Sariel Har-Peled: Curriculum Vitæ

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1 Personal Data

Born: 1971, Jerusalem, Israel.

2 Education

1995–1999 Ph.D., Computer Science, Tel Aviv University, Israel
Research supervised by Prof. Micha Sharir
Thesis title: Geometric Approximation Algorithms and Randomized Algorithms for Planar Arrangements
Graduated with distinction.

1993–1995 M.Sc., Computer Science, Tel Aviv University, Israel
Graduated with honors *(Summa Cum Laude)*
Thesis title: The Complexity of Many Cells in the Overlay of Many Arrangements
Research supervised by Prof. Micha Sharir

1989–1993 B.Sc., Mathematics and Computer Science, Tel Aviv University, Israel
Graduated with honors *(Magna Cum Laude)*

3 Employment

2014–current Professor, CS UIUC.

2006–2014 Associate Professor, CS UIUC.

2000–2006 Assistant Professor, CS UIUC.

1999–2000 Post-Doctorate, Duke University.

1996–1999 Teaching Assistant, CS, Tel-Aviv University.

1993–1995 Programmer, Capella Computers Ltd, Israel.

4 Research

Interests: Discrete and computational geometry, geometric computing, computer graphics, randomized algorithms, approximation algorithms.

4.1 Grants

NSF Grant AF-2317241 (CCF) – $110,000.00 2023
NSF-BSF: AF: Small: New directions in geometric traversal theory
Start date: July 26, 2023
Period: 1 year.

NSF Grant AF-1907400 (CCF) – $400,000 2019
Towards Sturdier Geometric Algorithms
Start date: July 1, 2019.
Period: 3 years.

NSF Grant AF-1421231 (CCF) – $490,364 2014
Towards better geometric algorithms: Summarizing, partitioning and shrinking data.
Start date: September 1, 2014.
Period: 3 years.

NSF Grant AF-1217462 (CCF) – $489,194 2012
Efficient Proximity and Similarity Search in Computational Geometry.
Start date: September 1, 2012.
Period: 3 years.

NSF Grant AF-0915984 (CCF) – $410,000 2009
Approximation, Covering and Clustering in Computational Geometry.
Start date: September 1, 2009-
Period: 3 years.

NSF Career CCR-0132901 - $325,000 2002
CAREER: Approximation Algorithms for Geometric Computing.
Start date: May 1, 2002.
Period: 5 years.

4.2 Publications

4.2.1 Book

S. Har-Peled. *Geometric Approximation Algorithms*. Vol. 173. Math. Surveys & Monographs. Amer. Math. Soc., 2011.

4.2.2 Journal papers/chapters

2024

1. T. M. Chan and S. Har-Peled. On the number of incidences when avoiding an induced biclique in geometric settings. *Discrete Comput. Geom.*, 2024.
2. P. K. Agarwal and S. Har-Peled. Computing instance-optimal kernels in two dimensions. *Discrete Comput. Geom.*, 2024.

2023

3. S. Har-Peled, M. Mendel, and D. Oláh. Reliable spanners for metric spaces. *ACM Trans. Algo.*, 19(1), 2023.
4. S. Har-Peled and M. Jones. Few cuts meet many point sets. *Algorithmica*, 85(4): 965–975, 2023.
5. S. Har-Peled and M. Jones. A note on stabbing convex bodies with points, lines, and flats. *Discret. Comput. Geom.*, 69(4): 1241–1254, 2023.

2022

6. D. Halperin, S. Har-Peled, K. Mehlhorn, E. Oh, and M. Sharir. The maximum-level vertex in an arrangement of lines. *Discrete Comput. Geom.*, 67(2): 439–461, 2022.

	7. M. Aumüller, S. Har-Peled, S. Mahabadi, R. Pagh, and F. Silvestri. Sampling near neighbors in search for fairness. *Commun. ACM*, 65(8): 83–90, 2022. 8. K. Buchin, S. Har-Peled, and D. Oláh. Sometimes reliable spanners of almost linear size. *J. Comput. Geom.*, 13(1): 178–196, 2022. 9. T. M. Chan, S. Har-Peled, and M. Jones. Optimal algorithms for geometric centers and depth. *SIAM J. Comput.*, 51(3): 627–663, 2022. eprint: `https://doi.org/10.1137/21M1423324`. 10. M. Aumüller, S. Har-Peled, S. Mahabadi, R. Pagh, and F. Silvestri. Sampling a near neighbor in high dimensions - who is the fairest of them all? *ACM Trans. Database Syst.*, 47(1): 4:1–4:40, 2022.
2021	11. S. Har-Peled and M. Jones. Journey to the center of the point set. *ACM Trans. Algo.*, 17(1): 9:1–9:21, 2021. 12. T. M. Chan and S. Har-Peled. Smallest k-enclosing rectangle revisited. *Discrete Comput. Geom.*, 66(2): 769–791, 2021. 13. S. Har-Peled, M. Jones, and S. Rahul. Active-learning a convex body in low dimensions. *Algorithmica*, 83(6): 1885–1917, 2021. 14. S. Har-Peled, H. Kaplan, W. Mulzer, L. Roditty, P. Seiferth, M. Sharir, and M. Willert. Stabbing pairwise intersecting disks by five points. *Discret. Math.*, 344(7): 112403, 2021. 15. M. Aumüller, S. Har-Peled, S. Mahabadi, R. Pagh, and F. Silvestri. Fair near neighbor search via sampling. *SIGMOD Rec.*, 50(1): 42–49, 2021.
2020	16. K. Buchin, S. Har-Peled, and D. Oláh. A spanner for the day after. *Discrete Comput. Geom.*, 64(4): 1167–1191, 2020. 17. S. Har-Peled and M. Jones. On separating points by lines. *Discret. Comput. Geom.*, 63(3): 705–730, 2020. 18. E. Ezra, S. Har-Peled, H. Kaplan, and M. Sharir. Decomposing arrangements of hyperplanes: VC-dimension, combinatorial dimension, and point location. *Discrete Comput. Geom.*, 64(1): 109–173, 2020. 19. D. Eppstein, S. Har-Peled, and G. Nivasch. Grid peeling and the affine curve-shortening flow. *Exper. Math.*, 29(3): 306–316, 2020. eprint: `https://doi.org/10.1080/10586458.2018.1466379`. 20. D. Eppstein, S. Har-Peled, and A. Sidiropoulos. Approximate greedy clustering and distance selection for graph metrics. *J. Comput. Geom.*, 11(1): 629–652, 2020. 21. T. M. Chan, S. Har-Peled, and M. Jones. On locality-sensitive orderings and their applications. *SIAM J. Comput.*, 49(3): 583–600, 2020. 22. P. Beame, S. Har-Peled, S. N. Ramamoorthy, C. Rashtchian, and M. Sinha. Edge estimation with independent set oracles. *ACM Trans. Algo.*, 16(4), 2020.
2019	23. A. Adamaszek, S. Har-Peled, and A. Wiese. Approximation schemes for independent set and sparse subsets of polygons. *J. Assoc. Comput. Mach.*, 66(4): 29:1–29:40, 2019. 24. A. Blum, S. Har-Peled, and B. Raichel. Sparse approximation via generating point sets. *ACM Trans. Algo.*, 15(3): 32:1–32:16, 2019.
2018	25. S. Har-Peled and N. Kumar. Robust proximity search for balls using sublinear space. *Algorithmica*, 80(1): 279–299, 2018.

2017	26. P. K. Agarwal, S. Har-Peled, S. Suri, H. Yildiz, and W. Zhang. Convex hulls under uncertainty. *Algorithmica*, 79(2): 340–367, 2017. 27. A. Ene, S. Har-Peled, and B. Raichel. Geometric packing under nonuniform constraints. *SIAM J. Comput.*, 46(6): 1745–1784, 2017. 28. S. Har-Peled, H. Kaplan, and M. Sharir. Approximating the k-level in three-dimensional plane arrangements. *A Journey Through Discrete Mathematics: A Tribute to Jiří Matoušek*. Springer, 2017, pp. 467–503. 29. S. Har-Peled and K. Quanrud. Approximation algorithms for polynomial-expansion and low-density graphs. *SIAM J. Comput.*, 46(6): 1712–1744, 2017. 30. S. Har-Peled and S. Roy. Approximating the maximum overlap of polygons under translation. *Algorithmica*, 78(1): 147–165, 2017.
2016	31. S. Har-Peled. Shortest path in a polygon using sublinear space. *J. Comput. Geom.*, 7(2): 19–45, 2016. 32. S. Har-Peled, A. Nayyeri, M. R. Salavatipour, and A. Sidiropoulos. How to walk your dog in the mountains with no magic leash. *Discrete Comput. Geom.*, 55(1): 39–73, 2016. 33. S. Har-Peled, N. Kumar, D. M. Mount, and B. Raichel. Space exploration via proximity search. *Discrete Comput. Geom.*, 56(2): 357–376, 2016. 34. H. Chang, S. Har-Peled, and B. Raichel. From proximity to utility: A voronoi partition of pareto optima. *Discrete Comput. Geom.*, 56(3): 631–656, 2016. 35. A. Driemel, S. Har-Peled, and B. Raichel. On the expected complexity of Voronoi diagrams on terrains. *ACM Trans. Algo.*, 12(3): 37, 2016. 36. P. K. Agarwal, B. Aronov, S. Har-Peled, J. M. Phillips, K. Yi, and W. Zhang. Nearest-neighbor searching under uncertainty II. *ACM Trans. Algo.*, 13(1): 3:1–3:25, 2016.
15	37. S. Har-Peled and B. Raichel. Net and prune: A linear time algorithm for Euclidean distance problems. *J. Assoc. Comput. Mach.*, 62(6): 44:1–44:35, 2015. 38. S. Har-Peled and N. Kumar. Approximating minimization diagrams and generalized proximity search. *SIAM J. Comput.*, 44(4): 944–974, 2015. 39. S. Har-Peled and B. Raichel. On the complexity of randomly weighted Voronoi diagrams. *Discrete Comput. Geom.*, 53(3): 547–568, 2015. 40. O. Cheong, S. Har-Peled, H. Kim, and H. Kim. On the number of edges of fan-crossing free graphs. *Algorithmica*, 73(4): 673–695, 2015.
14	41. S. Har-Peled and N. Kumar. Down the rabbit hole: robust proximity search in sublinear space. *SIAM J. Comput.*, 43(4): 1486–1511, 2014. 42. P. K. Agarwal, S. Har-Peled, H. Kaplan, and M. Sharir. Union of random Minkowski sums and network vulnerability analysis. *Discrete Comput. Geom.*, 52(3): 551–582, 2014. 43. S. Har-Peled and B. Raichel. The Fréchet distance revisited and extended. *ACM Trans. Algo.*, 10(1): 3:1–3:22, 2014. 44. A. Dumitrescu, S. Har-Peled, and C. D. Tóth. Minimum convex partitions and maximum empty polytopes. *J. Comput. Geom.*, 5(1): 86–103, 2014.

13	45. A. Driemel and S. Har-Peled. Jaywalking your dog – computing the Fréchet distance with shortcuts. *SIAM J. Comput.*, 42(5): 1830–1866, 2013. 46. P. Agarwal, S. Har-Peled, and H. Yu. Embeddings of surfaces, curves, and moving points in Euclidean space. *SIAM J. Comput.*, 42(2): 442–458, 2013. 47. S. Har-Peled and N. Kumar. Approximate nearest neighbor search for low-dimensional queries. *SIAM J. Comput.*, 42(1): 138–159, 2013. 48. S. Har-Peled and B. Lidicky. Peeling the grid. *SIAM J. Discrete Math.*, 27(2): 650–655, 2013.
12	49. S. Har-Peled, P. Indyk, and R. Motwani. Approximate nearest neighbors: Towards removing the curse of dimensionality. *Theory Comput.*, 8. Special issue in honor of Rajeev Motwani: 321–350, 2012. 50. A. Driemel, S. Har-Peled, and C. Wenk. Approximating the Fréchet distance for realistic curves in near linear time. *Discrete Comput. Geom.*, 48(1): 94–127, 2012. 51. T. M. Chan and S. Har-Peled. Approximation algorithms for maximum independent set of pseudo-disks. *Discrete Comput. Geom.*, 48(2): 373–392, 2012. 52. C. Chekuri, K. Clarkson, and S. Har-Peled. On the set multi-cover problem in geometric settings. *ACM Trans. Algo.*, 9(1): 9, 2012. 53. S. Har-Peled and M. Lee. Weighted geometric set cover problems revisited. *J. Comput. Geom.*, 3(1): 65–85, 2012. 54. M. A. Abam and S. Har-Peled. New constructions of SSPDs and their applications. *Comput. Geom. Theory Appl.*, 45(5–6): 200–214, 2012.
11	55. S. Har-Peled and M. Sharir. Relative (p, ε)-approximations in geometry. *Discrete Comput. Geom.*, 45(3): 462–496, 2011.
2010	56. P. K. Agarwal, S. Har-Peled, M. Sharir, and Y. Wang. Hausdorff distance under translation for points and balls. *ACM Trans. Algo.*, 6(4): 1–26, 2010.
09	57. M. de Berg, S. Cabello, and S. Har-Peled. Covering many or few points with unit disks. *Theory Comput. Syst.*, 45(3): 446–469, 2009.
08	58. K. Chen and S. Har-Peled. The Euclidean orienteering problem revisited. *SIAM J. Comput.*, 38(1): 385–397, 2008. 59. B. Aronov and S. Har-Peled. On approximating the depth and related problems. *SIAM J. Comput.*, 38(3): 899–921, 2008. 60. P. Agarwal, S. Har-Peled, and H. Yu. Robust shape fitting via peeling and grating coresets. *Discrete Comput. Geom.*, 39(1-3): 38–58, 2008.
07	61. S. Har-Peled and A. Kushal. Smaller coresets for k-median and k-means clustering. *Discrete Comput. Geom.*, 37(1): 3–19, 2007. 62. O. Cheong, A. Efrat, and S. Har-Peled. On finding a guard that sees most and a shop that sells most. *Discrete Comput. Geom.*, 37(4): 545–563, 2007. 63. S. Har-Peled. How to get close to the median shape. *Comput. Geom. Theory Appl.*, 36: 39–51, 2007.

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64. S. Har-Peled and M. Mendel. Fast construction of nets in low dimensional metrics, and their applications. *SIAM J. Comput.*, 35(5): 1148–1184, 2006.
65. J. Erickson, S. Har-Peled, and D. Mount. On the least median square problem. *Discrete Comput. Geom.*, 36(4): 593–607, 2006.
66. A. Efrat and S. Har-Peled. Guarding galleries and terrains. *Inform. Process. Lett.*, 100(6): 238–245, 2006.

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67. P. Carmi, S. Har-Peled, and M. J. Katz. On the Fermat-Weber center of a convex object. *Comput. Geom. Theory Appl.*, 32(3): 188–195, 2005.
68. S. Har-Peled and S. Mazumdar. Fast algorithms for computing the smallest k-enclosing disc. *Algorithmica*, 41(3): 147–157, 2005.
69. P. K. Agarwal, S. Har-Peled, N. H. Mustafa, and Y. Wang. Near-linear time approximation algorithms for curve simplification. *Algorithmica*, 42(3-4): 203–219, 2005.
70. P. Carmi, S. Dolev, S. Har-Peled, M. J. Katz, and M. Segal. Geographic quorum systems approximations. *Algorithmica*, 41(4): 233–244, 2005.
71. S. Har-Peled and B. Sadri. How fast is the k-means method? *Algorithmica*, 41(3): 185–202, 2005.
72. E. Althaus, S. Funke, S. Har-Peled, J. Könemann, E. A. Ramos, and M. Skutella. Approximating k-hop minimum-spanning trees. *Oper. Res. Lett.*, 33(2): 115–120, 2005.
73. S. Agarwal, T. Graepel, R. Herbrich, S. Har-Peled, and D. Roth. Generalization bounds for the area under the roc curve. *J. Mach. Learn. Research*, 6: 393–425, 2005.
74. S. Har-Peled and S. Smorodinsky. On conflict-free coloring of points and simple regions in the plane. *Discrete Comput. Geom.*, 34(1): 47–70, 2005.

04

75. S. Har-Peled and Y. Wang. Shape fitting with outliers. *SIAM J. Comput.*, 33(2): 269–285, 2004.
76. P. K. Agarwal, S. Har-Peled, and K. R. Varadarajan. Approximating extent measures of points. *J. Assoc. Comput. Mach.*, 51(4): 606–635, 2004.
77. S. Har-Peled and K. R. Varadarajan. High-dimensional shape fitting in linear time. *Discrete Comput. Geom.*, 32(2): 269–288, 2004.
78. J. Erickson and S. Har-Peled. Optimally cutting a surface into a disk. *Discrete Comput. Geom.*, 31(1): 37–59, 2004.
79. O. Cheong, S. Har-Peled, N. Linial, and J. Matoušek. The one-round Voronoi game. *Discrete Comput. Geom.*, 31(1): 125–138, 2004.
80. S. Har-Peled. Clustering motion. *Discrete Comput. Geom.*, 31(4): 545–565, 2004.

03

81. C. Linhart, D. Halperin, I. Hanniel, and S. Har-Peled. An experimental study of on-line methods for zone construction in arrangements of lines in the plane. *Int. J. Comput. Geom. Appl.*, 13(6): 463–485, 2003.

02

82. P. K. Agarwal, S. Har-Peled, and M. Karia. Computing approximate shortest paths on convex polytopes. *Algorithmica*, 33(2): 227–242, 2002.
83. P. K. Agarwal, M. de Berg, S. Har-Peled, M. H. Overmars, M. Sharir, and J. Vahrenhold. Reporting intersecting pairs of convex polytopes in two and three dimensions. *Comput. Geom. Theory Appl.*, 23(2): 195–207, 2002.

	84. A. Efrat, L. J. Guibas, S. Har-Peled, J. S. Mitchell, and T. Murali. New similarity measures between polylines with applications to morphing and polygon sweeping. *Discrete Comput. Geom.*, 28: 535–569, 2002.
01	85. G. Barequet and S. Har-Peled. Efficiently approximating the minimum-volume bounding box of a point set in three dimensions. *J. Algorithms*, 38(1): 91–109, 2001. 86. G. Barequet and S. Har-Peled. Polygon containment and translational min-hausdorff-distance between segment sets are 3sum-hard. *Int. J. Comput. Geom. Appl.*, 11(4): 465–474, 2001. 87. Y. Afek, A. Bremler-Barr, and S. Har-Peled. Routing with a clue. *IEEE/ACM Transactions on Networking*, 9(6): 693–705, 2001. 88. S. Har-Peled and M. Sharir. Online point location in planar arrangements and its applications. *Discrete Comput. Geom.*, 26: 19–40, 2001.
2000	89. P. K. Agarwal, L. J. Guibas, S. Har-Peled, A. Rabinovitch, and M. Sharir. Computing the penetration depth of two convex polytopes in 3d. *Nordic J. Comput.*, 7(3): 227–240, 2000. 90. S. Har-Peled. Constructing planar cuttings in theory and practice. *SIAM J. Comput.*, 29(6): 2016–2039, 2000. 91. S. Har-Peled. Taking a walk in a planar arrangement. *SIAM J. Comput.*, 30(4): 1341–1367, 2000. 92. P. K. Agarwal, B. Aronov, S. Har-Peled, and M. Sharir. Approximation and exact algorithms for minimum-width annuli and shells. *Discrete Comput. Geom.*, 24(4): 687–705, 2000.
99	93. S. Har-Peled. Approximate shortest paths and geodesic diameters on convex polytopes in three dimensions. *Discrete Comput. Geom.*, 21: 216–231, 1999. 94. S. Har-Peled. Constructing approximate shortest path maps in three dimensions. *SIAM J. Comput.*, 28(4): 1182–1197, 1999. 95. S. Har-Peled. Multicolor combination lemma. *Comput. Geom. Theory Appl.*, 12: 155–176, 1999.
98	96. S. Har-Peled. An output sensitive algorithm for discrete convex hulls. *Comput. Geom. Theory Appl.*, 10: 125–138, 1998.
1997	97. P. K. Agarwal, S. Har-Peled, M. Sharir, and K. R. Varadarajan. Approximate shortest paths on a convex polytope in three dimensions. *J. Assoc. Comput. Mach.*, 44(4): 567–584, 1997.

4.2.3 Survey

P. K. Agarwal, S. Har-Peled, and K. Varadarajan. Geometric approximation via coresets. *Combinatorial and Computational Geometry*. Math. Sci. Research Inst. Pub. Cambridge, 2005.

4.2.4 Refereed Conferences

(Numbers on the right, colored in red, are acceptance rate.)

2024

1. Z. Gao and S. Har-Peled. Near optimal locality sensitive orderings in euclidean space. *Proc. 40th Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 293. LIPIcs. 60:1–60:14, 2024. 35%
2. S. Har-Peled, E. Harb, and V. Livanos. Oracle-augmented prophet inequalities. *Proc. 51st Int. Colloq. Automata Lang. Prog.* (ICALP), vol. 297. LIPIcs. 81:1–81:19, 2024. 29%
3. S. Har-Peled and E. W. Robson. No-dimensional Tverberg partitions revisited. *Proc. 19th Scand. Workshop Algorithm Theory* (SWAT), vol. 294. LIPIcs. 26:1–26:14, 2024. 39%
4. S. Ashur and S. Har-Peled. Local spanners revisited. *Proc. 19th Scand. Workshop Algorithm Theory* (SWAT), vol. 294. LIPIcs. 2:1–2:15, 2024. 39%
5. P. K. Agarwal, S. Har-Peled, R. Raychaudhury, and S. Sintos. *Fast Approximation Algorithms for Piercing Boxes by Points*. *Proc. 35th ACM-SIAM Sympos. Discrete Algs.* (SODA), pp. 4892–4908. eprint: https://epubs.siam.org/doi/pdf/10.1137/1.9781611977912.174. 29%
6. S. Har-Peled and E. Harb. Revisiting random points: combinatorial complexity and algorithms. *Proc. Symp. Simplicity Alg. (*SOSA), 244–268, 2024. 37%

2023

7. S. Har-Peled and D. W. Zheng. Halving by a thousand cuts or punctures. *Proc. 34th ACM-SIAM Sympos. Discrete Algs.* (SODA), 1385–1397, 2023. eprint: https://epubs.siam.org/doi/pdf/10.1137/1.9781611977554.ch49. 30%
8. T. M. Chan and S. Har-Peled. On the number of incidences when avoiding an induced biclique in geometric settings. *Proc. 34th ACM-SIAM Sympos. Discrete Algs.* (SODA), 1398–1413, eprint: https://epubs.siam.org/doi/pdf/10.1137/1.9781611977554.ch50. 30%
9. P. K. Agarwal and S. Har-Peled. Computing instance-optimal kernels in two dimensions. *Proc. 39th Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 258. Schloss Dagstuhl – Leibniz-Zentrum für Informatik. 4:1–4:15, 2023. 35%
10. S. Har-Peled and B. Raichel. On the budgeted Hausdorff distance problem. *Proc. 35th Canad. Conf. Comput. Geom.* (CCCG), 169–173, 2023. **acceptrate**

2022

11. S. Har-Peled and E. Yang. Approximation algorithms for maximum matchings in geometric intersection graphs. *Proc. 38th Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 224. LIPIcs. 47:1–47:13, 2022. 36%

2021

12. S. Ashur and S. Har-Peled. On undecided LP, clustering and active learning. *Proc. 37th Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 189. LIPIcs. 12:1–12:15, 2021. 35%
13. S. Har-Peled, M. Mendel, and D. Oláh. Reliable spanners for metric spaces. *Proc. 37th Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 189. LIPIcs. 43:1–43:13, 2021. 35%
14. S. Har-Peled and M. Jones. Stabbing convex bodies with lines and flats. *Proc. 37th Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 189. LIPIcs. 42:1–42:12, 2021. 35%

	15. S. Har-Peled and T. Zhou. Improved approximation algorithms for Tverberg partitions. *Proc. 30th Annu. Euro. Sympos. Alg.* (ESA), vol. 204. LIPIcs. 51:1–51:15, 2021.	25%
2020	16. C. Chekuri, S. Har-Peled, and K. Quanrud. Fast LP-based approximations for geometric packing and covering problems. *Proc. 31st ACM-SIAM Sympos. Discrete Algs.* (SODA), 1019–1038, 2020.	30%
	17. S. Har-Peled and M. Jones. Fast algorithms for geometric consensuses. *Proc. 36th Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 164. LIPIcs. 50:1–50:16, 2020.	34%
	18. A. Backurs and S. Har-Peled. Submodular clustering in low dimensions. *Proc. 17th Scand. Workshop Algorithm Theory* (SWAT), vol. 162. LIPIcs. 8:1–8:14, 2020.	30%
	19. S. Har-Peled, M. Jones, and S. Rahul. Active learning a convex body in low dimensions. *Proc. 47th Int. Colloq. Automata Lang. Prog.* (ICALP), vol. 168. Leibniz International Proceedings in Informatics (LIPIcs). 64:1–64:17, 2020.	29%
	20. K. Buchin, S. Har-Peled, and D. Oláh. Sometimes reliable spanners of almost linear size. *Proc. 29th Annu. Euro. Sympos. Alg.* (ESA), vol. 173. LIPIcs. 27:1–27:15, 2020.	32%
	21. S. Har-Peled and M. Jones. Some geometric applications of anti-chains. *Proc. 32nd Canad. Conf. Comput. Geom.* (CCCG), 326–331, 2020.	70%
2019	22. T. M. Chan, S. Har-Peled, and M. Jones. On locality-sensitive orderings and their applications. *Proc. 10th Innov. Theo. Comp. Sci.* (ITCS), vol. 124. LIPIcs. 21:1–21:17, 2019.	33%
	23. T. M. Chan and S. Har-Peled. Smallest k-Enclosing rectangle revisited. *Proc. 35th Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 129. LIPIcs. 23:1–23:15, 2019.	36%
	24. S. Har-Peled and M. Jones. Journey to the center of the point set. *Proc. 35th Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 129. LIPIcs. 41:1–41:14, 2019.	36%
	25. K. Buchin, S. Har-Peled, and D. Oláh. A spanner for the day after. *Proc. 35th Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 129. LIPIcs. 19:1–19:15, 2019.	36%
	26. S. Har-Peled and S. Mahabadi. Near neighbor: who is the fairest of them all? *Proc. 32th Neural Info. Proc. Sys.* (NeurIPS), 13176–13187, 2019.	21%
2018	27. D. Eppstein, S. Har-Peled, and G. Nivasch. Grid peeling and the affine curve-shortening flow. *Proc. 20th Workshop Algorithm Eng. Exper.* (ALENEX), 109–116, 2018.	43%
	28. P. Beame, S. Har-Peled, S. N. Ramamoorthy, C. Rashtchian, and M. Sinha. Edge estimation with independent set oracles. *Innov. Theo. Comp. Sci.* (ITCS), vol. 94. LIPIcs. 38:1–38:21, 2018.	32%
	29. S. Har-Peled and M. Jones. On separating points by lines. *Proc. 29th ACM-SIAM Sympos. Discrete Algs.* (SODA), 918–932, 2018.	33%

	30. S. Har-Peled, P. Indyk, and S. Mahabadi. Approximate sparse linear regression. *Proc. 45th Int. Colloq. Automata Lang. Prog.* (ICALP), vol. 107. LIPIcs. 77:1–77:14, 2018.	29%
	31. S. Har-Peled, H. Kaplan, W. Mulzer, L. Roditty, P. Seiferth, M. Sharir, and M. Willert. Stabbing pairwise intersecting disks by five points. *Proc. 29th Annu. Internat. Sympos. Algorithms Comput.* (ISAAC), vol. 123. LIPIcs. 50:1–50:12, 2018.	36%
17	32. S. Har-Peled and S. Mahabadi. Proximity in the age of distraction: robust approximate nearest neighbor search. *Proc. 28th ACM-SIAM Sympos. Discrete Algs.* (SODA), 1–15, 2017. eprint: `http://epubs.siam.org/doi/pdf/10.1137/1.9781611974782.1`.	34%
16	33. A. Blum, S. Har-Peled, and B. Raichel. Sparse approximation via generating point sets. *Proc. 27th ACM-SIAM Sympos. Discrete Algs.* (SODA), 548–557, 2016.	28%
	34. S. Har-Peled, H. Kaplan, and M. Sharir. Approximating the k-level in three-dimensional plane arrangements. *Proc. 27th ACM-SIAM Sympos. Discrete Algs.* (SODA), 1193–1212, 2016.	28%
	35. V. V. S. P. Bhattiprolu and S. Har-Peled. Separating a Voronoi diagram via local search. *Proc. 32nd Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 51. LIPIcs. 18:1–18:16, 2016.	38%
	36. S. Har-Peled, P. Indyk, S. Mahabadi, and A. Vakilian. Towards tight bounds for the streaming set cover problem. *Proc. 35th ACM Sympos. Principles Database Syst.* (PODS), 371–383, 2016.	32%
15	37. S. Har-Peled and K. Quanrud. Approximation algorithms for polynomial-expansion and low-density graphs. *Proc. 23nd Annu. Euro. Sympos. Alg.* (ESA), vol. 9294. Lect. Notes in Comp. Sci. 717–728, 2015.	26%
	38. H.-C. Chang, S. Har-Peled, and B. Raichel. From proximity to utility: A Voronoi partition of Pareto optima. *Proc. 31st Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 34. LIPIcs. 689–703, 2015.	39%
	39. S. Har-Peled. Shortest path in a polygon using sublinear space. *Proc. 31st Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 34. LIPIcs. 111–125, 2015.	39%
	40. S. Har-Peled, N. Kumar, D. Mount, and B. Raichel. Space exploration via proximity search. *Proc. 31st Int. Annu. Sympos. Comput. Geom.* (SoCG), vol. 34. LIPIcs. 374–389, 2015.	39%
14	41. S. Har-Peled and N. Kumar. Robust proximity search for balls using sublinear space. *Proc. 34th Conf. Found. Soft. Tech. Theoret. Comput. Sci.* (FSTTCS), vol. 29. LIPIcs. 315–326, 2014.	29%
	42. S. Har-Peled and S. Roy. Approximating the maximum overlap of polygons under translation. *Proc. 22nd Annu. Euro. Sympos. Alg.* (ESA), vol. 8737. Lect. Notes in Comp. Sci. 542–553, 2014.	26%

	43. P. K. Agarwal, S. Har-Peled, S. Suri, and H. Y. amd W. Zhang. Convex hulls under uncertainty. *Proc. 22nd Annu. Euro. Sympos. Alg.* (ESA), 37–48, 2014.	26%
	44. S. Har-Peled. Quasi-polynomial time approximation scheme for sparse subsets of polygons. *Proc. 30th Annu. Sympos. Comput. Geom.* (SoCG), 120–129, 2014.	35%
	45. S. Har-Peled and B. Raichel. On the complexity of randomly weighted Voronoi diagrams. *Proc. 30th Annu. Sympos. Comput. Geom.* (SoCG), 232–241, 2014.	35%
13	46. S. Har-Peled and N. Kumar. Approximating minimization diagrams and generalized proximity search. *Proc. 54th Annu. IEEE Sympos. Found. Comput. Sci.* (FOCS), 717–726, 2013.	28%
	47. O. Cheong, S. Har-Peled, H. Kim, and H.-S. Kim. On the number of edges of fan-crossing free graphs. *Proc. 24th Annu. Internat. Sympos. Algorithms Comput.* (ISAAC), 163–173, 2013.	38%
	48. P. K. Agarwal, B. Aronov, S. Har-Peled, J. M. Phillips, K. Yi, and W. Zhang. Nearest neighbor searching under uncertainty II. *Proc. 32nd ACM Sympos. Principles Database Syst.* (PODS), 115–126, 2013.	25%
	49. S. Har-Peled and B. Raichel. Net and prune: a linear time algorithm for Euclidean distance problems. *Proc. 45th Annu. ACM Sympos. Theory Comput.* (STOC), 605–614, 2013.	28%
	50. S. Har-Peled, P. Indyk, and A. Sidiropoulos. Euclidean spanners in high dimensions. *Proc. 24rd ACM-SIAM Sympos. Discrete Algs.* (SODA), 804–809, 2013.	30%
12	51. S. Har-Peled and N. Kumar. Down the rabbit hole: robust proximity search in sublinear space. *Proc. 53rd Annu. IEEE Sympos. Found. Comput. Sci.* (FOCS), 430–439, 2012.	32%
	52. A. Ene, S. Har-Peled, and B. Raichel. Geometric packing under non-uniform constraints. *Proc. 28th Annu. Sympos. Comput. Geom.* (SoCG), 11–20, 2012.	35%
	53. S. Har-Peled, A. Nayyeri, M. Salavatipour, and A. Sidiropoulos. How to walk your dog in the mountains with no magic leash. *Proc. 28th Annu. Sympos. Comput. Geom.* (SoCG), 121–130, 2012.	35%
	54. A. Driemel, S. Har-Peled, and B. Raichel. On the expected complexity of Voronoi diagrams on terrains. *Proc. 28th Annu. Sympos. Comput. Geom.* (SoCG), 101–110, 2012.	35%
	55. A. Driemel and S. Har-Peled. Jaywalking your dog – computing the Fréchet distance with shortcuts. *Proc. 23rd ACM-SIAM Sympos. Discrete Algs.* (SODA), 318–337, 2012.	27%
	56. A. Dumitrescu, S. Har-Peled, and C. D. Tóth. Minimum convex partitions and maximum empty polytopes. *Proc. 13th Scand. Workshop Algorithm Theory* (SWAT), vol. 7357. Lect. Notes in Comp. Sci. 213–224, 2012.	26.8%
11	57. R. Agarwal, B. Godfrey, and S. Har-Peled. Approximate distance queries and compact routing in sparse graphs. *Proc. 30th Ann. Joint Conf. IEEE Comp. and Comm. Soc.* (INFOCOM), 1754–1762, 2011.	16%

	58. S. Har-Peled and B. Raichel. The Fréchet distance revisited and extended. *Proc. 27th Annu. Sympos. Comput. Geom.* (SoCG), 448–457, 2011.	38%
	59. A. F. Cook, A. Driemel, S. Har-Peled, J. Sherette, and C. Wenk. Computing the Fréchet distance between folded polygons. *Proc. 12th Workshop Algorithms Data Struct.* (WADS), 267–278, 2011.	42%
	60. S. Har-Peled and N. Kumar. Approximate nearest neighbor search for low dimensional queries. *Proc. 22nd ACM-SIAM Sympos. Discrete Algs.* (SODA), 854–867, 2011.	30%
2010	61. M. A. Abam and S. Har-Peled. New constructions of SSPDs and their applications. *Proc. 26th Annu. Sympos. Comput. Geom.* (SoCG), 192–200, 2010.	32%
	62. A. Driemel, S. Har-Peled, and C. Wenk. Approximating the Fréchet distance for realistic curves in near linear time. *Proc. 26th Annu. Sympos. Comput. Geom.* (SoCG), 365–374, 2010.	32%
09	63. T. M. Chan and S. Har-Peled. Approximation algorithms for maximum independent set of pseudo-disks. *Proc. 25th Annu. Sympos. Comput. Geom.* (SoCG), 333–340, 2009.	26%
	64. C. Chekuri, K. L. Clarkson., and S. Har-Peled. On the set multi-cover problem in geometric settings. *Proc. 25th Annu. Sympos. Comput. Geom.* (SoCG), 341–350, 2009.	26%
08	65. S. Har-Peled and S. Muthukrishnan. Range medians. *Proc. 16th Annu. Euro. Sympos. Alg.* (ESA), 503–514, 2008.	34%
07	66. B. Aronov, S. Har-Peled, and M. Sharir. On approximate halfspace range counting and relative epsilon-approximations. *Proc. 23rd Annu. Sympos. Comput. Geom.* (SoCG), 327–336, 2007.	32%
	67. P. Agarwal, S. Har-Peled, and H. Yu. Embeddings of surfaces, curves, and moving points in Euclidean space. *Proc. 23rd Annu. Sympos. Comput. Geom.* (SoCG), 381–389, 2007.	32%
	68. S. Har-Peled, D. Roth, and D. Zimak. Maximum margin coresets for active and noise tolerant learning. *Proc. 21st Int. Joint Conf. Art. Intell.* (IJCAI), 836–841, 2007.	15.6%
06	69. S. Har-Peled. How to get close to the median shape. *Proc. 22nd Annu. Sympos. Comput. Geom.* (SoCG), 402–410, 2006.	39%
	70. K. Chen and S. Har-Peled. The orienteering problem in the plane revisited. *Proc. 22nd Annu. Sympos. Comput. Geom.* (SoCG), 247–254, 2006.	39%
	71. P. Agarwal, S. Har-Peled, and H. Yu. Robust shape fitting via peeling and grating coresets. *Proc. 17th ACM-SIAM Sympos. Discrete Algs.* (SODA), 182–191, 2006.	31%
	72. B. Aronov, S. Har-Peled, C. Knauer, Y. Wang, and C. Wenk. Fréchet distance for curves, Revisited. *Proc. 14th Annu. Euro. Sympos. Alg.* (ESA), 52–63, 2006.	24%

	73. M. de Berg, S. Cabello, and S. Har-Peled. Covering many or few points with unit disks. *Proc. 4th Work. Approx. Online Alg.* (WAOA), vol. 4368. Lect. Notes in Comp. Sci. 55–68, 2006.	26%
	74. S. Har-Peled. Coresets for discrete integration and clustering. *Proc. 26th Conf. Found. Soft. Tech. Theoret. Comput. Sci.* (FSTTCS), 33–44, 2006.	22%
05	75. S. Har-Peled and M. Mendel. Fast construction of nets in low dimensional metrics, and their applications. *Proc. 21st Annu. Sympos. Comput. Geom.* (SoCG), http://sarielhp.org/p/04/lipschitz. 150–158, 2005.	29%
	76. S. Har-Peled and A. Üngör. A time-optimal Delaunay refinement algorithm in two dimensions. *Proc. 21st Annu. Sympos. Comput. Geom.* (SoCG), 228–236, 2005.	29%
	77. S. Har-Peled and A. Kushal. Smaller coresets for k-median and k-means clustering. *Proc. 21st Annu. Sympos. Comput. Geom.* (SoCG), 126–134, 2005.	29%
	78. B. Aronov and S. Har-Peled. On approximating the depth and related problems. *Proc. 16th ACM-SIAM Sympos. Discrete Algs.* (SODA), 886–894, 2005.	28%
	79. S. Har-Peled and B. Sadri. How fast is the k-means method? *Proc. 16th ACM-SIAM Sympos. Discrete Algs.* (SODA), 877–885, 2005.	28%
	80. A. Efrat, S. Har-Peled, and J. S. B. Mitchell. Approximation algorithms for location problems in sensor networks. *Proc. 2nd Int. Conf. Broadband Networks* (BROADNETS), 767–776, 2005.	49%
	81. S. Agarwal, S. Har-Peled, and D. Roth. A uniform convergence bound for the area under the ROC curve. *Tenth Inter. Work. Artif. Intell. Stat.* (AISTAT), 1–8, 2005.	39%
04	82. S. Har-Peled. No coreset, no cry. *Proc. 24th Conf. Found. Soft. Tech. Theoret. Comput. Sci.* (FSTTCS), 324–335, 2004.	22%
	83. J. Erickson, S. Har-Peled, and D. Mount. On the least median square problem. *Proc. 20th Annu. Sympos. Comput. Geom.* (SoCG), 273–279, 2004.	33%
	84. S. Har-Peled and S. Mazumdar. On coresets for k-means and k-median clustering. *Proc. 36th Annu. ACM Sympos. Theory Comput.* (STOC), 291–300, 2004.	26%
	85. O. Cheong, A. Efrat, and S. Har-Peled. On finding a guard that sees most and a shop that sells most. *Proc. 15th ACM-SIAM Sympos. Discrete Algs.* (SODA), 1091–1100, 2004.	30%
03	86. S. Har-Peled and S. Mazumdar. Fast algorithms for computing the smallest k-enclosing disc. *Proc. 11th Annu. Euro. Sympos. Alg.* (ESA), vol. 2832. Lect. Notes in Comp. Sci. 278–288, 2003.	39%
	87. S. Har-Peled, V. Koltun, D. Song, and K. Goldberg. Efficient algorithms for shared camera control. *Proc. 19th Annu. Sympos. Comput. Geom.* (SoCG), 68–77, 2003.	36%

88. S. Har-Peled and S. Smorodinsky. On conflict-free coloring of points and simple regions in the plane. *Proc. 19th Annu. Sympos. Comput. Geom.* (SoCG), 114–123, 2003. 36%

89. S. Har-Peled and Y. Wang. Shape fitting with outliers. *Proc. 19th Annu. Sympos. Comput. Geom.* (SoCG), 29–38, 2002. 36%

90. S. Har-Peled and K. R. Varadarajan. High-dimensional shape fitting in linear time. *Proc. 19th Annu. Sympos. Comput. Geom.* (SoCG), 39–47, 2003. 36%

91. P. K. Agarwal, S. Har-Peled, M. Sharir, and Y. Wang. Hausdorff distance under translation for points, disks, and balls. *Proc. 19th Annu. Sympos. Comput. Geom.* (SoCG), 282–291, 2003. 36%

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92. P. K. Agarwal, S. Har-Peled, N. H. Mustafa, and Y. Wang. Near-linear time approximation algorithms for curve simplification. *Proc. 10th Annu. Euro. Sympos. Alg.* (ESA), vol. 2461. Lecture Notes in Computer Science. 29–41, 2002. 37%

93. J. Erickson and S. Har-Peled. Optimally cutting a surface into a disk. *Proc. 18th Annu. Sympos. Comput. Geom.* (SoCG), 244–253, 2002. 34%

94. S. Har-Peled and K. R. Varadarajan. Projective clustering in high dimensions using coresets. *Proc. 18th Annu. Sympos. Comput. Geom.* (SoCG), 312–318, 2002. 34%

95. O. Cheong, S. Har-Peled, N. Linial, and J. Matoušek. The one-round Voronoi game. *Proc. 18th Annu. Sympos. Comput. Geom.* (SoCG), 97–101, 2002. 34%

96. M. Bădoiu, S. Har-Peled, and P. Indyk. Approximate clustering via coresets. *Proc. 34th Annu. ACM Sympos. Theory Comput.* (STOC), 250–257, 2002. 32%

97. A. Garg, S. Har-Peled, and D. Roth. On generalization bounds, projection profile, and margin distribution. *Proc. 19th Int. Conf. Mach. Learning* (ICML), 171–178, 2002. 33%

98. S. Har-Peled, D. Roth, and D. Zimak. Constraint classification for multiclass classification and ranking. *Neural Info. Proc. Sys.* (NIPS), 31%

99. S. Har-Peled, D. Roth, and D. Zimak. Constraint classification: a new approach to multiclass classification. *Proc. 13th Int. Conf. Alg. Learning Theory* (ALT), 365–379, 2002. 53%

100. C. M. Procopiuc, P. K. Agarwal, and S. Har-Peled. STAR-Tree: an efficient self-adjusting index for moving objects. *Proc. 4th Workshop Algorithm Eng. Exper.*, vol. 2409. Lect. Notes in Comp. Sci. 178–193, 2002. 44%

101. A. Efrat and S. Har-Peled. Guarding galleries and terrains. *2nd IFIP Internat. Conf. Theo. Comp. Sci.*: 181–192, 2002. 52%

01

102. S. Har-Peled. A practical approach for computing the diameter of a point-set. *Proc. 17th Annu. Sympos. Comput. Geom.* (SoCG), 177–186, 2001. 40%

103. S. Har-Peled. A replacement for Voronoi diagrams of near linear size. *Proc. 42nd Annu. IEEE Sympos. Found. Comput. Sci.* (FOCS), 94–103, 2001. 29%

104. S. Har-Peled. Clustering motion. *Proc. 42nd Annu. IEEE Sympos. Found. Comput. Sci.* (FOCS), 84–93, 2001. 29%

105. S. Har-Peled and K. R. Varadarajan. Approximate shape fitting via linearization. *Proc. 42nd Annu. IEEE Sympos. Found. Comput. Sci.* (FOCS), 66–73, 2001. 29%

106. P. K. Agarwal and S. Har-Peled. Maintaining the approximate extent measures of moving points. *Proc. 12th ACM-SIAM Sympos. Discrete Algs.* (SODA), 148–157, 2001. 42%

107. S. Har-Peled and M. Sharir. On-line point location in planar arrangements and its applications. *Proc. 12th ACM-SIAM Sympos. Discrete Algs.* (SODA), 57–66, 2001. 42%

108. A. Efrat, L. J. Guibas, S. Har-Peled, and T. M. Murali. Morphing between polylines. *Proc. 12th ACM-SIAM Sympos. Discrete Algs.* (SODA), 680–689, 2001. 42%

109. P. K. Agarwal, M. de Berg, S. Har-Peled, M. H. Overmars, M. Sharir, and J. Vahrenhold. Reporting intersecting pairs of polytopes in two and three dimensions. *Proc. 7th Workshop Algorithms Data Struct.* (WADS), vol. 2125. Lect. Notes in Comp. Sci. 122–134, 2001. 45%

2000

110. P. K. Agarwal, S. Har-Peled, and M. Karia. Computing approximate shortest paths on convex polytopes. *Proc. 16th Annu. Sympos. Comput. Geom.* (SoCG), 270–279, 2000. 34%

111. S. Har-Peled and P. Indyk. When crossings count – approximating the minimum spanning tree. *Proc. 16th Annu. Sympos. Comput. Geom.* (SoCG), 166–175, 2000. 34%

112. A. Efrat, L. J. Guibas, S. Har-Peled, D. C. Lin, J. S. Mitchell, and T. M. Murali. Sweeping simple polygons with a chain of guards. *Proc. 11th ACM-SIAM Sympos. Discrete Algs.* (SODA), 927–936, 2000. 37%

113. P. K. Agarwal, L. J. Guibas, S. Har-Peled, A. Rabinovitch, and M. Sharir. Computing the penetration depth of two convex polytopes in 3d. *Proc. 7th Scand. Workshop Algorithm Theory* (SWAT), 328–338, 2000. 41%

99

114. S. Har-Peled. Taking a walk in a planar arrangement. *Proc. 40th Annu. IEEE Sympos. Found. Comput. Sci.* (FOCS), 100–110, 1999. 31%

115. A. Bremler-Barr, Y. Afek, and S. Har-Peled. Routing with a clue. *Ann. Conf. on Data Comm. (SIGCOMM),* 203–214, 1999. 13%

116. P. K. Agarwal, B. Aronov, S. Har-Peled, and M. Sharir. Approximation and exact algorithms for minimum-width annuli and shells. *Proc. 15th Annu. Sympos. Comput. Geom.* (SoCG), 380–389, 1999. 44%

117. G. Barequet and S. Har-Peled. Efficiently approximating the minimum-volume bounding box of a point set in three dimensions. *Proc. 10th ACM-SIAM Sympos. Discrete Algs.* (SODA), 82–91, 1999. ≈30%

118. G. Barequet and S. Har-Peled. Polygon-containment and translational min-Hausdorff-distance between segment sets are 3SUM-hard. *Proc. 10th ACM-SIAM Sympos. Discrete Algs.* (SODA), 862–863, 1999. 51%

	119. Y. Aharoni, D. Halperin, I. Hanniel, S. Har-Peled, and C. Linhart. On-line zone construction in arrangements of lines in the plane. *Proc. 3rd Workshop Alg. Eng.* (WAE), 139–153, 1999.	52%
98	120. A. Andrzejak, B. Aronov, S. Har-Peled, R. Seidel, and E. Welzl. Results on k-sets and j-facets via continuous motion arguments. *Proc. 14th Annu. Sympos. Comput. Geom.* (SoCG), 192–199, 1998.	44%
	121. A. Efrat and S. Har-Peled. Fly cheaply: on the minimum fuel consumption problem. *Proc. 14th Annu. Sympos. Comput. Geom.* (SoCG), 143–145, 1998.	44%
	122. S. Har-Peled. Constructing approximate shortest path maps in three dimensions. *Proc. 14th Annu. Sympos. Comput. Geom.* (SoCG), 383–391, 1998.	44%
	123. S. Har-Peled. Constructing cuttings in theory and practice. *Proc. 14th Annu. Sympos. Comput. Geom.* (SoCG), 327–336, 1998.	35%
	124. S. Har-Peled. An output sensitive algorithm for discrete convex hulls. *Proc. 14th Annu. Sympos. Comput. Geom.* (SoCG), 357–364, 1998.	35%
97	125. S. Har-Peled. Approximate shortest paths and Geodesic diameters on convex polytopes in three dimensions. *Proc. 13th Annu. Sympos. Comput. Geom.* (SoCG), 359–365, 1997.	29%
96	126. S. Har-Peled, M. Sharir, and K. R. Varadarajan. Approximate shortest paths on a convex polytope in three dimensions. *Proc. 12th Annu. Sympos. Comput. Geom.* (SoCG), 329–338, 1996.	42%

5 Awards

The paper:

> S. Har-Peled and S. Mazumdar. On coresets for k-means and k-median clustering. *Proc. 36th Annu. ACM Sympos. Theory Comput.* (STOC), 291–300, 2004X

got the 20 years test of time award in STOC 2024.

6 Invited talks

1. *Beyond planarity: On geometric intersection graphs*, **Invited talk** in SODA 2016.

   Slides and youtube video here: `http://sarielhp.org/research/talks/16/01_soda/`.

2. *Quasi-Polynomial Time Approximation Scheme for Sparse Subsets of Polygons.* Discrete math seminar, KAIST, Korea. June 2, 2014.

3. *Net & Prune: A linear time algorithm for Euclidean distance problems.* Seminar in TU Eindhoven, Netherlands. September 18, 2013.

4. *Net & Prune: A linear time algorithm for Euclidean distance problems.* Seminar in Duke University. February 26, 2013.

5. *Net & Prune: A linear time algorithm for Euclidean distance problems.* Theory lunch, CMU. November 14, 2012.

6. *Finding haystacks (and similar structures) in geometry.* Workshop: Barriers in Computational Complexity II. Princeton, NJ. August 29, 2010.

7. *Summer school - lectured on coresets.* Madalgo, Aarhus, Denmark. August 16-19, 2010.

8. *Finding haystacks (and similar structures) in geometry.* In SharirFest, Tel-Aviv University. May 23, 2010.

9. *Approximating the Fréchet Distance for Realistic Curves in Near Linear Time.* Discrete & Computational Geometry Day. January 6, 2010, Ben-Gurion University.

10. *On set cover in geometric settings.* Algorithmic and Combinatorial Geometry, Budapest, June 15–19, 2009.

11. *Embeddings of Surfaces, Curves, and Moving Points in Euclidean Space.* Seminar in Yahoo (bay area). June 2007.

12. *On low dimensional coresets.* Seminar in University of Florida. March 2006.

13. *On Coresets and Shape Fitting in High Dimensions.* Seminar in CalTech. March 2005.

14. *Coresets.* Spring school as part of EuroCG, TU Eindhoven. March 7, 2005.

7 Students

7.1 Currently advising

(A) Stav Ashur, 2023 (phd).
(B) Jones Mitchell, 2021 (phd).
(C) Rajgopal, 2020 (ms).

7.2 Students advised

PhD:

(A) Kent Quanrud, faculty (Purdue), 2019 (co-advised).
(B) Benjamin Raichel, faculty (UT Dallas), 2015.
(C) Nirman Kumar, faculty (Memphis), 2014.
(D) Ke Chen, Pinterest. 2007.
(E) Dav Zimak (co-advised unofficially), youtube, 2007.

I also collaborated extensively with several students outside UIUC:

(A) Anne Driemel (TU Eindhoven), September 2013. Postdoc in TU Dortmund.
(B) Yusu Wang (Duke), 2004. Associate professor in Columbus, Ohio.

MS:

(A) Ben Miller (MS).
(B) Benjamin Raichel (MS).

(C) Bardia Sadri (MS).

Undergrad:

(A) Vijay Bhattiprolu (undergrad), admitted to CS CMU, 2014.

8 Teaching

Year	Fall	Spring
21/22	473 Algorithms	574 Randomized algorithms
20/21	374 Introduction Algo. & Models Comput.	498 Topics in algorithms
19/20	498 Randomized algorithms	598 Fixed parameter tractable algorithms
18/19	473 Algorithms	374 Introduction Algo. & Models Comput.
17/18	374 Introduction Algo. & Models Comput.	574 Randomized Algorithms
16/17	Sabbatical	
15/16	473 Algorithms	Paternity leave
14/15	573 Algorithms	473 Algorithms
13/14	573 Algorithms	574 Randomized Algorithms
12/13	573 Algorithms	473 Algorithms
11/12	473 Algorithms	498 Computational Geometry
10/11	598 Randomized Algorithms	473 Algorithms
09/10	573 Algorithms	598 Geometric Approximation Algorithms
08/09	598 Randomized Algorithms	373 Introduction to the theory of computation
07/08	473G Algorithms	273 Introduction to the theory of computation
06/07	Sabbatical	
05/06	598 Randomized algorithms	473G Algorithms
04/05	598 Approximation algorithms in geometry	473U Algorithms (undergrad section)
03/04	473G Algorithms	273 Introduction to theory of computation
02/03	497 Randomized Algorithms.	373 Algorithms
01/02	373 Algorithms	373 Algorithms
00/01	497 Clustering and Search in Low dimension.	497 Randomized Algorithms

Duke University. Spring 2000, Advanced Computational Geometry

Tel-Aviv University TA of courses in Computer Science at Tel Aviv University:

Assembly Language (x86), 96–97, Compilation, 96-97, 97–98, Efficiency of Computation 96–97, Introduction to Computer Science in Scheme 96–97, Programming Lab (C & Unix), 96–97, Software I (C & Unix) 97–98, Software II (Project in C++) 97–98, Workshop on Computational Geometry & Java 97–98.

9 Program committees

1. ESA: 2019.
2. SODA: 2019, 2015, 2008.
3. SoCG: 2017, 2013, 2008, 2001.
4. FOCS: 2016, 2005.
5. STOC: 2005.
6. SWAT: 2014.
7. EuroCG: 2013.
8. APPROX: 2012.
9. MASSIVE[1]: 2010, 2011.
10. (FSTTCS): 2011, 2005.
11. ICALP: 2007.
12. Video & multimedia track of 21st ACM Sym. Computational Geometry (SoCG), 2005.

10 Editorial board

- Algorithmica (Springer).
- TALG: ACM Transactions on Algorithms (ACM).

[1] Workshop on Massive Data Algorithms