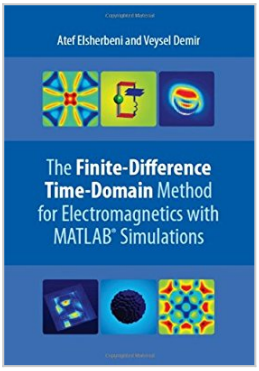

The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations

By Atef Z. Elsherbeni, Veysel Demir

The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir

The scope of the book is the fundamental techniques in the FDTD method. The book consists of 12 chapters, each chapter built on the concepts provided in the previous chapters.

In each chapter the details of the concepts are discussed at a graduate student level. Using this book, students will be able to construct a program with sufficient functionally to solve some basic problems. The construction of final equations is presented with a detailed step-by-step approach. In most cases the full-set of equations are provided.

While constructing the equations, the reader needs to visualize the positioning and orientation of field components in a three dimensional space. This is very difficult and usually requires extensive experience to be able to imagine the 3D space. Therefore, the book presents the construction of equations accompanied by a nice set of 3D illustrations. The figures greatly facilitate the understanding of the concepts.

While the concepts are being presented, it has been kept in mind that the outcome of the book will be a software package that will be sufficient to solve several types of basic electromagnetic problems. In each chapter the transformation of the concepts into programming is explained. Therefore the chapters are presented in such a way that, by adding/developing a new part of the code, chapter by chapter, at the end a well developed FDTD simulation package will be constructed.

A Solutions Manual is also available.

The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations

By Atef Z. Elsherbeni, Veysel Demir

The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir

The scope of the book is the fundamental techniques in the FDTD method. The book consists of 12 chapters, each chapter built on the concepts provided in the previous chapters.

In each chapter the details of the concepts are discussed at a graduate student level. Using this book, students will be able to construct a program with sufficient functionally to solve some basic problems. The construction of final equations is presented with a detailed step-by-step approach. In most cases the full-set of equations are provided.

While constructing the equations, the reader needs to visualize the positioning and orientation of field components in a three dimensional space. This is very difficult and usually requires extensive experience to be able to imagine the 3D space. Therefore, the book presents the construction of equations accompanied by a nice set of 3D illustrations. The figures greatly facilitate the understanding of the concepts.

While the concepts are being presented, it has been kept in mind that the outcome of the book will be a software package that will be sufficient to solve several types of basic electromagnetic problems. In each chapter the transformation of the concepts into programming is explained. Therefore the chapters are presented in such a way that, by adding/developing a new part of the code, chapter by chapter, at the end a well developed FDTD simulation package will be constructed.

A Solutions Manual is also available.

The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir Bibliography

- Sales Rank: #1908526 in Books
- Published on: 2009-12-01
- Original language: English
- Number of items: 1
- Dimensions: 10.10" h x .90" w x 7.20" l, 1.94 pounds
- Binding: Hardcover
- 450 pages

Editorial Review

About the Author
Atef Z. Elsherbeni is G.A. Dobelman Distinguished Professor of Electrical Engineering and Computer Science, Colorado School of Mines.

Veysel Demir is an Associate Professor in the Department of Electrical Engineering at Northern Illinois University. He is a member of IEEE, ACES, and SigmaXi, has co-authored more than 50 technical journal and conference papers, and served as a technical program co-chair for the 2014 IEEE *International Symposium on Antennas* and Propagation and USNC-URSI Radio Science Meeting and for the ACES 2015 conference.

Users Review

From reader reviews:

Kenneth Sisk:

This The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations book is absolutely not ordinary book, you have it then the world is in your hands. The benefit you have by reading this book is information inside this book incredible fresh, you will get info which is getting deeper you read a lot of information you will get. That The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations without we know teach the one who examining it become critical in thinking and analyzing. Don't be worry The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations can bring once you are and not make your bag space or bookshelves' grow to be full because you can have it with your lovely laptop even cell phone. This The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations having great arrangement in word as well as layout, so you will not feel uninterested in reading.

David Wysocki:

Do you one of people who can't read enjoyable if the sentence chained within the straightway, hold on guys that aren't like that. This The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations book is readable by means of you who hate the perfect word style. You will find the facts here are arrange for enjoyable reading through experience without leaving perhaps decrease the knowledge that want to offer to you. The writer involving The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations content conveys prospect easily to understand by most people. The printed and e-book are not different in the written content but it just different such as it. So , do you still thinking The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations is not loveable to be your top list reading book?

Kathleen Jones:

Often the book The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations will bring one to the new experience of reading a new book. The author style to explain the idea is very unique. Should you try to find new book to see, this book very acceptable to you. The book The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations is much recommended to you to learn. You can also get the e-book from official web site, so you can quickly to read the book.

Shalon Dougherty:

People live in this new day of lifestyle always aim to and must have the extra time or they will get great deal of stress from both daily life and work. So , if we ask do people have spare time, we will say absolutely of course. People is human not really a robot. Then we request again, what kind of activity are there when the spare time coming to a person of course your answer may unlimited right. Then ever try this one, reading books. It can be your alternative with spending your spare time, the book you have read is definitely The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations.

Read The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir for online ebook

The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir 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 Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir books to read online.

Online The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir ebook PDF download

The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir Doc

The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir Mobipocket

The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir EPub

TIVEYMNFQ71: The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir