

CHARLES L. FEFFERMAN

BIBLIOGRAPHY

1. *An easy proof of the fundamental theorem of algebra*, American Mathematical Monthly, August-September, 1967.
2. *A Radon-Nikodym theorem for finitely additive set functions*, Pacific Journal of Mathematics, **23** (1967).
3. *L_p spaces over finitely additive measures*, Pacific Journal of Mathematics, **26** (1968).
4. *On some singular convolution operators*, Bulletin of the American Mathematical Society, **75** (1969), 765-769.
5. *Inequalities for strongly singular convolution operators*, Acta Mathematica, **124** (1970), 10-36.
6. *On the divergence of multiple Fourier series*, Bulletin of the American Mathematical Society, **77** (1971), 191-195.
7. *On the convergence of multiple Fourier series*, Bulletin of the American Mathematical Society, **77** (1971), 744-745.
8. (with E. M. Stein) *Some maximal inequalities*, American Journal of Mathematics, **93** (1971), 107-115.
9. *The multiplier problem for the ball*, Annals of Mathematics, **94** (1971), 330-336.
10. *Characterizations of bounded mean oscillation*, Bulletin of the American Mathematical Society, **77** (1971), 587-588.
11. *Estimates for double Hilbert transforms*, Studia Math., **44** (1972), 1-15.
12. (with E. M. Stein) *H^p spaces of several variables*, Acta Mathematica, **129** (1972), 137-194.
13. (with R. Beals) *On local solvability of linear partial differential equations*, Annals of Mathematics, **97** (1973), 482-498.
14. *Pointwise convergence of Fourier series*, Annals of Mathematics, **98** (1973), 551-571.
15. *L^p bounds for pseudo-differential operators*, Israel Journal of Mathematics, **14** (1973), 413-417.

16. *A note on spherical summation multipliers*, Israel Journal of Mathematics, **15** (1973), 44-52.
17. (with R. Beals) *Spacially inhomogeneous pseudodifferential operators*, I, Communications in Pure and Applied Mathematics, **27** (1974), 1-24.
18. *The Bergman kernel and biholomorphic mappings of pseudoconvex domains*, Inventiones Mathematicae, **26** (1974), 1-65.
19. (with N. Riviere and Y. Sagher) *Interpolation between H^p spaces: The real method*, Transactions of the American Mathematical Society, **191** (1974), 75-81.
20. *Convergence on almost every line for functions with gradient in $L^p(\mathbb{R}^n)$* , Ann. de l'Institut Fourier, **24** (1974), 75-81.
21. *Recent progress in classical Fourier Analysis*, Proceedings of the International Congress of Mathematicians, Vancouver, 1974, invited address.
22. (with B. Muckenhaupt) *Two non-equivalent conditions for weight functions*, Proceedings of the American Mathematical Society, **45** (1974), 99-104.
23. (with R. Coifman) *Weighted norm inequalities for maximal functions and singular integrals*, Studia Math., **51** (1974), 241-250.
24. (with R. Beals) *On hypoellipticity of second-order operators*, Communications in Partial Differential Equations, **1**, No. 1 (1976), 73-85.
25. *Monge-Ampere equations, the Bergman kernel, and geometry of pseudoconvex domains*, Annals of Mathematics, **103** (1976), 395-416.
26. *Harmonic analysis and H_p spaces*, Studies in Harmonic Analysis, MAA Studies, **13** (1976).
27. *Some remarks on boundary behavior of analytic functions*, Proceedings of the American Mathematical Society Symposium on Harmonic Analysis and Homogeneous Spaces
28. (with A. Córdoba) *A wave-packet transform and Egorov's Theorem on Fourier integral operators*, Communications on Partial Differential Equations, **3** (1978), 979-1005.
29. (with D. H. Phong) *On positivity of pseudo-differential operators*, Proceedings of the National Academy of Sciences, **75** (1978), 4673-4674.
30. (with D. H. Phong) *Sharp Garding inequalities*, Proceedings of the Symposia in Pure Mathematics, **35**, Part 2 (1978), 137-141.

31. (with A. Córdoba and R. Fefferman) *Differentiation along vector fields in R^2* .
32. (with D. H. Phong) *An uncertainty principle for pseudo-differential operators*, Proceedings of the National Academy of Sciences.
33. (with P. Ash, M. Ash, and R. Jones) *Singular integral operators with complex homogeneity*, Studia Math, **65** (1979), 31-50.
34. (with D. H. Phong) *On the lowest eigenvalue of a pseudo-differential operator*, Proceedings of the National Academy of Sciences, USA, **76** (1979), 6055-6056.
35. *Parabolic invariant theory in complex analysis*, Advances in Mathematics, **31** (1979), 131-262.
36. (with D. H. Phong) *On the asymptotic eigenvalue distribution of a pseudo-differential operator*, Proceedings of the National Academy of Sciences, USA, **77**, N. 10 (1980), 5622-5625.
37. (with M. Cwikel) *Maximal seminorms in weak L^1* , Studia Math., **69** (1980), 149-154.
38. (with D. H. Phong) *The uncertainty principle and sharp Garding inequalities*, Communications in Pure and Applied Mathematics, **34** (1981), 285-331.
39. (with D. H. Phong) *Symplectic geometry and positivity of pseudo-differential operators*, Proceedings of the National Academy of Sciences, USA, **79** (1982), 710-713.
40. (with D. H. Phong) *Subelliptic eigenvalue problems*, Proceedings of the Chicago Conference in Honor of A. Zygmund (1983), 590-606.
41. (with R. M. Beals and R. Grossman) *Strictly pseudoconvex domains in C^n* , Bulletin of the American Mathematical Society, **8**, No. 2 (1983), 125-322.
42. *The Uncertainty Principle*, Bulletin of the American Mathematical Society, **9**, No. 2 (1983), 129-206.
43. (with H. Donnelly) *L^2 -cohomology and index theorem for the Bergman metric*, Annals of Mathematics, **118** (1983), 593-618.
44. (with J.-P. Kahane and E. M. Stein) *The scientific achievements of Antoni Zygmund*, Proceedings of the Chicago Conference in honor of A. Zygmund, to appear.
45. (with M. Cwikel) *The canonical seminorm on Weak L^1* , Studia Mathematica, T. LXXVIII (1984).
46. *The thermodynamic limit for a crystal*, Comm. Math. Phys., **98** (1985), 289-311.

47. *The atomic and molecular nature of matter*, Rev. Mat. Iberoam., **1**, no. 1 (1985), 1-44.
48. (with A. Sanchez-Calle) *Fundamental Solutions for Second-Order Subelliptic Operators*, Annals to Mathematics, **124**, no. 2, 247-272.
49. *The N-Body Problem in Quantum Mechanics*, Communications in Pure and Applied Mathematics, **39** (1986), S67-S109.
50. (with H. Donnelly) *Fixed point formula for the Bergman kernel*, American Journal of Mathematics, **108** (1986), 1241-1257.
51. (with R. de la Llave) *Relativistic Stability of Matter I*, Revista Mat. Iberoamer., **2** (1986), 119-213.
52. (with H. Donnelly) *Nodal Sets of eigenfunctions on Riemannian manifolds*, Inventiones Mathematicae, **93** (1988), 161-183.
53. (with J. J. Kohn) *Hölder Estimates on Domains of Complex Dimension Two and on Three Dimensional CR Manifolds*, Advances in Mathematics, **69** (1988), 223-303.
54. (with L. Seco) *An upper bound for the number of electrons in a large ion*, Proceedings of the National Academy of Sciences, **86** (1989), 3464-3465.
55. (with J. J. Kohn and M. Machedon) *Hölder Estimates on CR Manifold with a Diagonalizable Levi Form*, Advances in Mathematics, **84** (1990), 1-90.
56. (with L. Seco) *The Ground-State Energy of a Large Atom*, Bulletin of the A.M.S., **23** (1990), 525-530.
57. (with L. Seco) *Asymptotic Neutrality of Large Ions*, Comm. Math. Phys. **128**, (1990), 109-130.
58. (with L. Seco) *Eigenvalues and Eigenfunctions of Ordinary Differential Operators*, Advances in Math., Vol. 95, No. 2, (1992), 145-305.
59. (with L. Seco) *Aperiodicity of the Hamiltonian Flow in the Thomas-Fermi Potential*, Revista Mathematica Iberoamericana, Vol. 9, No. 3, (1993), 409-551.
60. (with L. Seco) *On the Dirac and Schwinger Corrections to the Ground-State Energy of an Atom*, Advances in Math., Vol. 107, No. 1, (1994), 1-185.
61. *Atoms and Analytic Number Theory in Proceedings of the AMS Centenary Symposium*, AMS.

62. (with R. Narasimhan) *Bernstein's Inequality on Algebraic Curves*, Ann. Inst. Fourier, Grenoble **43**, No. 5 (1993), 1319-1348.
63. (with P. Constantin) *Direction of Vorticity and the Problem of Global Regularity for the Navier-Stokes Equations*, Foias Volume (Vol. 42, No. 3, 1993), Indiana U. Math. Journal, 775-789.
64. *A Trigonometric Sum Relevant to the Non-Relativistic Theory of Atoms*, Proc. Nat. Acad. Sci, U.S.A. (1994).
65. *Stability of Coulomb Systems in a Magnetic Field*, Proc. Nat. Acad. Sci., U.S.A., Vol. 92, (1995), 5006-5007.
66. (with R. Narasimhan) *On the polynomial-like behaviour of certain algebraic functions*, Ann-de l'Inst. Fourier, Vol. 44, No. 2, (1994), 1091-1179.
67. (with L. Seco) *The Eigenvalue Sum for a One-Dimensional Potential*, Advances in Math., Vol. 108, No. 2, (1994), 263-335.
68. (with L. Seco) *The Density in a One-Dimensional Potential*, Advances in Math., Vol. 107, No. 2, (1994), 187-364.
69. *Reconstructing a neural net from its output*, Revista Mat. Iberoam., Vol. 10, No. 3, (1994), 507-555.
70. (with L. Seco) *The Density in a Three-Dimensional Radial Potential*, Advances in Math., Vol. 111, No. 1, (1995), 88-161.
71. (with R. Narasimhan) *Bernstein's inequality and the resolution of spaces of analytic functions*, Duke Math. J. **81**, No. 1, (1995), 77-98.
72. (with J. Fröhlich and G.M. Graf) *Stability of non-relativistic quantum-mechanical matter coupled to the (ultraviolet cutoff) radiation field*, Proc. Nat. Acad. Sci. U.S.A. (1996).
73. *On electrons and nuclei in a magnetic field*, Advances in Math **124**, No. 1, (1996), 100-153.
74. (with L. Seco) *Interval arithmetic in quantum mechanics*, in Application of Interval Computation, Kluwer, (1996).
75. (with L. Bugliaro, J. Fröhlich, G.M. Graf, J. Stubbe) *A Lieb-Thirring Bound for a Magnetic Pauli Hamiltonian*, Comm. Math. Phys. **187**, 567-582, (1997).
76. (with L.A. Seco) *Number Theory & Atomic Densities*, IMA, Emerging Applications of Number Theory, Springer Verlag, **109**, 205-218, (1999).

77. (with D. Córdoba) *Behavior of several 2D fluid equations in singular scenarios*, Proc. Nat. Acad. Sci., USA **98**, no. 8, 4311-4312, (2001).
78. (with D. Córdoba) *On the collapse of tubes carried by 3D incompressible flows*, Comm. Math. Phys., **222**, no. 2, 293-298, (2001).
79. (with D. Córdoba) *Scalars Convected by a Two-Dimensional Incompressible Flow*, Comm. Pure Appl. Math. **55**, no. 2, 255-260, (2002).
80. (with D. Córdoba) *Potato Chip Singularities of 3D Flows*, SIAM Journal on Mathematical Analysis **33**, no. 4, 786-789, (2002).
81. (with D. Córdoba) *Growth of solutions for GQ and 2D Euler equations*, Journal of the American Mathematical Society, Vol. 15, No. 3, pp. 665-670, (2002).
82. (with R. Graham) *Q-Curvature and Poincare Metrics*, Math. Res. Lets., Vol. 9, pp. 139-151, (2002).
83. (with D. Córdoba and M. Fontalos), *Drops: The collapse of capillary jets*, Proc. Nat. Acad. Sci., Vol. 99, No. 17, pp. 1006-1007, (2002).
84. (with K. Hirachi), *Ambient metric construction of Q-curvature in conformal and CR geometries*, Math. Res. Lets. **10**, pp. 819-831, (2003).
85. (with A. Córdoba, D. Córdoba and M. Fontelos), *A geometrical constraint for capillary jet breakup*, Advances in Mathematics, **187**, pp. 228-239, (2004).
86. (with D. Córdoba, R. de la Llave), *On squirt-singularities in hydrodynamics*, SIAM J. Math. Analysis, **36**, No. 1, pp. 204-213, (2004).
87. *A Sharp Form of Whitney's Extension Theorem*, Annals of Math., **161**, pp. 509-577, (2005).
88. *Interpolation and Extrapolation of Smooth Functions by Linear Operators*, Revista Mathematica Iberoamericana, 21 (2005), no. 1, 313-348.
89. *Whitney's Extension Problem in Certain Function Spaces*, preprint.
90. *A generalized sharp Whitney theorem for jets*, Revista Matematica Iberoamericana, vol. 21, No. 2, pp. 577-688, (2005).
91. *Whitney's extension problem for C^m* , Annals of Math., vol. 164, No. 1, pp. 313-359, (2006).
92. *Fluids and Singular Integrals*, Contemporary Mathematics, Vol. 411, pp. 39-52, (2006).

93. (with P. Constantin, E.S. Titi, and A. Zarnescu), *Regularity of coupled two-dimensional Nonlinear Fokker-Planck and Navier-Stokes*, Communications in Math. Physics, accepted (2006).
94. (with E. Bierstone, P.D. Milman and W. Pawlucki), *Examples Concerning Whitney's C^m Extension Problem*, Mathematical Research Letters, **13**, No. 5-6, pp. 833-845, (2006).
95. *The Structure of Linear Extension Operators for C^m* , Revista Mathematica Iberoamericana, **23**, No. 1, pp. 269-280, (2007).
96. (with P. Batchourine), *The volume near the zeros of a smooth function*, Revista Mat. Iberoam., **23**, No. 1, pp. 259-267, (2007).
97. *The Work of Terence Tao*, International Congress of Mathematicians, Vol. I, pp. 78-86, *Eur. Math. Soc., Zürich*, (2007).
98. *C^m extension by linear operators*, Annals of Math., Vol. 166, No. 3, pp. 779-835, (2007).
99. (with B. Klartag), *Whitney's extension problems and interpolation of data*, Bulletin American Math. Society, Posted November, 2008.
100. (with B. Klartag), *Fitting a C^m -Smooth Function to Data*, Part I, Annals of Math., Vol. 169, pp. 315-346, (2009), Part II, Revista Mathematica Iberoamericana, **25**, pp. 49-273, (2009), Part III, Annals of Math. 170 (2009), no. 1, 427-441..
101. *The C^m Norm of a Function with Prescribed Jets II*, Revista Mathematica Iberoamericana, 25 (2009), no. 1, 275-421.
102. (with S.B. Damelin), *On Approximate and Exact Alignment of Data in Euclidean Space via Euclidean Motions and Smooth Distortions*, in preparation, (2009).
103. (with B. Klartag), *An example related to Whitney extension with almost minimal C^m norm*. Rev. Mat. Iberoam. 25 (2009), no. 2, 423-446.
104. *Extension of $C^{m,\omega}$ smooth functions by linear operators*, Rev. Mat. Iberoam. 25 (2009), no. 1, 1-48.
105. *The C^m norm of a function with prescribed jets I*. Rev. Mat. Iberoam. 26 (2010), no. 3, 1075-1098.
106. (with A. Israel), *The Jet of an Interpolant on Finite Set*, Rev. Math. Iberoam. 27 (2011), no. 1, 355-360.

107. (with J. L. Rodrigo), *Analytic Sharp Fronts for the Surface Quasi-Geostrophic Equation*, Comm. Math. Phys. 303 (2011), no. 1, 261-288.
108. *Interpolation by Linear Programming I*, Discrete Contin. Dyn. Syst. 30 (2011), no. 2, 477-4922
109. (with A. Castro, C. Fefferman, F. Gancedo and M. López), *Turning waves and breakdown for incompressible flows*, Proc. Natl. Acad. Sci. 108 (2011), no. 12, 4754–4759.
110. *Nearly Optimal Interpolation of data in $C^2(\mathbf{R}^2)$ - Part I*, Rev. Mat. Iberoam. 28 (2012), no. 2, 415-533
111. (with A. Castro, F. Gancedo and M. López-Vernández) *Rayleigh-Taylor breakdown for the Muskat problem with applications to water waves*, Ann. of Math. (2) 175 (2012), no. 2, 909-948.
112. (with A. Castro, F. Gancedo and J. Gómez-Serrano), *Splash Singularity for water waves*, Proc. Natl. Acad. Sci. 109 (2012), no. 3, 733-738.
113. (with G. Robin), *The ambient metric*. Ann. of Math. Studies, 178. Princeton University Press, Princeton, NJ 2012.
114. (with G. Luli and J. Rodrigo), *The spine of an SQG almost-sharp front*. Nonlinearity 25 (2012), no. 2, 329-342.
115. (with F. Ricci), *Some examples of C^∞ extension by linear operators*. Rev. Mat. Iberoam. 28 (2012), no. 1, 297-304.
116. (with J. Rodrigo), *Almost sharp fronts for SQG: the limit equations*. Comm. Math. Phys. 313 (2012), no. 1, 131-153.
117. (with M. Weinstein), *Honeycomb lattice potentials and Dirac points*. J. Amer. Math. Soc. 25 (2012), no. 4, 1169-1220.
118. (with B. Klartag), *Erratum: Fitting a C^m -smooth function to data II*. Rev. Mat. Iberoam. 28 (2012), no. 4, 1193.
119. (with A. Castro, D. Córdoba, and F. Gancedo), *Finite time singularities for water waves with surface tension*. J. Math. Phys. 53 (2012), no. 11, 115622, 26 pp.
120. (with S. Damelin and W. Glover), *A BMO theorem for ϵ -distorted diffeomorphisms on \mathbb{R}^D and an application to comparing manifolds of speech and sound*. Involve 5 (2012), no. 2, 159-172.

121. *Sharp and almost-sharp fronts for the SQG equation*. Mathematical aspects of fluid mechanics, 116-129, London Math. Soc. Lecture Note Ser., 402, Cambridge Univ. Press, Cambridge, 2012.
122. (with J. Kollár), *Continuous solutions of linear equations*. From Fourier analysis and number theory to radon transforms and geometry, 233-282, Dev. Math., 28, Springer, New York, 2013.
123. (with A. Castro, D. Córdoba, and F. Gancedo), *Breakdown of smoothness for the Muskat problem*. Arch. Ration. Mech. Anal. 208 (2013), no. 3, 805-909.
124. (with R. Graham), *Juhl's formulae for GJMS operators and Q-curvatures*. J. Amer. Math. Soc. 26 (2013), no. 4, 1191-1207.
125. (with A. Castro, D. Córdoba, F. Gancedo, and J. Gómez-Serrano), *Finite time singularities for the free boundary incompressible Euler equations*. Ann. of Math. (2) 178 (2013), no. 3, 1061-1134.
126. *Smooth interpolation of data by efficient algorithms*. Excursions in harmonic analysis. Volume 1, 71-84, Appl. Numer. Harmon. Anal., Birkhäuser/Springer, New York, 2013.
127. (with A. Israel and G. Luli), *Sobolev extension by linear operators*. J. Amer. Math. Soc. 27 (2014), no. 1, 69-145.
128. (with M. Weinstein), *Wave packets in honeycomb structures and two-dimensional Dirac equations*. Comm. Math. Phys. 326 (2014), no. 1, 251-286.
129. (with A. Castro, D. Córdoba, F. Gancedo, and J. Gómez-Serrano), *Structural stability for the splash singularities of the water waves problem*. Discrete Contin. Dyn. Syst. 34 (2014), no. 12, 4997-5043.
130. (with D. McCormick, J. Robinson, and J. Rodrigo), *Higher order commutator estimates and local existence for the non-resistive MHD equations and related models*. J. Funct. Anal. 267 (2014), no. 4, 1035-1056.
131. (with A. Israel and G. Luli), *The structure of Sobolev extension operators*. Rev. Mat. Iberoam. 30 (2014), no. 2, 419-429.
132. (with G. Luli), *The Brenner-Hochster-Kollár and Whitney problems for vector-valued functions and jets*. Rev. Mat. Iberoam. 30 (2014), no. 3, 875-892.