



Electromagnetics and Calculation of Fields

By Ida, Nathan / Bastos, Joao P. A.

Book Condition: New. Publisher/Verlag: Springer, Berlin | This introduction to electromagnetic fields emphasizes the computation of fields and the development of theoretical relations. It presents the electromagnetic field and Maxwell's equations with a view toward connecting the disparate applications to the underlying relations, along with computational methods of solving the equations. | The Electromagnetic Field and Maxwell's Equations.- 1. Mathematical Preliminaries.- 1.1. Introduction.- 1.2. The Vector Notation.- 1.3. Vector Derivation.- 1.3.1. The Nabla (?) Operator.- 1.3.2. Definition of the Gradient, Divergence, and Curl.- 1.4. The Gradient.- 1.4.1. Example of Gradient.- 1.5. The Divergence.- 1.5.1. Definition of Flux.- 1.5.2. The Divergence Theorem.- 1.5.3. Conservative Flux.- 1.5.4. Example of Divergence.- 1.6. The Curl.- 1.6.1. Circulation of a Vector.- 1.6.2. Stokes's Theorem.- 1.6.3. Example of Curl.- 1.7. Second Order Operators.- 1.8. Application of Operators to More than One Function.- 1.9. Expressions in Cylindrical and Spherical Coordinates.- 2. The Electromagnetic Field and Maxwell's Equations.- 2.1. Introduction.- 2.2. Maxwell's Equations.- 2.2.1. Fundamental Physical Principles of the Electromagnetic Field.- 2.2.2. Point Form of the Equations.- 2.2.3. The Equations in Vacuum.- 2.2.4. The Equations in Media with $\epsilon \neq \epsilon_0$ and $\mu \neq \mu_0$.- 2.2.5. The Equations in General Media.- 2.2.6. The Integral Form of Maxwell's Equations.- 2.3. Approximations to Maxwell's...



[READ ONLINE](#)

Reviews

The book is great and fantastic. I could comprehend almost everything using this published e publication. I am just very happy to explain how here is the very best ebook i have study inside my very own existence and could be the greatest book for ever.

-- **Mekhi Marvin DVM**

I just started off reading this article pdf. Yes, it can be engage in, nonetheless an interesting and amazing literature. I am effortlessly can get a satisfaction of reading a written publication.

-- **Peyton Renner IV**