

A Compact Microstrip Patch Antenna For Lte Applications

This book provides insights into the First International Conference on Communication, Devices and Computing (ICCD 2017), which was held in Haldia, India on November 2–3, 2017. It covers new ideas, applications and the experiences of research engineers, scientists, industrialists, scholars and students from around the globe. The proceedings highlight cutting-edge research on communication, electronic devices and computing, and address diverse areas such as 5G communication, spread spectrum systems, wireless sensor networks, signal processing for secure communication, error control coding, printed antennas, analysis of wireless networks, antenna array systems, analog and digital signal processing for communication systems, frequency selective surfaces, radar communication, and substrate integrated waveguide and microwave passive components, which are key to state-of-the-art innovations in communication technologies. Compact antennas are a subject of growing interest from industry and scientific community to equip wireless communicating objects. The need for high performance small antennas and RF front ends is the challenge for future and next generation mobile devices. This book brings the body of knowledge on compact antennas into a single comprehensive volume. It is designed to meet the needs of electrical engineering and physics students to the senior undergraduate and beginning graduate levels, and those of practicing engineers.

This conference proceedings summarizes invited publications from the two IDES (Institute of Doctors Engineers and Scientists) International conferences, both held in Bangalore/ India. A guide to broadband microstrip antennas, offering information to help you choose and design the optimum broadband microstrip antenna configurations for your applications, without sacrificing other antenna parameters. The text shows you how to take advantage of the light-weight, low volume benefits of these antennas, by providing explanations of the various configurations and simple design equations that help you analyze and design microstrip antennas with speed and confidence. This practical resource presents an understanding of the radiation mechanism and characteristics of microstrip antennas, and provides guidance on designing new types of planar monopole antennas with multi-octave bandwidth. The authors explore how to select and design proper broadband microstrip antenna configurations for compact, tunable, dual-band and circular polarization applications. Moreover, the work compares all the broadband techniques and suggests the most attractive configuration.

Third International Conference, ICAICR 2019, Shimla, India, June 15–16, 2019, Revised Selected Papers, Part II

Select Proceedings of ICAECT 2021

Microstrip Patch Antenna Design

Proceedings of the 3rd International Conference on Communication, Devices and Computing

Progress in Compact Antennas

Compact and Broadband Microstrip Antennas John Wiley & Sons

This book presents the papers included in the proceedings of the 5th International Conference of Reliable Information and Communication Technology 2020 (IRICT 2020) that was held virtually on December 21–22, 2020. The main theme of the book is ‘Innovative Systems for Intelligent Health Informatics’. A total of 140 papers were submitted to the conference, but only 111 papers were published in this book. The book presents several hot research topics which include health informatics, bioinformatics, information retrieval, artificial intelligence, soft computing, data science, big data analytics, internet of things (IoT), intelligent communication systems, information security, information systems, and software engineering.

Masters Thesis from the year 2013 in the subject Electrotechnology, grade: First Class, course: Master Of Engineering, language: English, abstract: In today's modern communication industry, antennas are the most important components required to create a communication link. Microstrip antennas are the most suited for aerospace and mobile applications because of their low profile, light weight and low power handling capacity. These antennas can be designed in a variety of shapes in order to obtain enhanced gain and bandwidth for dual band and tri-band operation. This book focus on a detailed study of how to design and simulate a microstrip fed rectangular patch antenna using IE3D software with effect of antenna dimensions length (L), width (W), relative dielectric constant (ϵ_r) and substrate thickness (T) on the radiation parameters of bandwidth and gain. The design parameters of the antenna calculated using the transmission line model. Here antenna operates for tri- band operation, the operating bands are GSM, PCA and UIMS for antenna geometry -I and WLAN and WiMAX for antenna geometry -II. The fractional bandwidths (FB) after simulation obtain under criterion of 10%.

The 2nd Indian conference on Antennas and Propagation InCAP 2019 will be held at Ahmedabad, Gujarat India This conference is organized and technically supported by IEEE AP MTTI Joint Chapter, Gujarat Section InCap 2019 will provide an international forum for exchange of information on new trends in antenna theory and techniques, antenna hardware, propagation studies and also a venue for closer interaction among research students, academia, professional organizations and Industry partners We solicit original research work studies in the following areas in the format of paper for possible acceptance after review for presentation Major areas covered in the conference are satellite antennas, ground antennas, reflector & feed antennas, THz antennas, millimeter wave antennas, MIMO

antennas, Radar & remote sensing antennas, microstrip antennas, phased array antennas etc

Design of a Compact Microstrip Printed Patch Antenna for RFID Warehouse Management System

2021 IEEE International Conference on Power Electronics, Computer Applications (ICPECA)

2019 IEEE Indian Conference on Antennas and Propagation (InCAP)

Compact Microstrip Antenna For Wireless Applications

Proceedings of International Conference on Wireless Communication

Proceedings of Second International Conference on Electrical Systems, Technology and Information 2015 (ICESTI 2015)

the conference scope will be in the area of Artificial Intelligence, Data science, Internet of things, Machine Learning, Wireless Networks, Social Data Analytics, pattern recognition, Image and video processing, Neural networks, Information retrieval and Data Structure and algorithms

This book comprises select proceedings of the 4th International Conference on Optical and Wireless Technologies (OWT 2020). The contents of this volume focus on research carried out in the areas of Optical Communication, Optoelectronics, Optics, Wireless Communication, Wireless Networks, Sensors, Mobile Communications and Antenna and Wave Propagation. The volume also explores the combined use of various optical and wireless technologies in next generation applications, and their latest developments in applications like photonics, high speed communication systems and networks, visible light communication, nanophotonics, wireless and MIMO systems. This book will serve as a useful reference to scientists, academicians, engineers and policy-makers interested in the field of optical and wireless technologies.

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 (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.

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

Proceedings of International Conference on Computational Techniques and Applications (ICCTA 2021)

Advances in Electronics, Communication and Computing

Topical Drifts in Intelligent Computing

Advanced Computing and Intelligent Engineering

Proceedings of the 3rd International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA 2014)

Communication, Devices, and Computing

This book presents the latest techniques for the design of antenna, focusing specifically on the microstrip antenna. The authors discuss antenna structure, defected ground, MIMO, and fractal design. The book provides the design of microstrip antenna in terms of latest applications and uses in areas like IoT and device-to-device communication. The book also provides the current methods and techniques for microstrip antenna. Chapters enhance the knowledge and skills of students and researchers in the latest in the communications world like IoT, D2D, satellite, wearable devices etc. The authors discuss applications such as microwave imaging, medical implants, hyperthermia treatments, and wireless wellness monitoring and how a decrease in size of antenna help facilitate application potential. Printed structure, defected ground, MIMO and Fractal design: Outlines steps to resolve issues with designing antenna, including the latest design and design parameters for microstrip antenna: Presents the design of conformal and miniaturized antenna structures for various applications.

This book provides insights into the 3rd International Conference on Communication, Devices and Computing (ICCD 2021), which was held in Haldia, India, on August 16/18, 2021. It covers new ideas, applications, and the experiences of research engineers, scientists, industrialists, scholars, and students from around the globe. The proceedings highlight cutting-edge research on communication, electronic devices and computing, and address diverse areas such as 5G communication, spread spectrum systems, wireless sensor networks, signal processing for secure communication, error control coding, printed antennas, analysis of wireless networks, antenna array systems, analog and digital signal processing for communication systems, frequency selective surfaces, radar communication, and substrate integrated waveguide and microwave passive components, which are key to state-of-the-art innovations in communication technologies.

This book includes the original, peer-reviewed research papers from the 2nd International Conference on Electrical Systems, Technology and Information (ICESTI 2015), held in September 2015 at Patra Jasa Resort & Villas Bali, Indonesia. Topics covered include: Mechatronics and Robotics, Circuits and Systems, Power and Energy Systems, Control and Industrial Automation, and Information Theory and Applications. The book presents several hot research topics which include health informatics, bioinformatics, information retrieval, artificial intelligence, soft computing, data science, big data analytics, internet of things (IoT), intelligent communication systems, information security, information systems, and software engineering. range of engineering disciplines, including communication technologies and smart grids. It examines hybrid intelligent and knowledge-based control, embedded systems, and machine learning. It also presents emerging research and recent application in green energy system and storage. It discusses the role of electrical engineering in biomedical, industrial and mechanical systems, as well as machine learning. The primary objective of this series is to provide references for dissemination and discussion of the above topics. This volume is unique in that it includes work related to hybrid intelligent control and its applications. Engineers and researchers as well as teachers from academia and professionals in industry and government will gain valuable insights into interdisciplinary solutions in IT and communication technologies. It includes contributions from both academia and industry.

Advances in Electrical and Computer Technologies

Microstrip Antenna Design

Microstrip Patch Antennas for Modern Communication Systems

Innovative Systems for Intelligent Health Informatics

Advanced Informatics for Computing Research

Printed Antennas for 5G Networks

This book gathers high-quality research papers presented at the 3rd International Conference on Advanced Computing and Intelligent Engineering (ICACIE 2018). It includes sections describing technical advances and the latest research in the fields of computing and intelligent engineering. Intended for graduate students and researchers working in the disciplines of computer science and engineering, the proceedings will also appeal to researchers in the field of electronics, as they cover hardware technologies and future communication technologies.

This book gathers a collection of high-quality peer-reviewed research papers presented at International Conference on Computational Techniques and Applications (ICCTA 2021), organized by the Electronics and Telecommunication Engineers (IETE), Kolkata Center, India, during 8 – 9 October 2021. This includes research in the areas of intelligent computing and communication systems including computing, electronics, green energy design, communications, computers to interact and disseminate information on latest developments both academically and industrially for computational drifts. The three main tracks are (i) computing in network security, AI and data science; (ii) contemporary issues in electronics, and communication technology; and (iii) intelligent computing in electrical power, control systems and energy technology.

Based on Bahl and Bhartia's popular 1980 classic, Microstrip Antennas, this all new book provides the detail antenna engineers and designers need to design any type of microstrip antenna. After addressing essential microchip antenna theory, the authors highlight current design and engineering practices, emphasizing the most pressing issues in this area, including broadbanding, circular polarization, and active microstrip antennas in particular. Special design challenges, ranging from dual polarization, high bandwidth, and surface wave mitigation, to choosing the proper substrate, and shaping an antenna to achieve desired results are all covered.

The book provides a comprehensive overview of antennas for 5G technology, such as MIMO, multiband antennas, Magneto-Electric Dipole Antenna and PIFA Antenna for 5G networks, phased array antennas for 5G access, beam-forming and beam-steering issues, 5G antennas for specific applications (smartphone, cognitive radio) and advance antenna concept and materials for 5G. The book also covers optimizations methods for passive and active devices in mm-Wave 5G networks. It explores topics which influence the design and characterization of antennas such as data rates, high isolation, pattern and spatial diversity, making 5G antennas more suitable for a multipath environment. The book represents a learning tool for researchers in the field, and enables engineers, designers and manufacturers to identify key design challenges of antennas for 5G networks, and characterize novel antennas for 5G networks.

Microstrip Patch Antenna Learning using MATLAB. Theory and Implementation

DESIGN AND ANALYSIS OF HIGH GAIN COMPACT MULTI-BAND MICROSTRIP PATCH ANTENNA FOR 5G NETWORK

Microstrip Antenna Design Handbook

Microstrip Antenna Design for Wireless Applications

Proceedings of ICCDC 2017

Development of Compact Microstrip Patch Antenna for GPS Application

This book reviews developments in the following fields:circular microstrip antennas; microstrip patch antennas; circular polarisation and bandwidth; microstrip dipoles; multilayer and parasitic configurations; wideband flat dipole and short-circuit microstrip patch elements and arrays; numerical analysis; multiport network approach; transmission-line model; rectangular microstrip antennas; low-cost printed antennas; printed phased-array antennas; circularly polarized antenna arrays; microstrip antenna feeds; substrate technology; computer-aided design of microstrip and triplate circuits;resonant microstrip antenna elements and arrays for aerospace applications; mobile and satellite systems;conical conformal microstrip tracking antennas;and microstrip field diagnostics.

This book describes about the experimental simulation work carried out on rectangular microstrip antennas (RMAs). The various RMAs have been designed and fabricated on easily available, low-cost FR4 dielectric material at S-band frequency. The patch element (radiator) is excited using co-axial probe feed technique. The effect of slots, slits, stubs in enhancing the various antenna parameters such as compactness, impedance bandwidth and gain are studied in detail. Compactness, impedance bandwidth and gain of RMA has been enhanced using various techniques such as patch with slots, slits on patch, stubs loaded patch on 0.16 cm thick dielectric material with inverted patch configuration having air as a substrate medium. With these techniques, a compactness of 78%, 12.41% of bandwidth. It is also concluded that by etching the various slits on the patch having a superstrate thickness of 0.24 cm (2.4 mm thick Yagi-RMA and 2.4 mm thick H-RMA). This technique reduced the maximum physical size (compactness) of the antenna upto 98.3 % with a gain of 7.13 dB. These antennas may find applications in the wireless, microwave communication systems operating in L and S band of frequency range.

This book comprises select proceedings of the International Conference on Advances in Electrical and Computer Technologies 2021 (ICAECT 2021). The papers presented in this book are peer-reviewed and cover the latest research in electrical, electronics, communication, and computer engineering. Topics covered include smart grids, soft computing techniques in power systems, smart energy management systems, power electronics, feedback control systems, biomedical engineering, geographic information systems, grid computing, data mining, image and signal processing, video processing, computer vision, pattern recognition, cloud computing, pervasive computing, intelligent systems, artificial intelligence, neural network and fuzzy logic, broadband communication, mobile and optical communication, network security, VLSI, embedded systems, optical networks, and wireless communication. The book is useful for students and researchers working in the different overlapping areas of electrical, electronics, and communication engineering.

This useful tool provides the reader with a current overview of where microstrip patch antenna technology is at, and useful information on how to design this form of radiator for their given application and scenario. Practical design cases are provided for each goal.

Compact and Broadband Microstrip Antennas

Proceedings of OWT 2020

Broadband Microstrip Antennas

Proceedings of 3rd ICMIETE 2019

Data Science, Health Informatics, Intelligent Systems, Smart Computing

Computation and Communication Technologies

2021 IEEE International Conference on Power, Electronics and Computer Applications (ICPECA 2021) will take place in Shenyang, China, on January 22-24, 2021 ICPECA 2021 seeks to provide a high level forum for experts, researchers, professionals, innovators and practitioners in the field of Power, Electronics and Computer Applications from industry and academia to present and discuss the wide spectrum of original and novel researches and contributions together

Besides lot of advantages of Microstrip Patch Antenna some severe limitations like narrow bandwidth, low power output, low gain hindered it to use in some application specially where wideband, high gain & high power is essential. In modern days researchers are concentrated to overcome these limitations. The design of dual or multi-frequency patch antennas are also very much important because any one can use a single antenna instead of two or more antennas operating in the single frequency. Compact microstrip patch antenna design is also important in modern days as the area is a major constraint in the MMC design. In this book new and novel approaches to design dual, multi-frequency, compact and broadband microstrip patch antennas are discussed which are very new and published in different international journals by the author. This book constitutes of eight chapters among which first three chapters are about the basic concept and the last one is for major findings and future scope of work for the young researchers. Other four chapters are for novel approaches for designing different types of microstrip patch antennas.

The microstrip antenna is one of the most preferable for small equipment, especially when a built-in antenna is required. It has many advantages such as low profile and easy fabrication. However for low-frequency applications, the microstrip size becomes too large for practical implementation. The problems in microstrip antenna technology are the reduction of the antenna sizes and to obtain a larger bandwidth. The aim of this dissertation is to design and simulate compact microstrip patch antennas with good bandwidth. A semi-elliptical microstrip patch antenna with semi-elliptical parasitic patch is designed and investigated for Ku-band applications in Chapter 2. In this chapter stepwise simulation results have been presented while changing the various parameters of the patch and ground. Ultra-wideband (UWB) applications.

Compact microstrip antenna-circuit modules, which could be used as front-ends for future wireless systems applications, require electromagnetic modelling due to the close interaction of the circuit with the antenna. Spectrum crowding and EMC/EMI issues call for modelling of the radiation of such modules. Coupling through fringing fields and the nonlinearities of active devices must be addressed. In this work, the FDTD method was used because it can take the fringing field radiation of circuit elements in a full wave calculation. A software tool was developed and validated based on the method. The module was studied and compared with other similar systems compactness. A module with simultaneous transmit-receive operation in an active circuit (using amplifiers in a ring-like arrangement) at a quarter wavelength antenna was analysed. Coupling effects were identified and their impact on the radiation patterns was shown. Electronically tuneable microstrip patch antennas using varactor diodes were also studied. Tuning range and harmonic radiation were demonstrated. Single and dual device Gunn oscillator antennas were analysed and their radiation patterns were calculated for the first time. All of our results were in agreement with experimental findings.

Advances in Decision Sciences, Image Processing, Security and Computer Vision

Finite Difference Time Domain Analysis of Microstrip Antenna-circuit Modules

Handbook of Microstrip Antennas

ETAERE-2016

Optical and Wireless Technologies

Design and Implementation of Rectangular Patch Antenna for Tri-Band operation

The book comprises selected papers presented at the International Conference on Wireless Communication (ICWICOM), which is organized by D. J. Sanghvi College of Engineering 's Department of Electronics and Telecommunication Engineering. The book focuses on specific topics of wireless communication, like signal and image processing applicable to wireless domains, networking, microwave and antenna design, and telemedicine systems. Covering three main areas – networking, antenna designs and embedded systems applicable to communication – it is a valuable resource for postgraduate and doctoral students.

This volume contains 87 papers presented at FICTA 2014: Third International Conference on Frontiers in Intelligent Computing: Theory and Applications. The conference was held during 14-15, November, 2014 at Bhubaneswar, Odisha, India. This volume contains papers mainly focused on Network and Information Security, Grid Computing and Clod Computing, Cyber Security and Digital Forensics, Computer Vision, Signal, Image & Video Processing, Software Engineering in Multidisciplinary Domains and Ad-hoc and Wireless Sensor Networks.

Scientific Study from the year 2021 in the subject Engineering - Communication Technology, course: M. Tech, language: English, abstract: Microstrip patch antenna is used to send onboard parameters of article to the ground while under operating conditions. By the study of this book we find out how to investigate a new method of teaching microstrip patch antenna design for undergraduate students by using MATLAB. Effect of changes in basic parameter microstrip patch antenna on its radiation pattern and other parameters to study the effect of resonant frequency and substrate parameters like, relative dielectric constant, substrate thickness and physical dimension of the microstrip patch antenna can be determined by using GUI. In this book we develops simple CAD (GUI) formulates that describe the basic properties of microstrip patch antennas using MATLAB. By the usage of this teaching tool we can analyze the behaviour of the microstrip patch antennas and design of it for different material. Satellite communication and wireless communication has been developed rapidly in the past decades and it has already a dramatic impact on human life. In the last few years, the development of wireless local area networks (WLAN) represented one of the principal interests in the information and communication field. Thus, the current trend in commercial and government communication systems has been to develop low cost, minimal weight, low profile antennas that are capable of maintaining high performance over a large spectrum of frequencies. This technological trend has focused much effort into the design of microstrip (patch) antennas. The variety in design that is possible with microstrip antenna probably exceeds that of any other type of antenna element. In addition, once the shape and operating mode of the patch are selected, designs become very versatile in terms of operating frequency, polarization, pattern, and impedance. They are extremely low profile, lightweight, simple and inexpensive to fabricate using modern day printed circuit board technology, compatible with microwave and millimeter-wave integrated circuits (MMIC), and have the ability to conform to planar and non planar surfaces.

This book constitutes the proceedings of the First International Conference on Emerging Trends in Engineering (ICETE), held at University College of Engineering and organised by the Alumni Association, University College of Engineering, Osmania University, in Hyderabad, India on 22–23 March 2019. The proceedings of the ICETE are published in three volumes, covering seven areas: Biomedical, Civil, Computer Science, Electrical & Electronics, Electronics & Communication, Mechanical, and Mining Engineering. The 215 peer-reviewed papers from around the globe present the latest state-of-the-art research, and are useful to postgraduate students, researchers, academics and industry engineers working in the respective fields. Volume 2 presents papers on the theme

“ Advances in Decision Sciences, Image Processing, Security and Computer Vision – International Conference on Emerging Trends in Engineering (ICETE) “. It includes state-of-the-art technical contributions in the areas of electronics and communication engineering and electrical and electronics engineering, discussing the latest sustainable developments in fields such as signal processing and communications; GNSS and VLSI; microwaves and antennas; signal, speech and image processing; power systems; and power electronics.

2nd International Conference on Data, Engineering and Applications (IDEA)

ICWICOM 2019

ICDCD 2021

International Conference on Emerging Trends in Engineering (ICETE), Vol. 2

Latest Trends in Design and Application

Proceedings of ICACIE 2018, Volume 2

?This two-volume set (CCIS 1075 and CCIS 1076) constitutes the refereed proceedings of the Third International Conference on Advanced Informatics for Computing Research, ICAICR 2019, held in Shimla, India, in June 2019. The 78 revised full papers presented were carefully reviewed and selected from 382 submissions. The papers are organized in topical sections: methodologies; hardware; information systems; networks; software and its engineering.

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 an in depth understanding of this subject 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. Prof Luk receives the same award in 2017, both in recognition of their contributions to wideband microstrip antennas.

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 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 application 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 the industry while also as 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

This book presents selected papers from the 3rd International Conference on Micro-Electronics and Telecommunication Engineering, held at SRM Institute of Science and Technology, Ghaziabad, India, on 30-31 August 2019. It covers a wide variety of topics in micro-electronics and telecommunication engineering, including micro-electronic engineering, computational science and intelligent systems, signal and image processing, and information and communication technology.

Microstrip Patch Antennas (Second Edition)

Microstrip Patch Antennas: A Designer's Guide

Volumes 2

Smart Antennas

Micro-Electronics and Telecommunication Engineering

Proceedings of the 2nd International Conference on Communications and Cyber Physical Engineering