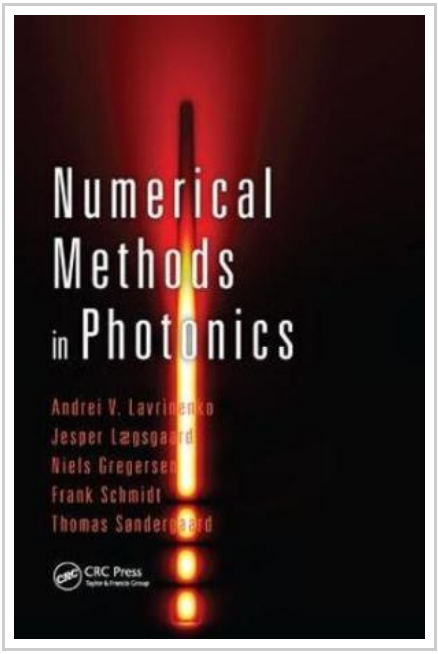

Numerical Methods in Photonics (Paperback)

By Andrei V. Lavrinenko, Jesper Laegsgaard, Niels Gregersen

Taylor Francis Ltd, United Kingdom, 2017. Paperback. Condition: New. Language: English . Brand New Book. Simulation and modeling using numerical methods is one of the key instruments in any scientific work. In the field of photonics, a wide range of numerical methods are used for studying both fundamental optics and applications such as design, development, and optimization of photonic components. Modeling is key for developing improved photonic devices and reducing development time and cost. Choosing the appropriate computational method for a photonics modeling problem requires a clear understanding of the pros and cons of the available numerical methods. Numerical Methods in Photonics presents six of the most frequently used methods: FDTD, FDFD, 1+1D nonlinear propagation, modal method, Green s function, and FEM. After an introductory chapter outlining the basics of Maxwell s equations, the book includes self-contained chapters that focus on each of the methods. Each method is accompanied by a review of the mathematical principles in which it is based, along withã sample scripts, illustrative examples of characteristic problem solving, and exercises. MATLAB (R) is used throughout the text. This book provides a solid basis to practice writing your own codes. The theoretical formulation is complemented by sets of...

Reviews

I actually started looking over this publication. It really is rally interesting throgh studying period. Once you begin to read the book, it is extremely difficult to leave it before concluding.

-- ***Dana Hintz***

Good electronic book and valuable one. It really is basic but unexpected situations in the 50 percent in the pdf. You wont really feel monotony at at any moment of your time (that's what catalogues are for concerning when you ask me).

-- ***Elisa Reinger***