

CURRICULUM VITAE

Bernard Chazelle

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Professional Experience

Princeton University

Professor, Department of Computer Science, 1989–

Associate Professor, Department of Computer Science, 1986–89

NEC Research Institute

Fellow, 1998–2003 (elected chairman of the board, 2000)

Brown University

Associate Professor, Department of Computer Science, 1985–86

Assistant Professor, Department of Computer Science, 1982–85

Visiting faculty at Ecole Polytechnique, Ecole normale supérieure, University of Paris, Carnegie-Mellon University, and INRIA.

Education

Ph.D., Computer Science, Yale University, 1980

B.Sc & M.Sc (Applied Math), ENSMP, Paris, 1977

Honors

Fellow, American Academy of Arts and Sciences (elected 2004)

Fellow, World Innovation Foundation (elected 2004)

Member, European Academy of Sciences (elected 2002)

Fellow, Association for Computing Machinery (elected 1995)

Guggenheim Fellow (1994)

Recognition of Service Award, Association for Computing Machinery (1988)

Editorial Boards

Journal of the ACM

SIAM Journal on Computing

Algorithmica

Discrete and Computational Geometry

International Journal of Computational Geometry & Applications

Computational Geometry: Theory and Applications

ACM Transactions on Algorithms (2004–2008)

AMS Contemporary Mathematics Series

Foundations and Trends in Theoretical Computer Science

Geometry & Computing (Springer)

Chapman & Hall/CRC (Handbook & Series)

Journal of Algorithms (1989–2003)

ENTCS (1995–2000)

Program Committees

2nd AFCET-STACS (1984); 17th ACM STOC (1985); 2nd ACM SoCG (1986); ICPAM (1986); SIAM Annu. Meeting (CGS) (1987); 4th ACM SoCG (chair, 1988); 3rd ARIDAM (chair, 1988); 22nd ACM STOC (1990); 25th ACM STOC (1993); 9th ACM SoCG (1993); 8th ACM-SIAM SODA (1996); 2nd ACM WACG (1997); 13th ACM SoCG (1997); 2nd RANDOM (1998); 2nd ALENEX (2000); 7th COCOON (2001); 12th ACM-SIAM SODA (2001); 2nd FUN (2001); 42nd FOCS (2001); LATIN (2002); 43rd FOCS (PC Chair, 2002); 9th COCOON (2003); 7th RANDOM (2003); 29th MFCS (2004); 20th ACM SoCG (2004); 16th ACM-SIAM SODA (2005); 12th COCOON (2006); FAW (2007); 40th ACM STOC (2008).

Service (selected)

Chair, DIMACS Special Year (1989–90); Member, The Geometry Center, NSF S&T Center (1990–94); Co-Director, DIMACS (1996–1998); Chair, Computational Geometry Impact Task Force (1996); Member, Steering Committee, ACM Computational Geometry (1997); President, Program Evaluation Committee, INRIA (1997); Founder, PACT (1998); Member, ACIB Scientific Council (1999); President, Scientific Council, DI, Ecole normale supérieure, Paris (1999–); Member, Research Council, Ecole Polytechnique, France (2000–); Advisor, Japan Society for the Promotion of Science (2004); Member, Scientific Council, Institut Henri-Poincaré, Paris (2006–); Member, Board of Governors, IMA (2006–); Member, Scientific Committee, TGGT, Paris (2008).

Keynote Addresses (since 1990)

ARIDAM V (1990); SIGAL Int. Symp. Alg. (Plenary Address, 1990); The Johns Hopkins University (Distinguished Lecture Series, 1990); ICALP (Plenary Address, 1991); 6th SIAM Conf. Disc. Math. (1992); 4th Canad. Conf. Comp. Geom. (Plenary Address, 1992); 16th IFIP Conf. Sys. Model. Optim. (1993); STOC (Plenary Address, 1994); Graduate Center, NYC (Distinguished Lecture Series, 1995); CG Conference, Johns Hopkins University (1996); Univ. British Columbia (Distinguished Lecture Series, 1996); WADS, Halifax (Plenary Address, 1997); ISAAC, Taejon, Korea (Plenary Address, 1998); EuroCG, Antibes, France (Plenary Address, 1999); ETH DCG Conf., Ascona (1999); Ron Graham's Celebration Day, AT&T Labs (1999); INRIA (Distinguished Lecture Series, 1999); FSTTCS New Delhi, India (Plenary Address, 2000); Duke Univ. (Distinguished Lecture Series, 2000); COCOON, Guilin, China (Plenary Address, 2001); Bourbaki Seminar, Paris (2001); New York Academy of Sciences (2002); Univ. Victoria, BC (Distinguished Lecture Series, 2002); Univ. Madison-Wisconsin (Distinguished Lecture Series, 2003); ESA, Budapest, Hungary (Plenary Address, 2003); SODA, New Orleans (Plenary Address, 2004); Univ. Illinois at Urbana-Champaign (Distinguished Lecture Series, 2004); Univ. Toronto (Distinguished Lecture Series, 2005); FOCS, Pittsburgh (Invited Tutorial, 2005); AAAS (Annual Meeting 2006); UT Dallas (Distinguished Lecture Series, 2006); EuroCG, Delphi, Greece (Plenary Address, 2006); DIKEMES, Athens, Greece (2006); Simon Fraser Univ. (Distinguished Lecture Series, 2006); Morgenstern Lecture Series (2006); ETH Informatik's 25th Anniversary, Zurich (Plenary Address, 2006); North Carolina State Univ. (Interdisc. Distinguished Lecture Series, 2006); Univ. Michigan (Distinguished Lecture Series, 2007); EuroCG, Graz, Austria (Plenary Address, 2007); 34th ICALP, Wroclaw, Poland (Plenary Address, 2007); Norway Research Council Conference (Plenary Address, 2007); Stony Brook Univ. (Distinguished Lecture Series, 2007); Univ. Washington (Distinguished Lecture Series, 2008); Birzeit University (Distinguished Lecture, 2008); Univ. Buffalo SUNY (Distinguished Lecture Series, 2008); 5th TAMC 2008, Xi'an, China (Plenary Address, 2008).

Twenty Selected Publications (among over 200 refereed journal & conference articles)

- The Discrepancy Method: Randomness and Complexity, *Cambridge University Press*, 2000; paperback version, 2001.
- The Power of Geometric Duality, (with L. Guibas and D.T. Lee), *BIT* 25 (1985), 76–90.
- How to Search in History, *Information & Control* 64 (1985), 77–99.
- Fractional Cascading: I. A Data Structuring Technique, II. Applications (with L.J. Guibas), *Algorithmica* 1 (1986), 133–191.
- Filtering Search: A New Approach to Query-Answering, *SIAM J. Comput.* 15 (1986), 703–724.
- A Functional Approach to Data Structures and Its Use in Multidimensional Searching, *SIAM J. Comput.* 17 (1988), 427–462.
- Lower Bounds on the Complexity of Polytope Range Searching, *J. AMS* 2 (1989), 637–666.
- A Deterministic View of Random Sampling and Its Use in Geometry (with J. Friedman), *Combinatorica* 10 (1990), 229–249.
- Lower Bounds for Orthogonal Range Searching: I. The Reporting Case, II. The Arithmetic Model, *J. ACM* 37 (1990), 200–212, 439–463.
- Triangulating a Simple Polygon in Linear Time, *Disc. Comput. Geom.* 6 (1991), 485–524.
- An Optimal Algorithm for Intersecting Line Segments in the Plane (with H. Edelsbrunner), *J. ACM* 39 (1992), 1–54.
- An Optimal Algorithm for Intersecting Three-Dimensional Convex Polyhedra, *SIAM J. Computing* 21 (1992), 671–696.
- Cutting Hyperplanes for Divide-and-Conquer, *Disc. Comput. Geom.* 9 (1993), 145–158.
- An Optimal Convex Hull Algorithm in Any Fixed Dimension, *Disc. Comput. Geom.* 10 (1993), 377–409.
- On Linear-Time Deterministic Algorithms for Optimization Problems in Fixed Dimension, (with J. Matoušek), *J. Algorithms* 21 (1996), 579–597.
- Lower Bounds for Off-Line Range Searching, *Disc. Comput. Geom.* 17 (1997), 53–65.
- A Spectral Approach to Lower Bounds with Applications to Geometric Searching, *SIAM J. Comput.* 27 (1998), 545–556.
- A Minimum Spanning Tree Algorithm with Inverse-Ackermann Type Complexity, *J. ACM* 47 (2000), 1028–1047.
- The Power of Nonmonotonicity in Geometric Searching, *Disc. Comput. Geom.* 31 (2004), 3–16.
- Lower Bounds for Linear Degeneracy Testing, (with N. Ailon), *J. ACM* 52 (2005), 157–171.