



Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics)

Fritz Schwarz

Download now

[Click here](#) if your download doesn't start automatically


Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics)

Fritz Schwarz

Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) Fritz Schwarz

Despite the fact that Sophus Lie's theory was virtually the only systematic method for solving nonlinear ordinary differential equations (ODEs), it was rarely used for practical problems because of the massive amount of calculations involved. But with the advent of computer algebra programs, it became possible to apply Lie theory to concrete problems. Taking this approach, Algorithmic Lie Theory for Solving Ordinary Differential Equations serves as a valuable introduction for solving differential equations using Lie's theory and related results.

After an introductory chapter, the book provides the mathematical foundation of linear differential equations, covering Loewy's theory and Janet bases. The following chapters present results from the theory of continuous groups of a 2-D manifold and discuss the close relation between Lie's symmetry analysis and the equivalence problem. The core chapters of the book identify the symmetry classes to which quasilinear equations of order two or three belong and transform these equations to canonical form. The final chapters solve the canonical equations and produce the general solutions whenever possible as well as provide concluding remarks. The appendices contain solutions to selected exercises, useful formulae, properties of ideals of monomials, Loewy decompositions, symmetries for equations from Kamke's collection, and a brief description of the software system ALLTYPES for solving concrete algebraic problems.

 [Download Algorithmic Lie Theory for Solving Ordinary Differ ...pdf](#)

 [Read Online Algorithmic Lie Theory for Solving Ordinary Diff ...pdf](#)

Download and Read Free Online Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) Fritz Schwarz

From reader reviews:

Tonya Deschamps:

This book entitled Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) to be one of several books in which best seller in this year, here is because when you read this guide you can get a lot of benefit in it. You will easily to buy that book in the book retail store or you can order it by means of online. The publisher with this book sells the e-book too. It makes you quickly to read this book, because you can read this book in your Smartphone. So there is no reason to your account to past this e-book from your list.

Patricia Beall:

People live in this new moment of lifestyle always make an effort to and must have the time or they will get wide range of stress from both way of life and work. So , if we ask do people have extra time, we will say absolutely yes. People is human not only a robot. Then we request again, what kind of activity do you possess when the spare time coming to anyone of course your answer can unlimited right. Then do you try this one, reading guides. It can be your alternative within spending your spare time, the actual book you have read is usually Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics).

Gregory Medina:

Beside this specific Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) in your phone, it may give you a way to get more close to the new knowledge or details. The information and the knowledge you are going to got here is fresh in the oven so don't possibly be worry if you feel like an aged people live in narrow village. It is good thing to have Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) because this book offers to you personally readable information. Do you occasionally have book but you don't get what it's exactly about. Oh come on, that won't happen if you have this in your hand. The Enjoyable blend here cannot be questionable, just like treasuring beautiful island. Techniques you still want to miss it? Find this book as well as read it from now!

Robin Bone:

A lot of people said that they feel bored stiff when they reading a publication. They are directly felt the idea when they get a half areas of the book. You can choose the particular book Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) to make your own reading is interesting. Your skill of reading ability is developing when you including reading. Try to choose simple book to make you enjoy to learn it and mingle the opinion about book and reading through especially. It is to be first opinion for you to like to open a book and learn it. Beside that the guide Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and

Applied Mathematics) can to be a newly purchased friend when you're feel alone and confuse with the information must you're doing of the time.

Download and Read Online Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) Fritz Schwarz #RMBA2P6O19D

Read Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) by Fritz Schwarz for online ebook

Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) by Fritz Schwarz Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) by Fritz Schwarz books to read online.

Online Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) by Fritz Schwarz ebook PDF download

Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) by Fritz Schwarz Doc

Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) by Fritz Schwarz Mobipocket

Algorithmic Lie Theory for Solving Ordinary Differential Equations (Chapman & Hall/CRC Pure and Applied Mathematics) by Fritz Schwarz EPub