Liste von Büchern über partielle Differentialgleichungen

(1) S. Agmon: Lectures on Elliptic Boundary Value Problems [1965], Van Nostrand.
(2) S. Alinhac: Blowup for Nonlinear Hyperbolic Equations [1995], Birkhäuser.
(3) T. Aubin: Nonlinear Analysis on Manifolds. Monge-Ampère Equations [1982], Springer, GMW 252.
(4) J. Barros-Neto, R. A. Artino: Hypoelliptic Boundary-Value Problems [1979], Dekker.
(5) H. Bateman: Partial Differential Equations of Mathematical Physics [1932], Cambridge, 1959^3.
(6) K.-J. Bathe: Finite Element Procedures in Engineering Analysis [1982]; Dt.: Springer, 1990.
(7) L. Bers, F. John, M. Schechter: Partial Differential Equations [1964], AMS.
(8) J. Björk: Rings of Differential Operators [1979], North-Holland.
(9) A. Bressan: Hyperbolic Systems of Conservation Laws. The One-Dimensional Cauchy Problem [2000], Oxford.
(10) C. Carathéodory: Variationsrechnung und partielle Differentialgleichungen erster Ordnung I, II [1935], Teubner, 1956^2; Engl.: Holden-Day, 1965, 1967.
(11) G. F. Carrier, C. E. Pearson: Partial Differential Equations [1976], AP, 1988^2.
(12) H. S. Carslaw, J. C. Jaeger: Conduction of Heat in Solids [1947], Oxford, 1960^2.
(13) L. Cattabriga: Alcuni problemi per equazioni differenziali lineari con coefficienti costanti [1983], Pitagora.
(14) J. Chazarain, A. Piriou: Introduction à la théorie des équations aux dérivées partielles linéaires [1978], Gauthiers-Villars; Engl.: North-Holland, 1982.
(15) P. G. Ciarlet: The Finite Element Method for Elliptic Problems [1978], North-Holland.
(16) D. L. Clements: Boundary Value Problems Governed by Second Order Elliptic Systems [1981], Pitman.
(17) D. Colton, R. Kress: Integral Equation Methods in Scattering Theory [1983], Wiley.
(18) C. Constanda: Direct and Indirect Boundary Integral Equation Methods [2000], Chapman.
(19) J. M. Cooper: Introduction to Partial Differential Equations with MATLAB [1998], Birkhäuser.
(20) H. O. Cordes: Elliptic Pseudodifferential Operators - an Abstract Theory [1979], Springer, LNM 756.
(21) R. Courant, D. Hilbert: Methoden der mathematischen Physik I [1924], II [1937], Springer, GMW 12, 48; HT 30, 31, $1968^{3 \text{ bzw. } 2}$; Engl.: Wiley, I: 1953^3, II: 1962^2.
(22) R. Courant, K. O. Friedrichs: Supersonic Flow and Shock Waves [1948], Interscience, PAM 1; Springer, AMSc 21, 1976.
(23) C. M. Dafermos: Hyperbolic Conservation Laws in Continuum Physics [2000], Springer, GMW 325.
(24) R. Dautray, J.-L. Lions (red.): Analyse mathématique et calcul numérique pour

les sciences et les techniques I–IX [1984/5], Masson; Engl.: Springer.
(25) J. L. Davis: Wave Propagation in Solids and Fluids [1988], Springer.
(26) J. Dieudonné: Eléments d'analyse VII, VIII [1978], Gauthiers-Villars.
(27) D. G. Duffy: Transform Methods for Solving Partial Differential Equations [1994], CRC Press.
(28) A. Duschek: Vorlesungen über höhere Mathematik III [1953], IV [1961], Springer, III: 1960^2.
(29) Ю. В. Егоров, М. А. Шубин (ред.): Дифференциальные уравнения с частными производными I–IV; Engl.: Springer, EMS 30–33, 1991–1994.
(30) L. Ehrenpreis: Fourier Analysis in Several Complex Variables [1970], Wiley, PAM 17.
(31) S. D. Eidel'man: Parabolic Systems [1962], North-Holland, 1969.
(32) H. O. Fattorini: The Cauchy Problem [1983], Addison-Wesley.
(33) G. Fix, G. Strang: An Analysis of the Finite Element Method [1973], Prentice Hall.
(34) G. B. Folland, J. J. Kohn: The Neumann Problem for the Cauchy-Riemann Complex [1972], Princeton, AMSt 75.
(35) G. B. Folland: Introduction to Partial Differential Equations [1976], Princeton, 1995^2.
(36) Ph. Frank, R. von Mises: Die Differential- und Integralgleichungen der Mechanik und Physik I [1924], II [1927], Vieweg, I: 1930^2, II: 1935^2.
(37) F. G. Friedlander: The Wave Equation on a Curved Space-Time [1975], Cambridge.
(38) A. Friedman: Generalized Functions and Partial Differential Equations [1963], Prentice Hall.
(39) A. Friedman: Partial Differential Equations of Parabolic Type [1964], Prentice Hall.
(40) G. G. Galdi: An Introduction to the Mathematical Theory of the Navier-Stokes Equations I, II [1994], Springer.
(41) P. R. Garabedian: Partial Differential Equations [1964], Wiley.
(42) И. М. Гельфанд, Г. Е. Шилов, Н. Я. Виленкин: Обобщённые функции I–V [1958], Физматгиз; Engl.: AP, 1964–1965.
(43) D. Gilbarg, N. Trudinger: Elliptic Partial Differential Equations of Second Order [1977], Springer, GMW 224, 1983^2.
(44) K. Girkmann: Flächentragwerke [1946], Springer, 1963^2.
(45) E. Goursat: Leçons sur l'intégration des équations aux dérivées partielles du second ordre I, II [1896, 1898]; Engl.: Dover, 1964^3.
(46) K. F. Graff: Wave Motion in Elastic Solids [1975], Clarendon.
(47) P. Grisvard: Elliptic Problems in Nonsmooth Domains [1985], Pitman.
(48) W. Gröbner, P. Lesky: Mathematische Methoden der Physik II [1965], BI 90.
(49) R. Haberman: Elementary Applied Partial Differential Equations with Fourier Series and Boundary Value Problems [1983], Prentice Hall, 1998^3.
(50) J. Hadamard: Propagation des ondes [1903], Chelsea, 1949.
(51) J. Hadamard: Le problème de Cauchy et les équations aux dérivées partielles linéaires hyperboliques [1932], Hermann; Engl.: Dover, 1952.

(52) G. Hellwig: Partielle Differentialgleichungen [1960], Engl.: Teubner, 1977^2.
(53) L. L. Helms: Introduction to Potential Theory [1969], Wiley, PAM 22.
(54) D. Henry: Geometric Theory of Semilinear Parabolic Equations [1981], Springer, LNM 840.
(55) G. Herglotz: Vorlesungen über die Mechanik der Kontinua [1926/31], Teubner 1985.
(56) G. Hoheisel: Partielle Differentialgleichungen [1928], Göschen, 1968^5.
(57) J. Horn: Partielle Differentialgleichungen [1910], de Gruyter, 1949^4.
(58) L. Hörmander: Linear Partial Differential Operators [1963], Springer, GMW 116, 1976^4.
(59) L. Hörmander: The Analysis of Linear Partial Differential Operators I, II [1983], III, IV [1985], Springer, GMW 256, 257, 274, 275, I, II: 1990^2.
(60) L. Hörmander: Lectures on Nonlinear Hyperbolic Differential Equations [1997], Springer, M&A 26.
(61) N. Jacob: Lineare partielle Differentialgleichungen [1995], Akademie Verlag.
(62) F. John: Partial Differential Equations [1971], Springer, 1982^4.
(63) T. Kato: Perturbation Theory for Linear Operators [1966], Springer, GMW 132, 1995^4.
(64) O. D. Kellogg: Foundations of Potential Theory [1929], Springer, GMW 31, Dover, 1953.
(65) Н. С. Кошляков, Е. Б. Глинер, М. М. Смирнов: Дифференциальные уравнения математической физики [1962], Государств. Издат. Физ.-Мат. Лит.; Engl.: North-Holland, 1964.
(66) S. G. Krantz: Partial Differential Equations and Complex Analysis [1992], CRC Press.
(67) Н. В. Крылов: Нелинейные эллиптические и параболические уравнения второго порядка [1985], Наука; Engl.: Reidel, 1987.
(68) A. Kufner, A.-M. Sändig: Some Applications of Weighted Sobolev Spaces [1987], Teubner.
(69) О. А. Ладыженская: Смешанная задача для гиперболических уравнений [1953], Гостехиздат.
(70) О. А. Ладыженская: Краевые задачи математической физики [1973], Наука; Engl.: Springer, AMSc 49, 1985.
(71) Н. С. Ландкоф: Основы современной теории потенциала [1966], Наука; Engl.: Springer, GMW 180, 1972.
(72) P. D. Lax: Partial Differential Equations [1951], Courant Institute.
(73) P. D. Lax, R. S. Phillips: Scattering Theory [1967], AP, PAM 26.
(74) R. Leis: Vorlesungen über partielle Differentialgleichungen zweiter Ordnung [1967], BI 165.
(75) R. Leis: Initial Boundary Value Problems in Mathematical Physics [1986], Wiley.
(76) J. Leray: Hyperbolic Differential Equations [1954], Princeton.
(77) T. Li, W. Yu: Boundary Value Problems for Quasilinear Hyperbolic Systems [1985], Duke.
(78) T. Li: Global Classical Solutions for Quasilinear Hyperbolic Systems [1994], Wiley.

(79) J.-L. Lions: Quelques méthodes de résolution des problèmes aux limites non linéaires [1969], Dunod.
(80) J.-L. Lions: Equations differentielles operationelles et problèmes aux limites [1961], Springer, GMW 111.
(81) J.-L. Lions, E. Magenes: Problèmes aux limites non homogènes et applications I–III [1963], Dunod; Engl.: Springer, GMW 181–183, 1972/73.
(82) В. П. Маслов: Теория возмущения и асимптотические методы [1965], Наука 1988^2; Franz.: Dunod, 1972.
(83) W. McLean: Strongly Elliptic Systems and Boundary Integral Equations [2000], Cambridge.
(84) E. Meister: Partielle Differentialgleichungen [1996], Akademie Verlag.
(85) В. П. Михайлов: Дифференциальные уравнения в частных производных [1976], Наука, 1983^2 ; Engl.: Mir, 1978.
(86) С. Г. Михлин: Курс математическои физики [1968], Наука; Engl.: North-Holland, 1970.
(87) C. Miranda: Equazioni alle derivate parziali di tipo ellitico [1955]; Engl.: Springer, 1970^2.
(88) S. Mizohata: The Theory of Partial Differential Equations [1973], Cambridge.
(89) S. Mizohata: On the Cauchy Problem [1985], AP.
(90) C. Müller: Grundprobleme der mathematischen Theorie elektromagnetischer Schwingungen [1957], Springer, GMW 88.
(91) C. Müller: Foundations of the Mathematical Theory of Electromagnetic Waves [1969], Springer, GMW 157.
(92) J. Nečas: Les méthodes directes en théorie des équations elliptiques [1967], Masson.
(93) M. Oberguggenberger: Multiplication of Distributions and Applications to Partial Differential Equations [1992], Pitman.
(94) P. J. Olver: Applications of Lie Groups to Differential Equations [1986], Springer, GTM 107, 1993^2.
(95) В. П. Паламодов: Линейные дифференциальные операторы с постоянными коэфициентами [1967], Наука; Engl.: Springer, GMW 168, 1970.
(96) H. Parkus: Mechanik der festen Körper [1960], Springer, 1981^2.
(97) B. E. Petersen: Introduction to the Fourier Transform and Pseudo-Differential Operators [1983], Pitman.
(98) V. Petkov: Scattering Theory for Hyperbolic Operators [1989], North-Holland.
(99) И. Г. Петровский: Лекции об уравнениях с частными производными [1950], Физматгиз, 1961^2; Engl.: Wiley, 1954.
(100) A. D. Polyanin: Handbook of Linear Partial Differential Equations for Engineers and Scientists [2002], CRC Press.
(101) M. H. Protter, H. F. Weinberger: Maximum Principles in Differential Equations [1967], Prentice Hall; Springer, 1984^2.
(102) J. Rauch: Partial Differential Equations [1991], Springer, GTM 128.
(103) P. Raviart, J. Thomas: Introduction à l'analyse numérique des équations aux dérivées partielles [1983], Masson.
(104) M. Reed: Abstract Non Linear Wave Equations [1976], Springer, LNM 507.

(105) M. Reed, B. Simon: Methods of Modern Mathematical Physics I–IV [1972–1979], AP; I: 1980^2.
(106) B. Riemann: Partielle Differentialgleichungen und deren Anwendung auf physikalische Fragen [1869], Hattendorf; mit H. Weber: Die partiellen Differentialgleichungen der Mathematischen Physik I, 1900^4, II, 1901^4; 1919^6 (Vieweg).
(107) Ya. A. Roitberg: Elliptic Boundary Value Problems in the Spaces of Distributions [1996], Kluwer, MIA 384.
(108) X. Saint Raymond: Elementary Introduction to the Theory of Pseudodifferential Operators [1991], CRC Press.
(109) R. Sauer: Anfangswertprobleme bei partiellen Differentialgleichungen [1952], Springer, GMW 62, 1958^2.
(110) M. Schechter: Modern Methods in Partial Differential Equations [1977], Mc Graw-Hill.
(111) H. Schmidt: Theorie der Wellengleichung [1931], Barth.
(112) L. Schwartz: Théorie des distributions [1950/51], Hermann, 1966^2.
(113) L. Schwartz: Méthodes mathématiques pour les sciences physiques [1961], Hermann, 1965^2.
(114) H. R. Schwarz: Methode der finiten Elemente [1991], Teubner, LAMM 47.
(115) Г. Е. Шилов: Математический анализ. Второй специалный курс [1965], Наука; Engl.: Generalized Functions and Partial Differential Equations, Gordon & Breach, MIA 7, 1968.
(116) N. Shimakura: Partial Differential Operators of Elliptic Type [1978], AMS 1992.
(117) M. G. Smith: Introduction to the Theory of Partial Differential Equations [1967], Van Nostrand.
(118) J. Smoller: Shock Waves and Reaction-Diffusion Equations [1983], Springer, GMW 258, 1994^2.
(119) I. N. Sneddon: Elements of Partial Differential Equations [1957], McGraw-Hill.
(120) I. N. Sneddon: Mixed Boundary Value Problems in Potential Theory [1966], Wiley.
(121) С. Л. Соболев: Уравнения математической физики [1948], Наука, 1992^5; Engl.: Pergamon, 1964^3.
(122) С. Л. Соболев: Некоторые применения функционалного анализа в математической физике [1950], Наука, 1988^3; Engl.: AMS, 1991.
(123) A. Sommerfeld: Theoretische Physik VI (Partielle Differentialgleichungen der Physik) [1945], Dieterich, 1947^2; Engl.: AP, PAM 1, 1949^2.
(124) I. Stakgold: Boundary Value Problems of Mathematical Physics I [1967], II [1968], Macmillan, SIAM, 2000^2.
(125) H. Stephani: Differentialgleichungen [1994], Spektrum.
(126) M. E. Taylor: Pseudo Differential Operators [1974], Springer, LNM 416.
(127) M. E. Taylor: Pseudodifferential Operators [1981], Princeton, PMS 34.
(128) M. E. Taylor: Pseudodifferential Operators and Nonlinear PDE [1991], Birkhäuser.
(129) M. E. Taylor: Partial Differential Equations I, II, III [1996], Springer, AMSc 115–117.
(130) А. Н. Тихонов, А. А. Самарский: Уравнения математической физики I, II [1959], Наука, 1972^4; Engl.: Holden-Day, 1970.

(131) S. Timoshenko: Vibration Problems in Engineering [1928], Van Nostrand, 1955^3.
(132) F. Trèves: Linear Partial Differential Equations with Constant Coefficients [1967], Gordon & Breach, MIA 6.
(133) F. Trèves: Locally Convex Spaces and Linear Partial Differential Equations [1967], Springer, GMW 146.
(134) F. Trèves: Basic Linear Partial Differential Equations [1975], AP, PAM 62.
(135) H. Triebel: Höhere Analysis [1972], H. Deutsch, 1980^2.
(136) H. Triebel: Analysis und mathematische Physik [1981], Birkhäuser, 1989^3.
(137) В. С. Владимиров (ред.): Сборник задач по уравнениям математической физики [1967], Наука, 1988^5 ; Franz.: Mir, 1976.
(138) В. С. Владимиров: Уравнения математической физики [1967], Наука, 1988^5 ; Engl.: Dekker, PAM 3, 1971.
(139) В. С. Владимиров: Обобщённые функции в математической физике [1976], Наука, 1979^2; Engl.: Mir, 1979.
(140) N. A. Watson: Parabolic Equations on an Infinite Strip [1989], Dekker, PAM 127.
(141) H. F. Weinberger: A First Course in Partial Differential Equations [1966], Holden-Day.
(142) C. H. Wilcox: Scattering Theory for the d'Alembert Equation in Exterior Domains [1975], Springer, LNM 442.
(143) G. B. Whitham: Linear and Nonlinear Waves [1974], Wiley.
(144) D. V. Widder: The Heat Equation [1975], AP, PAM 67.
(145) J. Wloka: Partielle Differentialgleichungen [1982], Teubner.
(146) E. Zauderer: Partial Differential Equations of Applied Mathematics [1983], Wiley.
(147) E. Zeidler: Vorlesungen über nichtlineare Funktionalanalysis I–IV [1976–1978], Teubner; Engl.: Springer, GTM 96–99, 1986–1990.
(148) C. Zuily: Problèmes de distributions [1978], Hermann.

Abkürzungen:

AMS: American Mathematical Society

AMSc: Applied Mathematical Sciences

AMSt: Annals of Mathematics Studies

AP: Academic Press

BI: Hochschultaschenbücher, Bibliographisches Institut

EMS: Encyclopedia of Mathematical Sciences

GMW: Grundlehren der mathematischen Wissenschaften

GTM: Graduate Texts in Mathematics

HT: Heidelberger Taschenbücher

LAMM: Leitfäden der angewandten Mathematik und Mechanik

LNM: Lecture Notes in Mathematics

M&A: Mathématiques & Applications

MIA: Mathematics and Its Applications

PAM: Pure and Applied Mathematics

PMS: Princeton Mathematical Series

Datum: 25. Mai 2005