Design Of C Band Microstrip Patch Antenna For Radar

The first of its kind, this work offers a detailed insight into a range of design procedures for dual-band and tri-band microstrip filters, from theory to practical design. Originating from the FP7 MultiWaveS project, this comprehensive resource includes the most recent results from several well-established research groups, as well as detailed coverage of competing approaches, ranging from the conventional approach to advanced multilayer fabrication technologies, and the development and application of several novel geometries and concepts. In-depth coverage of basic theoretical foundations, detailed design procedures and rules, and comparisons of measured and simulated results enable you to select the optimal approach for your purposes and designs, making this an invaluable resource for both students and industry professionals in the field of microwave engineering.

This book presents selected papers from 1st International Conference on Optical and Wireless Technologies, providing insights into the analytical, experimental, and developmental aspects of systems, techniques, and devices in these spheres. It explores the combined use of various optical and wireless technologies in next-generation networking applications, and discusses the latest developments in applications such as photonics, high-speed communication systems and networks, visible light communication, nanophotonics, and wireless and multiple-input-multiple-output (MIMO) systems. The book will serve as a valuable reference resource for academics and researchers across the globe.

This book offers a collection of high-quality peer-reviewed research papers presented at the Second International Conference on Communication and Computational Technologies (ICCCT 2019), held at Rajasthan Institute of Engineering and Technology, Jaipur, Rajasthan, India, on 30–31 August 2019. In contributions prepared by researchers from academia and industry alike, the book discusses a wide variety of industrial, engineering and scientific applications of emerging techniques.

The volume contains 94 best selected research papers presented at the Third International Conference on Micro Electronics, Electromagnetics and Telecommunications (ICMEET 2017) The conference was held during 09-10, September, 2017 at Department of Electronics and Communication Engineering, BVRRIT Hyderabad College of Engineering for Women, Hyderabad, Telangana, India. The volume includes original and application based research papers on microelectronics, electromagnetics, telecommunications, wireless communications, signal/speech/video processing and embedded systems.

This book gathers high-quality papers presented at the 2nd International Conference on Communication, Devices & Computing (ICCDC 2019), held at Haldia Institute of Technology from March 14–15, 2019. The papers are divided into three main areas: communication
technologies, electronics circuits & devices and computing. Written by students and researchers from around the world, they accurately reflect the global status quo.

Microstrip and Printed Antennas: Applications-Based Designs

This reference book entitled 'Design and Development of Dual-FrequencyCircularly Polarized Circular Microstrip Patch Antenna for C-Band Applications' covers basic equation based design of dual-frequency slotted circular microstrip patch antenna using Finite Element Method (FEM) analysis. It highlights fundamental design concepts, design formulas, numerical and mathematical analysis of circular microstrip patch antenna. All antennas can be applicable for various C-Band (4 GHz-8 GHz) applications. This book addresses space science and communication – one of the main pillars of space science sustainability, an area that has recently become of great importance. In this regard, research and development play a crucial role in sustainability development. However, obtaining essential data in the physical world to interpret the universe and to predict what could happen in the future is a challenging undertaking. Accordingly, providing valid information to understand trends, evaluate needs, and create sustainable development policies and programs in the best interest of all the people is indispensable. This book was prepared in conjunction with the fifth meeting of the 2017 International Conference on Space Science and Communication (IconSpace2017), held in Kuala Lumpur, Malaysia on 3-5 May 2017 to introduce graduate students, researchers, lecturers, engineers, geospatialists, meteorologists, climatologists, astronomers and practitioners to the latest applications of space science, telecommunications, meteorology, remote sensing and related fields. The individual papers discuss a broad range of space science and technology applications, e.g. the formation of global warming from space, environmental and remote sensing, communication systems, and smart materials for space applications.

Printed antennas have become an integral part of next-generation wireless communications and have been found to be commonly used to improve system capacity, data rate, reliability, etc. This book covers theory, design techniques, and the chronological regression of the printed antennas for various applications. This book will provide readers with the basic conceptual knowledge about antennas along with advanced techniques for antenna design. It covers a variety of analytical techniques and their CAD applications and discusses new applications of printed antenna technology such as sensing. The authors also present special reconfigurable antennas such as ME dipole, polarization, feeding, and DGS. The book will be useful to students as an introduction to design and applications of antennas. Additionally, experienced researchers in this field will find this book a ready reference and benefit from the techniques of research in printed antennas included in this book. Following are some of the salient features of this book: Covers a variety of analytical techniques and their CAD applications Discusses new applications of printed antenna technology such as sensing Examines the state of design techniques of printed antenna Presents special reconfigurable antennas such as ME dipole, polarization, feeding, and DGS

"This anthology combines 15 years of microstrip antenna technology research into one significant volume and includes a special introductory tutorial by the co-editors. Covering theory, design and modeling techniques and methods, this source book is an
excellent reference tool for engineers who want to become more familiar with microstrip antennas and microwave systems. Proven antenna designs, novel solutions to practical design problems and relevant papers describing the theory of operation and analysis of microstrip antennas are contained within this convenient reference.

This comprehensive resource presents antenna fundamentals balanced with the design of printed antennas. Over 70 antenna projects, along with design dimensions, design flows and antenna performance results are discussed, including antennas for wireless communication, 5G antennas and beamforming. Examples of smartphone antennas, MIMO antennas, aerospace and satellite remote sensing array antennas, automotive antennas and radar systems and many more printed antennas for various applications are also included. These projects include design dimensions and parameters that incorporate the various techniques used by industries and academia. This book is intended to serve as a practical microstrip and printed antenna design guide to cover various real-world applications. All Antenna projects discussed in this book are designed, analyzed and simulated using full-wave electromagnetic solvers. Based on several years of the author’s research in antenna design and development for RF and microwave applications, this book offers an in-depth coverage of practical printed antenna design methodology for modern applications.

This two-volume set (CCIS 955 and CCIS 956) constitutes the refereed proceedings of the Second International Conference on Advanced Informatics for Computing Research, ICAICR 2018, held in Shimla, India, in July 2018. The 122 revised full papers presented were carefully reviewed and selected from 427 submissions. The papers are organized in topical sections on computing methodologies; hardware; information systems; networks; security and privacy; computing methodologies.

The increasing demand for wireless communications has revolutionised the lifestyle of today’s society and one of the key components of wireless technology is antenna design. Broadband planar antennas are the newest generation of antennas boasting the attractive features required, such as broad operating bandwidth, low profile, light weight, low cost and ease of integration into arrays or Radio Frequency (RF) circuits, to make them ideal components of modern communications systems. Research into small and broadband antennas has been spurred by the rapid development of portable wireless communication devices such as cell phones, laptops and personal digital assistants. This all-encompassing volume, Broadband Planar Antennas: Design and Applications, systematically describes the techniques for all planar antennas from microstrip patch antennas, suspended plate antennas and planar inverted-L/F antennas to planar dipole antennas. Also discussed are some of the most recent outcomes such as broadband antenna issues in promising ultra-wideband applications. Clearly describes the fundamentals of planar antennas and categorises them according to their radiation characteristics Introduces the advanced progress in broadband planar antennas for modern wireless communications Includes a wealth of case studies, design guidelines, figures and tables This text is essential reading for antenna, RF and microwave engineers and manufacturers within the telecommunications industry. Its highly accessible approach will also appeal to researchers, postgraduate students and academic lecturers.

Computational Science and Engineering contains peer-reviewed research presented at the International Conference on Computational
Science and Engineering (RCC Institute of Information Technology, Kolkata, India, 4-6 October 2016). The contributions cover a wide range of topics: electronic devices - photonics - electromagnetics - soft computing - artificial intelligence - modern communication systems. Focussing on strong theoretical and methodological approaches and applications, Computational Science and Engineering will be of interest to academia and professionals involved or interested in the above mentioned domains.

The first of its kind, this comprehensive work details the theory and practical design of new multi-band filters. This book provides engineers with a comprehensive review of the state-of-the-art in reflectarray antenna research and development. The authors describe, in detail, design procedures for a wide range of applications, including broadband, multi-band, multi-beam, contour-beam, beam-scanning, and conformal reflectarray antennas. They provide sufficient coverage of basic reflectarray theory to fully understand reflectarray antenna design and analysis such that the readers can pursue reflectarray research on their own. Throughout the book numerous illustrative design examples including numerical and experimental results are provided. Featuring in-depth theoretical analysis along with practical design examples, Reflectarray Antennas is an excellent text/reference for engineering graduate students, researchers, and engineers in the field of antennas. It belongs on the bookshelves of university libraries, research institutes, and industrial labs and research facilities.

The second international conference on INformation Systems Design and Intelligent Applications (INDIA – 2015) held in Kalyani, India during January 8-9, 2015. The book covers all aspects of information system design, computer science and technology, general sciences, and educational research. Upon a double blind review process, a number of high quality papers are selected and collected in the book, which is composed of two different volumes, and covers a variety of topics, including natural language processing, artificial intelligence, security and privacy, communications, wireless and sensor networks, microelectronics, circuit and systems, machine learning, soft computing, mobile computing and applications, cloud computing, software engineering, graphics and image processing, rural engineering, e-commerce, e-government, business computing, molecular computing, nano-computing, chemical computing, intelligent computing for GIS and remote sensing, bio-informatics and bio-computing. These fields are not only limited to computer researchers but also include mathematics, chemistry, biology, bio-chemistry, engineering, statistics, and all others in which computer techniques may assist.

This book presents the latest developments in packaging for high-frequency electronics. It is a companion volume to “RF and Microwave Microelectronics Packaging” (2010) and covers the latest developments in thermal management, electrical/RF/thermal-mechanical designs and simulations, packaging and processing methods, and other RF and microwave packaging topics. Chapters provide detailed coverage of phased arrays, T/R modules, 3D transitions, high thermal conductivity materials, carbon nanotubes and graphene advanced materials, and chip size packaging for RF MEMS. It appeals to practicing engineers in the electronic packaging and high-frequency electronics domain, and to academic researchers interested in understanding the leading issues in the commercial sector. It is also a good reference and self-studying guide for students seeking future employment in consumer electronics.

This book focuses on the integration of intelligent communication systems, control systems and devices related to all aspects of engineering and sciences. It includes high-quality research papers from the 4th International Conference on Intelligent Communication, Control and Devices (ICICCD 2020), organized by the Department of Electronics, Instrumentation and Control Engineering at the University of Petroleum and Energy Studies, Dehradun, India during 27–28 November 2020. The topics covered are a range of recent advances in intelligent communication, intelligent control, and intelligent devices.
This book focuses on recent advances in the field of microstrip antenna design and its applications in various fields including space communication, mobile communication, wireless communication, medical implants and wearable applications. Scholars as well as researchers and those in the electronics/electrical/instrumentation engineering fields will benefit from this book. The book shall provide the necessary literature and techniques using which to assist students and researchers would design antennas for the above-mentioned applications and will ultimately enable users to take measurements in different environments. It is intended to help scholars and researchers in their studies, by enhancing their knowledge and skills in on the latest applications of microstrip antennas in the world of communications such as world like IoT, D2D, satellites and wearable devices, to name a few. FEATURES Addresses the complete functional framework workflow in printed antenna design systems Explores the basic and high-level concepts, including advanced aspects in planer design issues, thus serving as a manual for those in the industry while also assisting beginners Provides the latest techniques used for antennas in terms of structure, defected ground, MIMO and fractal designs Discusses case studies related to data-intensive technologies in microchip antennas in terms of the most recent applications and similar uses for the Internet of Things and device-to-device communication Exchange of information and innovative ideas are necessary to accelerate the development of technology. With advent of technology, intelligent and soft computing techniques came into existence with a wide scope of implementation in engineering sciences. Keeping this ideology in preference, this book includes the insights that reflect the ‘Advances in Computer and Computational Sciences’ from upcoming researchers and leading academicians across the globe. It contains high-quality peer-reviewed papers of ‘International Conference on Computer, Communication and Computational Sciences (ICCCCS 2016), held during 12-13 August, 2016 in Ajmer, India. These papers are arranged in the form of chapters. The content of the book is divided into two volumes that cover variety of topics such as intelligent hardware and software design, advanced communications, power and energy optimization, intelligent techniques used in internet of things, intelligent image processing, advanced software engineering, evolutionary and soft computing, security and many more. This book helps the perspective readers’ from computer industry and academia to derive the advances of next generation computer and communication technology and shape them into real life applications.

The Department of Electronics and Communication Engineering of KIET Group of Institutions, Delhi-NCR organized the 4th International Conference ICCE-2020 during November 28-29, 2020. Information compiled in this book is based on the 114 research papers of excellent quality covering different domains of Electronics and Communication Engineering, Computer Science Engineering, Information Technology, Electrical Engineering, Electronics and Instrumentation Engineering. The subject areas treated in the book are: Satellite, Radar and Microwave Techniques, Secure, Smart, and Reliable Networks, Next Generation Networks, Devices & Circuits, Signal & Image Processing, New Emerging Technologies, having the central focus on Recent Trends in Communication & Electronics (ICCE-2020). In addition, a few themes based on Special Sessions have also been conducted in ICCE-2020. The objective of the book resulting from the 4th International Conference on Recent Trends in Communication & Electronics (ICCE-2020) is to provide a resource for the study and research work for an interested audience comprising of researchers, students, audience, and practitioners in the areas of Communications & Computing Systems. This book introduces research presented at the “International Conference on Artificial Intelligence: Advances and Applications-2019 (ICAIAA 2019),” a two-day conference and workshop bringing together leading academicians, researchers as well as students to share their experiences and findings on all aspects of engineering applications of artificial intelligence. The book covers research in the areas of artificial intelligence, machine learning, and deep learning applications in health care, agriculture, business and security. It also includes research in
core concepts of computer networks, intelligent system design and deployment, real-time systems, WSN, sensors and sensor nodes, SDN and NFV. As such it is a valuable resource for students, academics and practitioners in industry working on AI applications.

In the last 40 years, the microstrip antenna has been developed for many communication systems such as radars, sensors, wireless, satellite, broadcasting, ultra-wideband, radio frequency identifications (RFIDs), reader devices etc. The progress in modern wireless communication systems has dramatically increased the demand for microstrip antennas. In this book some recent advances in microstrip antennas are presented.

The book features original papers from the 2nd International Conference on Smart IoT Systems: Innovations and Computing (SSIC 2019), presenting scientific work related to smart solution concepts. It discusses computational collective intelligence, which includes interactions between smart devices, smart environments and smart interactions, as well as information technology support for such areas. It also describes how to successfully approach various government organizations for funding for business and the humanitarian technology development projects. Thanks to the high-quality content and the broad range of the topics covered, the book appeals to researchers pursuing advanced studies.

This book, divided in two volumes, originates from Techno-Societal 2020: the 3rd International Conference on Advanced Technologies for Societal Applications, Maharashtra, India, that brings together faculty members of various engineering colleges to solve Indian regional relevant problems under the guidance of eminent researchers from various reputed organizations. The focus of this volume is on technologies that help develop and improve society, in particular on issues such as sensor and ICT based technologies for the betterment of people, Technologies for agriculture and healthcare, micro and nano technological applications. This conference aims to help innovators to share their best practices or products developed to solve specific local problems which in turn may help the other researchers to take inspiration to solve problems in their region. On the other hand, technologies proposed by expert researchers may find applications in different regions. This offers a multidisciplinary platform for researchers from a broad range of disciplines of Science, Engineering and Technology for reporting innovations at different levels.

This comprehensive reference text discusses fundamental concepts, applications, design techniques, and challenges in the field of planar antennas. The text focuses on recent advances in the field of planar antenna design and their applications in various fields of research, including space communication, mobile communication, wireless communication, and wearable applications. This resource presents planar antenna design concepts, methods, and techniques to enhance the performance parameters and applications for IoTs and device-to-device communication. The latest techniques used in antenna design, including their structures defected ground, MIMO, and fractal design, are discussed comprehensively. The text will be useful for senior undergraduate students, graduate students, and academic researchers in fields including electrical engineering, electronics, and communication engineering.

The 2014 International Conference on Mechatronics Engineering and Electrical Engineering (CMEEE2014) was held October 18-19, 2014 in Sanya, Hainan, China. CMEEE2014 provided a valuable opportunity for researchers, scholars and scientists to exchange their new ideas and application experiences face to face together, to establish business or research.

This book is a compilation of research work in the interdisciplinary areas of electronics, communication, and computing. This book is specifically targeted at students, research scholars and academicians. The book covers the different approaches and techniques for specific applications, such as particle-swarm optimization, Otsu's function and harmony search optimization algorithm, triple gate silicon on insulator
Read Book Design Of C Band Microstrip Patch Antenna For Radar

(SOI)MOSFET, micro-Raman and Fourier Transform Infrared Spectroscopy (FTIR) analysis, high-k dielectric gate oxide, spectrum sensing in cognitive radio, microstrip antenna, Ground-penetrating radar (GPR) with conducting surfaces, and digital image forgery detection. The contents of the book will be useful to academic and professional researchers alike. Microstrip patch antennas have become the favorite of antenna designers because of their versatility and having the advantages of planar profile, ease of fabrication, compatibility with integrated circuit technology, and conformability with a shaped surface. There is a need for graduate students and practicing engineers to gain in depth understanding of this subject. The first edition of this book, published in 2011, was written with this purpose in mind. This second edition contains approximately one third new materials. The authors, Prof KF Lee, Prof KM Luk and Dr HW Lai, have all made significant contributions in the field. Prof Lee and Prof Luk are IEEE Fellows. Prof Lee was the recipient of the 2009 John Kraus Antenna Award of the IEEE Antennas and Propagation Society while Prof. Luk receives the same award in 2017, both in recognition of their contributions to wideband microstrip antennas. Compact microstrip antennas are of great importance in meeting the miniaturization requirements of modern portable communications equipment This book is a comprehensive treatment of design techniques and test data for current compact and broadband microstrip designs. Summarizes the work of the author and his graduate students who have published over 80 refereed journal articles on the subject in the past few years. Advanced designs reported by various other prestigious antenna designers are incorporated as well. LAMC will have a general scope on RF and microwave engineering and technologies. This volume contains selected papers presented at the 10th International Conference on Advanced Computing and Communication Technologies (10th ICACCT 2016), technically sponsored by Institution of Electronics and Telecommunication Engineers (India), held during 18 – 20 November 2016 at Asia Pacific Institute of Information Technology, Panipat, India. The volume reports latest research on a wide range of topics spanning theory, system, applications and case studies in the fields of computing and communication technologies. Topics covered are robotics, computational intelligence encompassing fuzzy logic, neural networks, GA and evolutionary computing, applications, knowledge representation, data encryption, distributed computing, data analytics and visualization, knowledge representation, wireless sensor networks, MEM sensor design, analog circuit, statistical machine translation, cellular automata and antenna design. The volume has 31 chapters, including an invited paper on swarm robotics, grouped into three parts, viz., Advanced Computing, Communication Technologies, and Micro Electronics and Antenna Design. The volume is directed to researchers and practitioners aspiring to solve practical issues, particularly applications of the theories of computational intelligence, using recent advances in computing and communication technologies. Bendable wearable materials like conductive strands, fluid metallic mixes, and polymer in paper are generally utilized as a part of the current adaptable electronic gadgets. Extra necessities are implemented in wearable applications. Characteristic elastic, for example, is an appealing exchange adaptable material that is biocompatible and offers high conductivity, low lost, simplicity to make, and most importantly, it is water/climate safe and condition amicable. The wearable antenna is one of the key components to establish body area network (BAN) for wireless communication, which is why it has become such an important part of antenna research. Wearable antennas are being applied successfully in various parts of life such as health monitoring, physical training, navigation, RFID, medicine, military, and more. Emerging Materials and Advanced Designs for Wearable Antennas explores how wearable antenna technology is being employed to enhance the quality of life in various industries. The technologies implemented and success of these antenna technologies is essential in the emerging
field of wearable computing and is discussed in detail within the contents of this book. While covering essential topics such as the
optimization of antenna material, improvement in flexible antenna performance, synthesis and design aspects of antennas, and transmission
and receiving of the bendable antenna, this book is ideal for the military field, scientists, the medical field, practitioners, stakeholders,
researchers, academicians, and students looking for the most advanced and updated research on the technology and implementation of
wearable antennas spanning multiple industries.

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