The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences)

Gadi Fibich

The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences)

Gadi Fibich

The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) Gadi Fibich

This book is an interdisciplinary introduction to optical collapse of laser beams, which is modelled by singular (blow-up) solutions of the nonlinear Schrödinger equation. With great care and detail, it develops the subject including the mathematical and physical background and the history of the subject. It combines rigorous analysis, asymptotic analysis, informal arguments, numerical simulations, physical modelling, and physical experiments. It repeatedly emphasizes the relations between these approaches, and the intuition behind the results.

The Nonlinear Schrödinger Equation will be useful to graduate students and researchers in applied mathematics who are interested in singular solutions of partial differential equations, nonlinear optics and nonlinear waves, and to graduate students and researchers in physics and engineering who are interested in nonlinear optics and Bose-Einstein condensates. It can be used for courses on partial differential equations, nonlinear waves, and nonlinear optics.

Gadi Fibich is a Professor of Applied Mathematics at Tel Aviv University.

"This book provides a clear presentation of the nonlinear Schrodinger equation and its applications from various perspectives (rigorous analysis, informal analysis, and physics). It will be extremely useful for students and researchers who enter this field."

Frank Merle, Université de Cergy-Pontoise and Institut des Hautes Études Scientifiques, France

Download and Read Free Online The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) Gadi Fibich

---

From reader reviews:

Christina Bain:

Reading a guide tends to be new life style in this era globalization. With reading through you can get a lot of information that can give you benefit in your life. Along with book everyone in this world can share their idea. Guides can also inspire a lot of people. A great deal of author can inspire their own reader with their story or even their experience. Not only situation that share in the guides. But also they write about advantage about something that you need case in point. How to get the good score toefl, or how to teach your sons or daughters, there are many kinds of book which exist now. The authors nowadays always try to improve their skill in writing, they also doing some analysis before they write on their book. One of them is this The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences).

Veronica McFadden:

A lot of people always spent their own free time to vacation as well as go to the outside with them friends and family or their friend. Did you know? Many a lot of people spent many people free time just watching TV, as well as playing video games all day long. If you would like try to find a new activity here is look different you can read the book. It is really fun for yourself. If you enjoy the book that you simply read you can spent the entire day to reading a guide. The book The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) it is rather good to read. There are a lot of individuals who recommended this book. These were enjoying reading this book. Should you did not have enough space to create this book you can buy the actual e-book. You can m0ore easily to read this book from your smart phone. The price is not to fund but this book has high quality.

Nancy Steffen:

Reading a book to get new life style in this 12 months; every people loves to learn a book. When you examine a book you can get a great deal of benefit. When you read ebooks, you can improve your knowledge, since book has a lot of information in it. The information that you will get depend on what kinds of book that you have read. If you want to get information about your review, you can read education books, but if you want to entertain yourself read a fiction books, these kinds of us novel, comics, and soon. The The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) offer you a new experience in looking at a book.

Rodolfo Born:

Do you like reading a book? Confuse to looking for your selected book? Or your book ended up being rare? Why so many issue for the book? But any kind of people feel that they enjoy with regard to reading. Some people likes looking at, not only science book but additionally novel and The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) or perhaps others

sources were given expertise for you. After you know how the fantastic a book, you feel would like to read more and more. Science publication was created for teacher or even students especially. Those books are helping them to increase their knowledge. In different case, beside science guide, any other book likes The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) to make your spare time far more colorful. Many types of book like this.

Download and Read Online The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) Gadi Fibich #FBUC2M79EXP

Read The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) by Gadi Fibich for online ebook

The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) by Gadi Fibich 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 The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) by Gadi Fibich books to read online.

Online The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) by Gadi Fibich ebook PDF download

The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) by Gadi Fibich Doc

The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) by Gadi Fibich Mobipocket

The Nonlinear Schrödinger Equation: Singular Solutions and Optical Collapse (Applied Mathematical Sciences) by Gadi Fibich EPub