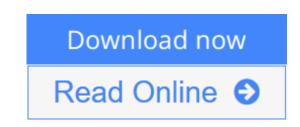# Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics)

By Markus Haase

Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase

This book introduces functional analysis at an elementary level without assuming any background in real analysis, for example on metric spaces or Lebesgue integration. It focuses on concepts and methods relevant in applied contexts such as variational methods on Hilbert spaces, Neumann series, eigenvalue expansions for compact self-adjoint operators, weak differentiation and Sobolev spaces on intervals, and model applications to differential and integral equations. Beyond that, the final chapters on the uniform boundedness theorem, the open mapping theorem and the Hahn-Banach theorem provide a stepping-stone to more advanced texts. The exposition is clear and rigorous, featuring full and detailed proofs. Many examples illustrate the new notions and results. Each chapter concludes with a large collection of exercises, some of which are referred to in the margin of the text, tailor-made in order to guide the student digesting the new material. Optional sections and chapters supplement the mandatory parts and allow for modular teaching spanning from basic to honors track level.

Download Functional Analysis: An Elementary Introduction (G ...pdf

Read Online Functional Analysis: An Elementary Introduction ...pdf

Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics)

By Markus Haase

Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase

This book introduces functional analysis at an elementary level without assuming any background in real analysis, for example on metric spaces or Lebesgue integration. It focuses on concepts and methods relevant in applied contexts such as variational methods on Hilbert spaces, Neumann series, eigenvalue expansions for compact self-adjoint operators, weak differentiation and Sobolev spaces on intervals, and model applications to differential and integral equations. Beyond that, the final chapters on the uniform boundedness theorem, the open mapping theorem and the Hahn-Banach theorem provide a stepping-stone to more advanced texts. The exposition is clear and rigorous, featuring full and detailed proofs. Many examples illustrate the new notions and results. Each chapter concludes with a large collection of exercises, some of which are referred to in the margin of the text, tailor-made in order to guide the student digesting the new material. Optional sections and chapters supplement the mandatory parts and allow for modular teaching spanning from basic to honors track level.

Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase Bibliography

- Sales Rank: #1447050 in Books
- Published on: 2014-09-17
- Original language: English
- Dimensions: 10.50" h x 7.50" w x 1.00" l,
- Binding: Hardcover
- 372 pages

⬇ **Download** Functional Analysis: An Elementary Introduction (G ...pdf

▤ **Read Online** Functional Analysis: An Elementary Introduction ...pdf

Download and Read Free Online Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase

Editorial Review

Review
"Markus Haase's beautiful book lives up to its promise: it provides a well-structured and gentle introduction to the fundamental concepts of functional analysis...The presentation is clear, the applications are insightful, and the large collection of exercises allow us to deepen the study of the presented material. Graduate students, as well as interested undergraduate students can easily profit from this well-written book." -Bela Gabor Pusztai, ACTA Sci. Math.

About the Author
Markus Haase, Delft University of Technology, The Netherlands

Users Review

From reader reviews:

Andrew Fogarty:

What do you think of book? It is just for students since they're still students or the idea for all people in the world, exactly what the best subject for that? Just you can be answered for that concern above. Every person has diverse personality and hobby per other. Don't to be obligated someone or something that they don't want do that. You must know how great in addition to important the book Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics). All type of book can you see on many solutions. You can look for the internet resources or other social media.

Walter Pyle:

In this 21st centuries, people become competitive in each way. By being competitive today, people have do something to make these survives, being in the middle of the particular crowded place and notice by simply surrounding. One thing that sometimes many people have underestimated the item for a while is reading. Yep, by reading a book your ability to survive increase then having chance to stand up than other is high. For you who want to start reading a book, we give you this specific Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) book as beginner and daily reading book. Why, because this book is more than just a book.

Roger Richmond:

Here thing why this particular Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) are different and reliable to be yours. First of all studying a book is good but it really depends in the content than it which is the content is as yummy as food or not. Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) giving you information deeper and different ways, you can find any book out there but there is no publication that similar with Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics). It gives you thrill studying journey, its open up your

personal eyes about the thing that will happened in the world which is probably can be happened around you. You can actually bring everywhere like in park your car, café, or even in your approach home by train. Should you be having difficulties in bringing the paper book maybe the form of Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) in e-book can be your substitute.

Robin Bone:

Is it anyone who having spare time after that spend it whole day through watching television programs or just lying down on the bed? Do you need something totally new? This Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) can be the answer, oh how comes? A fresh book you know. You are so out of date, spending your extra time by reading in this fresh era is common not a nerd activity. So what these publications have than the others?

Download and Read Online Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase #J6DZN2T5EIQ

Read Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase for online ebook

Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase 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 Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase books to read online.

Online Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase ebook PDF download

Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase Doc

Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase Mobipocket

Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase EPub

J6DZN2T5EIQ: Functional Analysis: An Elementary Introduction (Graduate Studies in Mathematics) By Markus Haase