CURRICULUM VITAE

**Haitao Wang**
Kahlert School of Computing
University of Utah
Room 3190, 50 Central Campus Dr.
Salt Lake City, UT 84112, USA
Email: haitao.wang@utah.edu
`https://www.cs.utah.edu/~hwang`

## Current Position

<u>Associate Professor</u>, Kahlert School of Computing, University of Utah.

## Education

- Ph.D. Computer Science, University of Notre Dame, Notre Dame, Indiana, USA, May 2010.
  Dissertation: *Algorithms and Data Structures for Geometric Object Approximation Problems*
  Advisor: Professor Danny Z. Chen.

- M.S. Computer Science, Fudan University, Shanghai, China, July 2006.
  Thesis: *Approximation Algorithms for Minimum Spanning Trees with Inner Node Cost*
  Advisor: Professor Hong Zhu.

- B.S. Mathematics, East China University of Science and Technology, Shanghai, China, July 2003.

## Research Interests

- Computational Geometry, Algorithms and Data Structures, Theoretical Computer Science

## Honors and Awards

- Best Student Paper Award, the 15th International Conference and Workshops on Algorithms and Computation (WALCOM), 2022

- Outstanding Graduate Mentor Award, Department of Computer Science, Utah State University, 2018.

- Faculty Teaching Award, Department of Computer Science, Utah State University, 2017.

- Best Newcomer Paper Award, the 20th International Conference on Database Theory (ICDT), 2017.

- Faculty Research Award, Department of Computer Science, Utah State University, 2016.

- Faculty Research Award, Department of Computer Science, Utah State University, 2015.

- Graduate Student Research Excellence Award, Department of Computer Science and Engineering, University of Notre Dame, 2010.

- Outstanding Teaching Assistant Award, Department of Computer Science and Engineering, University of Notre Dame, 2009.

- Graduate Fellowship of the Center for Applied Mathematics, University of Notre Dame, 2009–2010, Summer 2008.

## Professional Societies

- Association for Computing Machinery (ACM)

- Society for Computational Geometry

## Professional Experience

- August 2022 – present: Associate Professor (with tenure), Kahlert School of Computing, University of Utah.

- July 2022 – June 2023: Professor (on leave after August 2022), Department of Computer Science, Utah State University.

- July 2018 – June 2022: Associate Professor (with tenure), Department of Computer Science, Utah State University.

- August 2012 – June 2018: Assistant Professor, Department of Computer Science, Utah State University.

- May 2010 – July 2012: Postdoc (Research Assistant Professor), Department of Computer Science and Engineering, University of Notre Dame.

- Aug. 2008 – Dec. 2008, Aug. 2007 – Dec. 2007: Teaching Assistant, Department of Computer Science and Engineering, University of Notre Dame.

- Aug. 2006 – Aug. 2010: Research Assistant, Department of Computer Science and Engineering, University of Notre Dame.

## Supervision of Graduate Students

1. Gang Liu, Ph.D, Fall 2021 – present.

2. Yiming Zhao, Ph.D, Fall 2019 – Spring 2023, dissertation: "Algorithms for Unit-Disk Graphs and Related Problems". (Tenure Track Assistant Professor at Metropolitan State University of Denver, Denver, Colorado)

3. Princy Jain, Master, 2019 – 2021, thesis: "Algorithms for Covering Barrier Points by Mobile Sensors with Line Constraint". (Senior Software Engineer, Broadridge, Newark, New Jersey)

4. Shimin Li, Ph.D, 2014–2018, dissertation: "Geometric Algorithms for Intervals and Related Problems". (Tenure Track Assistant Professor at Winona State University, Winona, Minnesota)

5. Jingru Zhang, Ph.D, 2013–2017, dissertation: "Geometric Facility Locations on Uncertain Data". (Tenure Track Assistant Professor at Cleveland State University, Cleveland, Ohio)

6. Aaron M. Andrews, Master, 2012–2014, thesis: "Minimizing the Aggregate Movements for Interval Coverage". (Software Engineer at HP, Boise, Idaho)

## Supervision of Undergraduate Research

Matthew Lister (Summer 2019 – Fall 2019); Logan Pedersen (Spring 2018 – Fall 2018); Joshua Dawson (Fall 2017 – Spring 2018); Katie Sweet (Spring 2017 – Summer 2017); Christopher Johnson (Fall 2016 – Summer 2017)

## Publications

**(Note: Authors in most of my papers are ordered alphabetically by the last names, following the convention of Theoretical Computer Science.)**

### Peer Reviewed Journal Articles

1. Princy Jain and Haitao Wang. "Algorithms for Covering Barrier Points by Mobile Sensors with Line Constraint", *International Journal of Computational Geometry and Applications (IJCGA)*, accepted, 2024.

2. Haitao Wang. "Unit-disk range searching and applications", *Journal of Computational Geometry (JoCG)*, Vol. 14, pages 343–394, 2023.

3. Haitao Wang. "Constructing many faces in arrangements of lines and segments", *Journal of Computational Geometry (JoCG)*, Vol. 14, pages 287–308, 2023.

4. Haitao Wang. "A New Algorithm for Euclidean Shortest Paths in the Plane", *Journal of the ACM (JACM)*, Vol. 70, Article No. 11, pages 1–62, 2023.

5. Haitao Wang and Yiming Zhao. "An Optimal Algorithm for $L_1$ Shortest Paths in Unit-Disk Graphs", *Computational Geometry: Theory and Applications (CGTA)*, Vol. 110, Article No. 101960, pages 1–9, 2023.

6. Haitao Wang. "An Optimal Deterministic Algorithm for Geodesic Farthest-Point Voronoi Diagrams in Simple Polygons", *Discrete and Computational Geometry (DCG)*, Vol. 70, pages 426–454, 2023

7. Haitao Wang and Yiming Zhao. "Reverse Shortest Path Problem for Unit-Disk Graphs", *Journal of Computational Geometry (JoCG)*, Vol. 14, pages 14–47, 2023.

8. Logan Pedersen and Haitao Wang. "Algorithms for the Line-Constrained Disk Coverage and Related Problems", *Computational Geometry: Theory and Applications (CGTA)*, Vol. 105-106, Article No. 101883, pages 1–18, 2022.

9. Haitao Wang and Jie Xue. "Improved Algorithms for the Bichromatic Two-Center Problem for Pairs of Points", *Computational Geometry: Theory and Applications (CGTA)*, Vol. 100, Article No. 101806, pages 1–12, 2022.

10. Haitao Wang. "On the Planar Two-Center Problem and Circular Hulls", *Discrete and Computational Geometry (DCG)*, 2022.

11. Haitao Wang and Yiming Zhao. "Algorithms for Diameters of Unicycle Graphs and Diameter-Optimally Augmenting Trees", *Theoretical Computer Science (TCS)*, Vol. 890, pages 192–209, 2021.

12. Haitao Wang and Jingru Zhang. "An $O(n \log n)$-Time Algorithm for the $k$-Center Problem in Trees", *SIAM Journal on Computing (SICOMP)*, Vol. 50, pages 602–635, 2021.

13. Christopher Johnson and Haitao Wang. "A Linear-Time Algorithm for Radius-Optimally Augmenting Paths in a Metric Space", *Computational Geometry: Theory and Applications (CGTA)*, Vol. 76, Article No. 101759, pages 1–21, 2021.

14. Haitao Wang and Yiming Zhao. "A Linear-Time Algorithm for Discrete Radius Optimally Augmenting Paths in a Metric Space", *International Journal of Computational Geometry and Applications (IJCGA)*, Vol. 30, pages 167–182, 2020.

15. Haitao Wang. "A Divide-and-Conquer Algorithm for Two-Point $L_1$ Shortest Path Queries in Polygonal Domains", *Journal of Computational Geometry (JoCG)*, Vol. 11, pages 235–282, 2020.

16. Haitao Wang and Jie Xue. "Near-optimal Algorithms for Shortest Paths in Weighted Unit-Disk Graphs", *Discrete and Computational Geometry (DCG)*, accepted, 2020.

17. Shimin Li and Haitao Wang. "Separating Overlapped Intervals on a Line", *Journal of Computational Geometry (JoCG)*, Vol. 10, pages 281–321, 2019.

18. Haitao Wang and Wuzhou Zhang. "On Top-$k$ Weighted SUM Aggregate Nearest and Farthest Neighbors in the $L_1$ Plane", *International Journal of Computational Geometry and Applications (IJCGA)*, Vol. 29, pages 189–218, 2019.

19. Haitao Wang. "Bicriteria Rectilinear Shortest Paths among Rectilinear Obstacles in the Plane", *Discrete and Computational Geometry (DCG)*, Vol. 62, pages 525–582, 2019.

20. Haitao Wang. "Quickest Visibility Queries in Polygonal Domains", *Discrete and Computational Geometry (DCG)*, Vol. 62, pages 374–432, 2019.

21. Sang Won Bae and Haitao Wang. "$L_1$ Shortest Path Queries in Simple Polygons", *Theoretical Computer Science (TCS)*, Vol. 790, pages 105–116, 2019.

22. Haitao Wang and Jingru Zhang. "Covering Uncertain Points in a Tree", *Algorithmica*, Vol. 81, pages 2346–2376, 2019.

23. Shimin Li and Haitao Wang. "Algorithms for Covering Multiple Barriers", *Theoretical Computer Science (TCS)*, Vol. 758, pages 61–72, 2019.

24. Joseph S.B. Mitchell, Valentin Polishchuk, Mikko Sysikaski, and Haitao Wang. "An Optimal Algorithm for Minimum-Link Rectilinear Paths in Triangulated Rectilinear Domains", *Algorithmica*, Vol. 81, pages 289–316, 2019.

25. Danny Z. Chen and Haitao Wang "Computing $L_1$ Shortest Paths Among Polygonal Obstacles in the Plane", *Algorithmica*, Vol. 81, pages 2430–2483, 2019.

26. Haitao Wang. "On the Geodesic Centers of Polygonal Domains", *Journal of Computational Geometry (JoCG)*, Vol. 9, pages 131–190, 2018.

27. Haitao Wang. "An Improved Algorithm for Diameter-Optimally Augmenting Paths in a Metric Space", *Computational Geometry: Theory and Applications (CGTA)*, Vol. 75, pages 11–21, 2018.

28. Haitao Wang and Jingru Zhang. "Computing the Rectilinear Center of Uncertain Points in the Plane", *International Journal of Computational Geometry and Application (IJCGA)*, Vol. 28, pages 271–288, 2018.

29. Shimin Li and Haitao Wang. "Dispersing Points on Intervals", *Discrete Applied Mathematics (DAM)*, Vol. 239, pages 106–118, 2018.

30. Kai Jin, Jian Li, Haitao Wang, Bowei Zhang, and Ningye Zhang. " Near-Linear Time Approximation Schemes for Geometric Maximum Coverage", *Theoretical Computer Science (TCS)*, Vol. 725, pages 64–78, 2018.

31. Aaron M. Andrews and Haitao Wang. "Minimizing the Aggregate Movements for Interval Coverage", *Algorithmica*, Vol. 78, pages 47–85, 2017.

32. Haitao Wang and Jingru Zhang. "Computing the Center of Uncertain Points on Tree Networks", *Algorithmica*, Vol. 78, pages 232–254, 2017.

33. Sang Won Bae, Matias Korman, Joseph Mitchell, Yoshio Okamoto, Valentin Polishchuk, and Haitao Wang. "Computing the $L_1$ Geodesic Diameter and Center of a Polygonal Domain". *Discrete and Computational Geometry (DCG)*, Vol. 57, pages 674–701, 2017.

34. Danny Z. Chen and Haitao Wang. "Computing the Visibility Polygon of an Island in a Polygonal Domain", *Algorithmica*, Vol. 77, pages 40–64, 2017.

35. Haitao Wang and Jingru Zhang. "Line-Constrained $k$-Median, $k$-Means, and $k$-Center Problems in the Plane", *International Journal of Computational Geometry and Application (IJCGA)*, Vol. 26, pages 185–210, 2016.

36. Victor C.S. Lee, Haitao Wang, and Xiao Zhang. "Minimizing the Maximum Moving Cost of Interval Coverage", *International Journal of Computational Geometry and Application (IJCGA)*, accepted, 2016.

37. Haitao Wang and Jingru Zhang. "A Note on Computing the Center of Uncertain Data on the Real Line", *Operations Research Letters*, Vol. 44, pages 370–373, 2016.

38. Danny Z. Chen, Rajasekhar Inkulu, and Haitao Wang. "Two-Point $L_1$ Shortest Path Queries in the Plane", *Journal of Computational Geometry (JoCG)*, Vol. 1, pages 473–519, 2016.

39. Jian Li and Haitao Wang. "Range Queries on Uncertain Data", *Theoretical Computer Science*, Vol. 609, pages 23–48, 2016.

40. Minghui Jiang and Haitao Wang. "Shortest Color-Spanning Intervals", *Theoretical Computer Science*, Vol. 609, pages 561–568, 2016.

41. Boyang Wang, Ming Li, and Haitao Wang. "Geometric Range Searching on Encrypted Spatial Data", *IEEE Transactions on Information Forensics and Security (TIFS)*, Vol. 11, pages 704–719, 2016.

42. Danny Z. Chen, Jian Li, Hongyu Liang, and Haitao Wang. "Matroid and Knapsack Center Problems", *Algorithmica*, Vol. 75, pages 27–52, 2016.

43. Haitao Wang and Jingru Zhang. "One-Dimensional $k$-Center on Uncertain Data", *Theoretical Computer Science*, Vol. 602, pages 114–124, 2015.

44. Minghui Jiang, Pedro J. Tejada, and Haitao Wang. "Quell", *Theoretical Computer Science*, Vol. 593, pages 70–78, 2015.

45. Danny Z. Chen and Haitao Wang. "A New Algorithm for Computing Visibility Graphs of Polygonal Obstacles in the Plane", *Journal of Computational Geometry (JoCG)*, Vol. 6, pages 316-345, 2015.

46. Wei Cao, Jian Li, Shimin Li, and Haitao Wang. "Balanced Splitting on Weighted Intervals", *Operations Research Letters*, Vol. 43(4), pages 396–400, 2015.

47. Danny Z. Chen, Jian Li, and Haitao Wang. "Efficient Algorithms for the One-Dimensional $k$-Center Problem", *Theoretical Computer Science*, Vol. 592, pages 135–142, 2015.

48. Danny Z. Chen, Xiaomin Liu, and Haitao Wang. "Computing Maximum Non-crossing Matching in Convex Bipartite Graphs", *Discrete Applied Mathematics*, Vol. 187, pages 56–60, 2015.

49. Haitao Wang. "Aggregate-Max Top-$k$ Nearest Neighbor Searching in the $L_1$ Plane", *International Journal of Computational Geometry and Application (IJCGA)*, Vol. 25(1), pages 57–76, 2015.

50. Danny Z. Chen and Haitao Wang. "Weak Visibility Queries of Line Segments in Simple Polygons", *Computational Geometry: Theory and Applications (CGTA)*, Vol. 48(6), pages 443–452, 2015.

51. Sang Won Bae, Matias Korman, Yoshio Okamoto, and Haitao Wang. "Computing the $L_1$ Geodesic Diameter and Center of a Simple Polygon in Linear Time", *Computational Geometry: Theory and Applications (CGTA)*, Vol. 48(6), pages 495–505, 2015.

52. Danny Z. Chen and Haitao Wang. "Computing Shortest Paths among Curved Obstacles in the Plane", *ACM Transactions on Algorithms*, Vol. 11(4), Article No. 26, 2015.

53. Danny Z. Chen and Haitao Wang. "Visibility and Ray Shooting Queries in Polygonal Domains", *Computational Geometry: Theory and Applications (CGTA)*, Vol. 48(2), pages 31–41, 2015.

54. Danny Z. Chen, Xuehou Tan, Haitao Wang, and Gangshan Wu. Optimal Point Movement for Covering Circular Regions. *Algorithmica*, Vol. 72(2), pages 379–399, 2015.

55. Haitao Wang. "Minmax Regret 1-Facility Location on Uncertain Path Networks", *European Journal of Operational Research*, Vol. 239(3), pages 636–643, 2014.

56. Danny Z. Chen and Haitao Wang. "New Algorithms for Facility Location Problems on the Real Line", *Algorithmica*, Vol. 69(2), pages 370–383, 2014.

57. Danny Z. Chen and Haitao Wang. "Outlier Respecting Points Approximation", *Algorithmica*, Vol. 69(2), pages 410–430, 2014.

58. Danny Z. Chen, Yan Gu, Jian Li, and Haitao Wang. "Algorithms on Minimizing the Maximum Sensor Movement for Barrier Coverage of a Linear Domain", *Discrete and Computational Geometry (DCG)*, Vol. 50(2), pages 374–408, 2013.

59. Danny Z. Chen and Haitao Wang. "A Note on Searching Line Arrangements and Applications", *Information Processing Letters (IPL)*, Vol. 113, pages 518–521, 2013.

60. Danny Z. Chen, John Hershberger, and Haitao Wang. "Computing Shortest Paths amid Convex Pseudodisks", *SIAM Journal on Computing (SICOMP)*, Vol. 42(3), pages 1158–1184, 2013.

61. Danny Z. Chen and Haitao Wang. "Approximating Points by a Piecewise Linear Function", *Algorithmica*, Vol. 66(3), pages 682–713, 2013.

62. Shawn T. O'Neil, Amitabh Chaudhary, Danny Z. Chen, and Haitao Wang. "The Topology Aware File Distribution Problem", *Journal of Combinatorial Optimization*, Vol. 26(4), pages 621–635, 2013.

63. Danny Z. Chen and Haitao Wang. "Locating an Obnoxious Line among Planar Objects", *International Journal of Computational Geometry and Application (IJCGA)*, Vol. 22(5), pages 391–405, 2012.

64. Danny Z. Chen and Haitao Wang. "Fitting a Step Function to a Point Set with Outliers Based on Simplicial Thickness Data Structures", *International Journal of Computational Geometry and Application (IJCGA)*, Vol. 22(3), pages 215–241, 2012.

65. Danny Z. Chen and Haitao Wang. "An Improved Algorithm for Reconstructing a Simple Polygon from the Visibility Angles", *Computational Geometry: Theory and Applications (CGTA)*, Vol. 45, pages 254–257, 2012.

66. Danny Z. Chen and Haitao Wang. "Improved Algorithms for Path Partition and Related Problems", *Operations Research Letters*, Vol. 39(6), pages 437–440, 2011.

67. Danny Z. Chen and Haitao Wang. "Processing an Offline Insert-Query Sequence with Applications", *International Journal of Foundations of Computer Science (IJFCS)*, Vol. 22(6), pages 1439–1456, 2011.

68. Haitao Wang, Amitabh Chaudhary, and Danny Z. Chen. "Online Rectangle Filling", *Theoretical Computer Science (TCS)*, Vol. 412(39), pages 5247–5275, 2011.

69. Danny Z. Chen, Chao Wang, and Haitao Wang. "Representing a Functional Curve by Curves with Fewer Peaks", *Discrete and Computational Geometry (DCG)*, Vol. 46(2), pages 334–360, 2011.

70. Haitao Wang, Amitabh Chaudhary, and Danny Z. Chen. " New Algorithms for Online Rectangle Filling with $k$-Lookahead", *Journal of Combinatorial Optimization*, Vol. 21(1), pages 67–82, 2011.

71. Qi Ge, Haitao Wang, and Hong Zhu. "An Improved Algorithm for Finding the Closest Pair of Points", *Journal of Computer Science and Technology*, Vol. 21(1), pages 17–31, 2006.

## Peer Reviewed Conference Papers

1. Haitao Wang and Jie Xue. "Algorithms for Halfplane Coverage and Related Problems", *Proceedings of the 40th International Symposium on Computational Geometry (SoCG)*, Athens, Greece, June 2024, pages to appear.

2. Bruce Brewer, Gerth Stølting Brodal, and Haitao Wang. "Dynamic Convex Hulls for Simple Paths", *Proceedings of the 40th International Symposium on Computational Geometry (SoCG)*, Athens, Greece, June 2024, pages to appear.

3. Kyungjin Cho, Eunjin Oh, Haitao Wang, and Jie Xue. "Optimal Algorithm for the Planar Two-Center Problem", *Proceedings of the 40th International Symposium on Computational Geometry (SoCG)*, Athens, Greece, June 2024, pages to appear.

4. Haitao Wang. "Algorithms for Computing Closest Points for Segments", *Proceedings of the 41st International Symposium on Theoretical Aspects of Computer Science (STACS)*, Clermont-Ferrand, France, March 2024, pages 58:1–58:17.

5. Gang Liu and Haitao Wang. "On the Line-Separable Unit-Disk Coverage and Related Problems", *Proceedings of the 34th International Symposium on Algorithms and Computation (ISAAC)*, Kyoto, Japan, December 2023, pages 51:1–51:14.

6. Haitao Wang and Yiming Zhao. "Improved Algorithms for Distance Selection and Related Problems", *Proceedings of the 31st Annual European Symposium on Algorithms (ESA)*, Amsterdam, Netherlands, September 2023, pages 101:1–101:14.

7. Gang Liu and Haitao Wang. "Geometric Hitting Set for Line-Constrained Disks", *Proceedings of the 18th Algorithms and Data Structures Symposium (WADS)*, Montreal, Canada, August 2023, pages 574–587.

8. Haitao Wang. "Dynamic Convex Hulls under Window-Sliding Updates", *Proceedings of the 18th Algorithms and Data Structures Symposium (WADS)*, Montreal, Canada, August 2023, pages 689–703.

9. Haitao Wang and Yiming Zhao. "Computing the Minimum Bottleneck Moving Spanning Tree", *Proceedings of the 47th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, Vienna, Austria, August 2022, pages 82:1–82:15.

10. Haitao Wang. "Unit-Disk Range Searching and Applications", *Proceedings of the 18th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT)*, Torshavn, Faroe Islands, June 2022, pages 32:1–32:17.

11. Haitao Wang and Yiming Zhao. "Reverse Shortest Path Problem in Weighted Unit-Disk Graphs", *Proceedings of the 15th International Conference and Workshops on Algorithms and Computation (WALCOM)*, online, March 2022, pages 135–146. Best Student Paper Award.

12. Haitao Wang. "Constructing Many Faces in Arrangements of Lines and Segments", *Proceedings of the 33rd Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, online, January 2022, pages 3168–3180.

13. Haitao Wang. "A Simple Algorithm for Computing the Zone of a Line in an Arrangement of Lines", *Proceedings of the 5th SIAM Symposium on Simplicity in Algorithms (SOSA)*, online, January 2022, pages 79–86.

14. Princy Jain and Haitao Wang. " Algorithms for Covering Barrier Points by Mobile Sensors with Line Constraint", *Proceedings of the 33rd Canadian Conference on Computational Geometry (CCCG)*, online, August 2021, pages 139–148.

15. Haitao Wang and Yiming Zhao. " An Optimal Algorithm for $L_1$ Shortest Paths in Unit-Disk Graphs", *Proceedings of the 33rd Canadian Conference on Computational Geometry (CCCG)*, online, August 2021, pages 211–218.

16. Logan Pedersen and Haitao Wang. "Algorithms for the Line-Constrained Disk Coverage and Related Problems", *Proceedings of the 17th Algorithms and Data Structures Symposium (WADS)*, online, August 2021, pages 585–598.

17. Haitao Wang and Yiming Zhao. "Reverse Shortest Path Problem for Unit-Disk Graphs", *Proceedings of the 17th Algorithms and Data Structures Symposium (WADS)*, online, August 2021, pages 655–668.

18. Haitao Wang. "An Optimal Deterministic Algorithm for Geodesic Farthest-Point Voronoi Diagrams in Simple Polygons", to appear in the *Proceedings of the 37th International Symposium on Computational Geometry (SoCG)*, online, June 2021, pages 59:1–59:15.

19. Haitao Wang. "A New Algorithm for Euclidean Shortest Paths in the Plane", *Proceedings of the 53rd Annual ACM Symposium on Theory of Computing (STOC)*, online, June 2021, pages 975–988.

20. Haitao Wang and Yiming Zhao. "Algorithms for Diameters of Unicycle Graphs and Diameter-Optimally Augmenting Trees", *Proceedings of the 15th International Conference and Workshops on Algorithms and Computation (WALCOM)*, online, March 2021, pages 27–39.

21. Haitao Wang. "Shortest Paths Among Obstacles in the Plane Revisited", *Proceedings of the 32nd Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, online, January 2021, pages 810–821.

22. Haitao Wang. "Algorithms for Subpath Convex Hull Queries and Ray-Shooting Among Segments", *Proceedings of the 36th International Symposium on Computational Geometry (SoCG)*, online, June 2020, pages 69:1-69:14.

23. Haitao Wang and Yiming Zhao. "A Linear-Time Algorithm for Discrete Radius Optimally Augmenting Paths in a Metric Space", *Proceedings of the 32nd Canadian Conference on Computational Geometry (CCCG)*, online, August 2020, pages 174–180.

24. Haitao Wang. "On the Planar Two-Center Problem and Circular Hulls", *Proceedings of the 36th International Symposium on Computational Geometry (SoCG)*, online, June 2020, pages 68:1-68:14.

25. Christopher Johnson and Haitao Wang. "A Linear-Time Algorithm for Radius-Optimally Augmenting Paths in a Metric Space", *Proceedings of the 16th Algorithms and Data Structures Symposium (WADS)*, Edmonton, Canada, August 2019, pages 466–480.

26. Haitao Wang and Jie Xue. "Improved Algorithms for the Bichromatic Two-Center Problem for Pairs of Points", *Proceedings of the 16th Algorithms and Data Structures Symposium (WADS)*, Edmonton, Canada, August 2019, pages 578–591.

27. Haitao Wang. "A Divide-and-Conquer Algorithm for Two-Point $L_1$ Shortest Path Queries in Polygonal Domains", *Proceedings of the 35th International Symposium on Computational Geometry (SoCG)*, Portland, Oregon, USA, June 2019, pages 59:1–59:14.

28. Haitao Wang and Jie Xue. "Near-optimal Algorithms for Shortest Paths in Weighted Unit-Disk Graphs", *Proceedings of the 35th International Symposium on Computational Geometry (SoCG)*, Portland, Oregon, USA, June 2019, pages 60:1–60:13.

29. Logan Pedersen and Haitao Wang. "On the Coverage of Points in the Plane by Disks Centered at a Line", *Proceedings of the 30th Canadian Conference on Computational Geometry (CCCG)*, Manitoba, Canada, August 2018, pages 158–164.

30. Haitao Wang and Jingru Zhang. "An $O(n \log n)$-Time Algorithm for the $k$-Center Problem in Trees", *Proceedings of the 34th International Symposium on Computational Geometry (SoCG)*, Budapest, Hungary, June 2018, pages 72:1–72:15.

31. Shimin Li and Haitao Wang. "Algorithms for Covering Multiple Barriers", *Proceedings of the 15th Algorithms and Data Structures Symposium (WADS)*, St. John's, Canada, August 2017, pages 533–544.

32. Haitao Wang. "An Improved Algorithm for Diameter-Optimally Augmenting Paths in a Metric Space", *Proceedings of the 15th Algorithms and Data Structures Symposium (WADS)*, St. John's, Canada, August 2017, pages 545–556.

33. Haitao Wang and Jingru Zhang. "Covering Uncertain Points in a Tree", *Proceedings of the 15th Algorithms and Data Structures Symposium (WADS)*, St. John's, Canada, August 2017, pages 557–568.

34. Haitao Wang. "Bicriteria Rectilinear Shortest Paths among Rectilinear Obstacles in the Plane", *Proceedings of the 33rd International Symposium on Computational Geometry (SoCG)*, Brisbane, Australia, July 2017, pages 60:1–60:16.

35. Haitao Wang. "Quickest Visibility Queries in Polygonal Domains", *Proceedings of the 33rd International Symposium on Computational Geometry (SoCG)*, Brisbane, Australia, July 2017, pages 61:1–61:16.

36. Wei Cao, Jian Li, Haitao Wang, Kangning Wang, Ruosong Wang, Raymond Chi-Wing Wong, and Wei Zhan. "$k$-Regret Minimizing Set: Efficient Algorithms and Hardness", to appear in *Proceedings of the 20th International Conference on Database Theory (ICDT)*, Venice, Italy, March 2017, pages 11:1–11:19.

37. Shimin Li and Haitao Wang. "Dispersing Points on Intervals", to appear in *Proceedings of the 27th International Symposium on Algorithms and Computation (ISAAC)*, Sydney, Australia, December 2016.

38. Lingxiao Huang, Jian Li, Jeff M. Phillips, and Haitao Wang. "$\epsilon$-Kernel Coresets for Stochastic Points", *Proceedings of the 24th Annual European Symposium on Algorithms (ESA)*, Aarhus, Denmark, August 2016, pages 50:1–50:18.

39. Haitao Wang "On the Geodesic Centers of Polygonal Domains", *Proceedings of the 24th Annual European Symposium on Algorithms (ESA)*, Aarhus, Denmark, August 2016, pages 77:1–77:17.

40. Sang Won Bae, Matias Korman, Joseph Mitchell, Yoshio Okamoto, Valentin Polishchuk, and Haitao Wang. "Computing the $L_1$ Geodesic Diameter and Center of a Polygonal Domain". *Proceedings of the 33rd International Symposium on Theoretical Aspects of Computer Science (STACS)*, Orleans, France, February 2016, pages 14:1–14:14.

41. Haitao Wang and Xiao Zhang. "Minimizing the Maximum Moving Cost of Interval Coverage", *Proceedings of the 25th International Symposium on Algorithms and Computation (ISAAC)*, Nagoya, Japan, December 2015, pages 188–198.

42. Boyang Wang, Ming Li, Haitao Wang, and Hui Li. "Circular Range Search on Encrypted Spatial Data", *Proceedings of the 3rd IEEE Conference on Communications and Network Security (CNS)*, Florence, Italy, September 2015, pages 182–190.

43. Shimin Li and Haitao Wang. "Algorithms for Minimizing the Movements of Spreading Points in Linear Domains", *Proceedings of the 27th Canadian Conference on Computational Geometry (CCCG)*, Kingston, Ontario, Canada, August 2015, pages 187–192.

44. Haitao Wang and Jingru Zhang. "Computing the Center of Uncertain Points on Tree Networks", *Proceedings of the 14th Algorithms and Data Structures Symposium (WADS)*, Victoria, Canada, August 2015, pages 606–618.

45. Jiazhuo Wang, John D. MacKenzie, Rageshree Ramachandran, Yizhe Zhang, Haitao Wang, and Danny Z. Chen. "Segmenting Subcellular Structures in Histology Tissue Images", *Proceedings of the 12th IEEE International Symposium on Biomedical Imaging (ISBI)*, Brooklyn, New York, April 2015, pages 556–559.

46. Aaron M. Andrews and Haitao Wang. "Minimizing the Aggregate Movements for Interval Coverage", *Proceedings of the 14th Algorithms and Data Structures Symposium (WADS)*, Victoria, Canada, August 2015, pages 28–39.

47. Jian Li, Haitao Wang, Bowei Zhang, and Ningye Zhang. " Linear Time Approximation Schemes for Geometric Maximum Coverage", *Proceedings of the 21st Annual International Computing and Combinatorics Conference (COCOON)*, Beijing, China, August 2015, pages 559–571.

48. Joseph S.B. Mitchell, Valentin Polishchuk, Mikko Sysikaski, and Haitao Wang. "An Optimal Algorithm for Minimum-Link Rectilinear Paths in Triangulated Rectilinear Domains", *Proceedings of the 42nd International Colloquium on Automata, Languages and Programming (ICALP)*, Kyoto, Japan, July 2015, pages 947–959.

49. Haitao Wang and Jingru Zhang. "Line-Constrained $k$-Median, $k$-Means, and $k$-Center Problems in the Plane", *Proceedings of the 25th International Symposium on Algorithms and Computation (ISAAC)*, Jeonju, Korea, December 2014, pages 3–14.

50. Jian Li and Haitao Wang. "Range Queries on Uncertain Data", *Proceedings of the 25th International Symposium on Algorithms and Computation (ISAAC)*, Jeonju, Korea, December 2014, pages 326–337.

51. Boyang Wang, Yantian Hou, Ming Li, Haitao Wang, Hui Li, and Fenghua Li. "Tree-based Multi-Dimensional Range Search on Encrypted Data with Enhanced Privacy", *Proceedings of the 10th International Conference on Security and Privacy in Communication Networks (SecureComm)*, Beijing, China, September 2014, pages 374–394.

52. Haitao Wang and Wuzhou Zhang. "The $\tau$-Skyline for Uncertain Data", *Proceedings of the 26th Canadian Conference on Computational Geometry (CCCG)*, Halifax, Nova Scotia, Canada, August 2014.

53. Haitao Wang and Jingru Zhang. "One-Dimensional $k$-Center on Uncertain Data", *Proceedings of the 20th Annual International Computing and Combinatorics Conference (COCOON)*, Atlanta, Georgia, USA, August 2014, pages 104–115.

54. Minghui Jiang and Haitao Wang. "Shortest Color-Spanning Intervals", *Proceedings of the 20th Annual International Computing and Combinatorics Conference (COCOON)*, Atlanta, Georgia, USA, August 2014, pages 288–299.

55. Minghui Jiang, Pedro J. Tejada, and Haitao Wang. "Quell", *Proceedings of the 7th International Conference on Fun with Algorithms (FUN)*, Sicily, Italy, July 2014, pages 240–251.

56. Danny Z. Chen, Rajasekhar Inkulu, and Haitao Wang. "Two-Point $L_1$ Shortest Path Queries in the Plane", *Proceedings of the 30th Anuual Symposium on Computational Geometry (SoCG)*, Kyoto, Japan, June 2014, pages 406–415.

57. Boyang Wang, Yantian Hou, Ming Li, Haitao Wang, and Hui Li. "Maple: Scalable Multi-Dimensional Range Search over Encrypted Cloud Data with Tree-based Index", *Proceedings of the 9th ACM Symposium on Information, Computer and Communications Security (ASIACCS)*, Kyoto, Japan, June 2014, pages 111–122.

58. Sang Won Bae, Matias Korman, Yoshio Okamoto, and Haitao Wang. "Computing the $L_1$ Geodesic Diameter and Center of a Simple Polygon in Linear Time", *Proceedings of the 11th Latin American Theoretical Informatics Symposium (LATIN)*, Montevideo, Uruguay, April 2014, pages 120–131.

59. Haitao Wang. "Minmax Regret 1-Facility Location on Uncertain Path Networks", *Proceedings of the 24th International Symposium on Algorithms and Computation (ISAAC)*, Hong Kong, China, December 2013, pages 733–743.

60. Haitao Wang. "Aggregate-Max Nearest Neighbor Searching in the Plane", *Proceedings of the 25th Canadian Conference on Computational Geometry (CCCG)*, Waterloo, Ontario, Canada, August 2013, pages 91–96.

61. Danny Z. Chen and Haitao Wang. "Visibility and Ray Shooting Queries in Polygonal Domains", *Proceedings of the 13rd International Symposium on Algorithms and Data Structures (WADS)*, London, Ontario, Canada, August 2013, pages 244–255.

62. Danny Z. Chen and Haitao Wang. "Computing Shortest Paths among Curved Obstacles in the Plane", *Proceedings of the 29th ACM Symposium on Computational Geometry (SoCG)*, Rio de Janeiro, Brazil, June 2013, pages 369–378.

63. Danny Z. Chen, Jian Li, Hongyu Liang, and Haitao Wang. "Matroid and Knapsack Center Problems", *Proceedings of the 16th Conference on Integer Programming and Combinatorial Optimization (IPCO)*, Valparaiso, Chile, March 2013, pages 110–122.

64. Danny Z. Chen and Haitao Wang. "$L_1$ Shortest Path Queries among Polygonal Obstacles in the Plane", *Proceedings of the 30th Symposium on Theoretical Aspects of Computer Science (STACS)*, Kiel, Germany, February 2013, pages 293–304.

65. Danny Z. Chen and Haitao Wang. "Weak Visibility Queries of Line Segments in Simple Polygons", *Proceedings of the 23rd International Symposium on Algorithms and Computation (ISAAC)*, Taipei, December 2012, pages 609–618.

66. Danny Z. Chen, Xuehou Tan, Haitao Wang, and Gangshan Wu. "Optimal Point Movement for Covering Circular Regions", *Proceedings of the 23rd International Symposium on Algorithms and Computation (ISAAC)*, Taipei, December 2012, pages 332–341.

67. Xiaomin Liu, Cameron W. Harvey, Haitao Wang, Mark S. Alber, and Danny Z. Chen. "Detecting and Tracking Motion of Myxococcus xanthus Bacteria in Swarms", *Proceedings of the 15th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)*, Nice, France, October 2012, pages 373–380.

68. Danny Z. Chen and Haitao Wang. "Computing the Visibility Polygon of an Island in a Polygonal Domain", *Proceedings of the 39th International Colloquium on Automata, Languages and Programming (ICALP)*, Warwick, UK, July 2012, pages 218–229.

69. Danny Z. Chen, Yan Gu, Jian Li, and Haitao Wang. "Algorithms on Minimizing the Maximum Sensor Movement for Barrier Coverage of a Linear Domain", *Proceedings of the 13th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT)*, Helsinki, Finland, July 2012, pages 177–188.

70. Danny Z. Chen, Xiaomin Liu, and Haitao Wang. "Computing Maximum Non-crossing Matching in Convex Bipartite Graphs", *Proceedings of the 6th International Frontiers of Algorithmics Workshop (FAW)*, Beijing, China, May 2012, pages 105–116.

71. Danny Z. Chen and Haitao Wang. "Efficient Algorithms for the Weighted $k$-Center Problem on a Real Line", *Proceedings of the 22nd International Symposium on Algorithm and Computation (ISAAC)*, Yokohama, Japan, December 2011, pages 584–593.

72. Danny Z. Chen and Haitao Wang. "An Improved Algorithm for Reconstructing a Simple Polygon from the Visibility Angles", *Proceedings of the 22nd International Symposium on Algorithm and Computation (ISAAC)*, Yokohama, Japan, December 2011, pages 604–613.

73. Danny Z. Chen and Haitao Wang. "Outlier Respecting Points Approximation", *Proceedings of the 22nd International Symposium on Algorithm and Computation (ISAAC)*, Yokohama, Japan, December 2011, pages 594–603.

74. Danny Z. Chen and Haitao Wang. "A Nearly Optimal Algorithm for Finding $L_1$ Shortest Paths among Polygonal Obstacles in the Plane", *Proceedings of the 19th European Symposium on Algorithms (ESA)*, Saarbrücken, Germany, September 2011, pages 481–492.

75. Shawn T. O'Neil, Amitabh Chaudhary, Danny Z. Chen, and Haitao Wang. "The Topology Aware File Distribution Problem", *Proceedings of the 17th Annual International Computing and Combinatorics Conference (COCOON)*, Dallas, Texas, August 2011, pages 366–378.

76. Danny Z. Chen and Haitao Wang. "New Algorithms for 1-D Facility Location and Path Equipartition Problems", *Proceedings of the 12nd International Symposium on Algorithms and Data Structures (WADS)*, Brooklyn, New York, August 2011, pages 207–218.

77. Danny Z. Chen and Haitao Wang. "Computing Shortest Paths amid Pseudodisks", *Proceedings of the 22nd Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, San Francisco, California, January 2011, pages 309–326.

78. Danny Z. Chen and Haitao Wang. "Improved Points Approximation Algorithms Based on Simplicial Thickness Data Structures", *Proceedings of the 21st International Workshop on Combinatorial Algorithms (IWOCA)*, London, United Kingdom, July 2010, pages 363–376.

79. Danny Z. Chen, Chao Wang, and Haitao Wang. "Representing a functional curve by curves with fewer peaks", *Proceedings of the 12nd Scandinavian Symposium and Workshops on Algorithm Theory (SWAT)*, Bergen, Norway, June 2010, pages 200–211.

80. Danny Z. Chen and Haitao Wang. "Approximating Points by a Piecewise Linear Function: I.", *Proceedings of the 20th International Symposium on Algorithm and Computation (ISAAC)*, Honolulu, Hawaii, December 2009, pages 224–233.

81. Danny Z. Chen and Haitao Wang. "Approximating Points by a Piecewise Linear Function: II. Dealing with Outliers", *Proceedings of the 20th International Symposium on Algorithm and Computation (ISAAC)*, Honolulu, Hawaii, December 2009, pages 234–243.

82. Danny Z. Chen and Haitao Wang. "Locating an Obnoxious Line among Planar Objects", *Proceedings of the 20th International Symposium on Algorithm and Computation (ISAAC)*, Honolulu, Hawaii, December 2009, pages 740–749.

83. Danny Z. Chen and Haitao Wang. "Processing an Offline Insert-Query Sequence with Applications", *Proceedings of the 3rd International Frontiers of Algorithmics Workshop (FAW)*, 2009, pages 141–152.

84. Haitao Wang, Amitabh Chaudhary, and Danny Z. Chen. "New Algorithms for Online Rectangle Filling with $k$-Lookahead", *Proceedings of the 14th Annual International Conference on Computing and Combinatorics (COCOON)*, Dalian, China, June 2008, pages 385–394.

85. Haitao Wang, Amitabh Chaudhary, and Danny Z. Chen. "Online Rectangle Filling", *Proceedings of the 5th Workshop on Approximation and Online Algorithm (WAOA)*, Eilat, Israel, October 2007, pages 274–287.

86. Danny Z. Chen, Rudolf Fleischer, Jian Li, Haitao Wang, and Hong Zhu. "Traversing the Machining Graph", *Proceedings of the 14th Annual European Symposium on Algorithms (ESA)*, Zurich, Switzerland, September 2006, pages 220–231.

87. Rudolf. Fleischer, Qi Ge, Jian Li, Shijun Tian, and Haitao Wang. "Approximating Spanning Trees with Inner Nodes Cost", *Proceedings of the 6th International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT)*, Dalian, China, December 2005, pages 660–664.

# Research Grants

- The National Science Foundation (NSF Grant CCF-2005323), "AF: Small: Algorithms for Geometric Shortest Paths and Related Problems", October 1, 2020 – September 30, 2023, Sole PI, $400,000.

- The National Science Foundation (NSF Grant CCF-1317143), "AF: Small: Algorithms for Computational Geometry Problems in Polygonal Domains", September 15, 2013 – August 31, 2017, Sole PI, $337,964.

- Seed Grant (GEM), Utah State University, "New Algorithms for Link Distance Problems in Computational Geometry", January 1, 2013 – December 31, 2013, Sole PI, $2,751.

# Teaching

- **Teaching at University of Utah**

  - CS 3100 Models of Computation, Spring 2023, Fall 2023.
  - CS 4150 Algorithms, Spring 2024.
  - CS 6150 Graduate Algorithms (CS 5150 Advanced Algorithms), Fall 2022.

- **Teaching at Utah State University**

  - CS 2420 Algorithms and Data Structures, Spring 2014, Spring 2015, Spring 2016, Fall 2018, Fall 2021.
  - CS 5050 Advanced Algorithms, Fall 2012, Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017, Spring 2018, Spring 2019, Fall 2019, Spring 2021, Spring 2022.
  - CS 6050 Computational Geometry, Spring 2013, Spring 2015, Spring 2017, Spring 2018, Fall 2021.
  - CS 7150 Computational Complexity, Spring 2016, Spring 2017, Fall 2020.

- **Other Teaching Experience**

  - CSE 40113 Algorithm design and analysis, Teaching Assistant, Department of Computer Science and Engineering, University of Notre Dame, Fall 2008.
  - CSE 40113 Algorithm design and analysis, Teaching Assistant, Department of Computer Science and Engineering, University of Notre Dame, Fall 2007.

# Professional Activities

- **Journal Editorial Service**

  - Editorial Board of *Computing in Geometry and Topology (CGT)*, 2021–present.
  - Editorial Board of *International Journal of Computational Geometry and Applications (IJCGA)*, 2020–present.

- **Program Committee Chair / Co-Chair**

  - *The 16th International Frontiers of Algorithmics Workshop (FAW 2022)*, China, August 2022.
  - *CG Week 2021: Computational Geometry: Young Researchers Forum*, Buffalo, NY, USA, June 2021.

- **Program Committee Member**

  - The *29th International Computing and Combinatorics Conference (COCOON 2023)*, Hawaii, USA, December 2023.
  - The *18th Algorithms and Data Structures Symposium (WADS 2023)*, Montreal, Canada, August 2023.
  - The *28th International Computing and Combinatorics Conference (COCOON 2022)*, Shenzhen, China, October 2022.
  - The *30th Annual European Symposium on Algorithms (ESA 2022)*, Track S, Potsdam, Germany, September 2022.
  - The *17th Annual Conference on Theory and Applications of Models of Computation (TAMC 2022)*, Tianjin, China, September 2022.
  - The *34th Canadian Conference on Computational Geometry (CCCG 2022)*, Toronto, Canada, August 2022.
  - The *38th International Symposium on Computational Geometry (SoCG 2022)*, Berlin, Germany, June 2022.
  - The *32nd International Symposium on Algorithms and Computation (ISAAC 2021)*, Fukuoka, Japan, December 2021.
  - The *15th Frontiers of Algorithmics Workshop (FAW 2021)*, Beijing, China, August 2021.

- The *16th Annual Conference on Theory and Applications of Models of Computation (TAMC 2020)*, Changsha, China, May 2020.

- The *13th International Frontiers of Algorithmics Workshop (FAW 2019)*, Sanya, China, May 2019

- The *29th International Symposium on Algorithms and Computation (ISAAC 2018)*, December 2018

- The *16th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT 2018)*, Malmö, Sweden, June 2018

- The *28th International Symposium on Algorithms and Computation (ISAAC 2017)*, Phuket, Thailand, December 2017

- The *25th Fall Workshop on Computational Geometry (FWCG)*, the State University of New York at Buffalo, Buffalo, New York, October 23-24, 2015.

- The *31st Annual Symposium on Computational Geometry (SoCG)*, TU Eindhoven, the Netherlands, June 22-25, 2015.

- The *26th Canadian Conference on Computational Geometry (CCCG)*, Halifax, Nova Scotia, Canada, August 11-13, 2014.

- The Joint Conference of *the 6th International Frontiers of Algorithms Workshop (FAW)* and *the 8th International Conference on Algorithmic Aspects of Information and Management (AAIM)*, Peking University, Beijing, China, May 14-16, 2012.

- The *4th International Frontiers of Algorithms Workshop (FAW)*, Wuhan University, Wuhan, China, August 11-13, 2010.

- **Refereeing for Journals**

  ACM Journal of Experimental Algorithmics (JEA), ACM Transactions on Algorithms (TALG), ACM/IEEE Transactions on Networking (ToN), Algorithmica, Computational Geometry: Theory and Applications (CGTA), Journal of Computational Geometry (JoCG), International Journal of Computational Geometry and Applications (IJCGA), Theoretical Computer Science (TCS), European Journal of Operational Research (EJOR), Discrete and Computational Geometry (DCG), Discrete Applied Mathematics (DAM), Information Processing Letters (IPL), ACM Transactions on Sensor Networks (TOSN), IEEE Transactions on Knowledge and Data Engineering (TKDE), IEEE Transactions on Parallel and Distributed Systems (TPDS), Journal of Discrete Algorithms (JDA), Journal of Computer Science and Technology (JCST), Journal of Combinatorial Optimization (JOCO), Chicago Journal of Theoretical Computer Science (CJTCS), Robotica, International Journal of Computer Mathematics, Advances and Applications in Discrete Mathematics (AADM), Geographical Analysis, SIAM Journal on Computing (SICOMP)

- **Refereeing for Conferences**

  the Annual Symposium on Computational Geometry (SoCG), the Symposium on Theoretical Aspects of Computer Science (STACS), the IEEE Annual Symposium on Foundations

of Computer Science (FOCS), the ACM-SIAM Symposium on Discrete Algorithms (SODA), the International Colloquium on Automata, Languages and Programming (ICALP), the Annual Conference on Theory and Applications of Models of Computation (TAMC), the International Frontiers of Algorithms Workshop (FAW), the IEEE International Parallel & Distributed Processing Symposium (IPDPS), the International Symposium on Algorithms and Computation (ISAAC), the Annual European Symposium on Algorithms (ESA), the Annual International Computing and Combinatorics Conference (COCOON), the Workshop on Algorithms and Data Structures (WADS), the Canadian Conference on Computational Geometry (CCCG), the International Conference on Database Theory (ICDT), the International Workshop on Combinatorial Algorithms (IWOCA), the International Conference and Workshops on Algorithms and Computation (WALCOM), the International Symposium on Algorithms and Experiments for Wireless Sensor Networks (ALGOSENSORS), Japan Conference on Discrete and Computational Geometry and Graphs (JCDCG).

## Conference/Invited/Seminar Presentations

1. "Geometric Hitting Set for Line-Constrained Disks", the 18th Algorithms and Data Structures Symposium (WADS), Montreal, Canada, August 2023.

2. "Dynamic Convex Hulls under Window-Sliding Updates", the 18th Algorithms and Data Structures Symposium (WADS), Montreal, Canada, August 2023.

3. "Unit-Disk Range Searching and Applications", the 18th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT), Torshavn, Faroe Islands, June 2022.

4. "Constructing Many Faces in Arrangements of Lines and Segments", the 33rd Annual ACM-SIAM Symposium on Discrete Algorithms (SODA), virtual, January 2022.

5. "A Simple Algorithm for Computing the Zone of a Line in an Arrangement of Lines", the 5th SIAM Symposium on Simplicity in Algorithms (SOSA), virtual, January 2022.

6. "Algorithms for the Line-Constrained Disk Coverage and Related Problems", the 17th Algorithms and Data Structures Symposium (WADS), virtual, August 2021.

7. "An Optimal Deterministic Algorithm for Geodesic Farthest-Point Voronoi Diagrams in Simple Polygons", the 37th International Symposium on Computational Geometry (SoCG), virtual, June 2021.

8. "A New Algorithm for Euclidean Shortest Paths in the Plane", the 53rd Annual ACM Symposium on Theory of Computing (STOC), virtual, June 2021.

9. "Algorithms for Shortest Path Problems in Computational Geometry", virtual, Chinese Academy of Sciences, Beijing, China, March 2021.

10. "Shortest Paths Among Obstacles in the Plane Revisited", the 32nd Annual ACM-SIAM Symposium on Discrete Algorithms (SODA), virtual, January 2021.

11. "Algorithms for Subpath Convex Hull Queries and Ray-Shooting Among Segments", the 36th International Symposium on Computational Geometry (SoCG), virtual, June 2020.

12. "On the Planar Two-Center Problem and Circular Hulls", the 36th International Symposium on Computational Geometry (SoCG), Zürich, Switzerland, June 2020.

13. "A Linear-Time Algorithm for Radius-Optimally Augmenting Paths in a Metric Space", the 16th Algorithms and Data Structures Symposium (WADS), Edmonton, Canada, August 2019.

14. "Improved Algorithms for the Bichromatic Two-Center Problem for Pairs of Points", the 16th Algorithms and Data Structures Symposium (WADS), Edmonton, Canada, August 2019.

15. "An $O(n \log n)$-Time Algorithm for the $k$-Center Problem in Trees", the 34th International Symposium on Computational Geometry (SoCG), Budapest, Hungary, June 2018.

16. "Algorithms for Covering Multiple Barriers", the 15th Algorithms and Data Structures Symposium (WADS), St. John's, Canada, August 2017.

17. "An Improved Algorithm for Diameter-Optimally Augmenting Paths in a Metric Space", the 15th Algorithms and Data Structures Symposium (WADS), St. John's, Canada, August 2017.

18. "Covering Uncertain Points in a Tree", the 15th Algorithms and Data Structures Symposium (WADS), St. John's, Canada, August 2017.

19. "Bicriteria Rectilinear Shortest Paths among Rectilinear Obstacles in the Plane", the 33rd International Symposium on Computational Geometry (SoCG), Brisbane, Australia, July 2017.

20. "Quickest Visibility Queries in Polygonal Domains", the 33rd International Symposium on Computational Geometry (SoCG), Brisbane, Australia, July 2017.

21. "On the Geodesic Centers of Polygonal Domains", the 26th Fall Workshop on Computational Geometry (FWCG), New York, NY, October 2016.

22. "On the Geodesic Centers of Polygonal Domains", the 24th Annual European Symposium on Algorithms (ESA), Aarhus, Denmark, August 2016.

23. "Minimizing the Aggregate Movements for Interval Coverage", the 14th Algorithms and Data Structures Symposium (WADS), Victoria, Canada, August 2015.

24. "An Optimal Algorithm for Minimum-Link Rectilinear Paths in Triangulated Rectilinear Domains", the 42nd International Colloquium on Automata, Languages and Programming (ICALP), Kyoto, Japan, July 2015.

25. "Range Queries on Uncertain Data", the 25th International Symposium on Algorithms and Computation (ISAAC), Jeonju, Korea, December 2014.

26. "Two-Point $L_1$ Shortest Path Queries in the Plane", the 30th Anuual Symposium on Computational Geometry (SoCG), Kyoto, Japan, June 2014.

27. "Minmax Regret 1-Facility Location on Uncertain Path Networks", the 24th International Symposium on Algorithms and Computation (ISAAC), Hong Kong, China, December 2013.

28. "Aggregate-Max Nearest Neighbor Searching in the Plane", the 25th Canadian Conference on Computational Geometry (CCCG), Waterloo, Ontario, Canada, August 2013.

29. "Visibility and Ray Shooting Queries in Polygonal Domains", the 13rd International Symposium on Algorithms and Data Structures (WADS), London, Ontario, Canada, August 2013.

30. "Barrier Coverage on Mobile Sensors in Wireless Sensor Networks", Tsinghua University, Beijing, China, July 2013.

31. "Computing Shortest Paths among Curved Obstacles in the Plane", the 29th ACM Symposium on Computational Geometry (SoCG), Rio de Janeiro, Brazil, June 2013.

32. "Visibility Problems in Computational Geometry", Tsinghua University, Beijing, China, January 2013.

33. "Shortest Path Problems in Computational Geometry", Chinese Academy of Sciences, Beijing, China, January 2013.

34. "Shortest Paths and Visibility Problems in Computational Geometry", East China University of Science and Technology, Shanghai, China, December 2012.

35. "Weak Visibility Queries of Line Segments in Simple Polygons", the 23rd International Symposium on Algorithms and Computation (ISAAC), Taipei, December 2012.

36. "Optimal Point Movement for Covering Circular Regions", the 23rd International Symposium on Algorithms and Computation (ISAAC), Taipei, December 2012.

37. "Computing the Visibility Polygon of an Island in a Polygonal Domain", the 39th International Colloquium on Automata, Languages and Programming (ICALP), Warwick, UK, July 2012.

38. "Algorithms on Minimizing the Maximum Sensor Movement for Barrier Coverage of a Linear Domain", the 13th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT), Helsinki, Finland, July 2012.

39. "$L_1$ Shortest Path Queries among Polygonal Obstacles in the Plane", Computational Geometry: Young Researchers Forum, Chapel Hill, NC, June 2012.

40. "Shortest Paths among Obstacles in the Plane", Zhejiang University, Hangzhou, China, May 2012.

41. "Computing Maximum Non-crossing Matching in Convex Bipartite Graphs", the 6th International Frontiers of Algorithmics Workshop (FAW), Beijing, China, May 2012.

42. "New Algorithms for Computing the Visibility Polygons", Shanghai Jiao Tong University, Shanghai, China, May 2012.

43. "Efficient Algorithms for the Weighted $k$-Center Problem on a Real Line", the 22nd International Symposium on Algorithm and Computation (ISAAC), Yokohama, Japan, December 2011.

44. "An Improved Algorithm for Reconstructing a Simple Polygon from the Visibility Angles", the 22nd International Symposium on Algorithm and Computation (ISAAC), Yokohama, Japan, December 2011.

45. "Outlier Respecting Points Approximation", the 22nd International Symposium on Algorithm and Computation (ISAAC), Yokohama, Japan, December 2011.

46. "A Nearly Optimal Algorithm for Finding $L_1$ Shortest Paths among Polygonal Obstacles in the Plane", the 19th European Symposium on Algorithms (ESA), Saarbrücken, Germany, September 2011.

47. "Shortest Paths among Obstacles in the Plane", Tsinghua University, Beijing, China, September 2011.

48. "Shortest Paths among Obstacles in the Plane", East China Normal University, Shanghai, China, September 2011.

49. "New Algorithms for 1-D Facility Location and Path Equipartition Problems", the 12nd International Symposium on Algorithms and Data Structures (WADS), Brooklyn, New York, August 2011.

50. "Computing Shortest Paths amid Pseudodisks", the 22nd Annual ACM-SIAM Symposium on Discrete Algorithms (SODA), San Francisco, California, January 2011.

51. "An Improved Algorithm for Reconstructing a Simple Polygon from the Visibility Angles", the 20th Fall Workshop on Computational Geometry (FWCG), Stony Brook, New York, November 2010.

52. "Online Algorithms for Rectangle Filling", Zhejiang University, Shanghai, China, July 2010.

53. "Representing a functional curve by curves with fewer peaks", the 12th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT), Bergen, Norway, June 2010.

54. "Representing a functional curve by curves with fewer peaks", East China Normal University, Shanghai, China, July 2010.

55. "Locating an Obnoxious Line among Planar Objects", the 20th International Symposium on Algorithms and Computation (ISAAC), Honolulu, Hawaii, December 2009.

56. "Approximating Points by a Piecewise Linear Function: II. Dealing with Outliers", the 20th International Symposium on Algorithms and Computation (ISAAC), Honolulu, Hawaii, December 2009.

57. "Approximating Points by a Piecewise Linear Function: I.", the 20th International Symposium on Algorithms and Computation (ISAAC), Honolulu, Hawaii, December 2009.

58. "Dynamic Data Structures for Simplicial Thickness Queries", the 19th Fall Workshop on Computational Geometry (FWCG), Medford, Massachusetts, November 2009.

59. "Locating an Obnoxious Line among Planar Objects", Fudan University, Shanghai, China, June 2009.

60. "Approximating Points by Piecewise Linear Functions", the 18th Fall Workshop on Computational Geometry (FWCG), Troy, New York, November 2008.

61. "Online Rectangle Filling", the 55th Midwest Theory Day, Chicago, Illinois, November 2007.