

# Bibliography

- [A05] H. Abels, *Pseudodifferential boundary value problems with non-smooth coefficients*, Commun. Part. Diff. Eq. **30** (2005), 1463–1503.
- [ADN64] S. Agmon, A. Douglis, and L. Nirenberg, *Estimates near the boundary for solutions of elliptic partial differential equations satisfying general boundary conditions, II*, Commun. Pure Appl. Math. **17** (1964), 35–92.
- [A65] S. Agmon, *Lectures on Elliptic Boundary Value Problems*, Van Nostrand Math. Studies, Van Nostrand, Princeton, NJ, 1965.
- [AB64] M. F. Atiyah and R. Bott, *The index theorem for manifolds with boundary*, Proc. Bombay Symp. on Differential Analysis (Oxford), 1964, pp. 175–186.
- [AS68] M. F. Atiyah and I. M. Singer, *The index of elliptic operators*, Ann. Math. **87** (1968), 484–530.
- [ABP73] M. F. Atiyah, R. Bott, and V. K. Patodi, *On the heat equation and the index theorem*, Invent. Math. **19** (1973), 279–330.
- [APS75] M. F. Atiyah, V. K. Patodi, and I. M. Singer, *Spectral asymmetry and Riemannian geometry I*, Math. Proc. Camb. Phil. Soc. **77** (1975), 43–69.
- [AE99] G. Avramidi and G. Esposito, *Gauge theories on manifolds with boundary*, Commun. Math. Phys. **200** (1999), 495–543.
- [B56] M. S. Birman, *On the theory of self-adjoint extensions of positive definite operators*, Mat. Sb. **38**: 90 (1956), 431–450, Russian.
- [BW93] B. Booss-Bavnbek and K. P. Wojciechowski, *Elliptic Boundary Problems for Dirac Operators*, Birkhäuser Boston, Inc., Cambridge, MA, 1993.
- [B66] L. Boutet de Monvel, *Comportement d'un opérateur pseudo-différentiel sur une variété à bord, I-II*, J. Anal. Math. **17** (1966), 241–304.

- [B71] L. Boutet de Monvel, *Boundary problems for pseudo-differential operators*, Acta Math. **126** (1971), 11–51.
- [BGW08] B. M. Brown, G. Grubb, and I. G. Wood, *M-functions for closed extensions of adjoint pairs of operators with applications to elliptic boundary problems*, arXiv:0803.3630 (to appear).
- [BMNW08] B.M. Brown, M. Marletta, S. Naboko, and I.G. Wood, *Boundary triplets and M-functions for non-selfadjoint operators, with applications to elliptic PDEs and block operator matrices*, J. London Math. Soc. **77** (2008), 700–718.
- [C63] A. P. Calderón, *Boundary value problems for elliptic equations*, Proc. Joint Soviet-American Symp. on PDE, Novosibirsk, Acad. Sci. USSR Siberian Branch, 1963, pp. 303–304.
- [C40] J. W. Calkin, *Symmetric transformations in Hilbert space*, Duke Math. J. **7** (1940), 504–508.
- [C90] J. B. Conway, *A Course in Functional Analysis, Second Edition*, Springer-Verlag, New York, 1990.
- [CH62] R. Courant and D. Hilbert, *Methods of Mathematical Physics II*, Interscience Publishers, New York, 1962.
- [DM91] V. A. Derkach and M. M. Malamud, *Generalized resolvents and the boundary value problems for Hermitian operators with gaps*, J. Funct. Anal. **95** (1991), 1–95.
- [DS58] N. Dunford and J. Schwartz, *Linear Operators, Part I: General Theory*, Interscience Publishers, New York, 1958.
- [EE87] D. E. Edmunds and W. D. Evans, *Spectral Theory and Differential Operators*, Clarendon Press, Oxford, 1987.
- [E81] G. I. Eskin, *Boundary Value Problems for Elliptic Pseudodifferential Equations*, Transl. Math. Monogr. 52, Amer. Math. Soc., Providence, RI, 1981.
- [E98] L. C. Evans, *Partial Differential Equations*, Amer. Math. Soc., Providence, RI, 1998.
- [EM99] W. N. Everitt and L. Markus, *Boundary Value Problems and Symplectic Algebra for Ordinary Differential and Quasi-differential Operators*, Amer. Math. Soc., Providence, RI, 1999.
- [FGLS96] B. V. Fedosov, F. Golse, E. Leichtnam, and E. Schrohe, *The noncommutative residue for manifolds with boundary*, J. Funct. Anal. **142** (1996), 1–31.
- [F69] A. Friedman, *Partial Differential Equations*, Holt, Rinehart and Winston, New York, 1969.
- [F34] K. Friedrichs, *Spektraltheorie halbbeschränkter Operatoren und Anwendung auf die Spektralzerlegung von Differentialoperatoren*, Math. Ann. **109** (1934), 465–487.
- [F68] K. Friedrichs, *Pseudo-Differential Operators, an Introduction*, Courant Inst. Math. Sci., New York, 1968.
- [FS70] D. Fujiwara and N. Shimakura, *Sur les problèmes aux limites stablement variationnels*, J. Math. Pures Appl. **49** (1970), 1–28.

- [G53] L. Gårding, *Dirichlet's problem for linear elliptic partial differential equations*, Math. Scand. **1** (1953), 55–72.
- [GT77] D. Gilbarg and N. S. Trudinger, *Elliptic Partial Differential Equations of Second Order*, Grundlehren Math. Wiss. vol. 224, Springer-Verlag, Berlin, 1977.
- [Gi74] P. B. Gilkey, *The Index Theorem and the Heat Equation*, Publish or Perish Press, Boston, MA, 1974.
- [Gi85] P. B. Gilkey, *Invariance Theory, the Heat Equation, and the Atiyah-Singer Index Theorem*, Publish or Perish Press, Boston, MA, 1985, Second edition 1994, CRC Press.
- [G60] I. C. Gohberg, *On the theory of multidimensional singular integral equations*, Dokl. Akad. Nauk SSSR **133** (1960), 1279–1282.
- [GG91] V. I. Gorbachuk and M. L. Gorbachuk, *Boundary Value Problems for Operator Differential Equations*, Kluwer, Dordrecht, 1991.
- [GH90] G. Grubb and L. Hörmander, *The transmission property*, Math. Scand. **67** (1990), 273–289.
- [G68] G. Grubb, *A characterization of the non-local boundary value problems associated with an elliptic operator*, Ann. Scuola Norm. Sup. Pisa **22** (1968), 425–513.
- [G70] G. Grubb, *Les problèmes aux limites généraux d'un opérateur elliptique, provenant de la théorie variationnelle*, Bull. Sc. Math. **94** (1970), 113–157.
- [G71] G. Grubb, *On coerciveness and semiboundedness of general boundary problems*, Israel J. Math. **10** (1971), 32–95.
- [G73] G. Grubb, *Weakly semibounded boundary problems and sesquilinear forms*, Ann. Inst. Fourier Grenoble **23** (1973), 145–194.
- [G74] G. Grubb, *Properties of normal boundary problems for elliptic even-order systems*, Ann. Scuola Norm. Sup. Pisa Ser. IV **1** (1974), 1–61.
- [G77] G. Grubb, *Boundary problems for systems of partial differential operators of mixed order*, J. Funct. Anal. **26** (1977), 131–165.
- [G84] G. Grubb, *Singular Green operators and their spectral asymptotics*, Duke Math. J. **51** (1984), 477–528.
- [G90] G. Grubb, *Pseudo-differential boundary problems in  $L_p$  spaces*, Commun. Part. Diff. Eq. **15** (1990), 289–340.
- [G91] G. Grubb, *Parabolic pseudo-differential boundary problems and applications*, *Lecture Notes Math. vol. 1495*, "Microlocal Analysis and Applications", Montecatini Terme 1989, Springer-Verlag (eds. L. Cattabriga and L. Rodino), 1991, pp. 46–117.
- [G95] G. Grubb, *Parameter-elliptic and parabolic pseudodifferential boundary problems in global  $L_p$  Sobolev spaces*, Math. Z. **218** (1995), 43–90.

- [G96] G. Grubb, *Functional Calculus of Pseudodifferential Boundary Problems*, *Prog. Math. vol. 65, Second Edition*, Birkhäuser, Boston, 1996, first edition issued 1986.
- [G99] G. Grubb, *Trace expansions for pseudodifferential boundary problems for Dirac-type operators and more general systems*, *Ark. Mat.* **37** (1999), 45–86.
- [G03] G. Grubb, *Spectral boundary conditions for generalizations of Laplace and Dirac operators*, *Commun. Math. Phys.* **242** (2003), 243–280.
- [G08] G. Grubb, *The local and global parts of the basic zeta coefficient for pseudodifferential boundary operators*, *Math. Ann.* **341** (2008), 735–788.
- [G57] N. M. Günther, *Die Potentialtheorie und ihre Anwendungen auf Grundaufgaben der mathematischen Physik*, Teubner, Leipzig, 1957.
- [HP57] E. Hille and R. S. Phillips, *Functional Analysis and Semigroups*, vol. 31, Amer. Math. Soc. Colloq. Publ., 1957.
- [H63] L. Hörmander, *Linear Partial Differential Operators*, *Grundlehren Math. Wiss. vol. 116*, Springer-Verlag, Berlin, 1963.
- [H65] L. Hörmander, *Pseudo-differential operators*, *Commun. Pure Appl. Math.* **13** (1965), 501–517.
- [H66] L. Hörmander, *Pseudo-differential operators and non-elliptic boundary problems*, *Ann. Math.* **83** (1966), 129–209.
- [H67] L. Hörmander, *Pseudo-differential operators and hypoelliptic equations*, *Proc. Symp. Pure Math.*, vol. 10, 1967, pp. 138–183.
- [H71] L. Hörmander, *Fourier integral operators I*, *Acta Mat.* **127** (1971), 79–183.
- [H83] L. Hörmander, *The Analysis of Linear Partial Differential Operators I, Distribution Theory and Fourier Analysis*, *Grundlehren Math. Wiss. vol. 256*, Springer-Verlag, Berlin, 1983.
- [H85] L. Hörmander, *The Analysis of Linear Partial Differential Operators III, Pseudo-differential Operators*, *Grundlehren Math. Wiss. vol. 274*, Springer-Verlag, Berlin, 1985.
- [H89] L. Hörmander, *Linear Functional Analysis*, Matematiska Institutionen, Lunds Universitet, Lund, 1989.
- [K66] T. Kato, *Perturbation Theory for Linear Operators*, *Grundlehren Math. Wiss. vol. 132*, Springer-Verlag, Berlin, 1966.
- [K75] A. N. Kočubei, *Extensions of symmetric operators and symmetric binary relations*, *Math. Notes* **17** (1975), 25–28.
- [KN65] J. J. Kohn and L. Nirenberg, *An algebra of pseudo-differential operators*, *Commun. Pure Appl. Math.* **18** (1965), 269–305.
- [KV95] M. Kontsevich and S. Vishik, *Geometry of determinants of elliptic operators*, *Functional Analysis on the Eve of the 21'st*

- Century (Rutgers Conference in honor of I. M. Gelfand 1993), Vol. I, Birkhäuser (eds. S. Gindikin et al.), 1995, pp. 173–197.
- [K47] M. G. Kreĭn, *Theory of self-adjoint extensions of symmetric semi-bounded operators and applications I*, Mat. Sb. **20**: 62 (1947), 431–495, Russian.
- [LSU68] O. A. Ladyzhenskaya, V. A. Solonnikov, and N. N. Uraltseva, *Linear and Quasilinear Equations of Parabolic Type*, Amer. Math. Soc., Providence, RI, 1968.
- [LM54] P. D. Lax and N. Milgram, *Parabolic equations*, Ann. Math. Studies, Princeton **33** (1954), 167–190.
- [LP67] P. D. Lax and R. S. Phillips, *Scattering Theory*, Academic Press, New York, 1967.
- [LM63] J.-L. Lions and E. Magenes, *Problèmes aux limites non homogènes VI*, J. Anal. Math. **11** (1963), 165–188.
- [LM68] J.-L. Lions and E. Magenes, *Problèmes aux limites non homogènes et applications. Vol. 1 et 2*, Editions Dunod, Paris, 1968, translated to English as *Grundlehren Math. Wiss. vol. 181–182*, Springer-Verlag, Berlin, 1972.
- [L63] J.-L. Lions, *Équations différentielles opérationnelles et problèmes aux limites*, *Grundlehren Math. Wiss. vol. 111*, Springer-Verlag, Berlin, 1963.
- [LS83] V. E. Lyantze and O. G. Storozh, *Methods of the Theory of Unbounded Operators*, Naukova Dumka, Kiev, 1983, Russian.
- [MM99] M. M. Malamud and V. I. Mogilevskii, *On Weyl functions and  $Q$ -function of dual pairs of linear relations*, Dopov. Nat. Akad. Nauk Ukr. **4** (1999), 32–37.
- [MM02] M. M. Malamud and V. I. Mogilevskii, *Kreĭn type formula for canonical resolvents of dual pairs of linear relations*, Methods Funct. Anal. Topol. **8**: 4 (2002), 72–100.
- [M93] R. B. Melrose, *The Atiyah-Patodi-Singer Index Theorem*, A. K. Peters, Wellesley, MA, 1993.
- [N68] M. A. Naĭmark, *Linear Differential Operators. Part II: Linear Differential Operators in Hilbert Space*, Frederick Ungar Publishing Co., New York, 1968.
- [N29] J. v. Neumann, *Allgemeine Eigenwerttheorie Hermitescher Funktionaloperatoren*, Math. Ann. **102** (1929), 49–131.
- [N55] L. Nirenberg, *Remarks on strongly elliptic partial differential equations*, Commun. Pure Appl. Math. **8** (1955), 649–675.
- [P89] G. K. Pedersen, *Analysis Now*, Springer-Verlag, Berlin, 1989.
- [P59] R. S. Phillips, *Dissipative operators and hyperbolic systems of partial differential equations*, Trans. Amer. Math. Soc. **90** (1959), 193–254.
- [RS82] S. Rempel and B.-W. Schulze, *Index Theory of Elliptic Boundary Problems*, Akademie-Verlag, Berlin, 1982.

- [RN53] F. Riesz and B. Sz.-Nagy, *Leçons d'analyse fonctionnelle*, Akademiai Kiadó, Budapest, 1953.
- [R74] W. Rudin, *Functional Analysis*, Tata McGraw Hill, New Delhi, 1974.
- [S91] X. Saint Raymond, *Elementary Introduction to the Theory of Pseudodifferential Operators*, CRC Press, Boca Raton, FL, 1991.
- [S02] M. Schechter, *Principles of Functional Analysis*, Amer. Math. Soc., Providence, RI, 2002.
- [S98] B.-W. Schulze, *Boundary Value Problems and Singular Pseudodifferential Operators*, Wiley, New York, 1998.
- [S50] L. Schwartz, *Théorie des distributions I-II*, Hermann, Paris, 1950–51.
- [S61] L. Schwartz, *Méthodes mathématiques pour les sciences physiques*, Hermann, Paris, 1961.
- [S64] R. T. Seeley, *Extension of  $C^\infty$  functions*, Proc. Amer. Math. Soc. **15** (1964), 625–626.
- [S66] R. T. Seeley, *Singular integrals and boundary value problems*, Amer. J. Math. **88** (1966), 781–809.
- [S69] R. T. Seeley, *Topics in pseudo-differential operators*, CIME Conference on Pseudo-differential Operators (1969), 169–305.
- [T81] M. Taylor, *Pseudodifferential Operators*, Princeton University Press, Princeton, NJ, 1981.
- [T67] F. Trèves, *Topological Vector Spaces, Distributions and Kernels*, Academic Press, New York, 1967.
- [T75] F. Trèves, *Basic Linear Partial Differential Equations*, Academic Press, New York, 1975.
- [T80] F. Trèves, *Introduction to Pseudodifferential and Fourier Integral Operators I-II*, Plenum Press, New York, 1980.
- [V80] L. I. Vainerman, *On extensions of closed operators in Hilbert space*, Math. Notes **28** (1980), 871–875.
- [VE67] M. I. Vishik and G. I. Eskin, *Elliptic equations in convolution in a bounded domain and their applications*, Usp. Mat. Nauk **22** (1967), 15–76, translated in Russ. Math. Surv. **22** (1967), 13–75.
- [V52] M. I. Vishik, *On general boundary value problems for elliptic differential equations*, Tr. Moskv. Mat. Obšv. **1** (1952), 187–246, translated in AMS Transl. **24** (1963), 107–172.
- [W84] M. Wodzicki, *Local invariants of spectral asymmetry*, Invent. Math. **75** (1984), 143–176.
- [Y68] K. Yoshida, *Functional Analysis, Grundlehren Math. Wiss. vol. 123, 2nd Edition*, Springer-Verlag, Berlin, 1968.