Bernard Chazelle

Curriculum Vitae
December, 2025

1. Personal

Eugene Higgins Professor of Computer Science
Princeton University

Citizenship: USA & France

2. Education

Ph.D., Computer Science, Yale University, 1980
Diploma (Applied Math), Mines ParisTech, 1977

3. Honors

2025–	Fellow, Academy of the International Artificial Intelligence Industry Alliance
2024–	Fellow, Asia-Pacific Artificial Intelligence Association
2018	Test-of-Time Award, European Symposium on Algorithms
2013	Best SICON Paper Prize, SIAM Control and Systems Theory
2012	SIAM Outstanding Paper Prize
2009	Best Paper Award, ACM-SIAM Symposium on Discrete Algorithms
2004–	Fellow, American Academy of Arts and Sciences
2004–	Fellow, World Innovation Foundation
2002–	Member, European Academy of Sciences
1995–	Fellow, Association for Computing Machinery
1994	Fellow, John Simon Guggenheim Memorial Foundation
1988	Service Award, Association for Computing Machinery
1977	Fulbright Fellowship

4. Professional Appointments

1989–	Professor, Department of Computer Science, Princeton University
1986–89	Associate Professor, Department of Computer Science, Princeton University
2013–2015	Member, Institute for Advanced Study, Princeton
2012–2013	Professor, Computer Science Chair, Collège de France
1998–2003	Fellow, NEC Research Institute (chairman of the board, 2000–03)
1980–	Other positions: ENS Ulm, Ecole Polytechnique, University of Paris, Brown University, CMU, DEC SRC, Xerox PARC, INRIA

5. Editorial Service

1984–2009	Editor, *Algorithmica*
1985-2010	Editor, *SIAM Journal on Computing*
1986	Guest Editor, *Algorithmica*, Special Issue on 2nd Annual ACM Symposium on Computational Geometry
1988	Guest Editor, *Discrete and Computational Geometry*, Special Issue on 4th Annual ACM Symposium on Computational Geometry
1989–2003	Editor, *Journal of Algorithms*
1990–2008	Editor, *Computational Geometry: Theory and Applications*
1990–	Editor, *International Journal of Computational Geometry & Applications*
1991–	Editor, *Discrete and Computational Geometry*
1995–2000	Editor, *ENTCS*
1996–2010	Editor, *Journal of the ACM*
1997	Editor, *AMS Contemporary Mathematics Series*: Discrete and Computational Geometry: Ten Years Later
2001	Advisory Editorial Board Member, *Handbook of Discrete and Computational Geometry*, Chapman & Hall/CRC
2004–2008	Editor, *ACM Transactions on Algorithms* ppp
2004–	Editor, *Foundations and Trends in Theoretical Computer Science*
2006–	Advisory Editorial Board Member, *Geometry and Computing*, Springer
2007–	Advisory Editorial Board Member, *Applied Algorithms and Data Structures Series*, Chapman & Hall/CRC

2009– Editor, *Journal of Computational Geometry*

2010– Advisory Editorial Board Member, *ACM XRDS*

6. Program Committees

1984 Member, Program Committee, 2nd AFCET-STACS, Saarbrücken

1985 Member, Program Committee, 17th Annual ACM Symposium on Theory of Computing (STOC)

1986 Member, Program Committee, 2nd Annual ACM Symposium on Computational Geometry (SoCG)

1987 Program Chair, Minisymposium on Computational Geometry, SIAM Annual Meeting

1988 Program Chair, 4th Annual ACM Symposium on Computational Geometry (SoCG)

1990 Member, Program Committee, 22nd Annual ACM Symposium on Theory of Computing (STOC)

1993 Member, Program Committee, 25th Annual ACM Symposium on Theory of Computing (STOC)

1993 Member, Program Committee, 9th Annual ACM Symposium on Computational Geometry (SoCG)

1996 Member, Program Committee, 8th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)

1997 Member, Program Committee, 2nd Workshop on Applied Computational Geometry

1997 Member, Program Committee, 13th Annual ACM Symposium on Computational Geometry (SoCG)

1998 Member, Program Committee, 2nd International Workshop on Randomization and Approximation Techniques in Computer Science (RANDOM)

2000 Member, Program Committee, 2nd Workshop on Algorithm Engineering and Experimentation (ALENEX)

2001 Member, Program Committee, 7th Annual International Computing and Combinatorics Conference (COCOON)

2001 Member, Program Committee, 12th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)

2001	Member, Program Committee, 2nd International Conference on Fun with Algorithms, Elba
2001	Member, Program Committee, 42nd Annual IEEE Symposium on Foundations of Computer Science (FOCS)
2002	Member, Program Committee, LATIN'2002
2002	Program Chair, 43rd Annual IEEE Symposium on Foundations of Computer Science (FOCS)
2003	Member, Program Committee, 9th Annual International Computing and Combinatorics Conference (COCOON)
2003	Member, Program Committee, 7th International Workshop on Randomization and Approximation Techniques in Computer Science (RANDOM)
2004	Member, Program Committee, 29th International Symposium on Mathematical Foundations of Computer Science (MFCS)
2004	Member, Program Committee, 20th Annual ACM Symposium on Computational Geometry (SoCG)
2005	Member, Program Committee, 16th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)
2006	Member, Program Committee, 12th Annual International Computing and Combinatorics Conference (COCOON)
2007	Member, Program Committee, Frontiers of Algorithmics (Lanzhou, China)
2008	Member, Program Committee, 40th Annual ACM Symposium on Theory of Computing (STOC)
2010	Program Chair, 2nd Symposium on Innovations in Computer Science (ICS)
2012	Member, Program Committee, 39th International Colloquium on Automata, Languages and Programming (ICALP)
2013	Member, Program Committee, 45th Annual ACM Symposium on Theory of Computing (STOC)
2013	Member, Program Committee, 12th European Conference on Artificial Life (ECAL)
2015	Member, Program Committee, 7th Innovations in Theoretical Computer Science Conference (ITCS)
2017	Member, Program Committee, 9th Innovations in Theoretical Computer Science Conference (ITCS)
2018	Member, Program Committee, 10th Innovations in Theoretical Computer Science Conference (ITCS)

7. Professional Activities

1986	Member, Scientific Committee, ICPAM (Unesco)
1987–1988	Organizer, Princeton Forum on Algorithms and Complexity
1988	Chair, ARIDAM III, Rutgers University, Probabilistic methods in geometry
1989–1990	Chair, Organizing committee, DIMACS Special Year in "Discrete and Computational Geometry"
1989–1994	Faculty, Geometry Center, Minn. (NSF)
1991–1998	Member, Executive Committee, DIMACS
1991–1995	Co-Organizer, Dagstuhl Workshops on Efficient Algorithms
1996	Organizer, AMS-IMS-SIAM Summer Research Conference
1996	Research Director, DREI (NSF education program)
1996–1998	Co-Director, DIMACS (NSF Science and Technology Center)
1996	Chair, Computational Geometry Impact Task Force
1996	Co-chair, AMS–IMS–SIAM Joint Summer Research Conference
1997	Member, Steering Committee, ACM Computational Geometry
1997	Chair, Program Evaluation Committee, INRIA
1998	Founder, PACT (Consortium of Institute for Advanced Study, NECI, Princeton University)
1998	Co-Organizer, DIMACS Workshop, Design for Values
1998-2001	Chair, PACT Day
1998	Co-Organizer, DIMATIA-DIMACS Workshop on Combinatorial and Algorithmic Geometry, Prague
1999	Member, Scientific Council, ACIB, Ministère de l'Education Nationale et de la Recherche, France
1999–2007	President, Scientific Council, DI, Ecole normale supérieure, Paris, France
2000	Chair, Board of Fellows, NEC Research Institute
2001–2002	Member, Research Council, Ecole Polytechnique, France
2002–2005	Co-Organizer, DIMACS Special Focus: Computational Geometry and Applications
2004	Review Committee, Industrial Geometry Joint Research Program, Austrian Science Foundation

2004	Advisor, Contemporary Analysis of Discrete Algorithms Project, Japan Society for the Promotion of Science
2004–2006	Member, Scientific Council, Ecole normale supérieure, Paris, France
2006–2014	Member, Scientific Council, Institut Henri-Poincaré, Paris
2006–2011	Member, Board of Governors, Institute for Mathematics and Its Applications (IMA)
2008	Member, Scientific Committee, Topological & Geometric Graph Theory '08, Paris
2008–	Chair Professor, Institute for Theoretical Computer Science, Tsinghua University
2009	Organizer, Center for Computational Intractability "Natural Algorithms" Workshop, Princeton
2009–2012	President, Steering Committee, ITCS Conference
2010–2012	Director, NSF Center for Computational Intractability
2013	Co-organizer with Mark Braverman, Center for Computational Intractability "Natural Algorithms and the Natural Sciences" Workshop, Princeton
2015–2016	Co-Organizer, Dagstuhl workshop on Evolution and Computing
2015	Evaluation Committee, INRIA
2013–	Member, Scientific Advisory Board, Project SAGE (Speed of Adaptation in Population Genetics and Evolutionary Computation)

8. Keynote Addresses since 1990

1990	Plenary Address, ARIDAM V, Rutgers University
1990	Plenary Address, Journées de Géométrie Algorithmique, INRIA, Sophia-Antipolis
1990	Plenary Address, SIGAL International Symposium on Algorithms, Tokyo
1990	Distinguished Lecture Series, Johns Hopkins University
1991	Plenary Address, ICALP'91, Madrid, Spain
1992	Plenary Address, Sixth SIAM Conference on Discrete Mathematics, Vancouver
1992	Keynote Address, Stonybrook Workshop on Computational Geometry
1992	Plenary Address, 4th Canadian Conference on Computational Geometry, St. John's, Newfoundland, Canada

1993	Plenary Address, 16th IFIP Conference on System Modelling and Optimization, Compiègne, France
1994	Plenary Address, STOC'94, Montréal, Canada
1995	Distinguished Lecture Series, Graduate Center, NY
1996	Distinguished Lecture Series, Univ. British Columbia
1996	Plenary Address, AMS–IMS–SIAM Joint Summer Research Conference, Mount Holyoke
1996	Plenary Address, CGC Workshop on Computational Geometry, The Johns Hopkins University
1997	Plenary Address, WADS'97, Halifax
1998	Plenary Address, ISAAC'98, Taejon, Korea
1999	Distinguished Lecture Series, INRIA, Rocquencourt, France
1999	Plenary Address, EuroCG'99, Antibes, France
1999	Plenary Address, ETH Conference on Discrete and Computational Geometry, Ascona, Switzerland
1999	Ron Graham's Celebration Day, "The Shape of Points: Where Euclid Meets Turing," AT&T Labs
2000	Triangle Computer Science Distinguished Lecture Series, Duke University
2000	Plenary Address, FSTTCS-2000, Foundations of Software Technology and Theoretical Computer Science, New Delhi, India
2001	Plenary Address, COCOON'01, China
2001	Bourbaki Seminar, "The PCP Theorem," Institut Henri Poincaré, Paris
2002	Third Distinguished New York Computer Scientists Symposium, New York Academy of Sciences
2002	Distinguished Lecture Series, University of Victoria, British Columbia
2003	Distinguished Lecture Series, University of Wisconsin-Madison
2003	Plenary Address, ESA'03, Budapest, Hungary
2004	Plenary Address, SODA'04, New Orleans
2004	Distinguished Lecture Series, University of Illinois at Urbana-Champaign
2005	Distinguished Lecture Series, University of Toronto
2005	Invited Tutorial, FOCS'05, Pittsburgh
2006	Invited Lecture, AAAS Annual Meeting, St. Louis

2006	Distinguished Lecture Series, University of Texas at Dallas
2006	Plenary Address, EuroCG'06, Delphi, Greece
2006	Plenary Address, DIKEMES, Athens, Greece
2006	Distinguished Lecture Series, Simon Fraser University, Canada
2006	Morgenstern Lecture Series, INRIA
2006	Plenary Address, ETH Informatik's 25th Anniversary, Zurich
2006	Interdisciplinary Distinguished Lecture Series, North Carolina State University
2007	Distinguished Lecture Series, University of Michigan
2007	Plenary Address, EuroCG'07, Graz, Austria
2007	Plenary Address, 34th ICALP, Wroclaw, Poland
2007	Plenary Address, Norway Research Council Conference, Trondheim
2007	Distinguished Lecture Series, Stony Brook University
2008	Distinguished Lecture Series, University of Washington
2008	Distinguished Lecture, Birzeit University
2008	Distinguished Lecture Series, University of Buffalo, SUNY
2008	Plenary Address, 5th TAMC 2008, Xi'an, China
2008	Plenary Address, First China Symposium on Theoretical Computer Science, Tsinghua University, Beijing, China
2009	Distinguished Lecture Series, Bryn Mawr College
2009	Distinguished Lectures: Universities of Auckland, Canterbury, Otago; and Wellington (New Zealand)
2009	Distinguished Lecture, Gaschnig-Oakley Memorial Lecture Series, Carnegie-Mellon University
2009	Distinguished Lecture, Drexel University
2010	Distinguished Lecture, Dertouzos Lecture Series, MIT
2011	Distinguished Lecture, Bayer Lecture Series, University of Pittsburgh
2011	Keynote Address, 6th Computer Science Research Symposium, Dartmouth
2011	Plenary Address, Neural Information Processing Systems (NIPS), Granada, Spain
2012	Inaugural Address, Collège de France, Paris
2012	Morgenstern Lecture Series, INRIA

2013	Israel Pollak Lectures, Technion
2013	Avner Magen Memorial Lecture, Fields Institute, University of Toronto
2013	Institute Colloquium, IST Austria
2013	HaPoc 2013 Plenary Address, Ecole Normale Supérieure Ulm
2014	Collège de France Lecture Series, Cité des Sciences, Tunis,
2014	Distinguished Lecture Series, Bibliothèque Nationale de France
2014	Distinguished Lecture Series, Iowa State University
2015	Plenary Address, 9th International Conference on Algorithms and Complexity (CIAC 2015), Paris
2015	Plenary Address, Forums régionaux du Savoir, Regional Council, Rouen, France
2015	Presidential Lecture, Association of Bone and Joint Surgeon, Eugene, Oregon
2015	Plenary Lecture, 14th International Symposium on Algorithms and Data Structures (WADS 2015), Victoria, Canada
2015	Plenary Lecture, NecSys 2015, Philadelphia
2016	Distinguished Lecture, University of Rome, La Sapienza
2016	Keynote Address, Computability in Europe, Paris
2016	Keynote Address, Genetic and Evolutionary Computation Conference (GECCO 2016), Denver, Colorado
2016	Plenary Lecture, Inaugural, Michigan Center for Applied and Interdisciplinary Mathematics, University of Michigan, Ann Arbor
2018	Distinguished Lecture, Capital Area Theory Day, Georgetown University, Washington, DC
2019	Keynote Address, 22nd International Symposium, FCT 2019, Copenhagen, Denmark
2019	ESA Test-of-Time Award Lecture, Munich, Germany
2020	Distinguished Lecture, Yale University
2022	Paul Erdős Memorial Lecture, 34th CCCG 2022, Toronto, Canada

9. Books

[1] "L'Algorithmique et les Sciences", Leçon Inaugurale, Collège de France, Fayard, 2013.

[2] "The Discrepancy Method: Randomness and Complexity", Cambridge University Press, 2000. Paperback version, 2001.

[3] "Advances in Discrete and Computational Geometry", (co-edited with J.E. Goodman and R. Pollack) Contemporary Mathematics, 223, AMS, Providence, 1998.

10. Journal Articles and Book Chapters

[4] "The Polygon Containment Problem", *Advances in Computing Research 1*, (F.P. Preparata, ed.), JAI Press, Greenwich, 1983, pp. 1–33.

[5] "A Decision Procedure for Optimal Polyhedron Partitioning", *Information Processing Letters*, **16**(2), 1983, pp. 75–78.

[6] "An Improved Algorithm for the Fixed-Radius Neighbor Problem", *Information Processing Letters*, **16**(4), 1983, pp. 193–198.

[7] "Unbounded Hardware Is Equivalent to Deterministic Turing Machines" (with L. Monier), *Theoretical Computer Science*, **24**(2), 1983, pp. 123–130.

[8] "The Bottom-Left Bin-Packing Heuristic: An Efficient Implementation", *IEEE Transactions on Computers*, **C–32**(8), 1983, pp. 697–707.

[9] "Computing the Connected Components of D-Ranges" (with J. Incerpi), *Bulletin of EATCS*, **22**, 1984, pp. 9–11.

[10] "Triangulation and Shape-Complexity" (with J. Incerpi), *ACM Transactions on Graphics*, Special Issue on "Computational Geometry", **3**(2), 1984, pp. 135–152.

[11] "Convex Partitions of Polyhedra: A Lower Bound and Worst-Case Optimal Algorithm", *SIAM Journal on Computing*, **13**(3), 1984, pp. 488–507.

[12] "Computational Geometry on a Systolic Chip", *IEEE Transactions on Computers*, **C–33**(9), 1984, pp. 774–785.

[13] "How to Search in History", *Information & Control,* **64**(1–3), 1985, pp. 77–99.

[14] "Optimal Convex Decompositions" (with D.P. Dobkin), in *Computational Geometry*, (G.T. Toussaint, ed.), North-Holland, 1985, pp. 63–133.

[15] "The Power of Geometric Duality" (with L. Guibas, D.T. Lee), *BIT*, **25**(1), 1985, pp. 76–90.

[16] "On the Convex Layers of a Planar Set", *IEEE Transactions on Information Theory*, **IT–31**(4), 1985, pp. 509–517.

[17] "Optimal Solutions for a Class of Point Retrieval Problems", (with H. Edelsbrunner), *Journal of Symbolic Computation*, Vol.1, 1985, pp. 47–56.

[18] "A Model of Computation for VLSI with Related Complexity Results" (with L. Monier), *Journal of the ACM*, **32**(3), 1985, pp. 573–588.

[19] "New Upper Bounds for Neighbor Searching" (with R. Cole, F.P. Preparata, C. Yap), *Information & Control,* **68**(1–3), 1986, pp. 105–124.

[20] "Computing the Largest Empty Rectangle" (with R.L. Drysdale, D.T. Lee), *SIAM Journal on Computing*, **15**(1), 1986, pp. 300–315.

[21] "On a Circle Placement Problem" (with D.T. Lee), *Computing*, **36**, 1986, pp. 1–16.

[22] "Reporting and Counting Segment Intersections", *Journal of Computer and System Sciences*, **32**(2), 1986, pp. 156–182.

[23] "Halfspace Range Search: An Algorithmic Application of k-Sets", (with F.P. Preparata), *Discrete and Computational Geometry*, Vol.1, 1986, pp. 83–93.

[24] "Filtering Search: A New Approach to Query-Answering", *SIAM Journal on Computing*, **15**(3), 1986, pp. 703–724.

[25] "Fractional Cascading: I. A Data Structuring Technique", (with L.J. Guibas), *Algorithmica*, **1**(2), 1986, pp. 133–162.

[26] "Fractional Cascading: II. Applications", (with L.J. Guibas), *Algorithmica*, **1**(2), 1986, pp. 163–191.

[27] "Computing on a Free Tree via Complexity-Preserving Mappings", *Algorithmica*, **2**(3), 1987, pp. 337–361.

[28] "Some Techniques for Geometric Searching with Implicit Set Representations", *Acta Informatica*, **24**, 1987, pp. 565–582.

[29] "Intersection of Convex Objects in Two and Three Dimensions", (with D.P. Dobkin), *Journal of the ACM*, **34**(1), 1987, pp. 1–27.

[30] "An Improved Algorithm for Constructing k-th Order Voronoi Diagrams", (with H. Edelsbrunner), *IEEE Transactions on Computers*, **C–36**(11), 1987, pp. 1349–1354.

[31] "Linear Space Data Structures for Two Types of Range Search", (with H. Edelsbrunner), *Discrete and Computational Geometry*, **2**, 1987, pp. 113–126.

[32] "Approximation and Decomposition of Shapes", in *Advances in Robotics, Vol.1: Algorithmic and Geometric Aspects of Robotics*, (J.T. Schwartz and C.K. Yap, eds.), Lawrence Erlbaum Associates, 1987, pp. 145–185.

[33] "A Functional Approach to Data Structures and Its Use in Multidimensional Searching", *SIAM Journal on Computing*, **17**(3), 1988, pp. 427–462.

[34] "An Algorithm for Segment-Dragging and its Implementation", *Algorithmica*, **3**(2), 1988, pp. 205–221.

[35] "Parallel Computational Geometry", (with A. Aggarwal, L.J. Guibas, C. O'Dunlaing, C.K. Yap), *Algorithmica*, **3**(3), 1988, pp. 293–327.

[36] "The Complexity of Cutting Complexes", (with H. Edelsbrunner, L.J. Guibas), *Discrete and Computational Geometry*, **4**, 1989, pp. 139–181.

[37] "Visibility and Intersection Problems in Plane Geometry", (with L.J. Guibas), *Discrete and Computational Geometry*, **4**, 1989, pp. 551–581.

[38] "Lower Bounds on the Complexity of Polytope Range Searching", *Journal of the American Mathematical Society*, **2**(4), 1989, pp. 637–666.

[39] "Quasi-Optimal Range Searching in Spaces of Finite *VC*-Dimension", (with E. Welzl), *Discrete and Computational Geometry*, **4**, 1989, pp. 467–489.

[40] "An Algorithm for Generalized Point Location and Its Applications", (with M. Sharir), *Journal of Symbolic Computation*, **10**, 1990, pp. 281–309.

[41] "A Deterministic View of Random Sampling and Its Use in Geometry", (with J. Friedman), *Combinatorica*, **10**(3), 1990, pp. 229–249.

[42] "Lower Bounds for Orthogonal Range Searching: I. The Reporting Case", *Journal of the ACM*, **37**(2), 1990, pp. 200–212.

[43] "Lower Bounds for Orthogonal Range Searching: II. The Arithmetic Model", *Journal of the ACM*, **37**(3), 1990, pp. 439–463.

[44] "Triangulating a Nonconvex Polytope", (with L. Palios), *Discrete and Computational Geometry*, **5**, 1990, pp. 505–526.

[45] "A Singly Exponential Stratification Scheme for Real Semi-Algebraic Varieties and Its Applications", (with H. Edelsbrunner, L.J. Guibas, M. Sharir), *Theoretical Computer Science*, **84**, 1991, pp. 77–105.

[46] "Points and Triangles in the Plane and Halving Planes in Space", (with B. Aronov, H. Edelsbrunner, L.J. Guibas, M. Sharir, R. Wenger), *Discrete and Computational Geometry*, **6**, 1991, pp. 435–442.

[47] "The Complexity of Computing Partial Sums Off-Line", (with B. Rosenberg), *International Journal of Computational Geometry and Applications*, **1**(1), 1991, pp. 33–45.

[48] "Triangulating a Simple Polygon in Linear Time", *Discrete and Computational Geometry*, **6**, 1991, pp. 485–524.

[49] "An Optimal Algorithm for Intersecting Line Segments in the Plane", (with H. Edelsbrunner), *Journal of the ACM*, **39**(1), 1992, pp. 1–54.

[50] "Quasi-Optimal Upper Bounds for Simplex Range Searching and New Zone Theorems", (with M. Sharir, E. Welzl), *Algorithmica*, **8**, 1992, pp. 407–429.

[51] "An Optimal Algorithm for Intersecting Three-Dimensional Convex Polyhedra", *SIAM Journal on Computing*, **21**(4), 1992, pp. 671–696.

[52] "Counting and Cutting Cycles of Lines and Rods in Space", (with H. Edelsbrunner, L.J. Guibas, R. Pollack, R. Seidel, M. Sharir, J. Snoeyink), *Computational Geometry: Theory and Applications*, **1**, 1992, pp. 305–323.

[53] "Computing a Face in an Arrangement of Line Segments and Related Problems", (with H. Edelsbrunner, L.J. Guibas, M. Sharir, J. Snoeyink), *SIAM Journal on Computing*, **22**(6), 1993, pp. 1286–1302.

[54] "Cutting Hyperplanes for Divide-and-Conquer", *Discrete and Computational Geometry*, **9**, 1993, pp. 145–158.

[55] "An Optimal Convex Hull Algorithm in Any Fixed Dimension", *Discrete and Computational Geometry*, **10**, 1993, pp. 377–409.

[56] "How Hard Is Half-Space Range Searching?", (with H. Brönnimann, J. Pach), *Discrete and Computational Geometry*, **10**, 1993, pp. 143–155.

[57] "Diameter, Width, Closest Line Pair, and Parametric Searching", (with H. Edelsbrunner, L.J. Guibas, M. Sharir), *Discrete and Computational Geometry*, **10**, 1993, pp. 183–196.

[58] "Ray Shooting in Polygons Using Geodesic Triangulations", (with H. Edelsbrunner, M. Grigni, L.J. Guibas, J.E. Hershberger, M. Sharir, J. Snoeyink), *Algorithmica*, **12**, 1994, pp. 54–68.

[59] "Point Location among Hyperplanes and Unidirectional Ray-Shooting", (with J. Friedman), *Computational Geometry: Theory and Applications*, **4**(2), 1994, pp. 53–62.

[60] "Triangulating Disjoint Jordan Chains", (with R. Bar-Yehuda), *International Journal of Computational Geometry and Applications*, **4**(4), 1994, pp. 475–481.

[61] "Algorithms for Bichromatic Line-Segment Problems and Polyhedral Terrains", (with H. Edelsbrunner, L.J. Guibas, M. Sharir), *Algorithmica*, **11**(2), 1994, pp. 116–132.

[62] "Decomposition Algorithms in Geometry", (with L. Palios), *Algebraic Geometry and its Applications*, (C. Bajaj, ed.), Chap.27, Springer-Verlag, 1994, pp. 419–447.

[63] "Selecting Heavily Covered Points", (with H. Edelsbrunner, L.J. Guibas, J.E. Hershberger, R. Seidel, M. Sharir), *SIAM Journal on Computing*, **23**(6), 1994, pp. 1138–1151.

[64] "Derandomizing an Output-Sensitive Convex Hull Algorithm in Three Dimensions", (with J. Matoušek), *Computational Geometry: Theory and Applications*, **5**, 1995, pp. 27–32.

[65] "Improved Bounds on Weak ε-Nets for Convex Sets", (with H. Edelsbrunner, M. Grigni, L.J. Guibas, M. Sharir, E. Welzl), *Discrete and Computational Geometry*, **13**, 1995, pp. 1–15.

[66] "Computational Geometry: A Retrospective", In "Computing in Euclidean Geometry", (D.-Z. Du and F. Hwang, eds.), 2nd edition, World Scientific Press, 1995, pp. 22–46.

[67] "Bounds on the Size of Tetrahedralizations", (with N. Shouraboura), *Discrete and Computational Geometry*, **14**, 1995, pp. 429–444.

[68] "An Elementary Approach to Lower Bounds in Geometric Discrepancy", (with J. Matoušek, M. Sharir), *Discrete and Computational Geometry*, **13**, 1995, pp. 363–381.

[69] "Lines in Space: Combinatorics and Algorithms", (with H. Edelsbrunner, L.J. Guibas, M. Sharir, J. Stolfi), *Algorithmica*, **15**(5), 1996, pp. 428–447.

[70] "Simplex Range Reporting on a Pointer Machine", (with B. Rosenberg), *Computational Geometry: Theory and Applications*, **5**, 1996, pp. 237–247.

[71] "On Linear-Time Deterministic Algorithms for Optimization Problems in Fixed Dimension", (with J. Matoušek), *Journal of Algorithms*, **21**, 1996, pp. 579–597.

[72] "The Computational Geometry Impact Task Force Report: An Executive Summary", in *Applied Computational Geometry: Towards Geometric Engineering,* Springer-Verlag, LNCS 1148, 1996, pp. 59–65.

[73] "BOXTREE: A Hierarchical Representation for Surfaces in 3D", (with G. Barequet, L.J. Guibas, J. Mitchell, A. Tal), Graphics Forum, **15**(3), August 1996, pp. C–387–396.

[74] "Decomposing the Boundary of a Nonconvex Polytope", (with L. Palios), *Algorithmica*, **17**(3), 1997, pp. 245–265

[75] "Lower Bounds for Off-Line Range Searching", *Discrete and Computational Geometry*, **17**, 1997, pp. 53–65.

[76] "Strategies for Polyhedral Surface Decomposition: An Experimental Study", (with D.P. Dobkin, N. Shouraboura, A. Tal), *Computational Geometry: Theory and Applications*, **7**, 1997, pp. 327–342.

[77] "A Spectral Approach to Lower Bounds with Applications to Geometric Searching", *SIAM Journal on Computing*, **27**(2), 1998, pp. 545–556.

[78] "Optimal Slope Selection via Cuttings", (with H. Brönnimann), *Computational Geometry: Theory and Applications*, **10**(1), 1998, pp. 23–29.

[79] "Product Range Spaces, Sensitive Sampling, and Derandomization", (with H. Brönnimann and J. Matoušek), *SIAM Journal on Computing*, **28**(5), 1999, pp. 1552–1575.

[80] "Discrepancy Bounds for Geometric Set Systems with Square Incidence Matrices", *Advances in Discrete and Computational Geometry*, Contemporary Mathematics, 223, AMS, Providence, 1999, pp. 103–107.

[81] "The Computational Geometry Impact Task Force Report", (with 36 co-authors), *Advances in Discrete and Computational Geometry*, Contemporary Mathematics, 223, AMS, Providence, 1999, pp. 407–463.

[82] "A Lower Bound on the Complexity of Approximate Nearest-Neighbor Searching on the Hamming Cube", (with A. Chakrabarti, B. Gum, A. Lvov), *Discrete and Computational Geometry – The Goodman-Pollack Festschrift*, Springer-Verlag, 2003.

[83] "The Soft Heap: An Approximate Priority Queue with Optimal Error Rate", *Journal of the ACM*, **47**(6), 2000, pp. 1012–1027.

[84] "A Minimum Spanning Tree Algorithm with Inverse-Ackermann Type Complexity", *Journal of the ACM*, **47**(6), 2000, pp. 1028–1047.

[85] "Self-Customized BSP Trees for Collision Detection", (with S. Ar, A. Tal), *Computational Geometry: Theory and Applications*, **10**(1–3), 2000, 23–29. Special Issue on Computational Geometry in Virtual Reality,

[86] "The Discrepancy of Boxes in Higher Dimension", (with A. Lvov), *Discrete and Computational Geometry*, **25**, 2001, pp. 519–524.

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