



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

*By Atef Z. Elsherbeni, Veysel Demir*

Download now

Read Online ➔

## **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 functionality 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.

 [Download The Finite Difference Time Domain Method for Elect ...pdf](#)

 [Read Online The Finite Difference Time Domain Method for Ele ...pdf](#)

# 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 functionality 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

 [Download The Finite Difference Time Domain Method for Elect ...pdf](#)

 [Read Online The Finite Difference Time Domain Method for Ele ...pdf](#)



## **Download and Read Free Online The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir**

---

### **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:**

##### **Edward Bastian:**

This The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations is great reserve for you because the content and that is full of information for you who have always deal with world and get to make decision every minute. That book reveal it facts accurately using great arrange word or we can declare no rambling sentences included. So if you are read this hurriedly you can have whole data in it. Doesn't mean it only gives you straight forward sentences but tricky core information with lovely delivering sentences. Having The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations in your hand like keeping the world in your arm, info in it is not ridiculous a single. We can say that no book that offer you world in ten or fifteen tiny right but this book already do that. So , it is good reading book. Heya Mr. and Mrs. busy do you still doubt that?

##### **Michael Vines:**

Is it a person who having spare time in that case spend it whole day by watching television programs or just laying on the bed? Do you need something totally new? This The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations can be the reply, oh how comes? The new book you know. You are and so out of date, spending your time by reading in this brand new era is common not a geek activity. So what these publications have than the others?

##### **Robert Hansen:**

What is your hobby? Have you heard which question when you got students? We believe that that query was given by teacher to their students. Many kinds of hobby, Everyone has different hobby. And you know that little person including reading or as studying become their hobby. You must know that reading is very important and also book as to be the point. Book is important thing to incorporate you knowledge, except your current teacher or lecturer. You will find good news or update in relation to something by book.

Amount types of books that can you choose to use be your object. One of them is actually The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations.

**Harold Thompson:**

Many people said that they feel bored stiff when they reading a e-book. They are directly felt this when they get a half elements of the book. You can choose the actual book The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations to make your own personal reading is interesting. Your own skill of reading expertise is developing when you similar to reading. Try to choose easy book to make you enjoy to see it and mingle the feeling about book and studying especially. It is to be initially opinion for you to like to start a book and go through it. Beside that the book The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations can to be a newly purchased friend when you're feel alone and confuse using what must you're doing of that time.

**Download and Read Online The Finite Difference Time Domain Method for Electromagnetics: With MATLAB Simulations By Atef Z. Elsherbeni, Veysel Demir #X2TE0H9QKW8**

# **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**