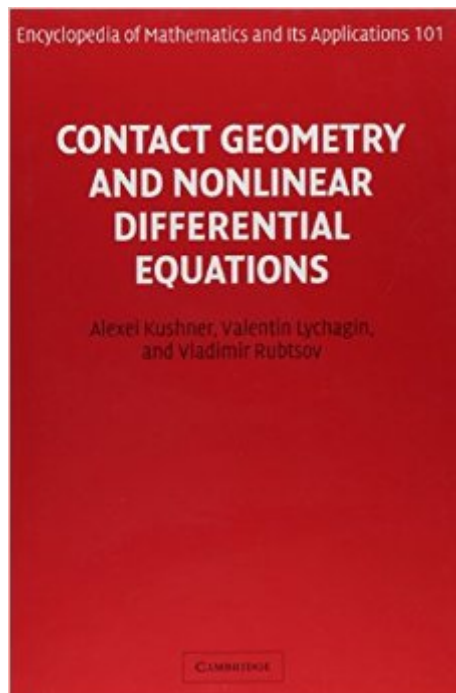


The book was found

# Contact Geometry And Nonlinear Differential Equations (Encyclopedia Of Mathematics And Its Applications)



## Synopsis

Methods from contact and symplectic geometry can be used to solve highly non-trivial nonlinear partial and ordinary differential equations without resorting to approximate numerical methods or algebraic computing software. This book explains how it's done. It combines the clarity and accessibility of an advanced textbook with the completeness of an encyclopedia. The basic ideas that Lie and Cartan developed at the end of the nineteenth century to transform solving a differential equation into a problem in geometry or algebra are here reworked in a novel and modern way. Differential equations are considered as a part of contact and symplectic geometry, so that all the machinery of Hodge-deRham calculus can be applied. In this way a wide class of equations can be tackled, including quasi-linear equations and Monge-Ampere equations (which play an important role in modern theoretical physics and meteorology).

## Book Information

Series: Encyclopedia of Mathematics and its Applications (Book 101)

Hardcover: 518 pages

Publisher: Cambridge University Press; 1 edition (January 15, 2007)

Language: English

ISBN-10: 052187467X

ISBN-13: 978-0521824767

ASIN: 0521824761

Product Dimensions: 6.1 x 1.3 x 9.2 inches

Shipping Weight: 1.8 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #2,746,353 in Books (See Top 100 in Books) #111 in Books > Science & Math > Mathematics > Geometry & Topology > Non-Euclidean Geometries #380 in Books > Science & Math > Mathematics > Geometry & Topology > Differential Geometry #701 in Books > Science & Math > Mathematics > Geometry & Topology > Topology

[Download to continue reading...](#)

Contact Geometry and Nonlinear Differential Equations (Encyclopedia of Mathematics and its Applications) Global Propagation of Regular Nonlinear Hyperbolic Waves (Progress in Nonlinear Differential Equations and Their Applications, No. 76 ) Student Solutions Manual for Differential Equations: Computing and Modeling and Differential Equations and Boundary Value Problems: Computing and Modeling Differential Equations and Boundary Value Problems: Computing and

Modeling (5th Edition) (Edwards/Penney/Calvis Differential Equations) Differential Equations:  
Computing and Modeling (5th Edition) (Edwards/Penney/Calvis Differential Equations) Applied  
Partial Differential Equations with Fourier Series and Boundary Value Problems (5th Edition)  
(Featured Titles for Partial Differential Equations) Fundamentals of Differential Equations and  
Boundary Value Problems (6th Edition) (Featured Titles for Differential Equations) Fundamentals of  
Differential Equations (8th Edition) (Featured Titles for Differential Equations) No Contact Rule: 17  
Best Tips on How To Get Your Ex Back + Free Gift Inside (The no contact rule - No contact -  
Dating) An Introduction to Partial Differential Equations with MATLAB (Chapman & Hall/CRC  
Applied Mathematics & Nonlinear Science) Computational Partial Differential Equations Using  
MATLAB (Chapman & Hall/CRC Applied Mathematics & Nonlinear Science) Lectures on Nonlinear  
Hyperbolic Differential Equations (Mathématiques et Applications) An Introduction to Differential  
Equations and Their Applications (Dover Books on Mathematics) Applications of Lie Groups to  
Differential Equations (Graduate Texts in Mathematics) How to Do No Contact Like a Boss!: The  
Woman's Guide to Implementing No Contact & Detaching from Toxic Relationships Eye Contact  
Training: Get Women, Increase Your Power & Become a True Leader (Eye contact book,  
Confidence building, Body language secrets, Nonverbal communication, ... Body language training,  
Attract women) Transformations Of Coordinates, Vectors, Matrices And Tensors Part I:  
LAGRANGE'S EQUATIONS, HAMILTON'S EQUATIONS, SPECIAL THEORY OF RELATIVITY  
AND CALCULUS ... Mathematics From 0 And 1 Book 16) Finite Difference Methods for Ordinary  
and Partial Differential Equations: Steady-State and Time-Dependent Problems (Classics in Applied  
Mathematics) Differential Equations, Dynamical Systems, and an Introduction to Chaos, Second  
Edition (Pure and Applied Mathematics) Dictionary of Analysis, Calculus, and Differential Equations  
(Comprehensive Dictionary of Mathematics)

[Dmca](#)