

BERNARD SHIFFMAN

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Education: Ph.D., University of California at Berkeley, 1968 (advisor: Shiing-Shen Chern)
 B.S., Massachusetts Institute of Technology, 1964

Positions: Academy Professor and Professor Emeritus, Johns Hopkins University, 2019–present
 Research Professor, Johns Hopkins University, 2019–2020
 Professor, Johns Hopkins University, 1977–2019
 Chair, Department of Mathematics, Johns Hopkins University, 1990–1993, 2012–2014
 Associate Professor, Johns Hopkins University, 1973–1977
 Assistant Professor, Yale University, 1970–1973
 C.L.E. Moore Instructor, M.I.T., 1968–1970

Visiting Positions: Columbia University, Fall 2014
 Mittag-Leffler Institute, March–April 2008
 Kavli Institute of Theoretical Physics, November 2005
 Université de Grenoble, June 1992, November 1995, May–June 2001, June 2003
 Mathematical Sciences Research Institute, Spring 1996, June 1999
 Université de Paris VI, May 1981, May 1985
 Institut des Hautes Études Scientifiques, Spring 1979
 Universität Kaiserslautern, Summer 1977
 Institute for Advanced Study, Fall 1975

Honors & Grants: Fellow of the American Mathematical Society, Inaugural Class 2013
 National Science Foundation research grants, 1970–present
 National Science Foundation conference grants, 1991, 1997, 2004, 2007
 Woodrow Wilson Faculty Development Award, 1979
 Alfred P. Sloan Research Fellowship, 1973–1975
 National Science Foundation Graduate Fellowship, 1965–1968
 Woodrow Wilson Fellow, 1964 (Honorary)

Editorial Boards: *American Journal of Mathematics*, Editor-in-Chief, 1993–2005; Editor, 1992–1993;
 Associate Editor, 1990–1992, 2005–present.
Forum Mathematicum, Editor, 1988–1995.

Recent Major Talks:

Mathematics Colloquium, National University of Singapore, October 2019.
 Mathematics Colloquium, East China Normal University, Shanghai, May 2015.
 Short Course at the Trondheim Spring School 2013 in Point Processes and Complex
 Analysis, Trondheim, Norway, May 2013.
 University of Maryland Mathematics Colloquium, September 2012.
 Howard University Mathematics Colloquium, March 2011.
 University of Michigan Mathematics Colloquium, December 2010.
 CRM Colloquium, Montréal, November 2008.
 Distinguished Visitors Lecture Series, University of Iowa, February 2008.
 “Frontiers in Mathematics” Lecture Series, Texas A & M University, April 2007.
 Colloquium, Institute of Mathematics, Chinese Academy of Sciences, Beijing, June 2004.

Selected Publications:

Books

- B. Shiffman and A. J. Sommese, *Vanishing theorems on complex manifolds*, Progress in Math. 56, Birkhäuser, Boston, 1985.
- Y. A. Rubinstein and B. Shiffman, eds., *Advances in Complex Geometry*, Contemporary Mathematics, vol. 735, Amer. Math. Soc., Providence, RI, 2019.

Research articles

- B. Shiffman, G. Chirikjian and S. Lyu, Mathematical aspects of molecular replacement. V. Isolating feasible regions in motion spaces, *Acta Cryst. A* 76 (2020) 145–162.
- Z. Lu and B. Shiffman, Asymptotic expansion of the off-diagonal Bergman kernel on compact Kähler manifolds, *J. Geom. Anal.*, 25 (2015), 761–782.
- B. Shiffman, Uniformly bounded orthonormal sections of positive line bundles on complex manifolds; *Proceedings of the Conference on Analysis, Complex Geometry, and Mathematical Physics: In Honor of Duong H. Phong*, Contemporary Mathematics, vol. 644, Amer. Math. Soc., Providence, RI, 2015, pp. 227–240.
- B. Shiffman and S. Zelditch, Number variance of random zeros on complex manifolds, *Geom. Funct. Anal.* 18 (2008) 1422–1475.
- T. Bloom and B. Shiffman, Zeros of random polynomials on \mathbb{C}^m , *Math. Res. Lett.* 14 (2007), 469–479.
- M. R. Douglas, B. Shiffman and S. Zelditch, Critical points and supersymmetric vacua, II: Asymptotics and extremal metrics, *J. Diff. Geometry* 72 (2006), 381–427.
- B. Shiffman and S. Zelditch, Random polynomials with prescribed Newton polytope, *J. Amer. Math. Soc.* 17 (2004), 49–108.
- B. Shiffman and M. Zaidenberg, Two classes of hyperbolic surfaces in \mathbb{P}^3 , *International J. Math.* 11 (2000), 65–101.
- P. Bleher, B. Shiffman and S. Zelditch, Universality and scaling of correlations between zeros on complex manifolds, *Inventiones Math.* 142 (2000), 351–395.
- B. Shiffman and S. Zelditch, Distribution of zeros of random and quantum chaotic sections of positive line bundles, *Commun. Math. Phys.* 200 (1999), 661–683.
- A. Russakovskii and B. Shiffman, Value distribution for sequences of rational mappings and complex dynamics, *Indiana Univ. Math. J.* 46 (1997), 897–932.
- J.-P. Demailly, L. Lempert and B. Shiffman, Algebraic approximations of holomorphic maps from Stein domains to projective manifolds, *Duke Math. J.* 76 (1994), 333–363.
- S. Ji, J. Kollár and B. Shiffman, A global Lojasiewicz inequality for algebraic varieties, *Trans. Amer. Math. Soc.* 329 (1992), 813–818.
- B. Shiffman, Nevanlinna defect relations for singular divisors, *Inventiones Math.* 31 (1975), 155–182.
- R. Harvey and B. Shiffman, A characterization of holomorphic chains, *Annals of Math.* 99 (1974), 553–587.
- B. Shiffman, Extension of positive line bundles and meromorphic maps, *Inventiones Math.* 15 (1972), 332–347.
- B. Shiffman, On the removal of singularities of analytic sets, *Michigan Math. J.* 15 (1968), 111–120.

University Service:

Faculty Editorial Board, Johns Hopkins University Press, 2008-2014.
Doctor of Philosophy Board, 2010–2012.
Homewood Graduate Board, 2005–2011.
Homewood Academic Council, 1999–2000, 2001–2002.
Ad hoc promotion and appointment committees.

Recent Scholarly Service:

NSF Review Panels.
Member of organizing committee for the International Conference on Nevanlinna Theory and Complex Geometry, Notre Dame, March 2012.
Chair of Organizing Committee for the Fields Institute Workshop on Diophantine Approximation and Complex Hyperbolic Geometry, Toronto, November 2008.
American Mathematical Society Committee on Professional Ethics, 2005–2008.
Co-organizer of CRM workshop on “The geometry of holomorphic and algebraic curves in complex algebraic varieties,” Montréal, May 2007.
Co-organizer of American Institute of Mathematics Workshop on Random Analytic Functions and Surfaces, January 2006.

Recent Ph.D. Students:

Junyan Zhu (Ph.D. 2015), Arash Karami (Ph.D. 2014), Timothy Tran (Ph.D. 2014), Jingzhou Sun (Ph.D. 2012), John Baber (Ph.D. 2010), Brian Macdonald (Ph.D. 2008), Scott Zrebiec (Ph.D. 2007)