):85–101, 1990.

J2. D. Eppstein. Reset sequences for monotonic automata. *SIAM J. Computing* 19(3):500–510, 1990.

J3. M. W. Bern, D. Eppstein, and F. F. Yao. The expected extremes in a Delaunay triangulation. *Int. J. Computational Geometry & Applications* 1(1):79–92, 1991.

J4. M. Chrobak and D. Eppstein. Planar orientations with low out-degree and compaction of adjacency matrices. *Theoretical Computer Science* 86(2):243–266, 1991.

J5. D. Eppstein, J. Feigenbaum, and C.-L. Li. Equipartitions of graphs. *Discrete Mathematics* 91(3):239–248, 1991.

J6. D. Eppstein, M. Overmars, G. Rote, and G. J. Woeginger. Finding minimum area k-gons. *Discrete & Computational Geometry* 7(1):45–58, 1992.

J7. D. Eppstein, L. A. Hemachandra, J. Tisdall, and B. Yener. Simultaneous strong separations of probabilistic and unambiguous complexity classes. *Mathematical Systems Theory* 25(1):23–36, 1992. Now known as Theory of Computing Systems.

J8. D. Eppstein, G. F. Italiano, R. Tamassia, R. E. Tarjan, J. R. Westbrook, and M. Yung. Maintenance of a minimum spanning forest in a dynamic planar graph. *J. Algorithms* 13(1):33–54, 1992. Special issue for 1st SODA.

J9. D. Eppstein. The farthest point Delaunay triangulation minimizes angles. *Computational Geometry Theory & Applications* 1(3):143–148, 1992.

J10. D. Eppstein. Parallel recognition of series parallel graphs. *Information & Computation* 98(1):41–55, 1992. Previously known as Information & Control.

J11. D. Eppstein. Finding the k smallest spanning trees. *BIT* 32(2):237–248, 1992. Special issue for 2nd SWAT.

J12. D. Eppstein, Z. Galil, R. Giancarlo, and G. F. Italiano. Sparse dynamic programming I: linear cost functions. *J. ACM* 39(3):519–545, 1992.

J13. D. Eppstein, Z. Galil, R. Giancarlo, and G. F. Italiano. Sparse dynamic programming II: convex and concave cost functions. *J. ACM* 39(3):546–567, 1992.

J14. M. W. Bern and D. Eppstein. Polynomial-size non-obtuse triangulation of polygons. *Int. J. Computational Geometry & Applications* 2(3):241–255, 1992. Special issue for 7th SCG.

J15. D. Eppstein. Dynamic three-dimensional linear programming. *ORSA J. Computing* 4(4):360–368, 1992. Special issue on computational geometry.

J16. D. Eppstein. Improved bounds for intersecting triangles and halving planes. *J. Combinatorial Theory, Series A* 62:176–182, 1993.

J17. D. Eppstein. Connectivity, graph minors, and subgraph multiplicity. *J. Graph Theory* 17:409–416, 1993.

J18. M. W. Bern, H. Edelsbrunner, D. Eppstein, S. A. Mitchell, and T.-S. Tan. Edge insertion for optimal triangulation. *Discrete & Computational Geometry* 10(1):47–65, 1993.

J19. D. Eppstein. Approximating the minimum weight Steiner triangulation. *Discrete & Computational Geometry* 11(2):163–191, 1994.

J20. M. W. Bern, D. P. Dobkin, D. Eppstein, and R. L. Grossman. Visibility with a moving point of view. *Algorithmica* 11(4):360–378, 1994.

J21. D. Eppstein and J. G. Erickson. Iterated nearest neighbors and finding minimal polytopes. *Discrete & Computational Geometry* 11(3):321–350, 1994.

J22. M. W. Bern, D. Eppstein, and J. R. Gilbert. Provably good mesh generation. *J. Computer & Systems Sciences* 48(3):384–409, 1994. Special issue for 31st FOCS.

J23. D. Eppstein. Tree-weighted neighbors and geometric k smallest spanning trees. *Int. J. Computational Geometry & Applications* 4(2):229–238, 1994.

J24. B. Aronov, M. W. Bern, and D. Eppstein. On the number of minimal 1-Steiner trees. *Discrete & Computational Geometry* 12(1):29–34, 1994.

J25. D. Eppstein. Arboricity and bipartite subgraph listing algorithms. *Information Processing Letters* 51(4):207–211, 1994.

J26. D. Eppstein. Offline algorithms for dynamic minimum spanning tree problems. *J. Algorithms* 17(2):237–250, 1994.

J27. D. Eppstein. Dynamic Euclidean minimum spanning trees and extrema of binary functions. *Discrete & Computational Geometry* 13(1):111–122, 1995.

J28. D. Eppstein, G. L. Miller, and S.-H. Teng. A deterministic linear time algorithm for geometric separators and its applications. *Fundamenta Informaticae* 22(4):309–331, 1995. Special issue on computational geometry.

J29. D. Eppstein. Ten algorithms for Egyptian fractions. *Mathematica in Education and Research* 4(2):5–15, 1995.

J30. D. Eppstein. Asymptotic speed-ups in constructive solid geometry. *Algorithmica* 13(5):462–471, 1995.

J31. M. W. Bern, D. P. Dobkin, and D. Eppstein. Triangulating polygons without large angles. *Int. J. Computational Geometry & Applications* 5(1–2):171–192, 1995. Special issue for 8th SCG.

J32. M. T. Dickerson and D. Eppstein. Algorithms for proximity problems in higher dimensions. *Computational Geometry Theory & Applications* 5(5):277–291, 1996.

J33. D. Eppstein, Z. Galil, G. F. Italiano, and T. H. Spencer. Separator based sparsification I: planarity testing and minimum spanning trees. *J. Computer & Systems Sciences* 52(1):3–27, 1996. Special issue for 25th STOC.

J34. D. Eppstein. Average case analysis of dynamic geometric optimization. *Computational Geometry Theory & Applications* 6(1):45–68, 1996.

J35. K. L. Clarkson, D. Eppstein, G. L. Miller, C. Sturtivant, and S.-H. Teng. Approximating center points with iterated Radon points. *Int. J. Computational Geometry & Applications* 6(3):357–377, 1996. Special issue for 9th SCG.

J36. D. P. Dobkin, D. Eppstein, and D. P. Mitchell. Computing the discrepancy with applications to supersampling patterns. *ACM Trans. Graphics* 15(4):354–376, 1996.

J37. D. Fernández-Baca, G. Slutzki, and D. Eppstein. Using sparsification for parametric minimum spanning tree problems. *Nordic J. Computing* 3(4):352–366, 1996. Special issue for 5th SWAT.

J38. D. Eppstein. Zonohedra and zonotopes. *Mathematica in Education and Research* 5(4):15–21, 1996.

J39. D. Eppstein, M. S. Paterson, and F. F. Yao. On nearest neighbor graphs. *Discrete & Computational Geometry* 17(3):263–282, 1997.

J40. D. Eppstein. Minimum range balanced cuts via dynamic subset sums. *J. Algorithms* 23(2):375–385, 1997.

J41. D. Eppstein. Dynamic connectivity in digital images. *Information Processing Letters* 62(3):121–126, 1997.

J42. D. Eppstein and D. S. Hirschberg. Choosing subsets with maximum weighted average. *J. Algorithms* 24(1):177–193, 1997.

J43. D. Eppstein, Z. Galil, G. F. Italiano, and A. Nissenzweig. Sparsification — A technique for speeding up dynamic graph algorithms. *J. ACM* 44(5):669–696, 1997.

J44. D. Eppstein. Faster circle packing with application to nonobtuse triangulation. *Int. J. Computational Geometry & Applications* 7(5):485–491, 1997.

J45. D. Eppstein. Faster geometric k-point MST approximation. *Computational Geometry Theory & Applications* 8:231–240, 1997.

J46. A. B. Amenta, M. W. Bern, and D. Eppstein. The crust and the β-skeleton: combinatorial curve reconstruction. *Graphical Models & Image Processing* 60/2(2):125–135, 1998.

J47. G. Barequet, M. T. Dickerson, and D. Eppstein. On triangulating three-dimensional polygons. *Computational Geometry Theory & Applications* 10(3):155–170, 1998.

J48. D. Eppstein. Geometric lower bounds for parametric matroid optimization. *Discrete & Computational Geometry* 20:463–476, 1998.

J49. D. Eppstein. Finding the k shortest paths. *SIAM J. Computing* 28(2):652–673, 1998.

J50. D. Eppstein, Z. Galil, G. F. Italiano, and T. H. Spencer. Separator based sparsification II: edge and vertex connectivity. *SIAM J. Computing* 28(1):341–381, 1999.

J51. D. Eppstein. Subgraph isomorphism in planar graphs and related problems. *J. Graph Algorithms & Applications* 3(3):1–27, 1999.

J52. A. B. Amenta, M. W. Bern, and D. Eppstein. Optimal point placement for mesh smoothing. *J. Algorithms* 30(2):302–322, 1999. Special issue for 8th SODA.

J53. D. Eppstein. Linear complexity hexahedral mesh generation. *Computational Geometry Theory & Applications* 12:3–16, 1999. Special issue for 12th Symp. Comp. Geom.

J54. D. Eppstein and J. G. Erickson. Raising roofs, crashing cycles, and playing pool: applications of a data structure for finding pairwise interactions. *Discrete & Computational Geometry* 22(4):569–592, 1999. Special issue for SCG 1998.

J55. M. W. Bern, D. Eppstein, and S.-H. Teng. Parallel construction of quadtrees and quality triangulations. *Int. J. Computational Geometry & Applications* 9(6):517–532, 1999.

J56. A. B. Amenta, M. W. Bern, D. Eppstein, and S.-H. Teng. Regression depth and center points. *Discrete & Computational Geometry* 23(3):305–323, 2000.

J57. D. Eppstein. Diameter and treewidth in minor-closed graph families. *Algorithmica* 27:275–291, 2000. Special issue on treewidth, graph minors, and algorithms.

J58. D. Eppstein. Clustering for faster network simplex pivots. *Networks* 35(3):173–180, 2000.

J59. D. Eppstein. Fast hierarchical clustering and other applications of dynamic closest pairs. *J. Experimental Algorithmics* 5(1):1–23, 2000.

J60. M. W. Bern and D. Eppstein. Quadrilateral meshing by circle packing. *Int. J. Computational Geometry & Applications* 10(4):347–360, 2000.

J61. M. B. Dillencourt, D. Eppstein, and D. S. Hirschberg. Geometric thickness of complete graphs. *J. Graph Algorithms & Applications* 4(3):5–17, 2000. Special issue for Graph Drawing '98.

J62. D. Eppstein. Incremental and decremental maintenance of planar width. *J. Algorithms* 37(2):570–577, 2000.

J63. D. Eppstein. Tangent spheres and triangle centers. *American Mathematical Monthly* 108(1):63–66, 2001.

J64. X. Ge, D. Eppstein, and P. Smyth. The distribution of loop lengths in graphical models for turbo decoding. *IEEE Trans. Information Theory* 47(6):2549–2553, 2001.

J65. M. W. Bern, D. Eppstein, and B. Hutchings. Algorithms for coloring quadtrees. *Algorithmica* 32(1):87–94, 2002.

J66. D. Eppstein. Beta-skeletons have unbounded dilation. *Computational Geometry Theory & Applications* 23(1):43–52, 2002.

J67. M. W. Bern and D. Eppstein. Multivariate regression depth. *Discrete & Computational Geometry* 28(1):1–17, 2002.

J68. M. W. Bern, D. Eppstein, and J. G. Erickson. Flipping cubical meshes. *Engineering with Computers* 18(3):173–187, 2002.

J69. M. W. Bern, E. D. Demaine, D. Eppstein, E. H.-S. Kuo, A. Mantler, and J. Snoeyink. Ununfoldable polyhedra with convex faces. *Computational Geometry Theory & Applications* 24(2):51–62, 2003.

J70. D. Eppstein. Setting parameters by example. *SIAM J. Computing* 32(3):643–653, 2003.

J71. D. Eppstein. Small maximal independent sets and faster exact graph coloring. *J. Graph Algorithms & Applications* 7(2):131–140, 2003. Special issue for WADS'01.

J72. D. Eppstein and M. B. Dillencourt. Uninscribable 4-regular polyhedron. *Electronic Geometry Models* no. 2003.08.001, 2003.

J73. D. Eppstein, J. M. Sullivan, and A. Üngör. Tiling space and slabs with acute tetrahedra. *Computational Geometry Theory & Applications* 27(3):237–255, 2004.

J74. D. Eppstein and J. Y. Wang. Fast approximation of centrality. *J. Graph Algorithms & Applications* 8(1):27–38, 2004.

J75. R. Beigel and D. Eppstein. 3-coloring in time $O(1.3289^n)$. *J. Algorithms* 54(2):168–204, 2005.

J76. D. Eppstein. The lattice dimension of a graph. *Eur. J. Combinatorics* 26(5):585–592, 2005.

J77. E. D. Demaine, M. L. Demaine, D. Eppstein, and E. Friedman. Hinged dissections of polyominoes and polyforms. *Computational Geometry Theory & Applications* 31(3):237–262, 2005. Special issue for 11th CCCG.

J78. T. D. Givargis and D. Eppstein. Memory reference caching for activity reduction on address buses. *J. Microprocessors and Microsystems* 29(4):145–153, 2005.

J79. D. Eppstein. Quasiconvex analysis of multivariate recurrence equations for backtracking algorithms. *ACM Trans. Algorithms* 2(4):492–509, 2006. Special issue for SODA 2004.

J80. D. Eppstein. Cubic partial cubes from simplicial arrangements. *Electronic J. Combinatorics* 13(1, R79):1–14, 2006.

J81. A. Bagchi, A. Bhargava, A. Chaudhary, D. Eppstein, and C. Scheideler. The effect of faults on network expansion. *Theory of Computing Systems* 39(6):903–928, 2006.

J82. D. Eppstein. The traveling salesman problem for cubic graphs. *J. Graph Algorithms & Applications* 11(1):61–81, 2007.

J83. D. Eppstein, M. T. Goodrich, and D. S. Hirschberg. Improved combinatorial group testing for real-world problem sizes. *SIAM J. Computing* 36(5):1360–1375, 2007.

J84. A. Bagchi, A. Chaudhary, D. Eppstein, and M. T. Goodrich. Deterministic sampling and range counting in geometric data streams. *ACM Trans. Algorithms* 3(2):A16, 2007.

J85. D. Eppstein, M. T. Goodrich, and J. Y. Meng. Confluent layered drawings. *Algorithmica* 47(4):439–452, 2007. Special issue for Graph Drawing 2004.

J86. D. Eppstein and K. A. Wortman. Minimum dilation stars. *Computational Geometry Theory & Applications* 37(1):27–37, 2007.

J87. V. Dujmović, D. Eppstein, M. Suderman, and D. R. Wood. Drawings of planar graphs with few slopes and segments. *Computational Geometry Theory & Applications* 38:194–212, 2007.

J88. L. Singhal, E. Bozorgzadeh, and D. Eppstein. Interconnect criticality driven delay relaxation. *IEEE Trans. Computer-Aided Design of Integrated Circuits and Systems* 26(10):1803–1817, 2007.

J89. D. Eppstein, M. T. Goodrich, and J. Z. Sun. Skip quadtrees: dynamic data structures for multidimensional data. *Int. J. Computational Geometry & Applications* 18(1–2):131–160, 2008.

J90. D. Eppstein. Upright-quad drawing of *st*-planar learning spaces. *J. Graph Algorithms & Applications* 12(1):51–72, 2008.

J91. D. Eppstein and J.-C. Falmagne. Algorithms for media. *Discrete Applied Mathematics* 156(8):1308–1320, 2008. Special issue for OSDA.

J92. D. Eppstein, J.-C. Falmagne, and H. Uzun. On verifying and engineering the well-gradedness of a union-closed family. *Journal of Mathematical Psychology* 53(1):34–39, 2009.

J93. D. Eppstein. Testing bipartiteness of geometric intersection graphs. *ACM Trans. Algorithms*. To appear.

J94. D. Eppstein. All maximal independent sets and dynamic dominance for sparse graphs. *ACM Trans. Algorithms*. To appear.

J95. D. Eppstein. Squarepants in a tree: sum of subtree clustering and hyperbolic pants decomposition. *ACM Trans. Algorithms*. To appear.

J96. D. Eppstein, M. J. van Kreveld, E. Mumford, and B. Speckmann. Edges and switches, tunnels and bridges. *Computational Geometry Theory & Applications*. To appear.

J97. D. Eppstein, M. T. Goodrich, E. Kim, and R. Tamstorf. Approximate topological matching of quadrilateral meshes. *The Visual Computer*. To appear.

Conference Proceedings

C1. D. Eppstein. A heuristic approach to program inversion. *Proc. 9th Int. Joint Conf. Artificial Intelligence*, vol. 1, pp. 219–221, 1985.

C2. D. Eppstein, Z. Galil, and R. Giancarlo. Efficient algorithms with applications to molecular biology. *Sequences: Combinatorics, Compression, Security, Transmission*, pp. 59–74. Springer-Verlag, 1990. From Int. Advanced Worksh. Sequences, Positano, Italy, June 1988.

C3. D. Eppstein. Reset sequences for monotonic automata. *Proc. 15th Int. Coll. Automata, Languages, and Programming (ICALP 1988)*, vol. 317, pp. 230–238. Springer-Verlag, Lecture Notes in Computer Science, 1988.

C4. D. Eppstein, Z. Galil, and R. Giancarlo. Speeding up dynamic programming. *Proc. 29th Symp. Foundations of Computer Science*, pp. 488–496. IEEE, 1988.

C5. D. Eppstein, L. A. Hemachandra, J. Tisdall, and B. Yener. Probabilistic and unambiguous computation are incomparable. *Proc. 1st Int. Conf. Computing & Information*, pp. 65–70, 1989.

C6. D. Eppstein and Z. Galil. Parallel algorithmic techniques for combinatorial computation. *Proc. 16th Int. Coll. Automata, Languages, and Programming (ICALP 1989)*, vol. 372, pp. 304–318. Springer-Verlag, Lecture Notes in Computer Science, 1989. Invited talk by Galil.

C7. D. Eppstein, Z. Galil, R. Giancarlo, and G. F. Italiano. Sparse dynamic programming. *Proc. 1st Symp. Discrete Algorithms*, pp. 513–522. SIAM, 1990.

C8. D. Eppstein, G. F. Italiano, R. Tamassia, R. E. Tarjan, J. R. Westbrook, and M. Yung. Maintenance of a minimum spanning forest in a dynamic planar graph. *Proc. 1st Symp. Discrete Algorithms*, pp. 1–11. SIAM, 1990.

C9. M. W. Bern, D. P. Dobkin, D. Eppstein, and R. L. Grossman. Visibility with a moving point of view. *Proc. 1st Symp. Discrete Algorithms*, pp. 107–118. SIAM, 1990.

C10. D. Eppstein. Finding the k smallest spanning trees. *Proc. 2nd Scandinavian Worksh. Algorithm Theory (SWAT 1990)*, vol. 447, pp. 38–47. Springer-Verlag, Lecture Notes in Computer Science, 1990.

C11. M. W. Bern, D. Eppstein, and J. R. Gilbert. Provably good mesh generation. *Proc. 31st Symp. Foundations of Computer Science*, vol. I, pp. 231–241. IEEE, 1990.

C12. M. Chrobak, D. Eppstein, G. F. Italiano, and M. Yung. Efficient sequential and parallel algorithms for computing recovery points in trees and paths. *Proc. 2nd Symp. Discrete Algorithms*, pp. 158–167. SIAM, 1991.

C13. M. W. Bern and D. Eppstein. Polynomial-size non-obtuse triangulation of polygons. *Proc. 7th Symp. Computational Geometry*, pp. 342–350. ACM, 1991.

C14. D. Eppstein, Z. Galil, R. Giancarlo, and G. F. Italiano. Efficient algorithms for sequence analysis. *Sequences II: Communication, Security, and Computer Science*, pp. 225–244. Springer-Verlag, 1993. From Int. Advanced Worksh. Sequences, Positano, Italy, June 1991.

C15. M. W. Bern, D. Eppstein, and F. F. Yao. The expected extremes in a Delaunay triangulation. *Proc. 18th Int. Coll. Automata, Languages, and Programming (ICALP 1991)*, vol. 510, pp. 674–685. Springer-Verlag, Lecture Notes in Computer Science, 1991.

C16. D. Eppstein. Offline algorithms for dynamic minimum spanning tree problems. *Proc. 2nd Worksh. Algorithms and Data Structures (WADS 1991)*, vol. 519, pp. 392–399. Springer-Verlag, Lecture Notes in Computer Science, 1991.

C17. D. Eppstein. Dynamic three-dimensional linear programming. *Proc. 32nd Symp. Foundations of Computer Science*, pp. 488–494. IEEE, 1991.

C18. D. Eppstein. Approximating the minimum weight triangulation. *Proc. 3rd Symp. Discrete Algorithms*, pp. 48–57. SIAM, 1992.

C19. D. Eppstein. New algorithms for minimum area k-gons. *Proc. 3rd Symp. Discrete Algorithms*, pp. 83–86. SIAM, 1992.

C20. M. W. Bern, H. Edelsbrunner, D. Eppstein, S. A. Mitchell, and T.-S. Tan. Edge insertion for optimal triangulation. *Proc. 1st Latin American Symp. Theoretical Informatics (LATIN 1992)*, vol. 583, pp. 46–60. Springer-Verlag, Lecture Notes in Computer Science, 1992.

C21. M. W. Bern, D. P. Dobkin, and D. Eppstein. Triangulating polygons without large angles. *Proc. 8th Symp. Computational Geometry*, pp. 222–231. ACM, 1992.

C22. D. Eppstein, Z. Galil, G. F. Italiano, and A. Nissenzweig. Sparsification — A technique for speeding up dynamic graph algorithms. *Proc. 33rd Symp. Foundations of Computer Science*, pp. 60–69. IEEE, 1992.

C23. P. K. Agarwal, D. Eppstein, and J. Matoušek. Dynamic algorithms for half-space reporting, proximity problems, and geometric minimum spanning trees. *Proc. 33rd Symp. Foundations of Computer Science*, pp. 80–89. IEEE, 1992.

C24. D. Eppstein and J. G. Erickson. Iterated nearest neighbors and finding minimal polytopes. *Proc. 4th Symp. Discrete Algorithms*, pp. 64–73. SIAM, 1993.

C25. D. Eppstein, Z. Galil, G. F. Italiano, and T. H. Spencer. Separator based sparsification for dynamic planar graph algorithms. *Proc. 25th Symp. Theory of Computing*, pp. 208–217. ACM, 1993.

C26. D. P. Dobkin and D. Eppstein. Computing the discrepancy. *Proc. 9th Symp. Computational Geometry*, pp. 47–52. ACM, 1993.

C27. K. L. Clarkson, D. Eppstein, G. L. Miller, C. Sturtivant, and S.-H. Teng. Approximating center points with iterated Radon points. *Proc. 9th Symp. Computational Geometry*, pp. 91–98. ACM, 1993.

C28. D. Eppstein, G. L. Miller, and S.-H. Teng. A deterministic linear time algorithm for geometric separators and its applications. *Proc. 9th Symp. Computational Geometry*, pp. 99–108. ACM, 1993.

C29. M. W. Bern and D. Eppstein. Worst-case bounds for subadditive geometric graphs. *Proc. 9th Symp. Computational Geometry*, pp. 183–188. ACM, 1993.

C30. M. W. Bern, D. Eppstein, and S.-H. Teng. Parallel construction of quadtrees and quality triangulations. *Proc. 3rd Worksh. Algorithms and Data Structures (WADS 1993)*, vol. 709, pp. 188–199. Springer-Verlag, Lecture Notes in Computer Science, 1993.

C31. D. Eppstein. Average case analysis of dynamic geometric optimization. *Proc. 5th Symp. Discrete Algorithms*, pp. 77–86. SIAM, 1994.

C32. D. Eppstein. Clustering for faster network simplex pivots. *Proc. 5th Symp. Discrete Algorithms*, pp. 160–166. SIAM, 1994.

C33. M. W. Bern, L. P. Chew, D. Eppstein, and J. Ruppert. Dihedral bounds for mesh generation in high dimensions. *Abstracts of the AMS* 15:366, 1994. From 892nd Meeting Amer. Math. Soc., Brooklyn, April 1994.

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