

David M. Mount
Curriculum Vitae
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Affiliation and Rank

Department of Computer Science (75%)
Institute for Advanced Computer Studies (UMIACS) (25%)

Rank: Professor (since August, 1999)

Research Interests

The design, analysis, and implementation of data structures and algorithms for geometric problems, particularly problems with applications in areas such as image processing, pattern recognition, information retrieval, and computer graphics.

Education

B.S.	Purdue University	1977	Computer Science (with highest distinction)
Ph.D.	Purdue University	1983	Computer Science (Advisor: Christoph Hoffmann)

Work Experience

1999– Professor, Computer Science Department, University of Maryland.
1990–99 Associate Professor, Computer Science Department, University of Maryland.
1984–90 Assistant Professor, Computer Science Department, University of Maryland.
1983–84 Visiting Assistant Professor, Computer Science Department, Purdue University.

Visiting Appointments

Feb–Jun 2009 Visiting Professor, Department of Computer Science and Engineering, Hong Kong University of Science and Technology. (While on sabbatical leave.)

Jul–Dec 2001 Visiting Professor, Department of Computer Science, Hong Kong University of Science and Technology. (While on sabbatical leave.)

Jun–Dec 1994 Visiting scientist, Max Planck Institute für Informatik, Saarbrücken, Germany. (While on sabbatical leave.)

Books

- [1] M. T. Goodrich, R. Tamassia, and D. M. Mount. *Data Structures and Algorithms in C++*. John Wiley & Sons, New York, 2nd edition, 2011.
- [2] M. T. Goodrich, R. Tamassia, and D. M. Mount. *Data Structures and Algorithms in C++*. John Wiley & Sons, New York, 2004.

Papers in Refereed Journals

- [3] S. Arya, D. M. Mount, and J. Xia. Tight lower bounds for halfspace range searching. *Discrete Comput. Geom.* To appear.
- [4] S. A. Friedler and D. M. Mount. Approximation algorithm for the kinetic robust k -center problem. *Comput. Geom. Theory Appl.*, 43:572–586, 2010. (doi: 10.1016/j.comgeo.2010.01.001).
- [5] G. D. da Fonseca and D. M. Mount. Approximate range searching: The absolute model. *Comput. Geom. Theory Appl.*, 43:434–444, 2010. (doi: 10.1016/j.comgeo.2008.09.009).
- [6] S. Arya, T. Malamatos, and D. M. Mount. Space-time tradeoffs for approximate nearest neighbor searching. *J. Assoc. Comput. Mach.*, 57:1–54, 2009. (doi: 10.1145/1613676.1613677).
- [7] S. Arya, T. Malamatos, and D. M. Mount. The effect of corners on the complexity of approximate range searching. *Discrete Comput. Geom.*, 41:398–443, 2009. (doi: 10.1007/s00454-009-9140-z).
- [8] F. B. Atalay and D. M. Mount. Pointerless implementation of hierarchical simplicial meshes and efficient neighbor finding in arbitrary dimensions. *Internat. J. Comput. Geom. Appl.*, 17:595–631, 2007. (doi: 10.1142/S0218195907002495).
- [9] M. Cho and D. M. Mount. Improved approximation bounds for planar point pattern matching. *Algorithmica*, 50:175–207, 2007. (doi: 10.1007/s00453-007-9059-9).
- [10] S. Arya, T. Malamatos, and D. M. Mount. A simple entropy-based algorithm for planar point location. *ACM Trans. Algorithms*, 3, 2007. (article: 17, doi: 10.1145/1240233.1240240).
- [11] S. Arya, T. Malamatos, D. M. Mount, and K.-C. Wong. Optimal expected-case planar point location. *SIAM J. Comput.*, 37:584–610, 2007. (doi: 10.1137/S0097539704446724).
- [12] N. Memarsadeghi, D. M. Mount, N. S. Netanyahu, and J. Le Moigne. A fast implementation of the ISODATA algorithm. *Internat. J. Comput. Geom. Appl.*, 17:71–103, 2007. (doi: 10.1142/S0218195907002252).

- [13] D. M. Mount, N. S. Netanyahu, K. R. Romanik, R. Silverman, and A. Y. Yu. A practical approximation algorithm for the LMS line estimator. *Computational Statistics & Data Analysis*, 51:2461–2486, 2007. (doi: 10.1016/j.csda.2006.08.033).
- [14] J. Erickson, S. Har-Peled, and D. M. Mount. On the least median square problem. *Discrete Comput. Geom.*, 36:593–607, 2006. (doi: 10.1007/s00454-006-1267-6).
- [15] O. Daescu, J. Luo, and D. M. Mount. Proximity problems on line segments spanned by points. *Comput. Geom. Theory Appl.*, 33:115–129, 2006. (doi: 10.1016/j.comgeo.2005.08.007).
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- [23] S. Arya, S.-W. Cheng, and D. M. Mount. Approximation algorithm for multiple-tool milling. *Internat. J. Comput. Geom. Appl.*, 11, 2000. 339–372.
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- [42] S. K. Ghosh and D. M. Mount. An output-sensitive algorithm for computing visibility graphs. *SIAM J. Comput.*, 20:888–910, 1991.
- [43] D. Mount and R. Silverman. Packing and covering the plane with translates of a convex polygon. *J. Algorithms*, 11:564–580, 1990.
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- [48] T. Y. Kong, D. M. Mount, and M. Werman. The decomposition of a square into rectangles of minimal perimeter. *Discrete Appl. Math.*, 16:239–243, 1987.

Invited Book Chapters

- [49] D. M. Mount, N. S. Netanyahu, and S. Ratanasanya. New approaches to robust, point-based image registration. In J. LeMoigne, R. Eastman, and N. S. Netanyahu, editors, *Image Registration for Remote Sensing*, pages 179–199. Cambridge University Press, 2011.
- [50] S. Arya and D. M. Mount. Computational geometry: Proximity and location. In D. Mehta and S. Sahni, editors, *The Handbook of Data Structures and Applications*, pages 63.1–63.22. Chapman & Hall/CRC, Boca Raton, Florida, 2005.
- [51] D. M. Mount. Geometric intersection. In J. E. Goodman and J. O’Rourke, editors, *The Handbook of Discrete and Computational Geometry, 2nd Edition*, pages 857–876. Chapman & Hall/CRC, Boca Raton, FL, 2004.
- [52] D. M. Mount, N. S. Netanyahu, and E. Zuck. Analyzing the number of samples required for an approximate monte-carlo LMS line estimator. In M. Hubert, G. Pison, A. Struyf, and S. Van Aelst, editors, *Theory and Applications of Recent Robust Methods*, Statistics for Industry and Technology, pages 207–219. Birkhauser, Basel, 2004.
- [53] S. Maneewongvatana and D. M. Mount. Analysis of approximate nearest neighbor searching with clustered point sets. In M. H. Goldwasser, D. S. Johnson, and C. C. McGeoch, editors, *Data Structures, Near Neighbor Searches, and Methodology: Fifth and Sixth DIMACS Implementation Challenges*, volume 59 of *DIMACS Series in Discr. Math. and Theoret. Comp. Sci.*, pages 105–123. AMS, 2002.
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- [56] P. J. Rousseeuw, N. Netanyahu, and D. M. Mount. New statistical and computational results on the repeated median regression estimator. In S. Morgenthaler, E. Ronchetti, and W. A. Stahel, editors, *New Directions in Statistical Data Analysis and Robustness*, pages 177–194. Birkhauser Verlag, Basel, 1993.

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- [59] S. Arya, G. D. da Fonseca, and D. M. Mount. Optimal area-sensitive bounds for polytope approximation. In *Proc. 28th Annu. Sympos. Comput. Geom.*, 2012. (To appear).
- [60] S. Arya, G. D. da Fonseca, and D. M. Mount. Polytope approximation and the Mahler volume. In *Proc. 23rd Annu. ACM-SIAM Sympos. Discrete Algorithms*, pages 29–42, 2012.
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- [66] M. Cho, D. M. Mount, and E. Park. Maintaining nets and net trees under incremental motion. In *Proc. 20th Internat. Sympos. on Algorithms and Computation (ISAAC 2009)*, volume LNCS 5878 of *Lecture Notes Comput. Sci.*, pages 1134–1143. Springer-Verlag, 2009. (doi: 10.1007/978-3-642-10631-6_114).
- [67] S. A. Friedler and D. M. Mount. Compressing kinetic data from sensor networks. In S. Dolev, editor, *Algorithmic Aspects of Wireless Sensor Networks (ALGOSENSORS 2009)*, volume LNCS 5804 of *Lecture Notes Comput. Sci.*, pages 191–202. Springer-Verlag, 2009. (doi: 10.1007/978-3-642-05434-1_20).

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Papers in Unrefereed Conference Proceedings

- [116] N. Memarsadeghi, V. C. Raykar, R. Duraiswami, and D. M. Mount. Efficient kriging via fast matrix-vector products. In *Proc. 2008 IEEE Aerospace Conference*, 2008. (doi: 10.1109/AERO.2008.4526433).
- [117] N. Memarsadeghi and D. M. Mount. Efficient implementation of an optimal interpolator for large spatial data sets. In *Computational Science - ICCS 2007; Internat. Conference on Computational Science, Part II*, volume 4488 of *Lecture Notes Comput. Sci.*, pages 503–510. Springer-Verlag, 2007. (doi: 10.1007/978-3-540-72586-2_74).
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- [121] S. Maneewongvatana and D. M. Mount. It's okay to be skinny, if your friends are fat. In *Proc. 4th Annual CGC Workshop on Computational Geometry*, 1999. Electronic proceedings <http://www.cs.jhu.edu/~cgc/abstracts99/mount.ps>.
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- [123] T. Kanungo, D. M. Mount, N. S. Netanyahu, C. Piatko, R. Silverman, and A. Y. Wu. Approximating large convolutions in digital images. In R. A. Melter, A. Y. Wu, and L. J. Latecki, editors, *Proc. Vision Geometry VII*, volume 3454 of *SPIE*, pages 216–227, 1998.
- [124] D. M. Mount, N. S. Netanyahu, and J. Le Moigne. Efficient algorithms for robust feature matching. In *Proceedings of the Image Registration Workshop*, pages 247–256, NASA Goddard Space Flight Center, Greenbelt, MD, 1997.
- [125] D. M. Mount and S. Arya. ANN: A library for approximate nearest neighbor searching. In *Proc. 2nd Annual CGC Fall Workshop on Computational Geometry*, 1997. (Electronic proceedings: <http://www.cs.duke.edu/CGC/workshop97.html>).
- [126] D. M. Mount and F. T. Pu. Stabbing orthogonal objects in 3-space. In *Proc. 1st Annual CGC Fall Workshop on Computational Geometry*, 1996. (Electronic proceedings: http://www.cs.jhu.edu/labs/cgc/cgc_conf.html).
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- [128] D. M. Mount, R. Silverman, and A. Wu. On the area of overlap of translated polygons. In R. A. Melter and A. Y. Wu, editors, *Proc. Vision Geometry III*, volume 2060 of *SPIE*, pages 254–264, 1994.
- [129] S. Arya, N. Phamdo, D. M. Mount, and N. Farvardin. Fast search algorithms with applications to split and multistage vector quantization of speech lsp parameters. In *Proc. 1993 IEEE Speech Coding Workshop*, St-Jovite, Quebec, 1993.
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- [131] D. M. Mount and N. S. Netanyahu. Efficient algorithms for robust circular arc estimators. In *Proc. Fifth Canad. Conf. Comput. Geom.*, pages 79–84, 1993.
- [132] M. Dillencourt, D. M. Mount, and A. Saalfeld. On the maximum number of intersections of two polyhedra in 2 and 3 dimensions. In *Proc. Fifth Canad. Conf. Comput. Geom.*, pages 49–54, 1993.
- [133] D. M. Mount and R. Silverman. Minimum enclosures with specified angles. In R. A. Melter and A. Y. Wu, editors, *Proc. Vision Geometry I*, volume 1832 of *SPIE*, pages 80–91, 1992.

- [134] P. J. Rousseeuw, N. Netanyahu, and D. M. Mount. New statistical and computational results on the repeated median regression estimator. In *Proc. of the Workshop on Data Analysis and Robustness*, Ascona, Switzerland, 1992.
- [135] M.-A. K. Posenau and D. M. Mount. Delaunay triangulations and computational fluid dynamics meshes. In *Proc. Fourth Canad. Conf. Comput. Geom.*, pages 316–321, 1992.
- [136] D. M. Mount and N. S. Netanyahu. Computationally efficient algorithms for high-dimensional robust estimators. In *Proc. Fourth Canad. Conf. Comput. Geom.*, pages 257–263, 1992.
- [137] T. C. Kao and D. M. Mount. Incremental construction and dynamic maintenance of constrained Delaunay triangulations. In *Proc. Fourth Canad. Conf. Comput. Geom.*, pages 170–175, 1992.
- [138] T. C. Kao and D. M. Mount. An algorithm for computing compacted Voronoi diagrams defined by convex distance functions. In *Proc. Third Canad. Conf. Comput. Geom.*, pages 104–109, 1991.
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Collections Edited

- [143] L. J. Latecki, D. M. Mount, and A. Y. Wu, editors. *Vision Geometry XIII, Proceedings of SPIE Vol. 5675*. SPIE, 2005.
- [144] L. J. Latecki, D. M. Mount, and A. Y. Wu, editors. *Vision Geometry XII, Proceedings of SPIE Vol. 5300*. SPIE, 2004.
- [145] D. M. Mount and C. Stein, editors. *Algorithm Engineering and Experiments: 4th Internat. Workshop*. Springer-Verlag, 2002.
- [146] L. J. Latecki, D. M. Mount, and A. Y. Wu, editors. *Vision Geometry XI, Proceedings of SPIE Vol. 4794*. SPIE, 2002.
- [147] L. J. Latecki, D. M. Mount, and A. Y. Wu, editors. *Vision Geometry X, Proceedings of SPIE Vol. 4476*. SPIE, 2001.

- [148] L. J. Latecki, D. M. Mount, and A. Y. Wu, editors. *Vision Geometry IX, Proceedings of SPIE Vol. 4117*. SPIE, 2000.
- [149] L. J. Latecki, D. M. Mount, and A. Y. Wu, editors. *Vision Geometry VIII, Proceedings of SPIE Vol. 3811*. SPIE, 2000.

Other Papers and Class Resources

1. “ANN Programming Manual,” unpublished manuscript, 1998.
2. Unpublished class lecture notes. Available from <http://www.cs.umd.edu/~mount>.
 - “CMSC 427: Computer Graphics,” 2003.
 - “CMSC 451: Algorithm Design,” 2003.
 - “CMSC 754: Computational Geometry,” 2002.
 - “CMSC 420: Data Structures,” 2001.
 - “CMSC 251: Algorithms”, 1998.

Invited Lectures

1. “Proximity Searching in Euclidean and Other Metric Spaces,” NASA Goddard Space Flight Center, Beltsville, Maryland (Nov 2009).
2. “On Proximity Searching in Euclidean and Metric Spaces,” Federal University of Rio de Janeiro (UFRJ), Rio de Janeiro, Brazil (Oct 2008).
3. “Embedding and Similarity Search for Point Sets under Translation,” National Institute of Pure and Applied Mathematics (IMPA), Rio de Janeiro, Brazil (Oct 2008).
4. “Embedding and Similarity Search for Point Sets under Translation,” Hong Kong University of Science and Technology (Aug 2008).
5. “Fat is Good: The Skinny on Approximate Range Searching,” University of Texas, Dallas (Feb 2007).
6. “Keep Your Friends Close and Your Enemies Closer: The Art of Proximity Searching,” Geroge Mason University (Sept 2006).
7. “On Approximate Range Searching, or Get in Shape; Round is a Good Choice,” Keynote address at the 18th Canadian Conf. on Computational Geometry, Kingston, Ontario (August 2006).
8. “Keep Your Friends Close and Your Enemies Closer: The Art of Proximity Searching,” University of Buffalo (April 2006).
9. “Keep Your Friends Close and Your Enemies Closer: The Art of Proximity Searching,” Keynote address at the 8th Workshop on Algorithm Engineering and Experiments (ALENEX-’06), (January 2006).

10. "Two Heads are Better Than One: Combining Two Heuristics to Produce One Approximation Algorithm", Georgetown University (October 2005).
11. "The ABCs of AVDs: Geometric Retrieval Made Simple," Keynote address at the International Symp. of Algorithms and Computation (ISAAC'04), Hong Kong (December 2004).
12. "On the Least Median Square Problem," Invited talk at Interface 2004 (May 2004).
13. "Data Structures for Approximate Proximity and Range Searching," CSCAMM Workshop on the Fast Multipole Method, University of Maryland (April 2004).
14. "Maintaining Geometric Structures under Incremental Motion," Hong Kong University of Science and Technology (January 2004).
15. "Maintaining Geometric Structures under Incremental Motion," Workshop on Robot Navigation (December 2003).
16. "Approximate Voronoi Diagrams," Mathematical Sciences Research Institute (MSRI), Berkeley (October 2003).
17. "Approximation Algorithms for Clustering," University of Alabama (September 2003).
18. "Approximate Voronoi Diagrams," University of Illinois at Urbana-Champaign (July 2003).
19. "Analyzing The Number of Samples Required for an Approximate Monte-Carlo LMS Line Estimator," DIMACS Workshop on Data Depth, (May 2003).
20. "Incremental Motion and k -Means Clustering," DIMACS Workshop on Motion (November 2002).
21. " k -Means Clustering and Applications," University of Notre Dame (April 2002).
22. " k -Means Clustering and Applications in Image Processing," 11th Workshop "Theoretical Foundations of Computer Vision, Schloss Dagstuhl, Wadern, Germany (April 2002).
23. "Analysis of a Local-Search Approximation Algorithm for k -Means Clustering", Hong Kong University of Science and Technology (November 2001).
24. "Two Heads are Better Than One: Combining Two Heuristics to Produce One Approximation Algorithm", Hong Kong University of Science and Technology (October 2001).
25. "Pseudo-kinetic Algorithms for Data Clustering", University of Pisa (September 1999).
26. "Nearest Neighbor Searching: New Issues, New Questions", Invited Talk at IWOSS'99 (International Workshop on Similarity Search), (September 1999).
27. "Hierarchical Algorithms for Geometric Optimization", Hong Kong University of Science and Technology (June 1999).
28. "Computational Geometry for Solid Modeling", (a four hour tutorial on computational geometry presented at the 1999 ACM Solid Modeling Symposium), (June 1999).

29. "Pseudo-kinetic Algorithms for Data Clustering", Los Alamos National Laboratory, Los Alamos, New Mexico (March 1999).
30. "Improved Algorithms for Robust Point Matching and Applications to Image Registration", University of Tokyo, Tokyo, Japan (November 1998).
31. "Robust Line Estimators (fitting good lines to bad data)", Georgetown University (October 1997).
32. "Practical Approaches to Nearest Neighbor Searching in Moderate Dimensions", University of Tokyo, Tokyo, Japan (July 1997).
33. "Robust Line Estimators", University of Genova, Genova, Italy (June 1997)
34. "A Practical Algorithm for the LMS Line Estimator", Schloss Dagstuhl, Wadern, Germany (February 1997).
35. "Robust Line Estimators", Hong Kong University of Science and Technology (January 1997)
36. "Routing and Clustering in Graphs", Census Bureau, Suitland, Maryland (October 1996).
37. "Tree Decomposition of Spanners", Max-Planck Institute for Computer Science, Saarbrücken, Germany (November 1994).
38. "Spanners Constructed from Well-Separated Pair Decompositions", Max-Planck Institute for Computer Science, Saarbrücken, Germany (November 1994).
39. "Nearest Neighbor Searching and Related Problems", Freiburg University, Freiburg, Germany (September 1994).
40. "Geometric Structures", A series of 3 lectures presented at Bilkent University, Ankara, Turkey (August 1994).
41. "Nearest Neighbor Searching", Johns Hopkins University, (May 1993).
42. "Nearest Neighbor Searching", University of New Hampshire, (March 1993).
43. "Minimum enclosures with specified angles", SPIE OE/Technology '92, Boston (November 1992).
44. "Approximate Nearest Neighbor Searching", University of Virginia (September 1992).
45. "Intersection Detection and Polygon Separators", SUNY at Stony Brook (August 1992).
46. "Geometric Packing and Covering", Department of Mathematics, University of Maryland (February 1992).
47. "Confronting Exponential Blow-up in Nearest Neighbor Searching", UMIACS Applied Computational Geometry Day, University of Maryland (February 1992).
48. "Intersection Detection and Polygon Separators", Invited talk at the MSI Workshop on Computational Geometry, SUNY at Stony Brook (October 1991).

49. “Computational Geometry and Mesh Generation,” NASA Langley (September 1991).
50. “Geometric Packing and Covering,” Cornell University (April 1991).
51. “Intersection Detection and Polygon Separators”, Cornell University (April 1991).
52. “Geometric Packing and Covering,” 1990 ORSA/TIMS Conference (October 1990).
53. “Slope Selection,” National Institute of Standards and Technology, Gaithersburg, Maryland (December 1989).
54. “Object Detection in Images by Probing,” AMS Special Session on Mathematics in Computer Vision, Hoboken, New Jersey (October 1989).
55. “Geometric Packing and Covering,” DIMACS Workshop on Geometric Complexity, Princeton University (October 1989).
56. “Geometric Packing and Covering,” Cornell University (November 1988).
57. “Geometric Algorithms and Data Structures,” Virginia Tech, (February 1988).
58. “An Output Sensitive Algorithm for Constructing Visibility Graphs,” New York University (November 1987).
59. “On the Number of Shortest Paths on Convex Polyhedra,” New York University, Computational Geometry Day (January 1987).
60. “Packing Flexible Objects,” Johns Hopkins University (April 1986) and UMIACS Colloquium Series (April 1986).

Grants

- 5/08–4/13, ONR MURI Grant 20082040, “Scalable Methods for the Analysis of Network-Based Data,” \$462,642, co-I. (This is my part of a \$5,381,300 grant involving multiple PIs from U.C. Irvine, U. Washington, and Penn State.)
- 10/06–9/10, NSF Grant CCF–0635099, “Approximation Algorithms for Geometric Retrieval,” \$307,386, PI.
- 8/01–8/06, NSF Grant CCR–0098151, “Structure-Sensitive Geometric Algorithms and Data Structures,” \$255,000, PI.
- 9/97–8/01, NSF Grant CCR–9712379, “Geometric Tools and Applications”, \$208,789, PI.
- 8/93–1/96, NSF Grant CCR–9310705, “Geometric Tools and Applications”, \$65,584, PI.
- 8/93–1/96, NSF ROA Supplement to CCR–9310705, \$13,116.
- 2/91–3/93, Bureau of the Census JSA 91–5 “Interviewer Assignment and Routing”, \$21,000, PI.

- 10/89–9/90, Bureau of the Census Grant JSA 89–32, “Efficient Joint Triangulation for Mapping”, \$25,000, PI.
- 7/89–12/91 NSF Grant CCR–89–08901, “Geometric Packing, Covering and Path Planning”, \$32,901, PI.

Awards and Honors

- ACM Recognition of Service Award for serving as the Conference Treasurer for the 41st ACM Symposium on Theory of Computing, 2009.
- ACM Recognition of Service Award for serving as the Conference Chair of the 24th Annual Symposium on Computational Geometry, 2008.
- Keynote speaker: 8th Workshop on Algorithm Engineering and Experiments (ALENEX’06), 2006, Miami, Florida.
- University of Maryland, School of CMPS, Dean’s Award for Excellence in Teaching, 2005.
- Keynote Speaker: International Symposium on Algorithms on Algorithms and Computation (ISAAC) 2004, Hong Kong.
- Hong Kong University of Science and Technology, School of Engineering, Award for Teaching Excellence Appreciation, 2001.
- University of Maryland, School of CMPS, Honorable Mention Citation for Excellence in Teaching, 2000.
- University of Maryland, Dept. of Computer Science, Award for Teaching Excellence, 1999.
- University of Maryland, School of CMPS, Dean’s Award for Excellence in Teaching, 1997.
- Membership in the faculty of MAPL (Applied Mathematics Program at UMCP), 1996–present.
- National Technological University, List of Outstanding Instructors, 1994.
- University of Maryland, Dept. of Computer Science, Award for Teaching Excellence, 1993.
- University of Maryland, Dept. of Computer Science, Award for Teaching Excellence, 1991.
- University of Maryland, Dept. of Computer Science, Award for Teaching Excellence, 1987.
- University of Maryland, Dept. of Computer Science, Award for Teaching Excellence (Honorable mention), 1986.
- Purdue University, School of Science List of Outstanding Teachers in Science, 1984.

Advising:

Doctoral Students Advised:

2010	Sorelle A. Friedler Minkyoung Cho
2007	Guilherme da Fonseca Nargess Memarsadeghi
2006	Cengiz Celik
2004	F. Betul Atalay
2002	Michael Murphy
2001	Songrit Maneewongvatana
1998	Fan-Tao Pu
1993	Sunil Arya
1992	Thomas Kao
1991	Nathan Netanyahu (Co-advised with Azriel Rosenfeld)
1989	Sharat Chandran (Co-advised with Larry Davis)

Currently advising: Eunhui Park.

Master's Students Advised:

2000	Cengiz Celik
1997	Shu Cheah, Connie Peng, Yi Qiu, Steven Han
1996	Tobin Hill
1994	ZhaoYu Liu
1993	Shuo-Jen Wu
1992	Salil Joshi, TianXiong Xue
1989	Kuodung Shih, Adrienne Paiewonsky.
1987	Pauline Hwang

Undergraduate Projects Supervised:

2008	David Yoo
2007	Gregory Osefo
2005	Chihiro Hirai, Jordan Richardson
2004	Steven Helfand (Honors), Yulia Eyman (Honors), Tzu-Hsiu (Kevin) Chou Christopher Horn (Honors), Istvan Lazslo (Honors)
2003	In-Joon Chu
2001	Amir Caspi (Honors), Carina Hassan (Honors) Ransom Winder (Honors, CMPS Outstanding Graduating Seniors)
2000	Aleksey Martynov (Honors)
1999	Amy Yuan (Honors)
1998	Maria Jump (Summer Research Scholarship)
1997	James Starz
1996	Gregory Seidman

1994 Salim Chworo
1993 Daniel Bounds

Mentoring High School Students:

2010–11 Qinlan Shen (Poolesville High).
1996–97 Ryan Cooper (Eleanor Roosevelt High).

Outside Service

Editorial Boards and Service Activities:

- *International J. Computational Geometry and Applications*. Associate editor (2008–present).
- *ACM Trans. Mathematical Software*. Associate editor (2006–present).
- ALENEX Steering Committee member (Workshop on Algorithm Engineering and Experiments) 2003–2007.
- *Pattern Recognition*. Editorial board member (1999–2006).
- *Computational Geometry: Theory and Applications*. Guest editor for the special issue on papers from the “19th ACM Symposium on Computational Geometry, 2003,” Vol 31, 2005.

Conference Committees and Panels:

- NSF Proposal Review Panel (Algorithmic Foundations), 2012.
- Program Committee, Computational Geometry: Applications, Practice, and Theory (CG:APT), 2012.
- Program Committee, XXIV SIBGRAPI Conference on Graphics, Patterns and Images, 2011.
- Program Committee, 26th Annual Symposium on Computational Geometry (SoCG 2011), 2011.
- Program Committee, Workshop on Algorithm Engineering and Experiments (ALENEX’11), 2011.
- NSF CAREER Program Panel Review (Theoretical Foundations), 2010.
- Program Committee, 21st International Symposium on Algorithms and Computation (ISAAC 2010), 2010.
- Conference Co-Chair, 41st ACM Symposium on Theory of Computing (STOC 2009), Bethesda, Maryland, May 31–June 2, 2009.
- Conference Chair, 24th Symposium on Computational Geometry (SoCG 2008), University of Maryland, College Park, June 9–11, 2008.

- Program Committee, 18th International Symposium on Algorithms and Computation (ISAAC 2007), 2007.
- NSF Career Proposal Review Panel (Theoretical Foundations), 2006.
- Program Committee, 12th Annual International Computing and Combinatorics Conference (COCOON'06), 2006.
- Conference Co-Chair, IS&T/SPIE Electronic Imaging Science and Technology (Vision Geometry XIV), 2006.
- Conference Co-Chair, IS&T/SPIE Electronic Imaging Science and Technology (Vision Geometry XIII), 2005.
- Conference Co-Chair, IS&T/SPIE Electronic Imaging Science and Technology (Vision Geometry XII), 2004.
- Program Committee Co-Chair, 19th ACM Symposium on Computational Geometry (SoCG'03), 2003.
- Conference Co-Chair, 4th Workshop on Algorithm Engineering and Experiments (ALENEX'02), 2002.
- Conference Co-Chair, SPIE's OE/Technology '02 (Vision Geometry XI), 2002.
- Program Committee, 10th European Symposium on Algorithms (ESA), 2002.
- Conference Co-Chair, SPIE's OE/Technology '01 (Vision Geometry X), 2001.
- NSF ITR Proposal Review Panel (Numerical and Symbolic Computation), 2001.
- Conference Co-Chair, SPIE's OE/Technology '00 (Vision Geometry IX), 2000.
- Conference Co-Chair, SPIE's OE/Technology '99 (Vision Geometry VII), 1999.
- NSF CCR Proposal Review Panel (Numerical and Symbolic Computation), 1997.
- Program Committee, SPIE's OE/Technology '98 (Vision Geometry VI), 1998.
- Program Committee, 13th ACM Symposium on Computational Geometry, 1997
- Program Committee, NASA Image Registration Workshop, 1997.
- Program Committee, SPIE's OE/Technology '97 (Vision Geometry V), 1997.
- NSF CAREER Program Panel Review, 1996.
- Program Committee, SPIE's OE/Technology '96 (Vision Geometry IV), 1996.
- Program Committee, SPIE's OE/Technology '95 (Vision Geometry III), 1995.
- Program Committee, SPIE's OE/Technology '94 (Vision Geometry II), 1993.
- Program Committee, SPIE's OE/Technology '93 (Vision Geometry I), 1992.

Educational and Other:

- Speaker at Prince George's Community College Science and Engineering Day (1999).
- Speaker at Prince George's Community College Science and Engineering Day (1996).
- Mentor for High School Honors Student from Roosevelt High (1999).
- Mentor for High School Honors Student from Montgomery Blair (1992).
- Mentor for High School Honors Student from Montgomery Blair (1991).

Consulting

- Automatic Target Recognition Project, Army Center for Night Vision and Electro-Optics, Ft. Belvoir, Virginia (algorithms for the identification of targets in laser radar data), 1988–1989.
- Aging Services Project, Dept. of Sociology and Anthropology, Purdue University, Lafayette, Indiana (design and implementation of graph theoretic algorithms for social network analysis), 1984.
- Wintek Corp. Lafayette, Indiana (design and implementation of a C-language compiler for microprocessor), 1979.