

David Eppstein

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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

Stanford University, B.S. in Mathematics, with distinction, 1984.
Columbia University, Computer Science Dept., M.S. May 1985; Ph.D. May 1989.

Professional Employment

Post-doctoral researcher, Xerox Palo Alto Research Center, 1989–1990.
Department of Information and Computer Science, University of California, Irvine
Assistant professor, 1990–1994
Associate professor, 1994–1998
Full professor, 1998–2002
Computer Science Department, Donald Bren School of Information and Computer Sciences, UC Irvine
Full professor, 2003–present
Founding co-chair 2003–2005; vice chair for the Computing Division 2008–2010
Chancellor's Professor, 2014–present

Awards and Honors

National Merit Scholarship, 1981–1984.
NSF Graduate Fellowship, 1984–1987.
NSF Young Investigator Award, 1992–1999.
Second Best Paper Award, 25th Conference of the European Association for Computer Graphics (Eurographics), 2004.
Best Paper Award, 16th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems, 2008.
Best Paper Award, Algorithms and Data Structures Symposium (WADS), 2009.
Dean's Award for Research, Donald Bren School of Information and Computer Sciences, UC Irvine, 2011.
Fellow of the Association for Computing Machinery, 2012.
Best Paper Award, 20th International Symposium on Graph Drawing, 2012.
Fellow of the American Association for the Advancement of Science, 2017.

Graduate Students

Jeff Erickson (M.S., 1992)
David Hart (Ph.D., 2002)
Joseph Wang (Ph.D., 2003)
Josiah Carlson (Ph.D., 2007)
Kevin Wortman (Ph.D., 2009)
Darren Strash (Ph.D., 2011, co-advised with Michael T. Goodrich)
Joe Simons (Ph.D., 2014, co-advised with Michael T. Goodrich)
Zhanpeng Cheng (M.S., 2014)
Michael J. Bannister (Ph.D., 2015)
William E. Devanny (Ph.D., 2017, co-advised with Michael T. Goodrich)
Sid Gupta (current)
Elham Havvaei (current)
Nil Mamano (current, co-advised with Michael T. Goodrich)

Postdoctoral Research Supervision

Maarten Löffler (2009–2011)
Martin Nöllenburg (2009–2010)

Journal editing

Editorial boards: *J. Algorithms*, 1994–2004; *Chicago J. Theor. Comp. Sci.*, 1994–present; *SIAM J. Comput.*, 1995–2004; *J. Graph Algorith. & Appl.*, 1995–2009. *ACM Trans. Algorith.*, 2004–2008.

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; *J. Graph Algorith. & Appl.*, special issue for GD 2009.

Conference reviewing

ACM Symposium on Computational Geometry (SoCG), program committee, 1995, 1999, and 2012; video/multimedia program committee, 2010; program chair for theory track, 2001; steering committee, 2013–present.

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

ACM-SIAM Symposium on Discrete Algorithms, program committee, 1996, 2000, 2011, and 2017; program chair, 2002.

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

Canadian Conference on Computational Geometry (CCCG), program committee, 2018.

Computational Geometry Young Researchers' Forum (CG:YRF), program committee, 2015.

Computing and Combinatorics (COCOON), program committee, 1999, 2012, and 2016.

European Symposium on Algorithms, steering committee, 2008–2012; program committee, 2014.

IEEE Symposia on Foundations of Computer Science (FOCS), program committee, 1993, 2001, and 2008.

International Colloquium on Automata, Languages and Programming (ICALP), program committee, 2005, 2008, and 2015.

International Conference on Fun with Algorithms (FUN), program committee, 2012, 2016, and 2018.

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

International Symposium on Graph Drawing, program committee, 2006, 2008, 2010, 2012, 2014, and 2016; program co-chair, 2009; steering committee, 2008–2010.

International Symposium on Theoretical Aspects of Computer Science (STACS), program committee, 2019.
International Symposium on Voronoi Diagrams (ISVD), program committee, 2013.
International Workshop on Graph-Theoretic Concepts in Computer Science (WG), program committee, 2014.
Meeting on Algorithms & Experiments (ALENEX), program co-chair, 2015.
NSF Workshop on Computational Topology, co-chair, 1999.
Scandinavian Symposium and Workshops on Algorithm Theory (SWAT), program committee, 2012 and 2014; program chair, 2018.

Other editorial service

Moderator for cs.DS (data structures and algorithms), arxiv.org electronic preprint repository, 2006–present; member of arXiv scientific advisory board, 2016–2019.
Administrator on English-language Wikipedia, 2007–present.

Patents

R. P. Tamstorf, M. T. Goodrich, and D. Eppstein. Attribute transfer between computer models including identifying isomorphic regions in polygonal meshes. US Patent 8,681,145, March 25, 2014.

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.
“Graph-theoretic solutions to computational geometry problems.” 35th International Workshop on Graph-Theoretic Methods in Computer Science, Montpellier, France, June 2009.
“Hyperconvexity and metric embedding”, 5th William Rowan Hamilton Geometry and Topology Workshop, Dublin, Ireland, September 2009.
“Hyperconvexity and metric embedding”, Workshop on Combinatorial Geometry, Institute for Pure and Applied Mathematics, Univ. of California, Los Angeles, October 2009.
“Regular labelings and geometric structures”, 22nd Canadian Conference on Computational Geometry, Winnipeg, Canada, August 2010.
“Listing all maximal cliques in sparse graphs in near-optimal time”, Workshop on Exact Algorithms for NP-Hard Problems, Dagstuhl, Germany, November 2010.
“Lombardi Drawings of Graphs”, 7th Dutch Computational Geometry Day, Eindhoven, The Netherlands, November 2010.
“Graph-theoretic solutions to computational geometry problems”, Computer Science Colloquium, KAIST, Daejeon, Korea, December 2010.
“Regular labelings and geometric structures”, 21st International Symposium on Algorithms and Computation, Jeju, Korea, December 2010.

- “Möbius transformations, power diagrams, Lombardi drawings, and soap bubbles”, EuroGIGA Midterm Conference, Prague, Czech Republic, July 2012.
- “Circle packings, hyperbolic Voronoi diagrams, Lombardi drawings, and soap bubbles”, International Workshop on Combinatorial Image Analysis, Austin, Texas, November 2012.
- “A brief history of curves in graph drawing”, Workshop on Drawing Graphs and Maps with Curves, Dagstuhl, Germany, April 2013.
- “Windows into relational events: Data structures for contiguous subsequences of edges”, University of Arizona, February 2014.
- “Structures in solution spaces: three lessons from Jean-Claude”, Conference on Meaningfulness and Learning Spaces (A Tribute to the Work of Jean-Claude Falmagne), Irvine, California, February 2014.
- “Regular labelings and geometric structures”, Oregon State University, March 2014.
- “Curves in graph drawing”, EuroGIGA Ph.D. school “CCC” 2014, Recent Trends in Graph Drawing – Curves, Crossings, and Constraints, University of Würzburg, Germany, September 2014.
- “Realizing graphs as polyhedra”, Workshop on Recent Trends in Graph Drawing: Curves, Graphs, and Intersections, California State University Northridge, September 2015
- “Treetopes and their graphs”, Southern California Theory Day, University of Southern California, November 2015
- “Forbidden configurations in discrete geometry”, Paul Erdős Memorial Lecture, Canadian Conference on Computational Geometry, Ottawa, Canada, July 2017.
- “Forbidden configurations in discrete geometry”, 20th Japan Conf. Discrete & Computational Geometry, Graphs, and Games, Tokyo, Japan, August 2017.
- “Forbidden configurations in discrete geometry”, 5th International Conf. Combinatorics, Melbourne, Australia, December 2017.

Books

- B1. D. Eppstein, J.-Cl. Falmagne, and S. Ovchinnikov. *Media Theory*. Springer-Verlag, 2008.
- B2. D. Eppstein. *Forbidden Configurations in Discrete Geometry*. Cambridge University Press, 2018.

Edited Volumes

- V1. D. Eppstein and D. Halperin. *Proceedings of the 17th Annual ACM Symposium on Computational Geometry. Medford, MA, USA, June 3–5, 2001*. ACM Press, 2001.
- V2. D. Eppstein. *Proceedings of the 13th Annual ACM–SIAM Symposium on Discrete Algorithms. San Francisco, CA, USA; January 6–8, 2002*. ACM Press, 2002.
- V3. D. Eppstein and E. Gansner. *Proceedings of the 17th International Symposium on Graph Drawing, GD 2009, Chicago, IL, USA, September 22–25, 2009*. Lecture Notes in Computer Science 5849, Springer-Verlag, 2010.
- V4. J.-Cl. Falmagne, D. Albert, C. Doble, D. Eppstein, and X. Hu. *Knowledge Spaces: Applications in Education*. Springer-Verlag, 2013.
- V5. U. Brandes and D. Eppstein. *Proceedings of the 17th Workshop on Algorithm Engineering and Experiments (ALENEX), San Diego, CA, USA, January 5, 2015*. Society for Industrial and Applied Mathematics, 2015, doi:10.1137/1.9781611973754.
- V6. D. Eppstein. *Proceedings of the 16th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT 2018), Malmö, Sweden, June 18–20, 2018*. Leibniz International Proceedings in Informatics (LIPIcs) 101, Dagstuhl Publishing, 2018, <http://www.dagstuhl.de/dagpub/978-3-95977-068-2>.

Refereed Journal Articles

- J1. D. Eppstein. Sequence comparison with mixed convex and concave costs. *J. Algorithms* 11(1):85–101, March 1990, doi:10.1016/0196-6774(90)90031-9, MR1041168.
- J2. D. Eppstein. Reset sequences for monotonic automata. *SIAM J. Computing* 19(3):500–510, June 1990, doi:10.1137/0219033, MR1041543.
- 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, March 1991, doi:10.1142/S0218195991000074, MR1099499.

- J4. M. Chrobak and D. Eppstein. Planar orientations with low out-degree and compaction of adjacency matrices. *Theoretical Computer Science* 86(2):243–266, September 1991, doi:10.1016/0304-3975(91)90020-3, MR1122790.
- J5. D. Eppstein, J. Feigenbaum, and C.-L. Li. Equipartitions of graphs. *Discrete Mathematics* 91(3):239–248, 1991, doi:10.1016/0012-365X(90)90233-8, MR1129988.
- J6. D. Eppstein, M. Overmars, G. Rote, and G. J. Woeginger. Finding minimum area k -gons. *Discrete & Computational Geometry* 7(1):45–58, 1992, doi:10.1007/BF02187823, MR1134451.
- 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, doi:10.1007/BF01368782, MR1139093.
- 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 plane graph. *J. Algorithms* 13(1):33–54, March 1992, doi:10.1016/0196-6774(92)90004-V, MR1146331. Special issue for 1st SODA.
- J9. D. Eppstein. The farthest point Delaunay triangulation minimizes angles. *Computational Geometry Theory & Applications* 1(3):143–148, March 1992, doi:10.1016/S0925-7721(98)00031-5, MR1154641.
- J10. D. Eppstein. Parallel recognition of series parallel graphs. *Information & Computation* 98(1):41–55, May 1992, doi:10.1016/0890-5401(92)90041-D, MR1161075.
- J11. D. Eppstein. Finding the k smallest spanning trees. *BIT* 32(2):237–248, 1992, doi:10.1007/BF01994879, MR1172188. 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, July 1992, doi:10.1145/146637.146650, MR1177953.
- 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, July 1992, doi:10.1145/146637.146656, MR1177954.
- J14. M. W. Bern and D. Eppstein. Polynomial-size non-obtuse triangulation of polygons. *Int. J. Computational Geometry & Applications* 2(3):241–255, September 1992, doi:10.1142/S0218195992000159, MR1194449. Special issue for 7th SCG.
- J15. D. Eppstein. Dynamic three-dimensional linear programming. *INFORMS Journal on Computing* 4(4):360–368, Fall 1992, doi:10.1287/ijoc.4.4.360, MR1189074. 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, doi:10.1016/0097-3165(93)90082-J, MR1198391.
- J17. D. Eppstein. Connectivity, graph minors, and subgraph multiplicity. *J. Graph Theory* 17:409–416, 1993, doi:10.1002/jgt.3190170314, MR1221000.
- 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, doi:10.1007/BF02573962, MR1215322.
- J19. D. Eppstein. Approximating the minimum weight Steiner triangulation. *Discrete & Computational Geometry* 11(2):163–191, 1994, doi:10.1007/BF02574002, MR1254088.
- 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, April 1994, doi:10.1007/BF01187019, MR1264269.
- J21. D. Eppstein and J. G. Erickson. Iterated nearest neighbors and finding minimal polytopes. *Discrete & Computational Geometry* 11(3):321–350, April 1994, doi:10.1007/BF02574012, MR1271639.
- J22. M. W. Bern, D. Eppstein, and J. R. Gilbert. Provably good mesh generation. *J. Computer & Systems Sciences* 48(3):384–409, June 1994, doi:10.1016/S0022-0000(05)80059-5, MR1279408. 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, June 1994, doi:10.1142/S0218195994000136, MR1288661.
- J24. B. Aronov, M. W. Bern, and D. Eppstein. On the number of minimal 1-Steiner trees. *Discrete & Computational Geometry* 12(1):29–34, July 1994, doi:10.1007/BF02574363, MR1280574.
- J25. D. Eppstein. Arboricity and bipartite subgraph listing algorithms. *Information Processing Letters* 51(4):207–211, August 1994, doi:10.1016/0020-0190(94)90121-X, MR1294315.
- J26. D. Eppstein. Offline algorithms for dynamic minimum spanning tree problems. *J. Algorithms* 17(2):237–250, September 1994, doi:10.1006/jagm.1994.1033, MR1291541.
- J27. D. Eppstein. Dynamic Euclidean minimum spanning trees and extrema of binary functions. *Discrete & Computational Geometry* 13(1):111–122, January 1995, doi:10.1007/BF02574030, MR1300511.
- 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, April 1995, MR1360950. 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, May 1995, doi:10.1007/BF01190849, MR1323901.
- 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, March–June 1995, doi:10.1142/S0218195995000106, MR1331181. 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, January 1996, doi:10.1016/0925-7721(95)00009-7, MR1368264.

- 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, February 1996, doi:10.1006/jcss.1996.0002, MR1375801. Special issue for 25th STOC.
- J34. D. Eppstein. Average case analysis of dynamic geometric optimization. *Computational Geometry Theory & Applications* 6(1):45–68, April 1996, doi:10.1016/0925-7721(95)00018-6, MR1387673.
- 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, September 1996, doi:10.1142/S021819599600023X, MR1409651. 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, October 1996, doi:10.1145/234535.234536.
- J37. D. Fernández-Baca, G. Slutzki, and D. Eppstein. Using sparsification for parametric minimum spanning tree problems. *Nordic J. Computing* 3(4):352–366, Winter 1996, MR1436019. 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, April 1997, doi:10.1007/PL00009293, MR1432064.
- J40. D. Eppstein. Minimum range balanced cuts via dynamic subset sums. *J. Algorithms* 23(2):375–385, May 1997, doi:10.1006/jagm.1996.0841, MR1441974.
- J41. D. Eppstein. Dynamic connectivity in digital images. *Information Processing Letters* 62(3):121–126, May 1997, doi:10.1016/S0020-0190(97)00056-2, MR1453694.
- J42. D. Eppstein and D. S. Hirschberg. Choosing subsets with maximum weighted average. *J. Algorithms* 24(1):177–193, July 1997, doi:10.1006/jagm.1996.0849, MR1453956.
- 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, September 1997, doi:10.1145/265910.265914, MR1492341.
- J44. D. Eppstein. Faster circle packing with application to nonobtuse triangulation. *Int. J. Computational Geometry & Applications* 7(5):485–491, October 1997, doi:10.1142/S0218195997000296, MR1471881.
- J45. D. Eppstein. Faster geometric k -point MST approximation. *Computational Geometry Theory & Applications* 8:231–240, October 1997, doi:10.1016/S0925-7721(96)00021-1, MR1472336.
- 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, March 1998, doi:10.1006/gmip.1998.0465.
- J47. G. Barequet, M. T. Dickerson, and D. Eppstein. On triangulating three-dimensional polygons. *Computational Geometry Theory & Applications* 10(3):155–170, June 1998, doi:10.1016/S0925-7721(98)00005-4, MR1625512.
- J48. D. Eppstein. Geometric lower bounds for parametric matroid optimization. *Discrete & Computational Geometry* 20:463–476, 1998, doi:10.1007/PL00009396, MR1651908.
- J49. D. Eppstein. Finding the k shortest paths. *SIAM J. Computing* 28(2):652–673, 1998, doi:10.1137/S0097539795290477, MR1634364.
- 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, doi:10.1137/S0097539794269072, MR1630489.
- J51. D. Eppstein. Subgraph isomorphism in planar graphs and related problems. *J. Graph Algorithms & Applications* 3(3):1–27, 1999, doi:10.7155/jgaa.00014, arXiv:cs.DS/9911003, MR1750082.
- J52. A. B. Amenta, M. W. Bern, and D. Eppstein. Optimal point placement for mesh smoothing. *J. Algorithms* 30(2):302–322, February 1999, doi:10.1006/jagm.1998.0984, arXiv:cs.CG/9809081, MR1671836. Special issue for 8th SODA.
- J53. D. Eppstein. Linear complexity hexahedral mesh generation. *Computational Geometry Theory & Applications* 12:3–16, 1999, doi:10.1016/S0925-7721(98)00032-7, arXiv:cs.CG/9809109, MR1677595. 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, doi:10.1007/PL00009479, MR1721026. 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, December 1999, doi:10.1142/S0218195999000303, MR1727394.
- 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, doi:10.1007/PL00009502, arXiv:cs.CG/9809037, MR1744506.
- J57. D. Eppstein. Diameter and treewidth in minor-closed graph families. *Algorithmica* 27:275–291, 2000, doi:10.1007/s004530010020, arXiv:math.CO/9907126, MR1759751. Special issue on treewidth, graph minors, and algorithms.
- J58. D. Eppstein. Clustering for faster network simplex pivots. *Networks* 35(3):173–180, 2000, doi:10.1002/(SICI)1097-0037(200005)35:3<173::AID-NET1>3.0.CO;2-W, MR1764876.
- J59. D. Eppstein. Fast hierarchical clustering and other applications of dynamic closest pairs. *J. Experimental Algorithmics* 5(1):1–23, June 2000, doi:10.1145/351827.351829, arXiv:cs.DS/9912014, MR1794936.
- J60. M. W. Bern and D. Eppstein. Quadrilateral meshing by circle packing. *Int. J. Computational Geometry & Applications* 10(4):347–360, August 2000, doi:10.1142/S0218195900000206, arXiv:cs.CG/9908016, MR1791192.

- J61. M. B. Dillencourt, D. Eppstein, and D. S. Hirschberg. Geometric thickness of complete graphs. *J. Graph Algorithms & Applications* 4(3):5–17, 2000, doi:10.7155/jgaa.00023, arXiv:math.CO/9910185, MR1787458. Special issue for Graph Drawing '98.
- J62. D. Eppstein. Incremental and decremental maintenance of planar width. *J. Algorithms* 37(2):570–577, November 2000, doi:10.1006/jagm.2000.1107, arXiv:cs.CG/9809038, MR1788850.
- J63. D. Eppstein. Tangent spheres and triangle centers. *American Mathematical Monthly* 108(1):63–66, January 2001, doi:10.2307/2695679, arXiv:math.MG/9909152, MR1857072.
- 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, September 2001, doi:10.1109/18.945266, MR1873940.
- J65. M. W. Bern, D. Eppstein, and B. Hutchings. Algorithms for coloring quadrees. *Algorithmica* 32(1):87–94, January 2002, doi:10.1007/s00453-001-0054-2, arXiv:cs.CG/9907030, MR1867026.
- J66. D. Eppstein. Beta-skeletons have unbounded dilation. *Computational Geometry Theory & Applications* 23(1):43–52, July 2002, doi:10.1016/S0925-7721(01)00055-4, arXiv:cs.CG/9907031, MR1902878.
- J67. M. W. Bern and D. Eppstein. Multivariate regression depth. *Discrete & Computational Geometry* 28(1):1–17, July 2002, doi:10.1007/s00454-001-0092-1, arXiv:cs.CG/9912013, MR1904006.
- J68. M. W. Bern, D. Eppstein, and J. G. Erickson. Flipping cubical meshes. *Engineering with Computers* 18(3):173–187, October 2002, doi:10.1007/s003660200016, arXiv:cs.CG/0108020.
- 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, February 2003, doi:10.1016/S0925-7721(02)00091-3, MR1956035.
- J70. D. Eppstein. Setting parameters by example. *SIAM J. Computing* 32(3):643–653, 2003, doi:10.1137/S0097539700370084, arXiv:cs.DS/9907001, MR2001747.
- J71. D. Eppstein. Small maximal independent sets and faster exact graph coloring. *J. Graph Algorithms & Applications* 7(2):131–140, 2003, doi:10.7155/jgaa.00064, arXiv:cs.DS/0011009, MR2112051. Special issue for WADS'01.
- J72. D. Eppstein and M. B. Dillencourt. Uninscribable 4-regular polyhedron. *Electronic Geometry Models* 2003.08.001, 2003, <https://www.eg-models.de/2003.08.001/>.
- 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, doi:10.1016/j.comgeo.2003.11.003, arXiv:cs.CG/0302027, MR2039173.
- J74. D. Eppstein and J. Y. Wang. Fast approximation of centrality. *J. Graph Algorithms & Applications* 8(1):39–45, 2004, doi:10.7155/jgaa.00081, arXiv:cs.DS/0009005, MR2112262.
- J75. R. Beigel and D. Eppstein. 3-coloring in time $O(1.3289^n)$. *J. Algorithms* 54(2):168–204, February 2005, doi:10.1016/j.jalgor.2004.06.008, arXiv:cs.DS/0006046, MR2111907.
- J76. D. Eppstein. The lattice dimension of a graph. *Eur. J. Combinatorics* 26(5):585–592, July 2005, doi:10.1016/j.ejc.2004.05.001, arXiv:cs.DS/0402028, MR2127682.
- 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, June 2005, doi:10.1016/j.comgeo.2004.12.008, arXiv:cs.CG/9907018, MR2143323. 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, May 2005, doi:10.1016/j.micpro.2004.08.001.
- J79. D. Eppstein. Quasiconvex analysis of multivariate recurrence equations for backtracking algorithms. *ACM Trans. Algorithms* 2(4):492–509, October 2006, doi:10.1145/1198513.1198515, MR2284242. Special issue for SODA 2004.
- J80. D. Eppstein. Cubic partial cubes from simplicial arrangements. *Electronic J. Combinatorics* 13(1, R79):1–14, September 2006, arXiv:math.CO/0510263, https://www.combinatorics.org/Volume_13/Abstracts/v13i1r79.html, MR2255421.
- 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, November 2006, doi:10.1007/s00224-006-1349-0, arXiv:cs.DC/0404029, MR2279081.
- J82. D. Eppstein. The traveling salesman problem for cubic graphs. *J. Graph Algorithms & Applications* 11(1):61–81, 2007, doi:10.7155/jgaa.00137, arXiv:cs.DS/0302030, MR2318425.
- 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, doi:10.1137/050631847, arXiv:cs.DS/0505048, MR2284085.
- 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, doi:10.1145/1240233.1240239, arXiv:cs.CG/0307027, MR2335299.
- J85. D. Eppstein, M. T. Goodrich, and J. Y. Meng. Confluent layered drawings. *Algorithmica* 47(4):439–452, 2007, doi:10.1007/s00453-006-0159-8, arXiv:cs.CG/0507051, MR2304989. 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, doi:10.1016/j.comgeo.2006.05.007, arXiv:cs.CG/0412025, MR2297224.
- 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, doi:10.1016/j.comgeo.2006.09.002, arXiv:math.CO/0606450, MR2352533.
- 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, doi:10.1109/TCAD.2007.896319.

- J89. D. Eppstein, M. T. Goodrich, and J. Z. Sun. Skip quadrees: dynamic data structures for multidimensional data. *Int. J. Computational Geometry & Applications* 18(1–2):131–160, 2008, doi:10.1142/S0218195908002568, arXiv:cs.CG/0507049, MR2397316.
- J90. D. Eppstein. Upright-quad drawing of st -planar learning spaces. *J. Graph Algorithms & Applications* 12(1):51–72, 2008, doi:10.7155/jgaa.00159, arXiv:cs.CG/0607094, MR2392934.
- J91. D. Eppstein and J.-C. Falmagne. Algorithms for media. *Discrete Applied Mathematics* 156(8):1308–1320, 2008, doi:10.1016/j.dam.2007.05.035, arXiv:cs.DS/0206033, MR2406357. 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, doi:10.1016/j.jmp.2008.09.002, arXiv:0704.2919, MR2500686.
- J93. D. Eppstein, M. T. Goodrich, E. Kim, and R. Tamstorf. Approximate topological matching of quadrilateral meshes. *The Visual Computer* 25(8):771–783, 2009, doi:10.1007/s00371-009-0363-z.
- J94. D. Eppstein. Testing bipartiteness of geometric intersection graphs. *ACM Trans. Algorithms* 5(2):15, 2009, doi:10.1145/1497290.1497291, arXiv:cs.CG/0307023, MR2561751.
- J95. D. Eppstein. Squarepants in a tree: sum of subtree clustering and hyperbolic pants decomposition. *ACM Trans. Algorithms* 5(3):29, 2009, doi:10.1145/1541885.1541890, arXiv:cs.CG/0604034, MR2548257.
- J96. D. Eppstein, M. J. van Kreveld, E. Mumford, and B. Speckmann. Edges and switches, tunnels and bridges. *Computational Geometry Theory & Applications* 42(8):790–802, 2009, doi:10.1016/j.comgeo.2008.05.005, arXiv:0705.0413, MR2527056.
- J97. D. Eppstein. Manhattan orbifolds. *Topology and its Applications* 157(2):494–507, 2009, doi:10.1016/j.topol.2009.10.008, arXiv:math.MG/0612109, MR2563298.
- J98. D. Eppstein. Finding large clique minors is hard. *J. Graph Algorithms & Applications* 13(2):197–204, 2009, doi:10.7155/jgaa.00183, arXiv:0807.0007, MR2545292.
- J99. D. Eppstein. All maximal independent sets and dynamic dominance for sparse graphs. *ACM Trans. Algorithms* 5(4):A38, 2009, doi:10.1145/1597036.1597042, MR2571901.
- J100. D. Eppstein. Happy endings for flip graphs. *Journal of Computational Geometry* 1(1):3–28, 2010, doi:10.20382/jocg.v1i1a2, arXiv:cs.CG/0610092, MR2770955.
- J101. D. Eppstein. Densities of minor-closed graph families. *Electronic J. Combinatorics* 17(1):R136, 2010, arXiv:1009.5633, https://www.combinatorics.org/Volume_17/Abstracts/v17i1r136.html, MR2729385.
- J102. H.-J. Bandelt, V. Chepoi, and D. Eppstein. Combinatorics and geometry of finite and infinite squaregraphs. *SIAM J. Discrete Mathematics* 24(4):1399–1440, 2010, doi:10.1137/090760301, arXiv:0905.4537, MR2735930.
- J103. D. Eppstein, M. T. Goodrich, and D. Strash. Linear-time algorithms for geometric graphs with sublinearly many crossings. *SIAM J. Computing* 39(8):3814–3829, 2010, doi:10.1137/090759112, arXiv:0812.0893, MR2745775.
- J104. J. Augustine, D. Eppstein, and K. A. Wortman. Approximate weighted farthest neighbors and minimum dilation stars. *Discrete Mathematics, Algorithms and Applications* 2(4):553–565, 2010, doi:10.1142/S1793830910000887, MR2763896.
- J105. D. Eppstein and M. T. Goodrich. Straggler identification in round-trip data streams via Newton’s identities and invertible Bloom filters. *IEEE Transactions on Knowledge and Data Engineering* 23(2):297–306, 2011, doi:10.1109/TKDE.2010.132, arXiv:0704.3313.
- J106. S. Cabello Justo, D. Eppstein, and S. Klavžar. The Fibonacci dimension of a graph. *Electronic J. Combinatorics* 18(1):Paper 55, 23, 2011, arXiv:0903.2507, https://www.combinatorics.org/Volume_18/Abstracts/v18i1p55.html, MR2776831.
- J107. D. Eppstein. Recognizing partial cubes in quadratic time. *J. Graph Algorithms & Applications* 15(2):269–293, 2011, doi:10.7155/jgaa.00226, arXiv:0705.1025, MR2821217.
- J108. D. Eppstein and M. T. Goodrich. Succinct greedy geometric routing using hyperbolic geometry. *IEEE Trans. Computers* 60(11):1571–1580, 2011, doi:10.1109/TC.2010.257, arXiv:0806.0341, MR2830035.
- J109. D. Eppstein and K. A. Wortman. Optimal angular resolution for face-symmetric drawings. *J. Graph Algorithms & Applications* 15(4):551–564, 2011, doi:10.7155/jgaa.00238, arXiv:0907.5474, MR2844744.
- J110. D. Eppstein. Optimally fast incremental Manhattan plane embedding and planar tight span construction. *Journal of Computational Geometry* 2(1):144–182, 2011, doi:10.20382/jocg.v2i1a8, arXiv:0909.1866, MR2855918.
- J111. C. A. Duncan, D. Eppstein, M. T. Goodrich, S. G. Kobourov, and M. Nöllenburg. Lombardi drawings of graphs. *J. Graph Algorithms & Applications* 16(1):85–108, 2012, doi:10.7155/jgaa.00251, arXiv:1009.0579, MR2872431. Special issue for GD 2010.
- J112. E. Chambers, D. Eppstein, M. T. Goodrich, and M. Löffler. Drawing graphs in the plane with a prescribed outer face and polynomial area. *J. Graph Algorithms & Applications* 16(2):243–259, 2012, doi:10.7155/jgaa.00257, arXiv:1009.0088, MR2892419.
- J113. D. Eppstein, E. Mumford, B. Speckmann, and K. A. B. Verbeek. Area-universal and constrained rectangular layouts. *SIAM J. Computing* 41(3):537–564, 2012, doi:10.1137/110834032, MR2967467.
- J114. D. Eppstein, M. T. Goodrich, D. Strash, and L. Trott. Extended dynamic subgraph statistics using h -index parameterized data structures. *Theoretical Computer Science* 447:44–52, 2012, doi:10.1016/j.tcs.2011.11.034, MR2943954. Special issue for COCOA 2010.
- J115. D. Eppstein and E. S. Spiro. The h -index of a graph and its application to dynamic subgraph statistics. *J. Graph Algorithms & Applications* 16(2):543–567, 2012, doi:10.7155/jgaa.00273, MR2971260.

- J116. M. J. Bannister, D. Eppstein, and J. Simons. Inapproximability of orthogonal compaction. *J. Graph Algorithms & Applications* 16(3):651–673, 2012, doi:10.7155/jgaa.00263, MR2983429.
- J117. D. Eppstein. The complexity of bendless three-dimensional orthogonal graph drawing. *J. Graph Algorithms & Applications* 17(1):35–55, 2013, doi:10.7155/jgaa.00283, MR3019198.
- J118. C. A. Duncan, D. Eppstein, M. T. Goodrich, S. G. Kobourov, and M. Nöllenburg. Drawing trees with perfect angular resolution and polynomial area. *Discrete & Computational Geometry* 49(2):157–182, 2013, doi:10.1007/s00454-012-9472-y, MR3017904.
- J119. G. Barequet, M. T. Dickerson, D. Eppstein, D. Hodorkovsky, and K. Vyatkina. On 2-site Voronoi diagrams under geometric distance functions. *J. Computer Science and Technology* 28(2):267–277, 2013, doi:10.1007/s11390-013-1328-2, MR3088356.
- J120. D. Eppstein, M. Löffler, E. Mumford, and M. Nöllenburg. Optimal 3D angular resolution for low-degree graphs. *J. Graph Algorithms & Applications* 17(3):173–200, 2013, doi:10.7155/jgaa.00290, MR3043208.
- J121. E. Chambers and D. Eppstein. Flows in one-crossing-minor-free graphs. *J. Graph Algorithms & Applications* 17(3):201–220, 2013, doi:10.7155/jgaa.00291, MR3043209.
- J122. D. Eppstein and M. Löffler. Bounds on the complexity of halfspace intersections when the bounded faces have small dimension. *Discrete & Computational Geometry* 50(1):1–21, 2013, doi:10.1007/s00454-013-9503-3, MR3070539.
- J123. D. Eppstein and J. Simons. Confluent Hasse diagrams. *J. Graph Algorithms & Applications* 17(7):689–710, 2013, doi:10.7155/jgaa.00312, MR3146044.
- J124. D. Eppstein, M. T. Goodrich, M. Löffler, D. Strash, and L. Trott. Category-based routing in social networks: membership dimension and the small-world phenomenon. *Theoretical Computer Science* 514:96–104, 2013, doi:10.1016/j.tcs.2013.04.027, MR3134291. Special issue on Graph Algorithms and Applications: in Honor of Professor Giorgio Ausiello.
- J125. D. Eppstein, D. Strash, and M. Löffler. Listing all maximal cliques in large sparse real-world graphs in near-optimal time. *J. Experimental Algorithmics* 18(3):3.1, 2013, doi:10.1145/2543629.
- J126. D. Eppstein. Antimatroids and balanced pairs. *Order* 31(1):81–99, 2014, doi:10.1007/s11083-013-9289-1, MR3167757.
- J127. D. Eppstein. Diamond-kite adaptive quadrilateral meshing. *Engineering with Computers* 30(2):223–235, 2014, doi:10.1007/s00366-013-0327-9.
- J128. M. J. Bannister, Z. Cheng, W. E. Devanny, and D. Eppstein. Superpatterns and universal point sets. *J. Graph Algorithms & Applications* 18(2):177–209, 2014, doi:10.7155/jgaa.00318, arXiv:1308.0403, MR3213194. Special issue for GD 2013.
- J129. D. Eppstein. Drawing arrangement graphs in small grids, or how to play planarity. *J. Graph Algorithms & Applications* 18(2):211–231, 2014, doi:10.7155/jgaa.00319, arXiv:1308.0066, MR3213195. Special issue for GD 2013.
- J130. P. Angelini, D. Eppstein, F. Frati, M. Kaufmann, S. Lazard, T. Mchedlidze, M. Teillaud, and A. Wolff. Universal point sets for planar graph drawings with circular arcs. *J. Graph Algorithms & Applications* 18(3):313–324, 2014, doi:10.7155/jgaa.00324, MR3213192.
- J131. D. Eppstein. Grid minors in damaged grids. *Electronic J. Combinatorics* 21(3):P3.20, 2014, <https://www.combinatorics.org/ojs/index.php/eljc/article/view/v21i3p20>, MR3262257.
- J132. D. Eppstein. A Möbius-invariant power diagram and its applications to soap bubbles and planar Lombardi drawing. *Discrete & Computational Geometry* 52(3):515–550, 2014, doi:10.1007/s00454-014-9627-0, MR3257673. Special issue for SoCG 2013.
- J133. D. Eppstein and E. Mumford. Steinitz theorems for simple orthogonal polyhedra. *Journal of Computational Geometry* 5(1):179–244, 2014, doi:10.20382/jocg.v5i1a10, arXiv:0912.0537, MR3259910.
- J134. B. E. Parrish, J. M. McCarthy, and D. Eppstein. Automated generation of linkage loop equations for planar one degree-of-freedom linkages, demonstrated up to 8-bar. *J. Mechanisms and Robotics* 7(1):011006, 2015, doi:10.1115/1.4029306.
- J135. G. Borradaile, D. Eppstein, and P. Zhu. Planar induced subgraphs of sparse graphs. *J. Graph Algorithms & Applications* 19(1):281–297, 2015, doi:10.7155/jgaa.00358, MR3351948.
- J136. D. Eppstein. Metric dimension parameterized by max leaf number. *J. Graph Algorithms & Applications* 19(1):313–323, 2015, doi:10.7155/jgaa.00360, arXiv:1506.01749, MR3358111.
- J137. D. Eppstein, M. J. van Kreveld, B. Speckmann, and F. Staals. Improved grid map layout by point set matching. *Int. J. Computational Geometry & Applications* 25(2):101–122, 2015, doi:10.1142/S0218195915500077.
- J138. G. Borradaile and D. Eppstein. Near-linear-time deterministic plane Steiner spanners and TSP approximation for well-spaced point set. *Computational Geometry Theory & Applications* 49:8–16, 2015, doi:10.1016/j.comgeo.2015.04.005, arXiv:1206.2254. Special issue for CCCG 2012.
- J139. H.-J. Bandelt, V. Chepoi, and D. Eppstein. Ramified rectilinear polygons: coordinatization by dendrons. *Discrete & Computational Geometry* 54(4):771–797, 2015, doi:10.1007/s00454-015-9743-5, arXiv:1005.1721.
- J140. M. J. Bannister, W. E. Devanny, D. Eppstein, and M. T. Goodrich. The Galois complexity of graph drawing: why numerical solutions are ubiquitous for force-directed, spectral, and circle packing drawings. *J. Graph Algorithms & Applications* 19(2):619–656, 2015, doi:10.7155/jgaa.00349, arXiv:1408.1422.
- J141. D. Eppstein, D. Holten, M. Löffler, M. Nöllenburg, B. Speckmann, and K. A. B. Verbeek. Strict confluent drawing. *Journal of Computational Geometry* 7(1):22–46, 2016, doi:10.20382/jocg.v7i1a2, arXiv:1308.6824.

- J142. E. D. Demaine, D. Eppstein, A. Hesterberg, H. Ito, A. Lubiw, R. Uehara, and Y. Uno. Folding a paper strip to minimize thickness. *J. Discrete Algorithms* 36:18–26, 2016, doi:10.1016/j.jda.2015.09.003, arXiv:1411.6371.
- J143. K. Buchin, D. Eppstein, M. Löffler, and R. I. Silveira. Adjacency-preserving spatial treemaps. *Journal of Computational Geometry* 7(1):100–122, 2016, doi:10.20382/jocg.v7i1a6, arXiv:1105.0398.
- J144. B. Aronov, M. T. de Berg, D. Eppstein, M. Roeloffzen, and B. Speckmann. Distance-sensitive point location made easy. *Computational Geometry Theory & Applications* 54:17–31, 2016, doi:10.1016/j.comgeo.2016.02.001, arXiv:1602.00767.
- J145. Z. Abel, J. Cantarella, E. D. Demaine, D. Eppstein, T. Hull, J. S. Ku, R. J. Lang, and T. Tachi. Rigid origami vertices: Conditions and forcing sets. *Journal of Computational Geometry* 7(1):171–184, 2016, doi:10.20382/jocg.v7i1a9, arXiv:1507.01644.
- J146. D. Eppstein. Simple recognition of Halin graphs and their generalizations. *J. Graph Algorithms & Applications* 20(2):323–346, 2016, doi:10.7155/jgaa.00395, arXiv:1502.05334.
- J147. V. Dujmović, D. Eppstein, and D. R. Wood. Structure of graphs with locally restricted crossings. *SIAM J. Discrete Mathematics* 31(2):805–824, 2017, doi:10.1137/16M1062879.
- J148. D. Eppstein, J. M. McCarthy, and B. E. Parrish. Rooted cycle bases. *J. Graph Algorithms & Applications* 21(4):663–686, 2017, doi:10.7155/jgaa.00434.
- J149. D. Eppstein. Maximizing the sum of radii of disjoint balls or disks. *Journal of Computational Geometry* 8(1):316–339, 2017, doi:10.20382/jocg.v8i1a12.
- J150. M. J. Bannister, S. Cabello Justo, and D. Eppstein. Parameterized complexity of 1-planarity. *J. Graph Algorithms & Applications* 18(1):23–49, 2018, doi:10.7155/jgaa.00457.
- J151. D. Eppstein. The parametric closure problem. *ACM Trans. Algorithms* 14(1):2:1–2:22, 2018, doi:10.1145/3147212, arXiv:1504.04073.
- J152. D. Eppstein, P. Kindermann, S. Kobourov, G. Liotta, A. Lubiw, A. Maignan, D. Mondal, H. Vosoughpour, S. Whitesides, and S. Wismath. On the planar split thickness of graphs. *Algorithmica* 80(3):977–994, 2018, doi:10.1007/s00453-017-0328-y. Special issue for LATIN 2016.
- J153. Z. Abel, E. D. Demaine, M. L. Demaine, D. Eppstein, A. Lubiw, and R. Uehara. Flat foldings of plane graphs with prescribed angles and edge lengths. *Journal of Computational Geometry* 9(1):71–91, 2018, doi:10.20382/jocg.v9i1a3.
- J154. D. Eppstein and D. S. Hirschberg. From discrepancy to majority. *Algorithmica* 80(4):1278–1297, 2018, doi:10.1007/s00453-017-0303-7.

Conference Proceedings

- C1. D. Eppstein. A heuristic approach to program inversion. *Proc. 9th Int. Joint Conf. Artificial Intelligence*, vol. 1, pp. 219–221, August 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, doi:10.1007/978-1-4612-3352-7_5, MR1040300. From Int. Advanced Worksh. Sequences, Positano, Italy, June 1988.
- C3. D. Eppstein. Reset sequences for finite automata with application to design of parts orienters. *Proc. 15th Int. Coll. Automata, Languages, and Programming (ICALP 1988)*, pp. 230–238. Springer-Verlag, Lecture Notes in Computer Science 317, July 1988, doi:10.1007/3-540-19488-6_119, MR1023639.
- C4. D. Eppstein, Z. Galil, and R. Giancarlo. Speeding up dynamic programming. *Proc. 29th Symp. Foundations of Computer Science*, pp. 488–496. IEEE, 1988, doi:10.1109/SFCS.1988.21965.
- 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)*, pp. 304–318. Springer-Verlag, Lecture Notes in Computer Science 372, July 1989, doi:10.1007/BFb0035768, MR1037060. 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, January 1990, <https://portal.acm.org/citation.cfm?id=320238>.
- 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, January 1990, <https://portal.acm.org/citation.cfm?id=320177>.
- 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, January 1990, <https://portal.acm.org/citation.cfm?id=320188>.
- C10. D. Eppstein. Finding the k smallest spanning trees. *Proc. 2nd Scandinavian Worksh. Algorithm Theory (SWAT 1990)*, pp. 38–47. Springer-Verlag, Lecture Notes in Computer Science 447, July 1990, doi:10.1007/3-540-52846-6_76, MR1076015.
- 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, October 1990, doi:FSCS.1990.89542, MR1150700.
- 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, January 1991, <https://portal.acm.org/citation.cfm?id=127821>, MR1095830.

- C13. M. W. Bern and D. Eppstein. Polynomial-size nonobtuse triangulation of polygons. *Proc. 7th Symp. Computational Geometry*, pp. 342–350. ACM, June 1991, doi:10.1145/109648.109686.
- 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, doi:10.1007/978-1-4613-9323-8_17, MR1249751. 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)*, pp. 674–685. Springer-Verlag, Lecture Notes in Computer Science 510, July 1991, doi:10.1007/3-540-54233-7_173, MR1129945.
- C16. D. Eppstein. Offline algorithms for dynamic minimum spanning tree problems. *Proc. 2nd Worksh. Algorithms and Data Structures (WADS 1991)*, pp. 392–399. Springer-Verlag, Lecture Notes in Computer Science 519, August 1991, doi:10.1007/BFb0028278, MR1146702.
- C17. D. Eppstein. Dynamic three-dimensional linear programming. *Proc. 32nd Symp. Foundations of Computer Science*, pp. 488–494. IEEE, October 1991, doi:10.1109/SFCS.1991.185410, MR1177201.
- C18. D. Eppstein. Approximating the minimum weight triangulation. *Proc. 3rd Symp. Discrete Algorithms*, pp. 48–57. SIAM, January 1992, <https://portal.acm.org/citation.cfm?id=139415>, MR1173880.
- C19. D. Eppstein. New algorithms for minimum area k -gons. *Proc. 3rd Symp. Discrete Algorithms*, pp. 83–86. SIAM, January 1992, <https://portal.acm.org/citation.cfm?id=139422>, MR1173884.
- 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)*, pp. 46–60. Springer-Verlag, Lecture Notes in Computer Science 583, April 1992, doi:10.1007/BFb0023816, MR1253346.
- C21. M. W. Bern, D. P. Dobkin, and D. Eppstein. Triangulating polygons without large angles. *Proc. 8th Symp. Computational Geometry*, pp. 222–231. ACM, June 1992, doi:10.1145/142675.142722.
- 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, October 1992, doi:10.1109/SFCS.1992.267818.
- C23. P. K. Agarwal, D. Eppstein, and J. Matoušek. Dynamic half-space reporting, geometric optimization, and minimum spanning trees. *Proc. 33rd Symp. Foundations of Computer Science*, pp. 80–89. IEEE, October 1992, doi:10.1109/SFCS.1992.267816.
- C24. D. Eppstein and J. G. Erickson. Iterated nearest neighbors and finding minimal polytopes. *Proc. 4th Symp. Discrete Algorithms*, pp. 64–73. SIAM, January 1993, <https://portal.acm.org/citation.cfm?id=313612>, MR1213220.
- 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, May 1993, doi:10.1145/167088.167159.
- C26. D. P. Dobkin and D. Eppstein. Computing the discrepancy. *Proc. 9th Symp. Computational Geometry*, pp. 47–52. ACM, May 1993, doi:10.1145/160985.160997.
- 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, May 1993, doi:10.1145/160985.161004.
- 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, May 1993, doi:10.1145/160985.161005.
- C29. M. W. Bern and D. Eppstein. Worst-case bounds for subadditive geometric graphs. *Proc. 9th Symp. Computational Geometry*, pp. 183–188. ACM, May 1993, doi:10.1145/160985.161018.
- C30. M. W. Bern, D. Eppstein, and S.-H. Teng. Parallel construction of quadrees and quality triangulations. *Proc. 3rd Worksh. Algorithms and Data Structures (WADS 1993)*, pp. 188–199. Springer-Verlag, Lecture Notes in Computer Science 709, August 1993, doi:10.1007/3-540-57155-8_247, MR1257418.
- C31. D. Eppstein. Average case analysis of dynamic geometric optimization. *Proc. 5th Symp. Discrete Algorithms*, pp. 77–86. SIAM, January 1994, <https://portal.acm.org/citation.cfm?id=314481>, MR1285153.
- C32. D. Eppstein. Clustering for faster network simplex pivots. *Proc. 5th Symp. Discrete Algorithms*, pp. 160–166. SIAM, January 1994, <https://portal.acm.org/citation.cfm?id=314490>, MR1285162.
- 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.
- C34. D. Eppstein. Finding the k shortest paths. *Proc. 35th Symp. Foundations of Computer Science*, pp. 154–165. IEEE, November 1994, doi:10.1109/SFCS.1994.365697.
- C35. M. W. Bern, L. P. Chew, D. Eppstein, and J. Ruppert. Dihedral bounds for mesh generation in high dimensions. *Proc. 6th Symp. Discrete Algorithms*, pp. 189–196. SIAM, January 1995, <https://portal.acm.org/citation.cfm?id=313694>, MR1321850.
- C36. D. Eppstein. Subgraph isomorphism in planar graphs and related problems. *Proc. 6th Symp. Discrete Algorithms*, pp. 632–640. SIAM, January 1995, arXiv:cs.DS/9911003, <https://portal.acm.org/citation.cfm?id=313830>, MR1321884.
- C37. D. Eppstein. Geometric lower bounds for parametric matroid optimization. *Proc. 27th Symp. Theory of Computing*, pp. 662–671. ACM, June 1995, doi:10.1145/225058.225284.
- C38. M. W. Bern, D. Eppstein, L. J. Guibas, J. E. Hershberger, S. Suri, and J. D. Wolter. The centroid of points with approximate weights. *Proc. 3rd Eur. Symp. Algorithms (ESA 1995)*, pp. 460–472. Springer-Verlag, Lecture Notes in Computer Science 979, September 1995, doi:10.1007/3-540-60313-1_163, MR1460758.

- C39. D. Eppstein and D. S. Hirschberg. Choosing subsets with maximum weighted average. *Proc. 5th Worksh. Computational Geometry*, pp. 7–8. State Univ. of New York at Stony Brook, Mathematical Sciences Inst., October 1995.
- C40. R. Beigel and D. Eppstein. 3-coloring in time $O(1.3446^n)$: a no-MIS algorithm. *Proc. 36th Symp. Foundations of Computer Science*, pp. 444–453. IEEE, October 1995, doi:10.1109/SFCS.1995.492575.
- C41. G. Barequet, M. T. Dickerson, and D. Eppstein. On triangulating three-dimensional polygons. *Proc. 12th Symp. Computational Geometry*, pp. 38–47. ACM, May 1996, doi:10.1145/237218.237234.
- C42. D. Eppstein. Linear complexity hexahedral mesh generation. *Proc. 12th Symp. Computational Geometry*, pp. 58–67. ACM, May 1996, doi:10.1145/237218.237237, arXiv:cs.CG/9809109.
- C43. D. Fernández-Baca, G. Slutzki, and D. Eppstein. Using sparsification for parametric minimum spanning tree problems. *Proc. 5th Scandinavian Worksh. Algorithm Theory (SWAT 1996)*, pp. 149–160. Springer-Verlag, Lecture Notes in Computer Science 1097, July 1996, doi:10.1007/3-540-61422-2_128, MR1465948.
- C44. A. B. Amenta, M. W. Bern, and D. Eppstein. Optimal point placement for mesh smoothing. *Proc. 8th Symp. Discrete Algorithms*, pp. 528–537. SIAM, January 1997, arXiv:cs.CG/9809081, <https://portal.acm.org/citation.cfm?id=314383>, MR1447700.
- C45. D. Eppstein. Faster construction of planar two-centers. *Proc. 8th Symp. Discrete Algorithms*, pp. 131–138. SIAM, January 1997, <https://portal.acm.org/citation.cfm?id=314198>, MR1447658.
- C46. D. Eppstein and D. Hart. An efficient algorithm for shortest paths in vertical and horizontal segments. *Proc. 5th Worksh. Algorithms and Data Structures (WADS 1997)*, pp. 234–247. Springer-Verlag, Lecture Notes in Computer Science 1272, August 1997, doi:10.1007/3-540-63307-3_63.
- C47. M. W. Bern and D. Eppstein. Quadrilateral meshing by circle packing. *Proc. 6th Int. Meshing Roundtable*, pp. 7–20. Sandia Nat. Lab., October 1997, arXiv:cs.CG/9908016.
- C48. D. Eppstein. Fast hierarchical clustering and other applications of dynamic closest pairs. *Proc. 9th Symp. Discrete Algorithms*, pp. 619–628. SIAM, January 1998, arXiv:cs.DS/9912014, <https://portal.acm.org/citation.cfm?id=315030>, MR1642976.
- C49. D. Eppstein and J. G. Erickson. Raising roofs, crashing cycles, and playing pool: applications of a data structure for finding pairwise interactions. *Proc. 14th Symp. Computational Geometry*, pp. 58–67. ACM, June 1998, doi:10.1145/276884.276891, MR2000i:68185.
- C50. M. W. Bern, E. D. Demaine, D. Eppstein, and B. Hayes. A disk-packing algorithm for an origami magic trick. *Proc. Int. Conf. Fun with Algorithms, Elba, 1998*, pp. 32–42. Carleton Scientific, Proceedings in Informatics 4, 1999.
- C51. M. B. Dillencourt, D. Eppstein, and D. S. Hirschberg. Geometric thickness of complete graphs. *Proc. 6th Int. Symp. Graph Drawing (GD 1998)*, pp. 102–110. Springer-Verlag, Lecture Notes in Computer Science 1547, August 1998, doi:10.1007/3-540-37623-2_8, arXiv:math.CO/9910185, MR1717446.
- C52. P. K. Agarwal, D. Eppstein, L. J. Guibas, and M. R. Henzinger. Parametric and kinetic minimum spanning trees. *Proc. 39th Symp. Foundations of Computer Science*, pp. 596–605. IEEE, November 1998, doi:10.1109/SFCS.1998.743510.
- C53. D. Eppstein and D. Hart. Shortest paths in an arrangement with k line orientations. *Proc. 10th Symp. Discrete Algorithms*, pp. 310–316. SIAM, January 1999, <https://portal.acm.org/citation.cfm?id=314580>, MR1739959.
- C54. D. Eppstein. Incremental and decremental maintenance of planar width. *Proc. 10th Symp. Discrete Algorithms*, pp. S899–S900. SIAM, January 1999, arXiv:cs.CG/9809038, <https://portal.acm.org/citation.cfm?id=315077>.
- C55. M. W. Bern, E. D. Demaine, D. Eppstein, and E. H.-S. Kuo. Ununfoldable polyhedra. *Proc. 11th Canad. Conf. Computational Geometry*, August 1999, arXiv:cs.CG/9908003, https://www.cs.ubc.ca/conferences/CCCG/elec_proc/fp38.pdf.
- C56. E. D. Demaine, M. L. Demaine, D. Eppstein, and E. Friedman. Hinged dissections of polyominoes and polyforms. *Proc. 11th Canad. Conf. Computational Geometry*, August 1999, arXiv:cs.CG/9907018, https://www.cs.ubc.ca/conferences/CCCG/elec_proc/fp37.pdf.
- C57. D. Eppstein. Setting parameters by example. *Proc. 40th Symp. Foundations of Computer Science*, pp. 309–318. IEEE, October 1999, doi:10.1109/SFCS.1999.814602, arXiv:cs.DS/9907001, MR1917569.
- C58. X. Ge, D. Eppstein, and P. Smyth. Cycle length distributions in graphical models for iterative decoding. *Proc. Int. Symp. Information Theory*. IEEE, June 2000, doi:10.1109/ISIT.2000.866440, arXiv:cs.DM/9907002.
- C59. M. W. Bern and D. Eppstein. Multivariate regression depth. *Proc. 16th Symp. Computational Geometry*, pp. 315–321. ACM, June 2000, doi:10.1145/336154.336218, arXiv:cs.CG/9912013, MR1802280.
- C60. M. W. Bern and D. Eppstein. Computing the depth of a flat. *Proc. 12th Symp. Discrete Algorithms*, pp. 700–701. SIAM, January 2001, arXiv:cs.CG/0009024, <https://portal.acm.org/citation.cfm?id=374603>.
- C61. D. Eppstein. Improved algorithms for 3-coloring, 3-edge-coloring, and constraint satisfaction. *Proc. 12th Symp. Discrete Algorithms*, pp. 329–337. SIAM, January 2001, arXiv:cs.DS/0009006, <https://portal.acm.org/citation.cfm?id=365471>, MR1958425.
- C62. D. Eppstein and S. Muthukrishnan. Internet packet filter management and rectangle geometry. *Proc. 12th Symp. Discrete Algorithms*, pp. 827–835. SIAM, January 2001, arXiv:cs.CG/0010018, <https://portal.acm.org/citation.cfm?id=365791>, MR1958558.
- C63. D. Eppstein and J. Y. Wang. Fast approximation of centrality. *Proc. 12th Symp. Discrete Algorithms*, pp. 228–229. SIAM, January 2001, arXiv:cs.DS/0009005, <https://portal.acm.org/citation.cfm?id=365449>, MR1958412.

- C64. D. Eppstein. Small maximal independent sets and faster exact graph coloring. *Proc. 7th Worksh. Algorithms and Data Structures (WADS 2001)*, pp. 462–470. Springer-Verlag, Lecture Notes in Computer Science 2125, August 2001, doi:10.1007/3-540-44634-6_42, arXiv:cs.DS/0011009, MR1936435.
- C65. M. W. Bern and D. Eppstein. Optimal Möbius transformations for information visualization and meshing. *Proc. 7th Worksh. Algorithms and Data Structures (WADS 2001)*, pp. 14–25. Springer-Verlag, Lecture Notes in Computer Science 2125, August 2001, doi:10.1007/3-540-44634-6_3, arXiv:cs.CG/0101006, MR1936397.
- C66. M. W. Bern and D. Eppstein. Optimization over zonotopes and training support vector machines. *Proc. 7th Worksh. Algorithms and Data Structures (WADS 2001)*, pp. 111–121. Springer-Verlag, Lecture Notes in Computer Science 2125, August 2001, doi:10.1007/3-540-44634-6_11, arXiv:cs.CG/0105017, MR1936405.
- C67. M. W. Bern, E. D. Demaine, D. Eppstein, and B. Hayes. A disk-packing algorithm for an origami magic trick. *Origami³: Proc. 3rd Int. Mtg. Origami Science, Math, and Education (3OSME), Asilomar, Calif., 2001*, pp. 17–28. A K Peters, 2002, MR1955756.
- C68. E. D. Demaine, D. Eppstein, J. G. Erickson, G. W. Hart, and J. O’Rourke. Vertex-unfoldings of simplicial manifolds. *Proc. 18th Symp. Computational Geometry*, pp. 237–243. ACM, June 2002, doi:10.1145/513400.513429, arXiv:cs.CG/0110054.
- C69. D. Eppstein and J. Y. Wang. A steady state model for graph power laws. *2nd Int. Worksh. Web Dynamics*, May 2002, arXiv:cs.DM/0204001, https://www.dcs.bbk.ac.uk/~ap/webDyn2/proceedings/eppstein_steady_state_model.pdf.
- C70. D. Eppstein. Separating thickness from geometric thickness. *Proc. 10th Int. Symp. Graph Drawing (GD 2002)*, pp. 150–161. Springer-Verlag, Lecture Notes in Computer Science 2528, 2002, doi:10.1007/3-540-36151-0_15, arXiv:math.CO/0204252, MR2063420.
- C71. D. Eppstein and T. D. Givargis. Reference caching using unit distance redundant codes for activity reduction on address buses. *Proc. Worksh. Embedded System Codesign (ESCODES ’02)*, pp. 43–48, September 2002.
- C72. M. W. Bern and D. Eppstein. Möbius-invariant natural neighbor interpolation. *Proc. 14th Symp. Discrete Algorithms*, pp. 128–129. SIAM, January 2003, arXiv:cs.CG/0207081, <https://portal.acm.org/citation.cfm?id=644130>, MR1974910.
- C73. D. Eppstein. Dynamic generators of topologically embedded graphs. *Proc. 14th Symp. Discrete Algorithms*, pp. 599–608. SIAM, January 2003, arXiv:cs.DS/0207082, <https://portal.acm.org/citation.cfm?id=644208>, MR1974971.
- C74. M. W. Bern and D. Eppstein. Optimized color gamuts for tiled displays. *Proc. 19th Symp. Computational Geometry*, pp. 274–281. ACM, June 2003, doi:10.1145/777792.777834, arXiv:cs.CG/0212007.
- C75. D. Eppstein. The traveling salesman problem for cubic graphs. *Proc. 8th Int. Worksh. Algorithms and Data Structures (WADS 2003)*, pp. 307–318. Springer-Verlag, Lecture Notes in Computer Science 2748, 2003, doi:10.1007/978-3-540-45078-8_27, arXiv:cs.DS/0302030, MR2078605.
- C76. M. T. Dickerson, D. Eppstein, M. T. Goodrich, and J. Y. Meng. Confluent drawings: visualizing non-planar diagrams in a planar way. *Proc. 11th Int. Symp. Graph Drawing (GD 2003)*, pp. 1–12. Springer-Verlag, Lecture Notes in Computer Science 2912, September 2003, doi:10.1007/978-3-540-24595-7_1, arXiv:cs.CG/0212046, MR2177578.
- C77. F.-J. Brandenburg, D. Eppstein, M. T. Goodrich, S. G. Kobourov, G. Liotta, and P. Mutzel. Selected open problems in graph drawing. *Proc. 11th Int. Symp. Graph Drawing (GD 2003)*, pp. 515–539. Springer-Verlag, Lecture Notes in Computer Science 2912, September 2003, doi:10.1007/978-3-540-24595-7_55, MR2177617.
- C78. D. Eppstein. Quasiconvex analysis of backtracking algorithms. *Proc. 15th Symp. Discrete Algorithms*, pp. 781–790. SIAM, January 2004, arXiv:cs.DS/0304018, <https://portal.acm.org/citation.cfm?id=982912>, MR2290968.
- C79. D. Eppstein. Testing bipartiteness of geometric intersection graphs. *Proc. 15th Symp. Discrete Algorithms*, pp. 853–861. SIAM, January 2004, arXiv:cs.CG/0307023, <https://portal.acm.org/citation.cfm?id=982921>, MR2290976.
- C80. J. Cardinal and D. Eppstein. Lazy algorithms for dynamic closest pair with arbitrary distance measures. *Joint Proc. Worksh. Algorithm Engineering and Experiments (ALENEX) and Worksh. Analytic Algorithmics and Combinatorics (ANALCO)*, pp. 112–119. SIAM, 2004, <https://www.siam.org/meetings/alnex04/abstracts/JCardinal.pdf>.
- C81. A. Bagchi, A. Chaudhary, D. Eppstein, and M. T. Goodrich. Deterministic sampling and range counting in geometric data streams. *Proc. 20th Symp. Computational Geometry*, pp. 144–151. ACM, 2004, doi:10.1145/997817.997842, arXiv:cs.CG/0307027.
- C82. C. A. Duncan, D. Eppstein, and S. G. Kobourov. The geometric thickness of low degree graphs. *Proc. 20th Symp. Computational Geometry*, pp. 340–346. ACM, 2004, doi:10.1145/997817.997868, arXiv:cs.CG/0312056.
- C83. G. Meenakshisundaram and D. Eppstein. Single-strip triangulation of manifolds with arbitrary topology. *Proc. 20th Symp. Computational Geometry*, pp. 455–456. ACM, 2004, doi:10.1145/997817.997888, arXiv:cs.CG/0405036. Abstract for video in 13th Video Review of Computational Geometry.
- C84. G. Meenakshisundaram and D. Eppstein. Single-strip triangulation of manifolds with arbitrary topology. *Proc. 25th Conf. Eur. Assoc. for Computer Graphics (EuroGraphics ’04)*, vol. 23, pp. 371–379, 2004, arXiv:cs.CG/0405036, <https://www.eg.org/EG/CGF/volume23/issue3/v23i3pp371-380.pdf>. Winner, second-best paper award.
- C85. A. Bagchi, A. Bhargava, A. Chaudhary, D. Eppstein, and C. Scheideler. The effect of faults on network expansion. *Proc. 16th Symp. Parallelism in Algorithms and Architectures (SPAA 2004)*, pp. 286–293. ACM, 2004, doi:10.1145/1007912.1007960, arXiv:cs.DC/0404029.
- C86. D. Eppstein. Algorithms for drawing media. *Proc. 12th Int. Symp. Graph Drawing (GD 2004)*, pp. 173–183. Springer-Verlag, Lecture Notes in Computer Science 3383, 2004, doi:10.1007/978-3-540-31843-9_19, arXiv:cs.DS/0406020.

- C87. D. Eppstein, M. T. Goodrich, and J. Y. Meng. Confluent layered drawings. *Proc. 12th Int. Symp. Graph Drawing (GD 2004)*, pp. 184–194. Springer-Verlag, Lecture Notes in Computer Science 3383, 2004, doi:10.1007/11618058_16, arXiv:cs.CG/0507051.
- C88. D. Eppstein. All maximal independent sets and dynamic dominance for sparse graphs. *Proc. 16th Symp. Discrete Algorithms*, pp. 451–459. SIAM, January 2005, arXiv:cs.DS/0407036, <https://portal.acm.org/citation.cfm?id=1070494>, MR2298294.
- C89. D. Eppstein, M. T. Goodrich, and J. Z. Sun. The skip quadtree: a simple dynamic data structure for multidimensional data. *Proc. 21st Symp. Computational Geometry*, pp. 296–305. ACM, June 2005, doi:10.1145/1064092.1064138, arXiv:cs.CG/0507049.
- C90. D. Eppstein and K. A. Wortman. Minimum dilation stars. *Proc. 21st Symp. Computational Geometry*, pp. 321–326. ACM, June 2005, doi:10.1145/1064092.1064142, arXiv:cs.CG/0412025.
- C91. L. Arge, D. Eppstein, and M. T. Goodrich. Skip-webs: efficient distributed data structures for multi-dimensional data sets. *Proc. 24th ACM SIGACT-SIGOPS Symp. Principles of Distributed Computing (PODC 2005)*, pp. 69–76, July 2005, doi:10.1145/1073827, arXiv:cs.DC/0507050.
- C92. D. Eppstein, M. T. Goodrich, and D. S. Hirschberg. Improved combinatorial group testing for real-world problem sizes. *Proc. 9th Int. Worksh. Algorithms and Data Structures (WADS 2005)*, pp. 86–98. Springer-Verlag, Lecture Notes in Computer Science 3608, August 2005, doi:10.1007/11534273_9, arXiv:cs.DS/0505048, MR2200314.
- C93. D. Eppstein, M. T. Goodrich, and J. Y. Meng. Delta-confluent drawings. *Proc. 13th Int. Symp. Graph Drawing (GD 2005)*, pp. 165–176. Springer-Verlag, Lecture Notes in Computer Science 3843, 2006, doi:10.1007/11618058_16, arXiv:cs.CG/0510024, MR2244510.
- C94. J. Carlson and D. Eppstein. The weighted maximum-mean subtree and other bicriterion subtree problems. *Proc. 10th Scand. Worksh. Algorithm Theory (SWAT 2006)*, pp. 397–408. Springer-Verlag, Lecture Notes in Computer Science 4059, 2006, doi:10.1007/11785293_37, arXiv:cs.CG/0503023, MR2288327.
- C95. A. Bhushan, P. Diaz-Gutierrez, D. Eppstein, and G. Meenakshisundaram. Single triangle strip and loop on manifolds with boundaries. *Proc. 19th Brazilian Symp. Computer Graphics and Image Processing (SIBGRAPI 2006)*, pp. 221–228. IEEE Computer Society Press, 2006, doi:10.1109/SIBGRAPI.2006.41.
- C96. J. Carlson and D. Eppstein. Trees with convex faces and optimal angles. *Proc. 14th Int. Symp. Graph Drawing*, pp. 77–88. Springer-Verlag, Lecture Notes in Computer Science 4372, 2006, doi:10.1007/978-3-540-70904-6_9, arXiv:cs.CG/0607113, MR2393907.
- C97. M. B. Dillencourt, D. Eppstein, and M. T. Goodrich. Choosing colors for geometric graphs via color space embeddings. *Proc. 14th Int. Symp. Graph Drawing*, pp. 294–305. Springer-Verlag, Lecture Notes in Computer Science 4372, 2006, doi:10.1007/978-3-540-70904-6_29, arXiv:cs.CG/0609033, MR2393925.
- C98. D. Eppstein. Upright-quad drawing of st -planar learning spaces. *Proc. 14th Int. Symp. Graph Drawing*, pp. 282–293. Springer-Verlag, Lecture Notes in Computer Science 4372, 2006, doi:10.1007/978-3-540-70904-6_28, arXiv:cs.CG/0607094, MR2393924.
- C99. D. Eppstein. Squarepants in a tree: sum of subtree clustering and hyperbolic pants decomposition. *Proc. 18th Symp. Discrete Algorithms*, pp. 29–38. SIAM, January 2007, arXiv:cs.CG/0604034, <https://portal.acm.org/citation.cfm?id=1283387>, MR2367426.
- C100. D. Eppstein. Happy endings for flip graphs. *Proc. 23rd Symp. Computational Geometry*, pp. 92–101. ACM, 2007, doi:10.1145/1247069.1247084, arXiv:cs.CG/0610092, MR2469149.
- C101. D. Eppstein, M. T. Goodrich, and N. Sitchinava. Guard placement for efficient point-in-polygon proofs. *Proc. 23rd Symp. Computational Geometry*, pp. 27–36. ACM, 2007, doi:10.1145/1247069.1247075, arXiv:cs.CG/0603057, MR2469142.
- C102. D. Eppstein and M. T. Goodrich. Space-efficient straggler identification in round-trip data streams via Newton’s identities and invertible Bloom filters. *Proc. 10th Worksh. Algorithms and Data Structures*, pp. 637–648. Springer-Verlag, Lecture Notes in Computer Science 4619, 2007, arXiv:0704.3313, 10.1007/978-3-540-73951-7_55.
- C103. D. Eppstein, M. J. van Kreveld, E. Mumford, and B. Speckmann. Edges and switches, tunnels and bridges. *Proc. 10th Worksh. Algorithms and Data Structures*, pp. 77–88. Springer-Verlag, Lecture Notes in Computer Science 4619, 2007, doi:10.1007/978-3-540-73951-7_8, arXiv:0705.0413.
- C104. D. Eppstein. Recognizing partial cubes in quadratic time. *Proc. 19th Symp. Discrete Algorithms*, pp. 1258–1266. SIAM, January 2008, arXiv:0705.1025, <https://portal.acm.org/citation.cfm?id=1347219>, MR2490498.
- C105. D. Eppstein, M. T. Goodrich, E. Kim, and R. Tamstorf. Approximate topological matching of quadrilateral meshes. *Proc. IEEE Int. Conf. Shape Modeling and Applications (SMI 2008)*, pp. 83–92, 2008, doi:10.1109/SMI.2008.4547954.
- C106. G. Barequet, D. Eppstein, M. T. Goodrich, and A. Vaxman. Straight skeletons of three-dimensional polyhedra. *Proc. 16th European Symp. Algorithms*, pp. 148–160. Springer-Verlag, Lecture Notes in Computer Science 5193, 2008, doi:10.1007/978-3-540-87744-8_13, arXiv:0805.0022.
- C107. D. Eppstein, M. T. Goodrich, E. Kim, and R. Tamstorf. Motorcycle graphs: canonical quad mesh partitioning. *Proc. 6th Symp. Geometry Processing*, vol. 27, pp. 1477–1486, 2008, doi:10.1111/j.1467-8659.2008.01288.x.
- C108. D. Eppstein. The topology of bendless three-dimensional orthogonal graph drawing. *Proc. 16th Int. Symp. Graph Drawing*, pp. 78–89. Springer-Verlag, Lecture Notes in Computer Science 5417, 2008, doi:10.1007/978-3-642-00219-9_9, arXiv:0709.4087.
- C109. D. Eppstein. Isometric diamond subgraphs. *Proc. 16th Int. Symp. Graph Drawing*, pp. 384–389. Springer-Verlag, Lecture Notes in Computer Science 5417, 2008, doi:10.1007/978-3-642-00219-9_37, arXiv:0807.2218.

- C110. D. Eppstein and M. T. Goodrich. Succinct greedy graph drawing in the hyperbolic plane. *Proc. 16th Int. Symp. Graph Drawing*, pp. 14–25. Springer-Verlag, Lecture Notes in Computer Science 5417, 2008, doi:10.1007/978-3-642-00219-9_3, arXiv:0806.0341.
- C111. D. Eppstein and M. T. Goodrich. Studying (non-planar) road networks through an algorithmic lens. *Proc. 16th ACM SIGSPATIAL Int. Conf. Advances in Geographic Information Systems (ACM GIS 2008)*, p. Article 16, 2008, doi:10.1145/1463434.1463455. Winner, best paper award.
- C112. D. Eppstein and E. Mumford. Self-overlapping curves revisited. *Proc. 20th ACM-SIAM Symp. Discrete Algorithms (SODA 2009)*, pp. 160–169, 2009, arXiv:0806.1724, https://www.siam.org/proceedings/soda/2009/SODA09_019_eppsteind.pdf, MR2809316.
- C113. D. Eppstein, M. T. Goodrich, and D. Strash. Linear-time algorithms for geometric graphs with sublinearly many crossings. *Proc. 20th ACM-SIAM Symp. Discrete Algorithms (SODA 2009)*, pp. 150–159, 2009, arXiv:0812.0893, https://www.siam.org/proceedings/soda/2009/SODA09_018_eppsteind.pdf, MR2809315.
- C114. D. Eppstein, E. Mumford, B. Speckmann, and K. A. B. Verbeek. Area-universal rectangular layouts. *Proc. 25th Symp. Computational Geometry*, pp. 267–276. ACM, 2009, doi:10.1145/1542362.1542411, arXiv:0901.3924.
- C115. M. T. Dickerson and D. Eppstein. Animating a continuous family of two-site distance function Voronoi diagrams (and a proof of a complexity bound on the number of non-empty regions). *Proc. 25th Symp. Computational Geometry*, pp. 92–93. ACM, 2009, doi:10.1145/1542362.1542380.
- C116. W. Du, D. Eppstein, M. T. Goodrich, and G. S. Lueker. On the approximability of geometric and geographic generalization and the min-max bin covering problem. *Proc. Algorithms and Data Structures Symposium (WADS 2009)*, pp. 242–253. Springer-Verlag, Lecture Notes in Computer Science 5664, 2009, doi:10.1007/978-3-642-03367-4_22, arXiv:0904.3756, MR2550611.
- C117. D. Eppstein and E. Mumford. Orientation-constrained rectangular layouts. *Proc. Algorithms and Data Structures Symposium (WADS 2009)*, pp. 266–277. Springer-Verlag, Lecture Notes in Computer Science 5664, 2009, doi:10.1007/978-3-642-03367-4_24, arXiv:0904.4312, MR2550613.
- C118. D. Eppstein and E. S. Spiro. The h -index of a graph and its application to dynamic subgraph statistics. *Proc. Algorithms and Data Structures Symposium (WADS 2009)*, pp. 278–289. Springer-Verlag, Lecture Notes in Computer Science 5664, 2009, doi:10.1007/978-3-642-03367-4_25, arXiv:0904.3741, MR2550614.
- C119. D. Eppstein and K. A. Wortman. Optimal embedding into star metrics. *Proc. Algorithms and Data Structures Symposium (WADS 2009)*, pp. 290–301. Springer-Verlag, Lecture Notes in Computer Science 5664, 2009, doi:10.1007/978-3-642-03367-4_26, arXiv:0905.0283, MR2550615. Winner, best paper award.
- C120. P. Diaz-Gutierrez, D. Eppstein, and G. Meenakshisundaram. Curvature-aware fundamental cycles. *Proc. 17th Pacific Conf. Computer Graphics and Applications, Jeju, Korea, 2009*, vol. 28, pp. 2015–2024, 2009, doi:10.1111/j.1467-8659.2009.01580.x.
- C121. D. Eppstein, M. T. Goodrich, and L. Trott. Going off-road: transversal complexity in road networks. *Proc. 17th ACM SIGSPATIAL Int. Conf. Advances in Geographic Information Systems, Seattle, 2009*, pp. 23–32, 2009, doi:10.1145/1653771.1653778.
- C122. D. Eppstein. Graph-theoretic solutions to computational geometry problems. *Proc. 35th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2009), Montpellier, France, 2009*, pp. 1–16. Springer-Verlag, Lecture Notes in Computer Science 5911, 2009, doi:10.1007/978-3-642-11409-0_1, arXiv:0908.3916, MR2587695.
- C123. D. Eppstein. Paired approximation problems and incompatible inapproximabilities. *Proc. 21st ACM-SIAM Symp. Discrete Algorithms, Austin, Texas, 2010*, pp. 1076–1086, 2010, arXiv:0909.1870, https://www.siam.org/proceedings/soda/2010/SODA10_087_eppsteind.pdf, MR2809728.
- C124. D. Eppstein and E. Mumford. Steinitz theorems for orthogonal polyhedra. *Proc. 26th Symp. Computational Geometry*, pp. 429–438. ACM, 2010, doi:10.1145/1810959.1811030, arXiv:0912.0537, MR2742980.
- C125. M. T. Dickerson, D. Eppstein, and K. A. Wortman. Planar Voronoi diagrams for sums of convex functions, smoothed distance and dilation. *Proc. 7th International Symposium on Voronoi Diagrams in Science and Engineering (ISVD 2010)*, pp. 13–22, 2010, doi:10.1109/ISVD.2010.12, arXiv:0812.0607.
- C126. J. Augustine, D. Eppstein, and K. A. Wortman. Approximate weighted farthest neighbors and minimum dilation stars. *Proc. 16th Annual International Computing and Combinatorics Conference (COCOON 2010), Nha Trang, Vietnam*, pp. 90–99. Springer-Verlag, Lecture Notes in Computer Science 6196, 2010, doi:10.1007/978-3-642-14031-0_12, arXiv:cs.CG/0602029, MR2720085.
- C127. D. Eppstein. Regular labelings and geometric structures. *Proc. 22nd Canadian Conference on Computational Geometry (CCCG 2010)*, 2010, arXiv:1007.0221, <https://www.cs.umanitoba.ca/~cccg2010/electronicProceedings/invitedpaper2.pdf>.
- C128. M. T. Dickerson, D. Eppstein, and M. T. Goodrich. Cloning Voronoi diagrams via retroactive data structures. *Proc. 18th Eur. Symp. Algorithms*, pp. 362–373. Springer-Verlag, Lecture Notes in Computer Science 6346, 2010, doi:10.1007/978-3-642-15775-2_31, arXiv:1006.1921, MR2762868.
- C129. E. Chambers, D. Eppstein, M. T. Goodrich, and M. Löffler. Drawing graphs in the plane with a prescribed outer face and polynomial area. *Proc. 18th Int. Symp. Graph Drawing*, pp. 129–140. Springer-Verlag, Lecture Notes in Computer Science 6502, 2011, doi:10.1007/978-3-642-18469-7_12, arXiv:1009.0088, MR2781259.
- C130. C. A. Duncan, D. Eppstein, M. T. Goodrich, S. G. Kobourov, and M. Nöllenburg. Lombardi drawings of graphs. *Proc. 18th Int. Symp. Graph Drawing*, pp. 195–207. Springer-Verlag, Lecture Notes in Computer Science 6502, 2011, doi:10.1007/978-3-642-18469-7_18, arXiv:1009.0579, MR2781265.

- C131. C. A. Duncan, D. Eppstein, M. T. Goodrich, S. G. Kobourov, and M. Nöllenburg. Drawing trees with perfect angular resolution and polynomial area. *Proc. 18th Int. Symp. Graph Drawing*, pp. 183–194. Springer-Verlag, Lecture Notes in Computer Science 6502, 2011, doi:10.1007/978-3-642-18469-7_17, arXiv:1009.0581, MR2781264.
- C132. D. Eppstein, M. Löffler, and E. Mumford. Optimal 3D angular resolution for low-degree graphs. *Proc. 18th Int. Symp. Graph Drawing*, pp. 208–219. Springer-Verlag, Lecture Notes in Computer Science 6502, 2011, doi:10.1007/978-3-642-18469-7_19, arXiv:1009.0045, MR2781266.
- C133. E. Chambers and D. Eppstein. Flows in one-crossing-minor-free graphs. *Proc. 21st Int. Symp. Algorithms and Computation (ISAAC 2010), Part I*, pp. 241–252. Springer-Verlag, Lecture Notes in Computer Science 6506, 2010, doi:10.1007/978-3-642-17517-6_23, arXiv:1007.1484, MR2781352.
- C134. D. Eppstein, M. Löffler, and D. Strash. Listing all maximal cliques in sparse graphs in near-optimal time. *Proc. 21st Int. Symp. Algorithms and Computation (ISAAC 2010), Part I*, pp. 403–414. Springer-Verlag, Lecture Notes in Computer Science 6506, 2010, doi:10.1007/978-3-642-17517-6_36, arXiv:1006.5440, MR2781365.
- C135. D. Eppstein, M. T. Goodrich, D. Strash, and L. Trott. Extended dynamic subgraph statistics using h -index parameterized data structures. *Proc. 4th Int. Conf. on Combinatorial Optimization and Applications (COCOA 2010)*, pp. 128–141. Springer-Verlag, Lecture Notes in Computer Science 6508, 2010, doi:10.1007/978-3-642-17458-2_12, arXiv:1009.0783, MR2783482.
- C136. D. Eppstein, M. T. Goodrich, and R. Tamassia. Privacy-preserving data-oblivious geometric algorithms for geographic data. *Proc. 18th ACM SIGSPATIAL Int. Conf. Advances in Geographic Information Systems (ACM GIS 2010)*, pp. 13–22, 2010, doi:10.1145/1869790.1869796, arXiv:1009.1904.
- C137. D. Eppstein and M. Löffler. Bounds on the complexity of halfspace intersections when the bounded faces have small dimension. *Proc. 27th Symp. Computational Geometry*, pp. 361–368. ACM, 2011, doi:10.1145/1998196.1998257, arXiv:1103.2575, MR2919627.
- C138. D. Eppstein and D. Strash. Listing all maximal cliques in large sparse real-world graphs. *Proc. 10th Int. Symp. Experimental Algorithms*, pp. 364–375. Springer-Verlag, Lecture Notes in Computer Science 6630, 2011, doi:10.1007/978-3-642-20662-7_31, arXiv:1103.0318.
- C139. D. Eppstein, M. T. Goodrich, and M. Löffler. Tracking moving objects with few handovers. *Proc. Algorithms and Data Structures Symposium (WADS 2011)*, pp. 362–373. Springer-Verlag, Lecture Notes in Computer Science 6844, 2011, doi:10.1007/978-3-642-22300-6_31, arXiv:1105.0392, MR2863150.
- C140. K. Buchin, D. Eppstein, M. Löffler, and R. I. Silveira. Adjacency-preserving spatial treemaps. *Proc. Algorithms and Data Structures Symposium (WADS 2011)*, pp. 159–170. Springer-Verlag, Lecture Notes in Computer Science 6844, 2011, doi:10.1007/978-3-642-22300-6_14, arXiv:1105.0398, MR2863133.
- C141. D. Eppstein, M. T. Goodrich, F. Uyeda, and G. Varghese. What’s the difference? Efficient set reconciliation without prior context. *Proc. ACM SIGCOMM 2011*, pp. 218–229, 2011, doi:10.1145/2018436.2018462.
- C142. G. Barequet, M. T. Dickerson, D. Eppstein, D. Hodorkovsky, and K. Vyatkina. On 2-site Voronoi diagrams under geometric distance functions. *Proc. 8th International Symposium on Voronoi Diagrams in Science and Engineering (ISVD 2011)*, pp. 31–38, 2011, doi:10.1109/ISVD.2011.13, arXiv:1105.4130.
- C143. M. J. Bannister and D. Eppstein. Hardness of approximate compaction for nonplanar orthogonal graph drawings. *Proc. 19th Int. Symp. Graph Drawing*, pp. 367–378. Springer-Verlag, Lecture Notes in Computer Science 7034, 2011, doi:10.1007/978-3-642-25878-7_35, MR2928299.
- C144. C. A. Duncan, D. Eppstein, M. T. Goodrich, S. G. Kobourov, and M. Löffler. Planar and poly-arc Lombardi drawings. *Proc. 19th Int. Symp. Graph Drawing*, pp. 308–319. Springer-Verlag, Lecture Notes in Computer Science 7034, 2011, doi:10.1007/978-3-642-25878-7_30, MR2928294.
- C145. D. Eppstein and J. Simons. Confluent Hasse diagrams. *Proc. 19th Int. Symp. Graph Drawing*, pp. 2–13. Springer-Verlag, Lecture Notes in Computer Science 7034, 2011, doi:10.1007/978-3-642-25878-7_2, MR2928266.
- C146. D. Eppstein, M. T. Goodrich, M. Löffler, D. Strash, and L. Trott. Category-based routing in social networks: membership dimension and the small-world phenomenon. *Proc. 3rd Int. Conf. Computational Aspects of Social Networks (CASON 2011)*, pp. 102–107, 2011, doi:10.1109/CASON.2011.6085926.
- C147. M. J. Bannister and D. Eppstein. Randomized speedup of the Bellman–Ford algorithm. *Proc. Analytic Algorithmics and Combinatorics (ANALCO12)*, pp. 41–47, 2012, doi:10.1137/1.9781611973020.6, arXiv:1111.5414, MR3240909.
- C148. D. Eppstein. Solving single-digit Sudoku subproblems. *Proc. 6th Int. Conf. Fun with Algorithms (FUN 2012)*, pp. 142–153. Springer-Verlag, Lecture Notes in Computer Science 7288, 2012, doi:10.1007/978-3-642-30347-0_16, arXiv:1202.5074.
- C149. G. Borradaile and D. Eppstein. Near-linear-time deterministic plane Steiner spanners and TSP approximation for well-spaced point sets. *Proc. 24th Canad. Conf. Computational Geometry*, pp. 311–316, 2012, arXiv:1206.2254, <https://2012.cccg.ca/papers/paper41.pdf>.
- C150. D. Eppstein. Planar Lombardi drawings for subcubic graphs. *Proc. 20th Int. Symp. Graph Drawing*, pp. 126–137. Springer-Verlag, Lecture Notes in Computer Science 7704, 2012, doi:10.1007/978-3-642-36763-2_12, arXiv:1206.6142, MR3067223. Best paper award.
- C151. M. J. Bannister, D. Eppstein, M. T. Goodrich, and L. Trott. Force-directed graph drawing using social gravity and scaling. *Proc. 20th Int. Symp. Graph Drawing*, pp. 414–425. Springer-Verlag, Lecture Notes in Computer Science 7704, 2012, doi:10.1007/978-3-642-36763-2_37, arXiv:1209.0748, MR3067248.

- C152. F.-J. Brandenburg, D. Eppstein, A. Gleißner, M. T. Goodrich, K. Hanauer, and J. Reislhuber. On the density of maximal 1-planar graphs. *Proc. 20th Int. Symp. Graph Drawing*, pp. 327–338. Springer-Verlag, Lecture Notes in Computer Science 7704, 2012, doi:10.1007/978-3-642-36763-2_29, MR3067240.
- C153. C. H.-Y. Yeh, S. Thomas, D. Eppstein, and N. Amato. UOBPRM: a uniform distributed obstacle-based PRM. *Proc. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2012)*, pp. 2655–2662, 2012, doi:10.1109/IROS.2012.6385875.
- C154. D. Eppstein. Diamond-kite meshes: adaptive quadrilateral meshing and orthogonal circle packing. *Proc. 21st Int. Meshing Roundtable*, pp. 261–277. Springer-Verlag, 2012, doi:10.1007/978-3-642-33573-0_16, arXiv:1207.5082.
- C155. M. J. Bannister, C. DuBois, D. Eppstein, and P. Smyth. Windows into relational events: data structures for contiguous subsequences of edges. *Proc. 24th Symp. Discrete Algorithms*. SIAM, 2013, doi:10.1137/1.9781611973105.61, arXiv:1209.5791, MR3221276.
- C156. D. Eppstein, M. J. van Kreveld, B. Speckmann, and F. Staals. Improved grid map layout by point set matching. *6th IEEE Pacific Visualization Conf. (PacificVis)*, pp. 25–32, 2013, doi:10.1109/PacificVis.2013.6596124.
- C157. D. Eppstein. The graphs of planar soap bubbles. *Proc. 29th Symp. Computational Geometry*, pp. 27–36. ACM, 2013, doi:10.1145/2462356.2462370, arXiv:1207.3761, MR3208193.
- C158. D. Eppstein, M. T. Goodrich, and J. Simons. Set-difference range queries. *Proc. 25th Canad. Conf. Computational Geometry*, 2013, arXiv:1306.3482, https://www.cccg.ca/proceedings/2013/papers/paper_4.pdf.
- C159. P. Angelini, D. Eppstein, F. Frati, M. Kaufmann, S. Lazard, T. Mchedlidze, M. Teillaud, and A. Wolff. Universal point sets for planar graph drawings with circular arcs. *Proc. 25th Canad. Conf. Computational Geometry*, 2013, https://www.cccg.ca/proceedings/2013/papers/paper_43.pdf.
- C160. D. Eppstein, M. T. Goodrich, and D. S. Hirschberg. Combinatorial pair testing: distinguishing workers from slackers. *Proc. 13th Int. Symp. Algorithms and Data Structures (WADS 2013)*, pp. 316–327. Springer-Verlag, Lecture Notes in Computer Science 8037, 2013, doi:10.1007/978-3-642-40104-6_28, arXiv:1305.0110, MR3126368.
- C161. M. J. Bannister, S. Cabello Justo, and D. Eppstein. Parameterized complexity of 1-planarity. *Proc. 13th Int. Symp. Algorithms and Data Structures (WADS 2013)*, pp. 97–108. Springer-Verlag, Lecture Notes in Computer Science 8037, 2013, doi:10.1007/978-3-642-40104-6_9, arXiv:1304.5591, MR3126349.
- C162. M. J. Bannister, D. Eppstein, and J. Simons. Fixed parameter tractability of crossing minimization of almost-trees. *Proc. 21st Int. Symp. Graph Drawing (GD 2013)*, pp. 340–351. Springer-Verlag, Lecture Notes in Computer Science 8242, 2013, doi:10.1007/978-3-319-03841-4_30, arXiv:1308.5741, MR3162035.
- C163. M. J. Bannister, Z. Cheng, W. E. Devanny, and D. Eppstein. Superpatterns and universal point sets. *Proc. 21st Int. Symp. Graph Drawing (GD 2013)*, pp. 208–219. Springer-Verlag, Lecture Notes in Computer Science 8242, 2013, doi:10.1007/978-3-319-03841-4_19, arXiv:1308.0403, MR3162024.
- C164. D. Eppstein. Drawing arrangement graphs in small grids, or how to play planarity. *Proc. 21st Int. Symp. Graph Drawing (GD 2013)*, pp. 436–447. Springer-Verlag, Lecture Notes in Computer Science 8242, 2013, doi:10.1007/978-3-319-03841-4_38, arXiv:1308.0066, MR3162043.
- C165. D. Eppstein, D. Holten, M. Löffler, M. Nöllenburg, B. Speckmann, and K. A. B. Verbeek. Strict confluent drawing. *Proc. 21st Int. Symp. Graph Drawing (GD 2013)*, pp. 352–363. Springer-Verlag, Lecture Notes in Computer Science 8242, 2013, doi:10.1007/978-3-319-03841-4_31, arXiv:1308.6824, MR3162036.
- C166. D. Eppstein, M. van Garderen, B. Speckmann, and T. Ueckerdt. Convex-arc drawings of pseudolines (poster). *Proc. 21st Int. Symp. Graph Drawing (GD 2013)*, pp. 522–523. Springer-Verlag, Lecture Notes in Computer Science 8242, 2013.
- C167. M. J. Bannister, W. E. Devanny, and D. Eppstein. Small superpatterns for dominance drawing. *Proc. Analytic Algorithmics and Combinatorics (ANALCO14)*, pp. 92–103, 2014, doi:10.1137/1.9781611973204.9, MR3248357.
- C168. B. Aronov, M. T. de Berg, D. Eppstein, M. Roeloffzen, and B. Speckmann. Distance-sensitive point location made easy. *Proc. 30th Eur. Worksh. Computational Geometry*, 2014.
- C169. D. Eppstein, M. T. Goodrich, M. Mitzenmacher, and P. Pszozna. Wear minimization for cuckoo hashing: how not to throw a lot of eggs into one basket. *Proc. 13th Int. Symp. Experimental Algorithms*, pp. 162–173. Springer-Verlag, Lecture Notes in Computer Science 8504, 2014, doi:10.1007/978-3-319-07959-2_14, arXiv:1404.0286.
- C170. B. E. Parrish, J. M. McCarthy, and D. Eppstein. Automated generation of linkage loop equations for planar 1-DoF linkages, demonstrated up to 8-bar. *Proc. ASME 2014 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference, Vol. 5A: 38th Mechanisms and Robotics Conference, Buffalo, New York, USA, August 17-20, 2014*, p. V05AT08A070, 2014, doi:10.1115/DETC2014-35263.
- C171. Z. Abel, E. D. Demaine, M. L. Demaine, D. Eppstein, A. Lubiw, and R. Uehara. Flat foldings of plane graphs with prescribed angles and edge lengths. *Proc. 22nd Int. Symp. Graph Drawing (GD 2014)*, pp. 272–283. Springer-Verlag, Lecture Notes in Computer Science 8871, 2014, doi:10.1007/10.1007/978-3-662-45803-7_23, arXiv:1408.6771, MR3333233.
- C172. M. J. Alam, D. Eppstein, M. T. Goodrich, S. G. Kobourov, and S. Pupyrev. Balanced circle packings for planar graphs. *Proc. 22nd Int. Symp. Graph Drawing (GD 2014)*, pp. 125–136. Springer-Verlag, Lecture Notes in Computer Science 8871, 2014, doi:10.1007/10.1007/978-3-662-45803-7_11, arXiv:1408.4902, MR3333221.
- C173. M. J. Bannister, W. E. Devanny, D. Eppstein, and M. T. Goodrich. The Galois complexity of graph drawing: why numerical solutions are ubiquitous for force-directed, spectral, and circle packing drawings. *Proc. 22nd Int. Symp. Graph Drawing (GD 2014)*, pp. 149–161. Springer-Verlag, Lecture Notes in Computer Science 8871, 2014, doi:10.1007/10.1007/978-3-662-45803-7_13, arXiv:1408.1422, MR3333223.

- C174. M. J. Bannister and D. Eppstein. Crossing minimization for 1-page and 2-page drawings of graphs with bounded treewidth. *Proc. 22nd Int. Symp. Graph Drawing (GD 2014)*, pp. 210–221. Springer-Verlag, Lecture Notes in Computer Science 8871, 2014, doi:10.1007/10.1007/978-3-662-45803-7_18, arXiv:1408.6321, MR3333228.
- C175. G. Borradaile, D. Eppstein, and P. Zhu. Planar induced subgraphs of sparse graphs. *Proc. 22nd Int. Symp. Graph Drawing (GD 2014)*, pp. 1–12. Springer-Verlag, Lecture Notes in Computer Science 8871, 2014, doi:10.1007/978-3-662-45803-7_1, arXiv:1408.5939, MR3333211.
- C176. Z. Cheng and D. Eppstein. Linear-time algorithms for proportional apportionment. *Proc. 25th Int. Symp. Algorithms and Computation (ISAAC 2014)*, pp. 581–592. Springer-Verlag, Lecture Notes in Computer Science, 2014, doi:10.1007/978-3-319-13075-0_46, arXiv:1409.2603, MR3295838.
- C177. B. Ballinger, M. Damian, D. Eppstein, R. Y. Flatland, J. Ginepro, and T. Hull. Minimum forcing sets for Miura folding patterns. *Proc. 26th ACM-SIAM Symp. Discrete Algorithms, San Diego, California, 2015*, pp. 136–147, 2015, doi:10.1137/1.9781611973730.11, arXiv:1410.2231.
- C178. E. D. Demaine, D. Eppstein, A. Hesterberg, H. Ito, A. Lubiw, R. Uehara, and Y. Uno. Folding a paper strip to minimize thickness. *Proc. 9th Int. Worksh. Algorithms and Computation (WALCOM 2015), Dhaka, Bangladesh*, pp. 113–124. Springer-Verlag, Lecture Notes in Computer Science 8973, 2015, doi:10.1007/978-3-319-15612-5_11, arXiv:1411.6371.
- C179. D. Bokal, S. Cabello Justo, and D. Eppstein. Finding all maximal subsequences with hereditary properties. *Proc. 31st Int. Symp. on Computational Geometry (SoCG 2015)*, pp. 240–254. Schloss Dagstuhl, Leibniz International Proceedings in Informatics (LIPIcs) 34, 2015, doi:10.4230/LIPIcs.SOCG.2015.240.
- C180. M. J. Alam, D. Eppstein, M. Kaufmann, S. G. Kobourov, S. Pupyrev, A. Schulz, and T. Ueckerdt. Contact graphs of circular arcs. *Proc. 14th Algorithms and Data Structures Symp. (WADS 2015)*, pp. 1–13. Springer-Verlag, Lecture Notes in Computer Science 9214, 2015, doi:10.1007/978-3-319-21840-3_1.
- C181. D. Eppstein. The parametric closure problem. *Proc. 14th Algorithms and Data Structures Symp. (WADS 2015)*, pp. 327–338. Springer-Verlag, Lecture Notes in Computer Science 9214, 2015, doi:10.1007/978-3-319-21840-3_27.
- C182. D. Eppstein, J. M. McCarthy, and B. E. Parrish. Rooted cycle bases. *Proc. 14th Algorithms and Data Structures Symp. (WADS 2015)*, pp. 339–350. Springer-Verlag, Lecture Notes in Computer Science 9214, 2015, doi:10.1007/978-3-319-21840-3_28.
- C183. O. Aichholzer, M. Biro, E. D. Demaine, M. L. Demaine, D. Eppstein, S. P. Fekete, A. Hesterberg, I. Kostitsyna, and C. Schmidt. Folding polyominoes into (poly)cubes. *Proc. 27th Canad. Conf. Computational Geometry (CCCG 2015)*, pp. 101–106. Queen’s Univ., School of Computing, August 2015.
- C184. V. Dujmović, D. Eppstein, and D. R. Wood. Genus, treewidth, and local crossing number. *Proc. 23rd Int. Symp. Graph Drawing (GD 2015)*, pp. 87–98. Springer-Verlag, Lecture Notes in Computer Science 9411, 2015, doi:10.1007/978-3-319-27261-0_8, arXiv:1506.04380.
- C185. M. J. Bannister, D. A. Brown, and D. Eppstein. Confluent orthogonal drawings of syntax diagrams. *Proc. 23rd Int. Symp. Graph Drawing (GD 2015)*, pp. 260–271. Springer-Verlag, Lecture Notes in Computer Science 9411, 2015, doi:10.1007/978-3-319-27261-0_22, arXiv:1509.00818.
- C186. D. Eppstein. Treetopes and their graphs. *Proc. 27th ACM-SIAM Symp. Discrete Algorithms, Arlington, Virginia, 2016*, pp. 969–984, 2016, doi:10.1137/1.9781611974331.ch69, arXiv:1510.03152.
- C187. D. Eppstein and D. S. Hirschberg. From discrepancy to majority. *Proc. 12th Latin American Theoretical Informatics Symposium (LATIN 2016)*, pp. 390–402. Springer-Verlag, Lecture Notes in Computer Science 9644, 2016, doi:10.1007/978-3-662-49529-2_29, arXiv:1512.06488.
- C188. D. Eppstein, P. Kindermann, S. Kobourov, G. Liotta, A. Lubiw, A. Maignan, D. Mondal, H. Vosoughpour, S. Whitesides, and S. Wismath. On the planar split thickness of graphs. *Proc. 12th Latin American Theoretical Informatics Symposium (LATIN 2016)*, pp. 403–415. Springer-Verlag, Lecture Notes in Computer Science 9644, 2016, doi:10.1007/978-3-662-49529-2_30, arXiv:1512.04839.
- C189. G. Borradaile, D. Eppstein, A. Nayyeri, and C. Wulff-Nilsen. All-pairs minimum cuts in near-linear time for surface-embedded graphs. *Proc. 32nd Int. Symp. Computational Geometry*, pp. 22:1–22:16. Schloss Dagstuhl, Leibniz International Proceedings in Informatics (LIPIcs) 51, 2016, doi:10.4230/LIPIcs.SOCG.2016.22, arXiv:1411.7055.
- C190. D. Eppstein. Cuckoo filter: simplification and analysis. *Proc. 15th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT 2016)*, pp. 8.1–8.12. Schloss Dagstuhl, Leibniz International Proceedings in Informatics (LIPIcs) 53, 2016, doi:10.4230/LIPIcs.SWAT.2016.8, arXiv:1604.06067.
- C191. D. Eppstein. Maximizing the sum of radii of disjoint balls or disks. *Proc. 28th Canad. Conf. Computational Geometry*, pp. 260–265. Simon Fraser Univ., School of Computer Science, 2016, arXiv:1607.02184.
- C192. J. J. Besa Vial, W. E. Devanny, D. Eppstein, and M. T. Goodrich. Scheduling autonomous vehicle platoons through an unregulated intersection. *Proc. 16th Worksh. on Algorithmic Approaches for Transportation Modelling, Optimization and Systems (ATMOS 2016)*, pp. 5:1–5:16. Schloss Dagstuhl, OpenAccess Series in Informatics (OASICS) 54, 2016, doi:10.4230/OASICS.ATMOS.2016.5, arXiv:1607.02184.
- C193. D. Eppstein, M. T. Goodrich, J. Lam, N. Mamano, M. Mitzenmacher, and M. Torres. Models and algorithms for graph watermarking. *Information Security Conference 2016*, pp. 283–301. Springer-Verlag, Lecture Notes in Computer Science 9866, 2016, doi:10.1007/978-3-319-45871-7_18, arXiv:1605.09425.
- C194. M. J. Bannister, W. E. Devanny, V. Dujmović, D. Eppstein, and D. R. Wood. Track layout is hard. *Proc. 24th Int. Symp. Graph Drawing (GD 2016)*, pp. 499–510. Springer-Verlag, Lecture Notes in Computer Science 9801, 2016, doi:10.1007/978-3-319-50106-2_38, arXiv:1506.09145.

- C195. D. Eppstein, M. T. Goodrich, M. Mitzenmacher, and M. Torres. 2-3 cuckoo filters for faster triangle listing and set intersection. *Proc. 36th ACM SIGMOD-SIGACT-SIGAI Symposium on Principles of Database Systems (PODS 2017)*, pp. 247–260, 2017, doi:10.1145/3034786.3056115.
- C196. D. Eppstein, M. T. Goodrich, and N. Mamano. Algorithms for stable matching and clustering in a grid. *Proc. 18th Int. Worksh. Combinatorial Image Analysis (IWCIA 2017)*, pp. 117–131. Springer-Verlag, Lecture Notes in Computer Science 10256, 2017, doi:10.1007/978-3-319-59108-7_10, arXiv:1704.02303.
- C197. A. Biniat, P. Bose, K. Crosbie, J.-L. De Carufel, D. Eppstein, A. Maheshwari, and M. Smid. Maximum plane trees in multipartite geometric graphs. *Proc. 15th Algorithms and Data Structures Symp. (WADS 2015)*, pp. 193–204. Springer-Verlag, Lecture Notes in Computer Science 10389, 2017, doi:10.1007/978-3-319-62127-2_17.
- C198. D. Eppstein and M. T. Goodrich. Using multi-level parallelism and 2-3 cuckoo filters for faster set intersection queries and sparse boolean matrix multiplication. *Proc. 29th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA 2017)*, pp. 137–139, 2017, doi:10.1145/3087556.3087599.
- C199. D. Eppstein and D. Kurz. K -best solutions of MSO problems on tree-decomposable graphs. *Proc. 12th International Symposium on Parameterized and Exact Computation (IPEC 2017)*, pp. 16:1–16:13. Schloss Dagstuhl, Leibniz International Proceedings in Informatics (LIPIcs) 89, 2017, doi:10.4230/LIPIcs.IPEC.2017.16, arXiv:1703.02784.
- C200. D. Eppstein. Triangle-free penny graphs: degeneracy, choosability, and edge count. *Proc. 25th Int. Symp. Graph Drawing and Network Visualization (GD 2017)*, pp. 506–513. Springer-Verlag, Lecture Notes in Computer Science 10692, 2017, doi:10.1007/978-3-319-73915-1_39, arXiv:1708.05152.
- C201. D. Eppstein. The effect of planarization on width. *Proc. 25th Int. Symp. Graph Drawing and Network Visualization (GD 2017)*, pp. 560–572. Springer-Verlag, Lecture Notes in Computer Science 10692, 2017, doi:10.1007/978-3-319-73915-1_43, arXiv:1708.05155.
- C202. D. Eppstein, M. T. Goodrich, D. Korkmaz, and N. Mamano. Defining equitable geographic districts in road networks via stable matching. *Proc. 25th ACM SIGSPATIAL Int. Conf. Advances in Geographic Information Systems (SIGSPATIAL 2017)*, pp. 52:1–52:4, 2017, doi:10.1145/3139958.3140015, arXiv:1706.09593.
- C203. D. Eppstein and S. Gupta. Crossing patterns in nonplanar road networks. *Proc. 25th ACM SIGSPATIAL Int. Conf. Advances in Geographic Information Systems (SIGSPATIAL 2017)*, pp. 40:1–40:9, 2017, doi:10.1145/3139958.3139999, arXiv:1709.06113.
- C204. G. Da Lozza, W. E. Devanny, D. Eppstein, and T. U. Johnson. Square-contact representations of partial 2-trees and triconnected simply-nested graphs. *Proc. 28th Int. Symp. Algorithms and Computation (ISAAC 2017)*, pp. 24:1–24:14. Schloss Dagstuhl, Leibniz International Proceedings in Informatics (LIPIcs) 92, 2017, doi:10.4230/LIPIcs.ISAAC.2017.24, arXiv:1710.00426.
- C205. J. J. Besa Vial, W. E. Devanny, D. Eppstein, M. T. Goodrich, and T. U. Johnson. Quadratic time algorithms appear to be optimal for sorting evolving data. *Proc. 16th Worksh. Algorithm Engineering and Experiments (ALENEX 2018)*, pp. 87–96, January 2018, doi:10.1137/1.9781611975055.8.
- C206. D. Eppstein, S. Har-Peled, and G. Nivasch. Grid peeling and the affine curve-shortening flow. *Proc. 16th Worksh. Algorithm Engineering and Experiments (ALENEX 2018)*, pp. 109–116, January 2018, doi:10.1137/1.9781611975055.10.
- C207. D. Eppstein, M. T. Goodrich, and N. Mamano. Reactive proximity data structures for graphs. *Proc. 13th Latin American Theoretical Informatics Symposium (LATIN 2018)*, pp. 777–789. Springer-Verlag, Lecture Notes in Computer Science 10807, 2018, doi:10.1007/978-3-319-77404-6_56, arXiv:1803.04555.
- C208. D. Eppstein. Faster evaluation of subtraction games. *Proc. 9th Int. Conf. Fun with Algorithms (FUN 2018)*, pp. 20:1–20:12. Schloss Dagstuhl, Leibniz International Proceedings in Informatics (LIPIcs) 100, 2018, doi:10.4230/LIPIcs.FUN.2018.20, arXiv:1804.06515.
- C209. D. Eppstein. Making change in 2048. *Proc. 9th Int. Conf. Fun with Algorithms (FUN 2018)*, pp. 21:1–21:13. Schloss Dagstuhl, Leibniz International Proceedings in Informatics (LIPIcs) 100, 2018, doi:10.4230/LIPIcs.FUN.2018.21, arXiv:1804.07396.
- C210. G. Barequet, D. Eppstein, M. T. Goodrich, and N. Mamano. Stable-matching Voronoi diagrams: combinatorial complexity and algorithms. *Proc. 45th International Colloquium on Automata, Languages, and Programming*, pp. 89:1–89:14. Schloss Dagstuhl, Leibniz International Proceedings in Informatics (LIPIcs) 107, 2018, doi:10.4230/LIPIcs.ICALP.2018.89, arXiv:1804.09411.
- C211. J. J. Besa Vial, W. E. Devanny, D. Eppstein, M. T. Goodrich, and T. U. Johnson. Optimally sorting evolving data. *Proc. 45th International Colloquium on Automata, Languages, and Programming*, pp. 81:1–81:13. Schloss Dagstuhl, Leibniz International Proceedings in Informatics (LIPIcs) 107, 2018, doi:10.4230/LIPIcs.ICALP.2018.81, arXiv:1805.03350.
- C212. J. Cardinal, E. D. Demaine, D. Eppstein, R. A. Hearn, and A. Winslow. Reconfiguration of satisfying assignments and subset sums: Easy to find, hard to connect. *Proc. 24th International Computing and Combinatorics Conference (COCOON 2018)*, pp. 365–377. Springer-Verlag, Lecture Notes in Computer Science 10976, 2018, doi:10.1007/978-3-319-94776-1_31, arXiv:1805.04055.
- C213. D. Eppstein, M. T. Goodrich, J. Jorgensen, and M. Torres. Geometric fingerprint matching via oriented point-set pattern matching. *Proc. 30th Canadian Conference on Computational Geometry (CCCG 2018)*, 2018.
- C214. G. Da Lozza, D. Eppstein, M. T. Goodrich, and S. Gupta. Subexponential-time and FPT algorithms for embedded flat clustered planarity. *Proc. 44th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2018)*. Springer-Verlag, Lecture Notes in Computer Science, 2018, arXiv:1803.05465.

- C215. D. Eppstein and E. Havvaei. Parameterized leaf power recognition via embedding into graph products. *Proc. 13th International Symposium on Parameterized and Exact Computation (IPEC 2018)*. Schloss Dagstuhl, Leibniz International Proceedings in Informatics (LIPIcs), 2018.
- C216. D. Eppstein and D. Lokshtanov. The parameterized complexity of finding point sets with hereditary properties. *Proc. 13th International Symposium on Parameterized and Exact Computation (IPEC 2018)*. Schloss Dagstuhl, Leibniz International Proceedings in Informatics (LIPIcs), 2018.

Book Chapters

- Ch1. D. Eppstein and Z. Galil. Parallel algorithmic techniques for combinatorial computation. *Annual Reviews in Computer Science* 3:233–283, 1988, MR1001205.
- Ch2. M. W. Bern, D. Eppstein, P. E. Plassman, and F. F. Yao. Horizon theorems for lines and polygons. *Discrete and Computational Geometry: Papers from the DIMACS Special Year*, pp. 45–66. Amer. Math. Soc., DIMACS Ser. Discrete Math. and Theoretical Computer Science 6, 1991, MR1143288.
- Ch3. M. W. Bern and D. Eppstein. Mesh generation and optimal triangulation. *Computing in Euclidean Geometry*, second edition, pp. 47–123. World Scientific, Lecture Notes Series on Computing 4, 1995.
- Ch4. M. W. Bern and D. Eppstein. Approximation algorithms for geometric problems. *Approximation Algorithms for NP-hard Problems*, 8 edition, pp. 296–345. PWS Publishing, 1996.
- Ch5. D. Eppstein, Z. Galil, and G. F. Italiano. Dynamic graph algorithms. *Algorithms and Theory of Computation Handbook*. CRC Press, 1999, MR1797176.
- Ch6. D. Eppstein. Spanning trees and spanners. *Handbook of Computational Geometry*, pp. 425–461. Elsevier, 2000, doi:10.1016/B978-044482537-7/50010-3, MR1746681.
- Ch7. C. Moore and D. Eppstein. One-dimensional peg solitaire, and duotaire. *More Games of No Chance*, pp. 341–350. Cambridge Univ. Press, MSRI Publications 42, 2002, arXiv:math.CO/0008172, <https://www.msri.org/publications/books/Book42/files/moore.pdf>, MR1973022. See <http://www.msri.org/publications/books/Book42/contents.html> for an online version of the entire book.
- Ch8. E. D. Demaine, M. L. Demaine, and D. Eppstein. Phutball endgames are hard. *More Games of No Chance*, pp. 351–360. Cambridge Univ. Press, MSRI Publications 42, 2002, arXiv:cs.CC/0008025, <https://www.msri.org/publications/books/Book42/files/dephut.pdf>, MR1973023. See <http://www.msri.org/publications/books/Book42/contents.html> for an online version of the entire book.
- Ch9. D. Eppstein. Searching for spaceships. *More Games of No Chance*, pp. 433–453. Cambridge Univ. Press, MSRI Publications 42, 2002, arXiv:cs.AI/0004003, <https://www.msri.org/publications/books/Book42/files/eppstein.pdf>, MR1973109. See <http://www.msri.org/publications/books/Book42/contents.html> for an online version of the entire book.
- Ch10. E. D. Demaine, D. Eppstein, J. G. Erickson, G. W. Hart, and J. O’Rourke. Vertex-unfoldings of simplicial manifolds. *Discrete Geometry: In honor of W. Kuperberg’s 60th birthday*, pp. 215–228. Marcel Dekker, Pure and Applied Mathematics 253, 2003, arXiv:cs.CG/0110054, MR2034718.
- Ch11. D. Eppstein, G. Kuperberg, and G. M. Ziegler. Fat 4-polytopes and fatter 3-spheres. *Discrete Geometry: In honor of W. Kuperberg’s 60th birthday*, pp. 239–265. Marcel Dekker, Pure and Applied Mathematics 253, 2003, arXiv:math.CO/0204007, MR2034720.
- Ch12. D. Eppstein. Separating thickness from geometric thickness. *Towards a Theory of Geometric Graphs*, pp. 75–86. Amer. Math. Soc., Contemporary Mathematics 342, 2004, arXiv:math.CO/0204252, MR2065254.
- Ch13. D. Eppstein. Quasiconvex programming. *Combinatorial and Computational Geometry*, pp. 287–331. Cambridge Univ. Press, MSRI Publications 52, 2005, arXiv:cs.CG/0412046, MR2178325.
- Ch14. D. Eppstein. Growth and decay in life-like cellular automata. *Game of Life Cellular Automata*, pp. 71–98. Springer-Verlag, 2010, doi:10.1007/978-1-84996-217-9_6, arXiv:0911.2890.
- Ch15. D. Eppstein. Learning sequences: an efficient data structure for learning spaces. *Knowledge Spaces: Applications in Education*. Springer-Verlag, 2013.
- Ch16. D. Eppstein. Projection, decomposition, and adaption of learning spaces. *Knowledge Spaces: Applications in Education*. Springer-Verlag, 2013.
- Ch17. D. Eppstein. k -best enumeration. *Encyclopedia of Algorithms*, pp. 1–4. Springer-Verlag, 2014, doi:10.1007/978-3-642-27848-8_733-1.

Group Art Exhibitions

- X1. Four illustrations in *Bending Reality: Where arc and science meet*, Schloss Dagstuhl, Wadern, Germany (curated by Maxwell J. Roberts, Stephen Kobourov, and Martin Nöllenburg), April 8–21, 2013.

Other Publications

- P1. D. Eppstein. Trees in T_EX . *TUGboat* 6(1):31, 1985, <https://www.ics.uci.edu/~eppstein/pubs/p-ttree.tex.Z>.
- P2. D. Eppstein. On the NP-completeness of cryptarithms. *SIGACT News* 18(3):38–40, 1987, <https://www.ics.uci.edu/~eppstein/pubs/Epp-SN-87.pdf>.
- P3. D. Eppstein. *Efficient algorithms for sequence analysis with concave and convex gap costs*. Ph.D. thesis, Columbia Univ., Computer Science Dept., New York, NY, 10027, USA, 1989, <https://www.ics.uci.edu/~eppstein/pubs/Epp-PhD-89.pdf>.
- P4. D. Eppstein. Persistence, offline algorithms, and space compaction. Tech. Rep. 91-54, Univ. of California, Irvine, Dept. of Information and Computer Science, 1991, <https://www.ics.uci.edu/~eppstein/pubs/Epp-TR-91-54.pdf>.
- P5. D. Eppstein. Subquadratic nonobtuse triangulation of convex polygons. Tech. Rep. 91-61, Univ. of California, Irvine, Dept. of Information and Computer Science, 1991.
- P6. H. Asuri, M. B. Dillencourt, D. Eppstein, G. S. Lueker, and M. Molodowitch. Fast optimal parallel algorithms for maximal matching in sparse graphs. Tech. Rep. 92-01, Univ. of California, Irvine, Dept. of Information and Computer Science, 1992.
- P7. D. Eppstein and J. G. Erickson. New algorithms for minimum measure simplices and one-dimensional weighted Voronoi diagrams. Tech. Rep. 92-55, Univ. of California, Irvine, Dept. of Information and Computer Science, 1992.
- P8. D. Eppstein. The diameter of nearest neighbor graphs. Tech. Rep. 92-76, Univ. of California, Irvine, Dept. of Information and Computer Science, 1992, <https://www.ics.uci.edu/~eppstein/pubs/Epp-TR-92-76.pdf>.
- P9. D. Eppstein. Sets of points with many halving lines. Tech. Rep. 92-86, Univ. of California, Irvine, Dept. of Information and Computer Science, 1992, <https://www.ics.uci.edu/~eppstein/pubs/Epp-TR-92-86.pdf>.
- P10. D. Eppstein. Representing all minimum spanning trees with applications to counting and generation. Tech. Rep. 95-50, Univ. of California, Irvine, Dept. of Information and Computer Science, 1995, <https://www.ics.uci.edu/~eppstein/pubs/Epp-TR-95-50.pdf>.
- P11. D. Eppstein. Finding common ancestors and disjoint paths in DAGs. Tech. Rep. 95-52, Univ. of California, Irvine, Dept. of Information and Computer Science, 1995, <https://www.ics.uci.edu/~eppstein/pubs/Epp-TR-95-52.pdf>.
- P12. B. Chazelle et al. Application challenges to computational geometry. Tech. Rep. TR-521-96, Princeton Univ., Dept. of Computer Science, April 1996, <https://ncstrl.cs.princeton.edu/expand.php?id=TR-521-96>.
- P13. D. Eppstein. On the parity of graph spanning tree numbers. Tech. Rep. 96-14, Univ. of California, Irvine, Dept. of Information and Computer Science, 1996.
- P14. D. Eppstein. Guest editor’s forward to special issue of papers from the 34th Annual Symposium on Foundations of Computer Science. *J. Computer & Systems Sciences* 54(2):263, April 1997.
- P15. D. Eppstein. Guest editor’s forward to special issue on dynamic graph algorithms. *Algorithmica* 22(3):233–234, November 1998.
- P16. G. F. Italiano and D. Eppstein. Preface to Festschrift for Zvi Galil. *J. Complexity* 15(1):1–3, March 1999.
- P17. M. W. Bern, D. Eppstein, et al. Emerging challenges in computational topology. Electronic preprint arxiv:cs.CG/9909001, September 1999.
- P18. D. Eppstein. Hinged kite mirror dissection. Electronic preprint arxiv:cs.CG/0106032, June 2001.
- P19. D. Eppstein. Guest editor’s forward to special issue for ACM Symp. on Computational Geometry. *Discrete & Computational Geometry* 30(1):1–2, July 2003.
- P20. D. Eppstein. Comment on Location-Scale Depth. *J. American Statistical Assoc.* 99(468):976–979, December 2004.
- P21. D. Eppstein. Nonrepetitive paths and cycles in graphs with application to Sudoku. Electronic preprint arxiv:cs.DS/0507053, July 2005.
- P22. D. Clarke, D. Eppstein, K. Ghasemloo, L. Reyzin, A. Salamon, P. Shor, A. Sterling, and S. Venkatasubramanian. Questions answered. In theory. *SIGACT News* 41(4):58–60, 2010, doi:10.1145/1907450.1907532.
- P23. D. Eppstein and E. R. Gansner. Guest editor’s foreword. *J. Graph Algorithms & Applications* 15(1):3–5, 2011, doi:10.7155/jgaa.00214, MR2775998.
- P24. D. Eppstein. k -best enumeration. *Bulletin of the European Association for Theoretical Computer Science* 115, 2015, <https://bulletin.eatcs.org/index.php/beatcs/article/view/322>.
- P25. D. Eppstein. Which women mathematicians get written about on Wikipedia, and why. *AWM Newsletter* 48(4):12–14, 2018.

Grants and Contracts

- PI, “Algorithms for Molecular Biology, Optimal Triangulation, Minimum Spanning Trees, and Geometric Optimization,” \$200,000, NSF Young Investigator Award CCR-9258355, 1992–1999.
- PI, “Workshop on Computational Topology, Miami, FL, June 10–11, 1999”, \$22,500, NSF Grant CCR-9908620, 1999–2000.
- PI, “Geometric Algorithms in Statistics, Meshing, and Parametric Optimization,” \$222,047, NSF Grant CCR-9912338, 2000–2004.
- Co-PI, “Collaborative Research: Algorithms for Graphs on Surfaces,” \$400,000, NSF Grant CCR-0830403, 2008–2011.

Co-investigator, “Scalable Methods for the Analysis of Network-Based Data,” \$529,152, Office of Naval Research: Multidisciplinary University Research Initiative (MURI) Award, number N00014-08-1-1015, 2008–2015.

PI, “Geometric Graph Algorithms,” \$388,861, NSF Grant CCF-1217322, 2012–2015.

Co-PI, “Collaborative Research: Efficient Algorithms for Cycles on Surfaces,” \$159,987, NSF Grant CCF-1618301, 2016–2019.

PI, “Sparse Geometric Graph Algorithms,” \$415,894, NSF Grant CCF-1616248, 2016–2019.