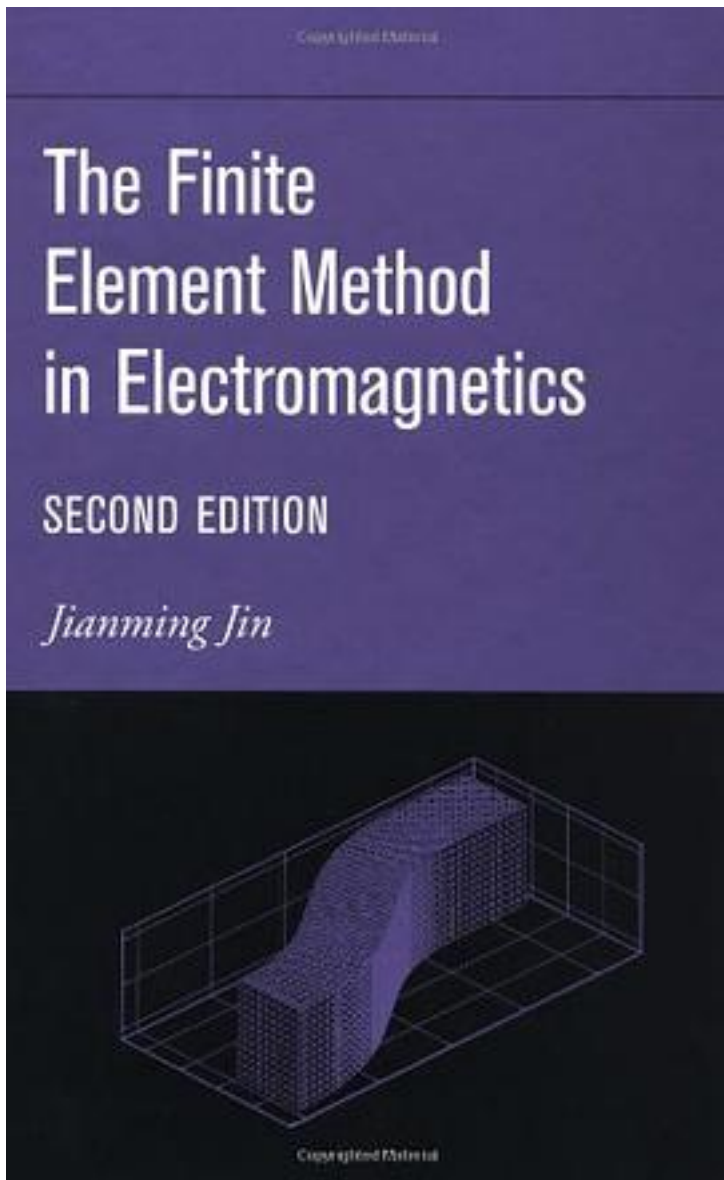# The Finite Element Method in Electromagnetics

[The Finite Element Method in Electromagnetics_下载链接1_](#)

著者:Jian-Ming Jin

出版者:Wiley-IEEE Press

出版时间:2002-5-27

装帧:Hardcover

isbn:9780471438182

A systematic treatment of the finite element method

"Anyone interested in the state of the art in finite element formulations will find this book an interesting read. In particular, I would strongly recommend it to those members of the electromagnetic community who are involved in high-frequency applications."-Measurement Science and Technology The finite element method is one of the preeminent simulation techniques for obtaining solutions to boundary-value problems in mathematical physics. It has applications in a variety of engineering and scientific studies, such as antennas, radar, microwave engineering, high-speed/high-frequency circuits, wireless communication, electro-optical engineering, remote sensing, bioelectromagnetics, and geoelectromagnetics. This Second Edition of an essential text teaches the finite element method for electromagnetic analysis. It offers engineers a methodical way to quickly master this very powerful technique for solving practical, often complicated, engineering problems. This book provides the first systematic treatment of this numerical analysis technique for electromagnetics, including a brief overview of the two classic methods-the Ritz variational method and Galerkin's method-which form the foundation of the finite element function. Employing an example to introduce the concept of the finite element method and describe the essential steps of the technique, the author lays the groundwork for a broad-based understanding of the finite element method's usefulness. He completes his coverage by describing the finite element analysis of one-, two-, and three-dimensional problems, developing for each problem a rigorous finite element solution in general form from which solutions to specific problems can be deduced. Carefully updated to include the most recent developments, the Second Edition now includes new coverage of: * Absorbing boundary conditions

* A hybrid technique for pen-region scattering and radiation problems

* Eigenfunction expansions on elliptical boundaries

* Time-domain analysis of transient electromagnetic problems

* The method of moments and its fast solvers

作者介绍:

目录:

[The Finite Element Method in Electromagnetics_下载链接1_](#)

标签

FEM

电磁场有限元法

微波

CEM

schedule

评论

金老师集大成之作

[The Finite Element Method in Electromagnetics_下载链接1_](#)

书评

[The Finite Element Method in Electromagnetics_下载链接1_](#)