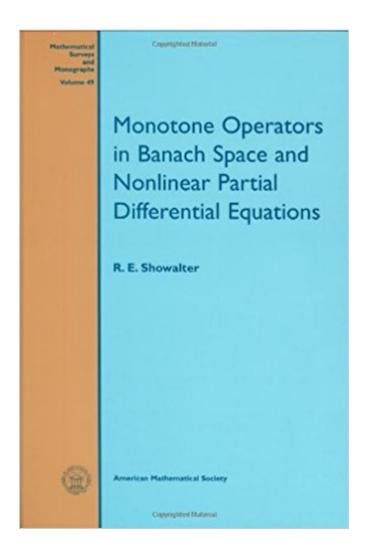


### The book was found

## Monotone Operators In Banach Space And Nonlinear Partial Differential Equations (Mathematical Surveys And Monographs)





### **Synopsis**

The objectives of this monograph are to present some topics from the theory of monotone operators and nonlinear semigroup theory which are directly applicable to the existence and uniqueness theory of initial-boundary-value problems for partial differential equations and to construct such operators as realizations of those problems in appropriate function spaces. A highlight of this presentation is the large number and variety of examples introduced to illustrate the connection between the theory of nonlinear operators and partial differential equations. These include primarily semilinear or quasilinear equations of elliptic or of parabolic type, degenerate cases with change of type, related systems and variational inequalities, and spatial boundary conditions of the usual Dirichlet, Neumann, Robin or dynamic type. The discussions of evolution equations include the usual initial-value problems as well as periodic or more general nonlocal constraints, history-value problems, those which may change type due to a possibly vanishing coefficient of the time derivative, and other implicit evolution equations or systems including hysteresis models. The scalar conservation law and semilinear wave equations are briefly mentioned, and hyperbolic systems arising from vibrations of elastic-plastic rods are developed. The origins of a representative sample of such problems is given in the Appendix.

### **Book Information**

Series: Mathematical Surveys and Monographs (Book 49)

Hardcover: 278 pages

Publisher: American Mathematical Society (December 10, 1996)

Language: English

ISBN-10: 0821805002

ISBN-13: 978-0821805008

Product Dimensions: 0.8 x 7.5 x 10.5 inches

Shipping Weight: 1.2 pounds

Average Customer Review: Be the first to review this item

Best Sellers Rank: #3,450,576 in Books (See Top 100 in Books) #106 in A A Books > Science &

Math > Mathematics > Transformations #26556 in A A Books > Textbooks > Science &

Mathematics > Mathematics

#### **Customer Reviews**

The book is extremely clear and well written, and so it is very readable. It contains a large variety of examples and applications and consequently it will prove quite useful not only to mathematicians,

but also to engineers and physicists. --Mathematical ReviewsThe completeness and the way of presentation makes the text understandable to anybody who can be interested in existence and uniqueness theory for initial-boundary-value problems. --European Mathematical Society Newsletter --This text refers to the Paperback edition.

R. E. Showalter, Oregon State University, Corvallis, OR, USA. --This text refers to the Paperback edition.

#### Download to continue reading...

Monotone Operators in Banach Space and Nonlinear Partial Differential Equations (Mathematical Surveys and Monographs) Applied Partial Differential Equations with Fourier Series and Boundary Value Problems (5th Edition) (Featured Titles for Partial Differential Equations) Fundamental Algebraic Geometry (Mathematical Surveys and Monographs) (Mathematical Surveys and Monographs Series (Sep.Title P) Partial Differential Equations of Mathematical Physics and Integral Equations (Dover Books on Mathematics) Numerical Partial Differential Equations: Conservation Laws and Elliptic Equations (Texts in Applied Mathematics) (v. 33) Differential Equations and Boundary Value Problems: Computing and Modeling (5th Edition) (Edwards/Penney/Calvis Differential Equations) [ Differential Equations, Dynamical Systems, and an Introduction to Chaos [ DIFFERENTIAL EQUATIONS, DYNAMICAL SYSTEMS, AND AN INTRODUCTION TO CHAOS BY Hirsch, Morris W. (Author) Mar-26-2012] By Hirsch, Morris W. (Author) [2012) [Paperback] Student's Solutions Manual for Fundamentals of Differential Equations 8e and Fundamentals of Differential Equations and Boundary Value Problems 6e Differential Equations: Computing and Modeling (5th Edition) (Edwards/Penney/Calvis Differential Equations) Fundamentals of Differential Equations (8th Edition) (Featured Titles for Differential Equations) Student Solutions Manual to accompany Boyce Elementary Differential Equations 10e & Elementary Differential Equations with Boundary Value Problems 10e Hilbert Space Methods in Partial Differential Equations (Dover Books on Mathematics) Banach Space Theory: The Basis for Linear and Nonlinear Analysis (CMS Books in Mathematics) Finite Difference Methods for Ordinary and Partial Differential Equations: Steady-State and Time-Dependent Problems (Classics in Applied Mathematics) Boundary Value Problems, Sixth Edition: and Partial Differential Equations Partial Differential Equations for Scientists and Engineers (Dover Books on Mathematics) Boundary Value Problems: and Partial Differential Equations Applied Partial Differential Equations: With Fourier Series and Boundary Value Problems, 4th Edition Numerical Solution of Partial Differential Equations: Finite Difference Methods (Oxford Applied Mathematics and Computing Science Series) Partial Differential Equations with Fourier

# Series and Boundary Value Problems (2nd Edition)

Contact Us

DMCA

Privacy

FAQ & Help