

GERALD B. FOLLAND

Curriculum Vitae (2025)

Born June 4, 1947, at Salt Lake City, Utah.

Education

B.A., Harvard, 1968
M.A., Princeton, 1970
Ph.D., Princeton, 1971

Employment

1971–73: Courant Institute Instructor, New York University
1973–75: assistant professor of mathematics, University of Washington
1975–80: associate professor of mathematics, University of Washington
1980–2012: professor of mathematics, University of Washington
2012–: professor emeritus of mathematics, University of Washington

Visiting Positions (2 months or more)

June–Sept. 1969: member of technical staff, Bell Laboratories
Sept.–Dec. 1974: assistant professor, Princeton University
Jan.–April 1979: member, Institute for Advanced Study
Sept.–Nov. 1981: professor, Tata Institute of Fundamental Research, Bangalore Centre
Jan.–March 1987: professor, Indian Statistical Institute, Bangalore Centre
April–May 1987: visiting scholar, University of New South Wales
Aug.–Dec. 1993: Ulam Visiting Professor, University of Colorado, Boulder

Publications (other than book reviews)

1. Weyl manifolds, *J. Diff. Geometry* **4** (1970), 145–153.
2. The tangential Cauchy-Riemann complex on spheres, *Trans. Amer. Math. Soc.* **171** (1972), 83–133.
3. (with J. J. Kohn) *The Neumann Problem for the Cauchy-Riemann Complex*, Annals of Math. Studies no. 75, Princeton University Press, 1972.
4. Tangential Cauchy-Riemann complexes on spheres, *Proc. Symp. Pure Math.* **23** (1973), 105–112.
5. A fundamental solution for a subelliptic operator, *Bull. Amer. Math. Soc.* **79** (1973), 373–376.

6. Subelliptic operators on the Heisenberg group, *Proc. Symp. Pure Math.* **26** (1973), 259–261.
7. (with E. M. Stein) Parametrices and estimates for the $\bar{\partial}_b$ complex on strongly pseudoconvex boundaries, *Bull. Amer. Math. Soc.* **80** (1974), 253–258.
8. (with E. M. Stein) Estimates for the $\bar{\partial}_b$ complex and analysis on the Heisenberg group, *Comm. Pure Appl. Math.* **27** (1974), 429–522.
9. Spherical harmonic expansion of the Poisson-Szegő kernel for the ball, *Proc. Amer. Math. Soc.* **47** (1975), 401–408.
10. Subelliptic estimates and functions spaces on nilpotent Lie groups, *Arkiv för Mat.* **13** (1975), 161–207.
11. *Introduction to Partial Differential Equations*, Math. Notes no. 17, Princeton University Press, 1976.
12. On the Rothschild-Stein lifting theorem, *Comm. Partial Diff. Eq.* **2** (1977), 165–191.
13. Applications of analysis on nilpotent groups to partial differential equations, *Bull. Amer. Math. Soc.* **83** (1977), 912–930.
14. On dilations and derivatives, *Several Complex Variables* (proceedings of international conferences, Cortona, 1976–77), Scuola Normale Superiore, Pisa, 1978, 80–86.
15. (with H. T. Hung) Non-isotropic Lipschitz spaces, *Proc. Symp. Pure Math.* **35** (II) (1979), 391–394.
16. Lipschitz classes and Poisson integrals on stratified groups, *Studia Math.* **66** (1979), 37–55.
17. Spectral analysis of a singular nonself-adjoint boundary value problem, *J. Diff. Eq.* **37** (1980), 206–224.
18. Spectral analysis of a nonself-adjoint differential operator, *J. Diff. Eq.* **39** (1981), 151–185.
19. (with E. M. Stein) *Hardy Spaces on Homogeneous Groups*, Math. Notes no. 28, Princeton University Press, 1982.
20. *Lectures on Partial Differential Equations*, Tata Institute of Fundamental Research, 1983.
21. *Real Analysis: Modern Techniques and their Applications*, John Wiley, 1984.
22. On characterizations of analyticity, *Amer. Math. Monthly* **93** (1986), 640–641.

23. *Harmonic Analysis in Phase Space*, Annals of Math. Studies no. 122, Princeton University Press, 1989.
24. Harmonic analysis of the deRham complex on the sphere, *J. Reine Angew. Math.* **398** (1989), 130–143.
25. Remainder estimates in Taylor’s theorem, *Amer. Math. Monthly* **97** (1990), 233–235.
26. *Fourier Analysis and its Applications*, Wadsworth & Brooks/Cole, 1992.
27. Meta-Heisenberg groups, pp. 121–147 in *Fourier Analysis: Analytic and Geometric Aspects* (W. O. Bray, P. S. Milojević, and C. V. Stanojević, eds.), Marcel Dekker, New York, 1994.
28. *A Course in Abstract Harmonic Analysis*, CRC Press, 1995.
29. *Introduction to Partial Differential Equations* (2nd ed.), Princeton University Press, 1995.
30. Fundamental solutions for the wave operator, *Exposit. Math.* **15** (1997), 25–52.
31. From calculus to wavelets: a new mathematical technique, *Resonance* **2**, no. 4 (1997), 25–37.
32. (with A. Sitaram) The uncertainty principle: a mathematical survey, *J. Fourier Anal. Appl.* **3** (1997), 207–238.
33. Hermite distributions associated to the group $O(p, q)$, *Proc. Amer. Math. Soc.* **126** (1998), 1751–1763.
34. *Real Analysis: Modern Techniques and their Applications* (2nd ed.), John Wiley, 1999.
35. How to integrate a polynomial over a sphere, *Amer. Math. Monthly* **108** (2001), 446–448.
36. *Advanced Calculus*, Prentice Hall, 2002.
37. Compact Heisenberg manifolds as CR manifolds, *J. Geom. Analysis* **14** (2004), 521–532.
38. The abstruse meets the applicable: some aspects of time-frequency analysis, *Proc. Indian Acad. Sci. (Math. Sci.)* **116** (2006), 121–136.
39. (with M. Bownik) Duals of Hardy spaces on homogeneous groups, *Math. Nachr.* **280** (2007), 1223–1229.
40. *Quantum Field Theory: A Tourist Guide for Mathematicians*, American Mathematical Society, Providence, RI, 2008.

41. *A Guide to Advanced Real Analysis*, Mathematical Association of America, Washington, DC, 2009.
42. Speaking with the natives: reflections on mathematical communication, *Notices Amer. Math. Soc.* **57** (2010), 1121–1124.
43. A tale of topology, *Amer. Math. Monthly* **117** (2010), 663–672.
44. *A Course in Abstract Harmonic Analysis* (2nd ed.), CRC Press, 2016.
45. Some topics in the history of harmonic analysis in the twentieth century, *Indian J. Pure Appl. Math.* **48** (2017), 1–58.
46. Time-frequency analysis and representations of the discrete Heisenberg group, pp. 3–16 in *Excursions in Harmonic Analysis, Volume 5* (R. Balan, J. J. Benedetto, W. Czaja, M. Dellatore, and K. A. Okoudjou, eds.), Birkhäuser, 2017.
47. The Heisenberg group and its relatives in the work of Elias M. Stein, *J. Geom. Analysis* **31** (2021), 6681–6697. DOI 10.1007/s12220-019-00309-w
48. *The Heisenberg Group: A Survey*, American Mathematical Society, Providence, RI, 2025.

Book Reviews (A few brief reviews are omitted. Reviews are listed by title and author of the book, followed by publication data for the review.)

1. *Differential Forms Orthogonal to Holomorphic Functions or Forms, and Their Properties*, by L. A. Aizenberg and S. A. Dautov. *Bull. Amer. Math. Soc.* **12** (1985), 156–158.
2. *Lectures on Bochner-Riesz Means*, by Katherine Michelle Davis and Yang-Chun Chang. *Bull. Amer. Math. Soc.* **20** (1989), 139–142.
3. *Handbook of Writing for the Mathematical Sciences*, by Nicholas J. Higham; *A Primer of Mathematical Writing*, by Steven G. Krantz. *Amer. Math. Monthly* **105** (1998), 779–781.
4. *The Universal Computer: the Road from Leibniz to Turing*, by Martin Davis; *The Universal History of Computing: From the Abacus to the Quantum Computer*, by Georges Ifrah. *Amer. Math. Monthly* **109** (2002), 581–583.
5. *Imagining Numbers (Particularly the Square Root of Minus Fifteen)*, by Barry Mazur; *Abel’s Proof: An Essay on the Sources and Meaning of Mathematical Unsolvability*, by Peter Pesic; *The Riemann Hypothesis: The Greatest Unsolved Problem in Mathematics*, by Karl Sabbagh. *Amer. Math. Monthly* **111** (2004), 75–81.

6. *Functional Analysis*, by Peter D. Lax; *Functional Analysis: An Introduction*, by Yuli Eidelman, Vitaly Milman, and Antonis Tsolomitis. *Amer. Math. Monthly* **112** (2005), 937–940.
7. *Analysis I: Convergence, Elementary Functions*, and *Analysis II: Differential and Integral Calculus, Fourier Series, Holomorphic Functions*, by Roger Godement. *Amer. Math. Monthly* **114** (2007), 172–176.
8. *The Best Writing on Mathematics 2010*, edited by Mircea Pitici. *Notices Amer. Math. Soc.* **58** (2011), 1451–1452.
9. *Why Beliefs Matter: Reflections on the Nature of Science*, by E. Brian Davies. *Notices Amer. Math. Soc.* **59** (2012), 553–555.
10. *The Universe in Zero Words: The Story of Mathematics as Told through Equations*, by Dana Mackenzie; *In Pursuit of the Unknown: 17 Equations That Changed the World*, by Ian Stewart. *Notices Amer. Math. Soc.* **59** (2012), 1562–1564.
11. *Hidden Harmony—Geometric Fantasies: The Rise of Complex Function Theory*, by Umberto Bottazzini and Jeremy Gray. *Amer. Math. Monthly* **122** (2015), 183–188.
12. *A History in Sum: 150 Years of Mathematics at Harvard (1825–1975)*, by Steve Nadis and Shing-Tung Yau. *Amer. Math. Monthly* **122** (2015), 508–510.
13. *Birds and Frogs: Selected Papers 1990–2014*, by Freeman Dyson. *Notices Amer. Math. Soc.* **63** (2016), 442–443.
14. *The Real and the Complex: A History of Analysis in the 19th Century*, by Jeremy Gray. *Amer. Math. Monthly* **123** (2016), 949–952.
15. *50 Visions of Mathematics*, edited by Sam Parc. *Math. Intelligencer* **38** (4) (2016), 87.