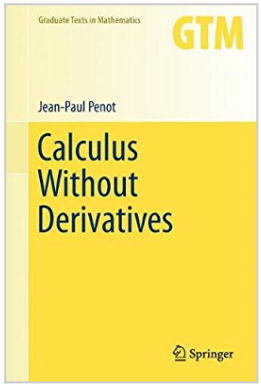

Calculus Without Derivatives (Graduate Texts in Mathematics)

By Jean-Paul Penot

Calculus Without Derivatives (Graduate Texts in Mathematics) By Jean-Paul Penot

Calculus Without Derivatives expounds the foundations and recent advances in nonsmooth analysis, a powerful compound of mathematical tools that obviates the usual smoothness assumptions. This textbook also provides significant tools and methods towards applications, in particular optimization problems. Whereas most books on this subject focus on a particular theory, this text takes a general approach including all main theories.

In order to be self-contained, the book includes three chapters of preliminary material, each of which can be used as an independent course if needed. The first chapter deals with metric properties, variational principles, decrease principles, methods of error bounds, calmness and metric regularity. The second one presents the classical tools of differential calculus and includes a section about the calculus of variations. The third contains a clear exposition of convex analysis.

Calculus Without Derivatives (Graduate Texts in Mathematics)

By Jean-Paul Penot

Calculus Without Derivatives (Graduate Texts in Mathematics) By Jean-Paul Penot

Calculus Without Derivatives expounds the foundations and recent advances in nonsmooth analysis, a powerful compound of mathematical tools that obviates the usual smoothness assumptions. This textbook also provides significant tools and methods towards applications, in particular optimization problems. Whereas most books on this subject focus on a particular theory, this text takes a general approach including all main theories.

In order to be self-contained, the book includes three chapters of preliminary material, each of which can be used as an independent course if needed. The first chapter deals with metric properties, variational principles, decrease principles, methods of error bounds, calmness and metric regularity. The second one presents the classical tools of differential calculus and includes a section about the calculus of variations. The third contains a clear exposition of convex analysis.

Calculus Without Derivatives (Graduate Texts in Mathematics) By Jean-Paul Penot Bibliography

- Sales Rank: #665589 in Books
- Published on: 2012-11-09
- Original language: English
- Number of items: 1
- Dimensions: 9.21" h x 1.19" w x 6.14" l, 2.06 pounds
- Binding: Hardcover
- 524 pages

Editorial Review

Review

“The book collects three different branches of analysis: differential calculus, convex analysis, and nonsmooth analysis. … What makes Penot’s work stand out is his path through the material and the clean and scholarly presentation. It is well suited for individual study or a classroom … . As preparation for the rough road ahead of us in the coming decades, it might be worth the investment.” (Russell Luke, SIAM Review, Vol. 57 (2), June, 2015)

“This very good book is an treatise on approximate calculus and justifies the author’s claim that the rules of this calculus are as important and useful as those for exact calculus. … The book is notable not only for its exposition but also for the notes at the end of each chapter explaining the historical and other relevant backgrounds of the material. There are many exercises throughout the book.” (Peter S. Bullen, Zentralblatt MATH, Vol. 1264, 2013)

“By collecting together a lot of results in nonsmooth analysis and presenting them in a coherent and accessible way, the author rendered a great service to the mathematical community. The book can be considered as an incentive for newcomers to enter this area of research … . The specialists will find also a lot of systematized information, and … the first three chapters can be used for independent graduate courses.” (S. Cobza?¸ Studia Universitatis Babes-Bolyai, Mathematica, Vol. 58 (1), 2013)

From the Back Cover

Calculus Without Derivatives expounds the foundations and recent advances in nonsmooth analysis, a powerful compound of mathematical tools that obviates the usual smoothness assumptions. This textbook also provides significant tools and methods towards applications, in particular optimization problems. Whereas most books on this subject focus on a particular theory, this text takes a general approach including all main theories.

In order to be self-contained, the book includes three chapters of preliminary material, each of which can be used as an independent course if needed. The first chapter deals with metric properties, variational principles, decrease principles, methods of error bounds, calmness and metric regularity. The second one presents the classical tools of differential calculus and includes a section about the calculus of variations. The third contains a clear exposition of convex analysis.

About the Author
Jean-Paul Penot is an Emeritus Professor at Université Paris 6. He has taught in Paris, Pau and Canada.

Users Review

From reader reviews:

Laura Mason:

Reading a reserve tends to be new life style on this era globalization. With reading through you can get a lot

of information that will give you benefit in your life. Along with book everyone in this world can easily share their idea. Ebooks can also inspire a lot of people. A great deal of author can inspire their reader with their story or their experience. Not only the storyline that share in the ebooks. But also they write about the data about something that you need case in point. How to get the good score toefl, or how to teach your children, there are many kinds of book that exist now. The authors on this planet always try to improve their skill in writing, they also doing some investigation before they write to their book. One of them is this Calculus Without Derivatives (Graduate Texts in Mathematics).

Patrice Reese:

The book Calculus Without Derivatives (Graduate Texts in Mathematics) has a lot details on it. So when you read this book you can get a lot of advantage. The book was compiled by the very famous author. The author makes some research just before write this book. This specific book very easy to read you can find the point easily after perusing this book.

Elizabeth Maez:

This Calculus Without Derivatives (Graduate Texts in Mathematics) is completely new way for you who has attention to look for some information as it relief your hunger associated with. Getting deeper you on it getting knowledge more you know or you who still having small amount of digest in reading this Calculus Without Derivatives (Graduate Texts in Mathematics) can be the light food in your case because the information inside this particular book is easy to get by means of anyone. These books create itself in the form and that is reachable by anyone, sure I mean in the e-book form. People who think that in guide form make them feel tired even dizzy this reserve is the answer. So there is no in reading a book especially this one. You can find actually looking for. It should be here for an individual. So , don't miss the item! Just read this e-book type for your better life in addition to knowledge.

Sanjuanita Mecham:

A lot of guide has printed but it differs. You can get it by world wide web on social media. You can choose the best book for you, science, comedian, novel, or whatever by means of searching from it. It is referred to as of book Calculus Without Derivatives (Graduate Texts in Mathematics). You'll be able to your knowledge by it. Without leaving the printed book, it could add your knowledge and make you actually happier to read. It is most important that, you must aware about e-book. It can bring you from one destination for a other place.

Read Calculus Without Derivatives (Graduate Texts in Mathematics) By Jean-Paul Penot for online ebook

Calculus Without Derivatives (Graduate Texts in Mathematics) By Jean-Paul Penot 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 Calculus Without Derivatives (Graduate Texts in Mathematics) By Jean-Paul Penot books to read online.

Online Calculus Without Derivatives (Graduate Texts in Mathematics) By Jean-Paul Penot ebook PDF download

Calculus Without Derivatives (Graduate Texts in Mathematics) By Jean-Paul Penot Doc

Calculus Without Derivatives (Graduate Texts in Mathematics) By Jean-Paul Penot Mobipocket

Calculus Without Derivatives (Graduate Texts in Mathematics) By Jean-Paul Penot EPub

93NE8017B5Z: Calculus Without Derivatives (Graduate Texts in Mathematics) By Jean-Paul Penot