Communications in Mathematical Physics

Volume 179 Number 2 1996

JB. Zuber	Graphs and Reflection Groups 265
F. Bidegain, G. Pinczon	Quantization of Poisson–Lie Groups and Applications 295
G. O. Chen, D. Wang	Convergence of Shock Capturing Schemes for the Compressible Euler–Poisson Equations 333
J. C. Lagarias	Meyer's Concept of Quasicrystal and Quasiregular Sets 365
A. Kiselev	Absolutely Continuous Spectrum of One- Dimensional Schrödinger Operators and Jacobi Matrices with Slowly Decreasing Potentials 377
H. Awata, H. Kubo, S. Odake, J. Shiraishi	Quantum \mathcal{W}_N Algebras and Macdonald Polynomials 401
B. Temple, R. Young	The Large Time Stability of Sound Waves 417
G. B. Arous, JD. Deuschel	The Construction of the <i>d</i> + 1-Dimensional Gaussian Droplet 467
D. Simpelaere	Mean of the Singularities of a Gibbs Measure 489
J. Xin, J. Moloney	Global Weak Solutions and Attractors of the Three Dimensional MaxwellBloch Two Level Laser Systems 511

Indexed in *Current Contents* Abstracted/Indexed in *MATH Database, Zentralblatt für Mathematik* Evaluated and abstracted for *PHYS* on *STN* CMPHAY 179 (2) 265–528 August (I) 1996

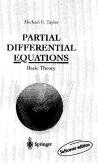


Springer

Partial Differential Equations

The introductory textbook

This text introduces of basic examples of partial differential equations, arising in continuum mechanics, electromagnetism, complex analysis and other areas, and develops a number of tools for their solution, including particularly Fourier analysis, distribution theory, and Sobolev spaces. These tools are applied to the treatment of basic problems in linear PDE including the Laplace equation, heat equation, and wave equation, as well as more general elliptic, parabolic, and hyperbolic equations. This book is also available in Hardcover as Volume 1 in the 3 volume set (below).



1996. Approx. 585 pages. 37 figures (Texts in Applied Mathematics, Vol. 23). Softcover DM 58,– ISBN 0-387-94654-3

... and the comprehensive overview



Please order by Fax: +49 30 8207 301 e-mail: orders@springer.de or through your bookseller

M. Taylor Partial Differential Equations I: Basic Theory

1996. Approx. 586 pages. 37 figures (Applied Mathematical Sciences, Vol. 115). Hardcover DM 98,- ISBN 0-387-94653-5

Contents: 1) Basic theory of ODE and vector fields; 2) The Laplace equation and wave equation; 3) Fourier analysis, distributions, and constant coeffecient linear PDE; 4) Sobolev spaces; 5) Linear elliptic equations; 6) Linear evolution equations; Appendix A: Outline of functional analysis; Appendix B: Manifolds, vector bundles, and Lie groups.

II: Qualitative Studies of Linear Equations

1996. Approx. 545 pages. 13 figures (Applied Mathematical Sciences, Vol. 116). Hardcover DM 98,- ISBN 0-387-94651-9

Contents: 7) Pseudodifferential operators; 8) Spectral theory; 9) Scattering by obstacles; 10) Dirac operators and index theory; 11) Brownian motion and potential theory; 12) The partial Neumann problem; Apendix C: Connections and curvature.

III: Nonlinear Equations

1996. Approx. 650 pages. 65 figures (Applied Mathematical Sciences, Vol. 117). Hardcover DM 98,-

ISBN 0-387-94652-7 Contents: 13) Function space and

operator theory for nonlinear analysis; 14) Nonlinear elliptic equations; 15) Nonlinear parabolic equations; 16) Nonlinear hyperbolic equations; 17) Euler and Navier-Stokes equations for incompressible fluids; 18) Einstein's equations



Springer-Verlag, P. O Box 31 13 40, D-10643 Berlin, Germany.

IMCA 3406/MNT/E/1