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Terahertz Sources and Systems

New Developments and Applications in Sensing Technology

... Workshop on High Energy Density and High Power RF

A Clinical Guide

Ground Plane Method to Suppress Coupling in 3 Dimensional Integration Targeted for Mixed Signal Application

ICAIA 2020

Management of Heart Failure

EM Modeling of Antennas and RF Components for Wireless Communication Systems

Microwave Circuit Modeling Using Electromagnetic Field Simulation

The Wave Concept in Electromagnetism and Circuits

World Congress on Medical Physics and Biomedical Engineering May 26-31, 2012, Beijing, China

Proceedings of the 1999 Particle Accelerator Conference

Passive Microwave Components and Antennas

Anesthesia for Transplant Surgery

Handbook Of Accelerator Physics And Engineering (3rd Printing)

High Energy Density and High Power RF

Theory and Design

Frequency Selective Surfaces

Revised and Updated Second Edition

Soft Computing: Theories and Applications

Advances in Ubiquitous Networking 2

Heart Failure

European Particle Accelerator Conference (Epac 94) (In 3 Volumes)

Practical Guide to RF-MEMS

Proceedings of the UNet'15

Proceedings of SoCTA 2019

Mechanical Circulatory Support

Numerical Analysis or Numerical Method in Symmetry

Hurst's the Heart, 12th Edition

VLSI-SoC: Technologies for Systems Integration

Proceedings of International Conference on Artificial Intelligence and Applications

Principles and Applications

Volume 1: Medical

17th IFIP WG 10.5/IEEE International Conference on Very Large Scale Integration,

VLSI-SoC 2009, Florianópolis, Brazil, October 12-15, 2009, Revised Selected Papers

Computational Electromagnetics for RF and Microwave Engineering

Proceedings of the UNet'16

Advances in Ubiquitous Networking

Clinical Guide to Heart Transplantation

An Illustrated Textbook

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Terahertz Sources and Systems John Wiley & Sons

This new edition of Medical Management of Heart Failure will provide the full spectrum of medical options, ICU management and rehabilitation, while also prepare the reader for the second volume of Comprehensive Management of Heart Failure by introducing the surgical options in heart failure from transplant to the more noninvasive procedures in the interventional radiology department. The contributing authors are all key opinion leaders in the medical management of heart failure. This volume is designed to integrate with its sister surgery title, but also alone be the definitive guide to the medical management of heart failure.

New Developments and Applications in Sensing Technology Springer Nature

"Real and complex exponential data fitting is an important activity in many different areas of science and engineering, ranging from Nuclear Magnetic Resonance Spectroscopy and Lattice Quantum Chromodynamics to Electrical and Chemical Engineering, Vision a"

... Workshop on High Energy Density and High Power RF Springer Science & Business Media

New Developments and Applications in Sensing Technology Springer Science & Business Media

A Clinical Guide Springer Nature

This is a concise review of up-to-date concepts and techniques in the discipline of heart transplantation. It is a review and reference for practitioners managing patients with advanced heart disease, including patients with end-stage heart

failure, mechanical circulatory support or transplant recipients. Heart failure is a major public health issue, with a prevalence of over 5.8 million in the USA, and over 23 million worldwide, and rising. The lifetime risk of developing heart failure is one in five. Heart failure carries substantial morbidity and mortality, with 5-year mortality that rival those of many cancers. As heart transplantation remains the best treatment option for patients with end stage heart failure, this primer will provide valuable information and management strategies for physicians caring for these patients. Also, due to continued shortage in donor organs, heart transplantation is a limited resource - which further underscores the importance of appropriately evaluating patients for transplant candidacy and managing their pre, peri- and post-transplant care for maximum benefit and best outcomes.

Ground Plane Method to Suppress Coupling in 3 Dimensional Integration Targeted for Mixed Signal Application McGraw Hill Professional

The congress's unique structure represents the two dimensions of technology and medicine: 13 themes on science and medical technologies intersect with five challenging main topics of medicine to create a maximum of synergy and integration of aspects on research, development and application. Each of the congress themes was chaired by two leading experts. The themes address specific topics of medicine and technology that provide multiple and excellent opportunities for exchanges.

ICAIA 2020 Amer Inst of Physics

This Special Issue focuses mainly on techniques and the relative formalism typical of numerical methods and

therefore of numerical analysis, more generally. These fields of study of mathematics represent an important field of investigation both in the field of applied mathematics and even more exquisitely in the pure research of the theory of approximation and the study of polynomial relations as well as in the analysis of the solutions of the differential equations both ordinary and partial derivatives. Therefore, a substantial part of research on the topic of numerical analysis cannot exclude the fundamental role played by approximation theory and some of the tools used to develop this research. In this Special Issue, we want to draw attention to the mathematical methods used in numerical analysis, such as special functions, orthogonal polynomials, and their theoretical tools, such as Lie algebra, to study the concepts and properties of some special and advanced methods, which are useful in the description of solutions of linear and nonlinear differential equations. A further field of investigation is dedicated to the theory and related properties of fractional calculus with its adequate application to numerical methods.

Management of Heart Failure

Springer

Annotation This practical "how to" book is an ideal introduction to electromagnetic field-solvers. Where most books in this area are strictly theoretical, this unique resource provides engineers with helpful advice on selecting the right tools for their RF (radio frequency) and high-speed digital circuit design work

EM Modeling of Antennas and RF Components for Wireless Communication Systems Springer

"...Ben has been the world-wide guru of this technology, providing support to

applications of all types. His genius lies in handling the extremely complex mathematics, while at the same time seeing the practical matters involved in applying the results. As this book clearly shows, Ben is able to relate to novices interested in using frequency selective surfaces and to explain technical details in an understandable way, liberally spiced with his special brand of humor... Ben Munk has written a book that represents the epitome of practical understanding of Frequency Selective Surfaces. He deserves all honors that might befall him for this achievement." - William F. Bahret. Mr. W. Bahret was with the United States Air Force but is now retired. From the early 50s he sponsored numerous projects concerning Radar Cross Section of airborne platforms in particular antennas and absorbers. Under his leadership grew many of the concepts used extensively today, as for example the metallic radome. In fact, he is by many considered to be the father of stealth technology. "This book compiles under one cover most of Munk's research over the past three decades. It is woven with the physical insight that he has gained and further developed as his career has grown. Ben uses mathematics to whatever extent is needed, and only as needed. This material is written so that it should be useful to engineers with a background in electromagnetics. I strongly recommend this book to any engineer with any interest in phased arrays and/or frequency selective surfaces. The physical insight that may be gained from this book will enhance their ability to treat additional array problems of their own." - Leon Peters, Jr. Professor Leon Peters, Jr., was a professor at the Ohio State University but is now retired. From the early sixties he

worked on, among many other things, RCS problems involving antennas and absorbers. This book presents the complete derivation of the Periodic Method of Moments, which enables the reader to calculate quickly and efficiently the transmission and reflection properties of multi-layered Frequency Selective Surfaces comprised of either wire and/or slot elements of arbitrary shape and located in a stratified medium. However, it also gives the reader the tools to analyze multi-layered FSS's leading to specific designs of the very important Hybrid Radome, which is characterized by constant bandwidth with angle of incidence and polarization. Further, it investigates in great detail bandstop filters with large as well as narrow bandwidth (dichroic surfaces). It also discusses for the first time, lossy elements used in producing Circuit Analog absorbers. Finally, the last chapter deals with power breakdown of FSS's when exposed to pulsed signals with high peak power. The approach followed by most other presentations simply consists of expanding the fields around the FSS, matching the boundary conditions and writing a computer program. While this enables the user to obtain calculated results, it gives very little physical insight and no help in how to design actual multi-layered FSS's. In contrast, the approach used in this title analyzes all curves of desired shapes. In particular, it discusses in great detail how to produce radomes made of FSS's located in a stratified medium (Hybrid Radomes), with constant bandwidth for all angles of incidence and polarizations. Numerous examples are given of great practical interest. More specifically, Chapter 7 deals with the theory and design of bandpass radomes with constant

bandwidth and flat tops. Examples are given for mono-, bi- and tri-planar designs. Chapter 8 deals with bandstop filters with broad as well as narrow bandwidth. Chapter 9 deals with multi-layered FSS of lossy elements, namely the so-called Circuit Analog Absorbers, designed to yield outstanding absorption with more than a decade of bandwidth. Features material previously labeled as classified by the United States Air Force.

Microwave Circuit Modeling Using Electromagnetic Field Simulation

Springer

Modelling and computations in electromagnetics is a quite fast-growing research area. The recent interest in this field is caused by the increased demand for designing complex microwave components, modeling electromagnetic materials, and rapid increase in computational power for calculation of complex electromagnetic problems. The first part of this book is devoted to the advances in the analysis techniques such as method of moments, finite-difference time-domain method, boundary perturbation theory, Fourier analysis, mode-matching method, and analysis based on circuit theory. These techniques are considered with regard to several challenging technological applications such as those related to electrically large devices, scattering in layered structures, photonic crystals, and artificial materials. The second part of the book deals with waveguides, transmission lines and transitions. This includes microstrip lines (MSL), slot waveguides, substrate integrated waveguides (SIW), vertical transmission lines in multilayer media as well as MSL to SIW and MSL to slot line transitions.

The Wave Concept in Electromagnetism and Circuits

Springer

This book provides clinicians with the most recent developments in anaesthesia for transplant surgery. Beginning with the history and ethics of the procedure, the following chapters discuss anaesthetic techniques for transplant surgery of different organs in the body. The importance of history taking, thorough clinical examination, invention of the artificial respirator and controversies surrounding brain death, are discussed in depth. This useful manual includes more than 110 clinical photographs and illustrations to enhance learning. Key points Provides clinicians with recent developments in anaesthesia for transplant surgery Covers techniques for transplant surgery of different organs in body Emphasis on importance of history taking and thorough clinical examination Includes more than 110 clinical photographs and illustrations *World Congress on Medical Physics and Biomedical Engineering May 26-31, 2012, Beijing, China* John Wiley & Sons This book focuses on soft computing and how it can be applied to solve real-world problems arising in various domains, ranging from medicine and healthcare, to supply chain management, image processing and cryptanalysis. It gathers high-quality papers presented at the International Conference on Soft Computing: Theories and Applications (SoCTA 2019), organized by the National Institute of Technology Patna, India. Offering valuable insights into soft computing for teachers and researchers alike, the book will inspire further research in this dynamic field.

Proceedings of the 1999 Particle Accelerator Conference Oxford

University Press, USA

Proceedings of the NATO Advanced Research Workshop, Château de Bonas,

France, 22-27 June 2000

Passive Microwave Components and Antennas Springer Science & Business Media

Closes the gap between hardcore-theoretical and purely experimental RF-MEMS books. The book covers, from a practical viewpoint, the most critical steps that have to be taken in order to develop novel RF-MEMS device concepts. Prototypical RF-MEMS devices, both including lumped components and complex networks, are presented at the beginning of the book as reference examples, and these are then discussed from different perspectives with regard to design, simulation, packaging, testing, and post-fabrication modeling.

Theoretical concepts are introduced when necessary to complement the practical hints given for all RF-MEMS development stages. Provides researchers and engineers with invaluable practical hints on how to develop novel RF-MEMS device concepts Covers all critical steps, dealing with design, simulation, optimization, characterization and fabrication of MEMS for radio-frequency applications Addresses frequently disregarded issues, explicitly treating the hard to predict interplay between the three-dimensional device structure and its electromagnetic functionality Bridges theory and experiment, fundamental concepts are introduced with the application in mind, and simulation results are validated against experimental results Appeals to the practice-oriented R&D reader: design and simulation examples are based on widely known software packages such as ANSYS and the hardware description language Verilog.

John Wiley & Sons

This book contains extended and revised versions of the best papers presented at

the 17th IFIP WG 10.5/IEEE International Conference on Very Large Scale Integration, VLSI-SoC 2009, held in Florianópolis, Brazil, in October 2009. The 8 papers included in the book together with two keynote talks were carefully reviewed and selected from 27 papers presented at the conference. The papers cover a wide variety of excellence in VLSI technology and advanced research addressing the current trend toward increasing chip integration and technology process advancements bringing about stimulating new challenges both at the physical and system-design levels, as well as in the test of these systems.

Anesthesia for Transplant Surgery
Springer Science & Business Media
text 2nd ed

Handbook Of Accelerator Physics And Engineering (3rd Printing) MDPI

The recent shift in focus from defense and government work to commercial wireless efforts has caused the job of the typical microwave engineer to change dramatically. The modern microwave and RF engineer is expected to know customer expectations, market trends, manufacturing technologies, and factory models to a degree that is unprecedented in the

High Energy Density and High Power RF
BRILL

This book has focussed on different aspects of smart sensors and sensing technology, i.e. intelligent measurement, information processing, adaptability, recalibration, data fusion, validation, high reliability and integration of novel and high performance sensors in the areas of magnetic, ultrasonic, vision and image sensing, wireless sensors and network, microfluidic, tactile, gyro, flow, surface acoustic wave, humidity and ultra-wide band. While future interest in

this field is ensured by the constant supply of emerging modalities, techniques and engineering solutions, as well as an increasing need from aging structures, many of the basic concepts and strategies have already matured and now offer opportunities to build upon. The book has primarily been focussed for postgraduate and research students working on different aspects of design and developments of smart sensors and sensing technology.

Theory and Design Springer

This book focuses on practical computational electrodynamics, guiding the reader step-by-step through the modeling process from the initial "what question must the model answer?", through the setting up of a computer model, to post processing, validation and optimization. The book offers a realistic view of the capabilities and limits of current 3-D field simulators and how to apply this knowledge efficiently to EM analysis and design of RF applications in modern communication systems.

Frequency Selective Surfaces Springer

This two volume set presents recent advances in the knowledge and technology related to the field of cardiology. Beginning with a basic introduction, the text continues with a step by step approach through the subject, covering topics such as cardiovascular pharmacology, electrophysiology, coronary heart diseases, myocardial and pericardial disease and more. With contributions from leading international experts and over 1500 colour photographs, each chapter contains additional comments and guidelines from reputed international bodies. The book is accompanied by a DVD ROM containing high quality video footage of echocardiography.

Revised and Updated Second Edition Cambridge University Press
Organ Transplantation: A Clinical Guide covers all aspects of transplantation in both adult and pediatric patients. Cardiac, lung, liver, kidney, pancreas and small bowel transplantation are discussed in detail, as well as emerging areas such as face and pancreatic islet cell transplantation. For each organ, chapters cover basic science of transplantation, recipient selection, the transplant procedure, anesthetic and post-operative care, and long-term follow-up and management of complications. Important issues in donor

selection and management are also discussed, including recruitment and allocation of potential donor organs and expanding the donor pool. Summary tables and illustrations enhance the text, and long-term outcome data are provided where available. Written by expert transplant surgeons, anesthetists and physicians, Organ Transplantation: A Clinical Guide is an invaluable multidisciplinary resource for any clinician involved in transplantation, providing in-depth knowledge of specialist areas of transplantation and covering the full range of management strategies.