

# HARMONIC ANALYSIS AND ELLIPTIC EQUATIONS ON REAL EUCLIDEAN SPACES AND ON ROUGH SETS

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- [1] M. CHRIST, A  $T(b)$  theorem with remarks on analytic capacity and the Cauchy integral, *Colloq. Math.* **60/61** (1990), no. 2, 601–628. MR 1096400. Zbl 0758.42009. Available at <http://pldml.icm.edu.pl/pldml/element/bwmeta1.element.desklight-9b5a38f7-8096-41e3-8845-bb2f37d9a814>.
- [2] G. DAVID and D. JERISON, Lipschitz approximation to hypersurfaces, harmonic measure, and singular integrals, *Indiana Univ. Math. J.* **39** (1990), no. 3, 831–845. MR 1078740. Zbl 0758.42008. doi: 10.1512/iumj.1990.39.39040.
- [3] G. DAVID and S. SEMMES, *Singular integrals and rectifiable sets in  $\mathbb{R}^n$ : Beyond Lipschitz graphs*, Astérisque **193**, Société Mathématique de France, Paris, 1991. MR 1113517. Zbl 0743.49018.
- [4] G. DAVID and S. SEMMES, *Analysis of and on uniformly rectifiable sets*, Mathematical Surveys and Monographs **38**, American Mathematical Society, Providence, RI, 1993, ISBN 0-8218-1537-7. MR 1251061. Zbl 0832.42008. doi: 10.1090/surv/038.
- [5] L. C. EVANS and R. F. GARIEPY, *Measure theory and fine properties of functions*, Studies in Advanced Mathematics, CRC Press, Boca Raton, FL, 1992, ISBN 0-8493-7157-0. Revised in 2015. MR 1158660. Zbl 0804.28001. Available at <https://www.crcpress.com//Evans-Gariepy/p/book/9781482242386>.
- [6] J. GARCÍA-CUERVA and J. L. RUBIO DE FRANCIA, *Weighted norm inequalities and related topics*, North-Holland Mathematics Studies **116**, North-Holland, Amsterdam, 1985, ISBN 0-444-87804-1. MR 807149. Zbl 0578.46046. Available at <http://www.sciencedirect.com/science/bookseries/03040208/116>.
- [7] D. GILBARG and N. S. TRUDINGER, *Elliptic partial differential equations of second order*, 2nd ed., Grundlehren der Mathematischen Wissenschaften **224**, Springer, Berlin, 1983, ISBN 3-540-13025-X. Reprinted in 1998 and 2001. MR 737190. Zbl 0562.35001. doi: 10.1007/978-3-642-61798-0.
- [8] M. GRÜTER and K.-O. WIDMAN, The Green function for uniformly elliptic equations, *Manuscripta Math.* **37** (1982), no. 3, 303–342. MR 657523. Zbl 0485.35031. doi: 10.1007/BF01166225. Available at <http://www.digizeitschriften.de/dms/img/?PID=GDZPPN002224135>.
- [9] L. L. HELMS, *Introduction to potential theory*, Pure and Applied Mathematics **22**, Wiley, New York, 1969. MR 0261018. Zbl 0188.17203.
- [10] L. L. HELMS, *Potential theory*, 2nd ed., Springer, London, 2014, ISBN 978-1-4471-6421-0; 978-1-4471-6422-7. MR 3308615. Zbl 1295.31001. doi: 10.1007/978-1-4471-6422-7.
- [11] C. E. KENIG, *Harmonic analysis techniques for second order elliptic boundary value problems*, CBMS Regional Conference Series in Mathematics **83**, American Mathematical Society, Providence, RI, 1994, ISBN 0-8218-0309-3. MR 1282720. Zbl 0812.35001. doi: 10.1090/cbms/083.
- [12] E. M. STEIN, *Singular integrals and differentiability properties of functions*, Princeton Mathematical Series **30**, Princeton University Press, Princeton, NJ, 1970. MR 0290095. Zbl 0207.13501. Available at [https://books.google.com/books?id=\\_9wDDAAAQBAJ](https://books.google.com/books?id=_9wDDAAAQBAJ).
- [13] E. M. STEIN, *Harmonic analysis: real-variable methods, orthogonality, and oscillatory integrals*, Princeton Mathematical Series **43**, Princeton University Press, Princeton, NJ, 1993, ISBN 0-691-03216-5. MR 1232192. Zbl 0821.42001. Available at <https://books.google.com.au/books?id=btODDAAAQBAJ>.
- [14] E. M. STEIN and G. WEISS, *Introduction to Fourier analysis on Euclidean spaces*, Princeton Mathematical Series **32**, Princeton University Press, Princeton, NJ, 1971. MR 0304972. Zbl 0232.42007.