



Electromagnetic Waves

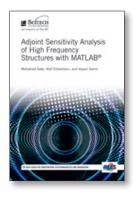


Electromagnetic Waves - Highlights

Adjoint Sensitivity Analysis of High Frequency Structures with MATLAB®

Author: Mohamed Bakr, McMaster University, Canada

This unique reference is the first to cover the theory of adjoint sensitivity analysis and uses the popular FDTD (finite-difference time-domain) method to show how wideband sensitivities can



be efficiently estimated for different types of materials and structures. It includes a variety of MATLAB® examples to help readers absorb the content more easily. Topics covered include a review of FDTD and an introduction to adjoint sensitivity analysis; second-order sensitivity analysis; time-domain responses; and applications to nonlinear and anisotropic materials.

The ACES Series on Computational Electromagnetics and Engineering

2017 / 280pp / £95 / \$150

Print SBEW5250 / 978-1-61353-231-7 eBook SBEW525E / 978-1-61353-232-4

Advances in Planar Filters Design

Editor: Jiasheng Hong, Heriot Watt University, Edinburgh, UK

Written by a team of leading experts in the field, this book presents recent advances in the design of RF/microwave planar filters. It covers applications in current and future wireless, microwave, communications and radar systems and looks



at topics such as planar millimetre-wave and terahertz filters, microstrip lossy filters, absorptive/reflectionless filters, superconducting filters and planar SIW coaxial resonator filters. This is an ideal resource for research engineers, professionals, specialists, research students and academics working on the topic of RF/microwave filters and related system applications.

2019 / 424pp / £125 / \$165

Print SBEW5350 / 978-1-78561-589-4 eBook SBEW535E / 978-1-78561-590-0

Developments in Antenna Analysis and Design

(2-vol set)

Editor: Raj Mittra, University of Central Florida, USA

This 2-volume set presents recent developments in antenna design and modeling techniques for a wide variety of applications, chosen because they are contemporary in nature, have been receiving considerable attention in recent years, and are crucial for future



developments. It includes topics such as body-worn antennas, that play an important role as sensors for Internet of Things (IoT), and millimeter wave antennas that are vitally important for 5G devices. It also covers a wide frequency range that includes terahertz and optical frequencies. Additionally, it discusses topics such as theoretical bounds of antennas and aspects of statistical analysis that are not readily found in the existing literature.

Vol 1: 2018 / 473pp / £125 / \$165

Print SBEW543A / 978-1-78561-888-8 eBook SBEW543F / 978-1-78561-889-5

Vol 2: 2018 / 403pp / £125 / \$165 Print SBEW543B / 978-1-78561-890-1 eBook SBEW543G / 978-1-78561-891-8

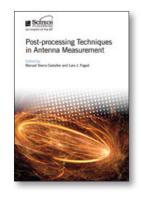
Set: 2018 / £200 / \$260

Print SBEW543X / 978-1-78561-892-5

Post-processing Techniques in Antenna Measurement

Editors: Manuel Sierra Castañer & Lars J. Foged, Politécnica (Polytechnic) University of Madrid, Spain & Microwave Vision Group (MVG), Italy

This title presents new postprocessing techniques for improving the quality of antenna measurement results. Written



by a team of authors and editors from academia and industry, the book gives a balanced, global view of the topic and focuses on source reconstruction techniques, modal filtering, phase recovery and the combination of simulations and measurements. It discusses potential problems for the future, as well as possible solutions, making it an essential read for industry professionals and academics interested in the leading-edge thinking in antenna measurement and design.

2019 / 250pp / £110 / \$145

Print SBEW5290 / 978-1-78561-537-5 eBook SBEW529E / 978-1-78561-538-2

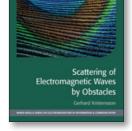
Electromagnetic Waves - Highlights



Scattering of Electromagnetic Waves by Obstacles

Author: Gerhard Kristensson, Lund University, Sweden

The main purpose of this book is to give a theoretical treatment of the scattering phenomena, and to illustrate numerical computations of some canonical scattering problems for different geometries and materials. The scattering



theory is also important in the theory of passive antennas, and this book gives several examples on this topic.

Mario Boella Series on Electromagnetism in Information and Communication

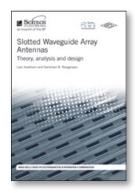
2016 / 760pp / £95 / \$149

Print SBEW5240 / 978-1-61353-221-8 eBook SBEW524E / 978-1-61353-222-5

Slotted Waveguide Array Antennas

Authors: Sembiam Rengarajan & Lars Josefsson, California State University, USA & Lars Microwave, Sweden

This is the first comprehensive treatment of slotted waveguide array antennas from an engineering perspective. It provides readers with a thorough foundation in applicable theories



as well as hands-on instruction for practical analysis and design of important types of waveguide slot arrays. Slotted Waveguide Array Antennas goes beyond some of the commonly discussed topics and ventures into areas that include: higher order mode coupling and edge effects; performance optimisation in terms of bandwidth and pattern performance and manufacturing tolerances.

Mario Boella Series on Electromagnetism in Information and Communication

2018 / 426pp / £125 / \$160

Print SBEW5170 / 978-1-61353-189-1 eBook SBEW517E / 978-1-61353-190-7



Electromagnetic Waves - Forthcoming

to be published in 2020 and 2021

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Advances in Mathematical Methods for Electromagnetics	Kobayashi & Smith (Eds)	£145.00	\$190.00	978-1-78561-384-5	978-1-78561-385-2	SBEW528
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