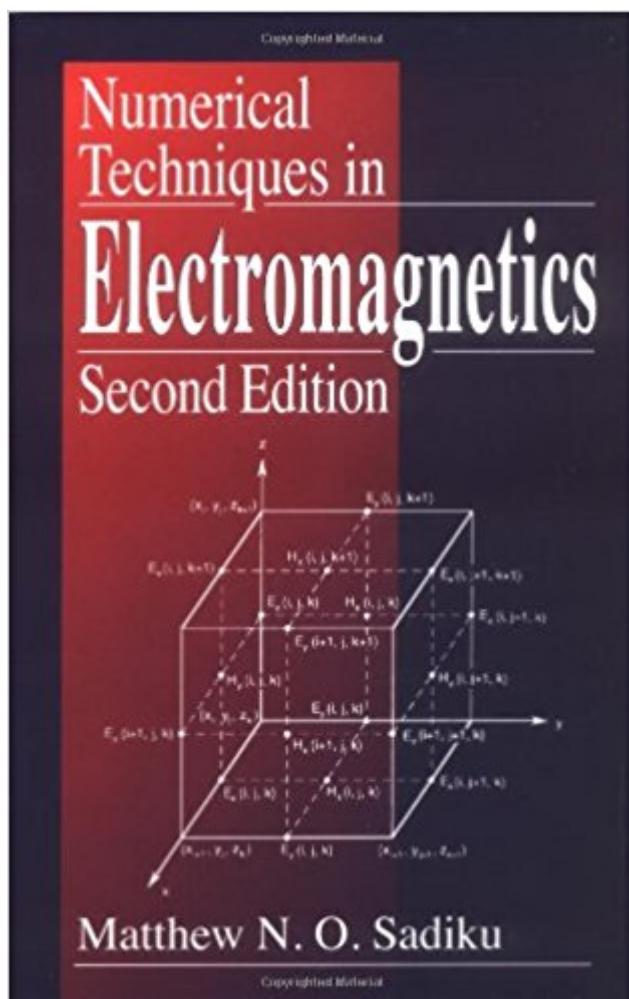


The book was found

# Numerical Techniques In Electromagnetics, Second Edition



## **Synopsis**

As the availability of powerful computer resources has grown over the last three decades, the art of computation of electromagnetic (EM) problems has also grown - exponentially. Despite this dramatic growth, however, the EM community lacked a comprehensive text on the computational techniques used to solve EM problems. The first edition of Numerical Techniques in Electromagnetics filled that gap and became the reference of choice for thousands of engineers, researchers, and students. The Second Edition of this bestselling text reflects the continuing increase in awareness and use of numerical techniques and incorporates advances and refinements made in recent years. Most notable among these are the improvements made to the standard algorithm for the finite difference time domain (FDTD) method and treatment of absorbing boundary conditions in FDTD, finite element, and transmission-line-matrix methods. The author also added a chapter on the method of lines. Numerical Techniques in Electromagnetics continues to teach readers how to pose, numerically analyze, and solve EM problems, give them the ability to expand their problem-solving skills using a variety of methods, and prepare them for research in electromagnetism. Now the Second Edition goes even further toward providing a comprehensive resource that addresses all of the most useful computation methods for EM problems.

## **Book Information**

Hardcover: 760 pages

Publisher: CRC Press; 2 edition (July 12, 2000)

Language: English

ISBN-10: 0849313953

ISBN-13: 978-0849313950

Product Dimensions: 6.1 x 1.6 x 9.2 inches

Shipping Weight: 2.6 pounds

Average Customer Review: 4.2 out of 5 stars 6 customer reviews

Best Sellers Rank: #741,032 in Books (See Top 100 in Books) #163 in Books > Textbooks > Engineering > Electrical & Electronic Engineering #514 in Books > Science & Math > Physics > Electromagnetism #3628 in Books > Engineering & Transportation > Engineering > Electrical & Electronics

## **Customer Reviews**

Book covers a lot of stuff. But there are some problems. 1) Too many typos!. 2) The binding is horrible!, you cannot keep this book on your desk and study, because it will close automatically.

That is too many pages and width of the book is small. That annoys me, making me avoid using this book. Still a good book to have

This book is a decent overview of numerical techniques in electromagnetics (and in general). I have mixed feelings about it, however. I think the math coverage is OK, although it is somewhat abstract. E.g., MoM and FEM are introduced through variational methods, which is probably an elegant yet unintuitive way to understand them. A more heuristic approach might have been better. Many techniques are covered (FDTD, MoM, FEM, TLM, Monte Carlo, method of lines), but I wish this book spent more time on the really important methods (FDTD, MoM, FEM) and less on the more obscure ones (TLM, method of lines). I would gladly trade these two methods for some coverage on geometrical optics, physical optics, GTD, and UTD. One nice thing is that the numerical methods are illustrated with simpler EM problem formulations, e.g., Poisson's equation, instead of going into the full complexity of solving general wave problems. The short intro to analytical and numerical techniques is appreciated. There are a few glaring typos in this book that I've noticed, e.g., in figure captions. This is annoying, but I guess the errors are obvious enough that you won't be led astray. I hope there's not more subtle errors elsewhere in the text. There's a fair bit of Fortran 77 and C++ source code included. I don't think there's a machine readable files available, so they'd be mostly for illustration purposes. I originally rated this text 3 stars, but after getting into numerical EM more since then, I'd upgrade it to 4.

Makes an otherwise complex subject seem simple by the way it is presented. I found it to be an exceptionally well written text, and would encourage anyone who is interested in the subject to buy it. A great book!

this book is nice....there are so manythings covered there....that it is notpossible for the author to go too deep intosolution of the wave equation itself...i wouldhave loved a better introduction to the fieldequations...something i found surprisin giventhat it is a book in EM.But, even if you can catch up and apply afew of the concepts that he lays out for youin the book you have learnt something. and thebook is a worthy buy.

Can't design motors without a little computer-aided engineering ...this is a good overview of the theory of subjects such as finite element analysis, boundary element analysis, finite difference analysis, etc. I used this text in my graduate level course on the subject.

Nice book I like it. Just Buy it!

[Download to continue reading...](#)

Numerical Techniques in Electromagnetics, Second Edition Engineering Electromagnetics (Mcgraw-Hill Series in Electrical Engineering. Electromagnetics) Numerical Modeling of Explosives and Propellants, Second Edition Numerical Computation of Internal and External Flows: The Fundamentals of Computational Fluid Dynamics, Second Edition A First Course in Numerical Analysis: Second Edition (Dover Books on Mathematics) Numerical Methods for Engineers and Scientists Using MATLAB®, Second Edition Numerical Methods for Engineers and Scientists, Second Edition, Introduction to Geophysical Fluid Dynamics, Volume 101, Second Edition: Physical and Numerical Aspects (International Geophysics) Theoretical and Numerical Combustion, Second Edition Schaum's Outline of Electromagnetics, 4th Edition (Schaum's Outlines) Fundamentals of Applied Electromagnetics (7th Edition) Fundamentals of Applied Electromagnetics (6th Edition) Schaum's Outline of Electromagnetics, Third Edition (Schaum's Outline Series) Fundamentals of Applied Electromagnetics 6th (sixth) edition Text Only Advanced Engineering Electromagnetics, 2nd Edition Field and Wave Electromagnetics (2nd Edition) Engineering Electromagnetics and Waves (2nd Edition) Traffic Flow Theory: Characteristics, Experimental Methods, and Numerical Techniques Numerical Modelling of Wave Energy Converters: State-of-the-Art Techniques for Single Devices and Arrays Fundamentals of Electromagnetics with Engineering Applications

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)