

A Compact Microstrip Patch Antenna For Lte Applications

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.

Nature-inspired computation is an interdisciplinary topic area that connects the natural sciences to computer science. Since natural computing is utilized in a variety of disciplines, it is imperative to research its capabilities in solving optimization issues. The Handbook of Research on Natural Computing for Optimization Problems discusses nascent optimization procedures in nature-inspired computation and the innovative tools and techniques being utilized in the field. Highlighting empirical research and best practices concerning various optimization issues, this publication is a comprehensive reference for researchers, academicians, students, scientists, and technology developers interested in a multidisciplinary perspective on natural computational systems.

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) antennas have been a research and development topic of increased interest in the industry. The Federal Communication Commission (FCC) has recently allocated 7.5 GHz of bandwidth (3.1 to 10.6 GHz) for Ultra-wideband (UWB) applications.

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. Continuing advancements in electronics creates the possibility of communicating with more people at greater

distances. Such an evolution calls for more efficient techniques and designs in radio communications. Emerging Innovations in Microwave and Antenna Engineering provides innovative insights into theoretical studies on propagation and microwave design of passive and active devices. The content within this publication is separated into three sections: the design of antennas, the design of the antennas for the RFID system, and the design of a new structure of microwave amplifier. Highlighting topics including additive manufacturing technology, design application, and performance characteristics, it is designed for engineers, electricians, researchers, students, and professionals, and covers topics centered on modern antenna and microwave circuits design and theory.

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 antenna operating in the single frequency. Compact microstrip patch antenna design is also important in modern days as the area is a major constrained in the MMIC 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.

This conference proceedings summarizes invited publications from the two IDES (Institute of Doctors Engineers and Scientists) International conferences, both held in Bangalore/ India.

This two-volume set constitutes the refereed post-conference proceedings of the 8th International Conference on Advancement of Science and Technology, ICAST 2020, which took place in Bahir Dar, Ethiopia, in October 2020. The 74 revised full papers were carefully reviewed and selected from more than 200 submissions of which 157 were sent out for peer review. The papers present economic and technologic developments in modern societies in 6 tracks: Chemical, food and bio-process engineering; Electrical and computer engineering; IT, computer science and software engineering; Civil, water resources, and environmental engineering; Mechanical and industrial engineering; Material science and engineering.

[ICCCE 2019](#)

[Computational Intelligence in Data Mining - Volume 1](#)

[Proceedings of the International Conference on CIDM, 20-21 December 2014](#)

[Microstrip Patch Antennas: A Designer's Guide](#)

[Proceedings of the 6th International Conference on Innovations in Bio-Inspired Computing and Applications \(IBICA 2015\) held in Kochi, India during December 16-18, 2015](#)

Advances in Decision Sciences, Image Processing, Security and Computer Vision
Compact Microstrip Antenna For Wireless Applications
Innovations in Bio-Inspired Computing and Applications
Advanced Informatics for Computing Research
A Simple Design and Analysis of Coaxial Fed Annular Ring Microstrip Patch Antenna For Wireless
Communication Systems
Proceedings of 3rd ICMETE 2019
Microstrip Patch Antennas for Modern Communication Systems
Third International Conference, ICAICR 2019, Shimla, India, June 15-16, 2019, Revised Selected Papers

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 on computing methodologies; hardware; information systems; networks; software and its engineering.

This book is a collection research papers and articles from the 2nd International Conference on Communications and Cyber-Physical Engineering (ICCCE – 2019), held in Pune, India in Feb 2019. Discussing the latest developments in voice and data communication engineering, cyber-physical systems, network science, communication software, image- and multimedia processing research and applications, as well as communication technologies and other related technologies, it includes contributions from both academia and industry.

The contributed volume aims to explicate and address the difficulties and challenges for the seamless integration of two core disciplines of computer science, i.e., computational intelligence and data mining. Data Mining aims at the automatic discovery of underlying non-trivial knowledge from datasets by applying intelligent analysis techniques. The interest in this research area has experienced a considerable growth in the last years due to two key factors: (a) knowledge hidden in organizations' databases can be exploited to improve strategic and managerial decision-making; (b) the large volume of data managed by organizations makes it impossible to carry out a manual analysis. The book addresses different methods and techniques of integration for enhancing the overall goal of data mining. The book helps to disseminate the knowledge about some innovative, active research directions in the field of data mining, machine and computational intelligence, along with some current issues and applications of related topics.

IMDC-SDSP conference offers an exceptional platform and opportunity for practitioners, industry experts, technocrats, academics, information scientists, innovators, postgraduate students, and research scholars to share their experiences for the advancement of knowledge and obtain critical feedback on their work.

The timing of this conference coincides with the rise of Big Data, Artificial Intelligence powered applications, Cognitive Communications, Green Energy, Adaptive Control and Mobile Robotics towards maintaining the Sustainable Development and Smart Planning and management of the future technologies. It is aimed at the knowledge generated from the integration of the different data sources related to a number of active real-time applications in supporting the smart planning and enhance and sustain a healthy environment. The conference also covers the rise of the digital health, well-being, home care, and patient-centred era for the benefit of patients and healthcare providers; in addition to how supporting the development of a platform of smart Dynamic Health Systems and self-management. This Volume contains the papers presented during the 6th International Conference on Innovations in Bio-Inspired Computing and Applications IBICA 2015 which was held in Kochi, India during December 16-18, 2015. The 51 papers presented in this Volume were carefully reviewed and selected. The 6th International Conference IBICA 2015 has been organized to discuss the state-of-the-art as well as to address various issues in the growing research field of Bio-inspired Computing which is currently one of the most exciting research areas, and is continuously demonstrating exceptional strength in solving complex real life problems. The Volume will be a valuable reference to researchers, students and practitioners in the computational intelligence field..

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.

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This proceedings book showcases the latest research work presented at the Second Edition of the Mediterranean Symposium on Smart City Application (SCAMS 2017), which was held in Tangier, Morocco on October 15–27, 2017. It presents original research results, new ideas and practical development experiences that concentrate on both theory and practice. It includes papers from all areas of Smart City Applications, e.g. Smart Mobility, Big Data, Smart Grids, Smart Homes and Buildings, clouds, crowds, mashups, social networks, and security issues. The conference stimulated cutting-edge research discussions among pioneering researchers, scientists, industrial engineers, and students from all around the world. The topics covered in this book also focus on innovative issues at the international level by bringing together experts from different countries. The scope of SCAMS 2017 included methods and practices that combine various emerging internetworking and data technologies to capture, integrate, analyze, mine, annotate, and visualize data in a meaningful and collaborative manner. A series of international workshops were organized as invited sessions during the SCAMS 2017: The 2nd International Workshop on Smart Learning & Innovative Educations The 1st International Workshop on Smart Healthcare The 1st International Workshop on Mathematics for Smart City The 1st International Workshop Industry 4.0 and

Smart Manufacturing

[8th EAI International Conference, ICAST 2020, Bahir Dar, Ethiopia, October 2-4, 2020, Proceedings, Part](#)

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[Advances in Smart Grid and Renewable Energy](#)

[Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems](#)

[Proceedings of SoCTA 2018](#)

[ICWiCOM 2019](#)

[Compact and Broadband Microstrip Antennas](#)

[Proceedings of the 8th ICIECE 2019](#)

[Select Proceedings of ETAEERE 2020](#)

[Broadband Planar Antennas](#)

[Select Proceedings of IC3E 2018](#)

[2018 International Conference on Applied Electromagnetics, Signal Processing and Communication \(AESPC\)](#)

[Computation and Communication Technologies](#)

[Microstrip Antenna Design for Wireless Applications](#)

This International Conference on Applied Electromagnetics, Signal Processing & Communication (AESPC 2018), is dedicated to advanced research in the areas of microwave as well as antenna engineering, signal processing and communication. The conference aims at bringing together the researchers, scientists, engineers and research scholars from all areas of engineering and technology, to provide an international forum to exchange their ideas, foster collaboration, practical developments experiences and cover new grounds. AESPC 2018 is organized to address various issues involved in establishing an intelligent wireless communication system, which includes device level research, transmitter design, signal processing, signal transmission in channel, antenna design and design of overall control system.

The conference provides an overview of the state of the art developments and innovations in Antennas, Propagation, and Measurements, highlighting the latest requirements for future applications.

This book comprises select proceedings of the international conference ETAEERE 2020, and primarily focuses on renewable energy resources and smart grid technologies. The book provides valuable information on the technology and design of power grid integration on microgrids of green energy sources. Some of the topics covered include solar PV array, hybrid microgrid,

daylight harvesting, green computing, photovoltaic applications, nanogrid applications, AC/DC/AC converter for wind energy systems, solar photovoltaic panels, PEM fuel cell system, and biogas run dual-fueled diesel engine. The contents of this book will be useful for researchers and practitioners working in the areas of smart grids and renewable energy generation, distribution, and management.

This book is a collection of the best research papers presented at the 8th International Conference on Innovations in Electronics and Communication Engineering at Guru Nanak Institutions Hyderabad, India. Featuring contributions by researchers, technocrats and experts, the book covers various areas of communication engineering, like signal processing, VLSI design, embedded systems, wireless communications, and electronics and communications in general, as well as cutting-edge technologies. As such, it is a valuable reference resource for young researchers.

The Proceedings of First International Conference on Opto-Electronics and Applied Optics 2014, IEM OPTRONIX 2014 presents the research contributions presented in the conference by researchers from both India and abroad. Contributions from established scientists as well as students are included. The book is organized to enable easy access to various topics of interest. The first part includes the Keynote addresses by Phillip Russell, Max Planck Institute of the Light Sciences, Erlangen, Germany and Lorenzo Pavesi, University of Trento, Italy. The second part focuses on the Plenary Talks given by eminent scientists, namely, Azizur Rahman, City University London, London; Bishnu Pal, President, The Optical Society of India; Kamakhya Ghatak, National Institute of Technology, Agartala; Kehar Singh, Former Professor, India Institute of Technology Delhi; Mourad Zghal, SUPCOM, University of Carthage, Tunisia; Partha Roy Chaudhuri, IIT Kharagpur; S K. Bhadra, CSIR-Central Glass and Ceramic Research Institute, Kolkata; Sanjib Chatterjee, Raja Ramanna Centre for Advanced Technology, Indore; Takeo Sasaki, Tokyo University, Japan; Lakshminarayan Hazra, Emeritus Professor, University of Calcutta, Kolkata; Shyam Akashe, ITM University, Gwalior and Vasudevan Lakshminarayanan, University of Waterloo, Canada. The subsequent parts focus on topic-wise contributory papers in Application of Solar Energy; Diffraction Tomography; E.M. Radiation Theory and Antenna; Fibre Optics and Devices; Photonics for Space Applications; Micro-Electronics and VLSI; Nano-Photonics, Bio-Photonics and Bio-Medical Optics; Non-linear Phenomena and Chaos; Optical and Digital Data and Image Processing; Optical Communications and Networks; Optical Design; Opto-Electronic Devices; Opto-Electronic

Materials and Quantum Optics and Information Processing.

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 provides 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 the 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 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 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.

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.

[Designing and Implementation](#)

[IMDC-SDSP 2020](#)

[Advances of Science and Technology](#)

[Proceedings of the 2nd International Conference on Communications and Cyber Physical Engineering Volume 2](#)

[Proceedings of International Conference on Wireless Communication](#)

[MCCS 2018](#)

[Innovative Systems for Intelligent Health Informatics](#)

[Innovations in Smart Cities and Applications](#)

[Development of Compact Microstrip Patch Antenna for GPS Application](#)

[Soft Computing: Theories and Applications](#)

[Microstrip Patch Antenna Design](#)

[ICT: Applications and Social Interfaces](#)

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 remote sensing, computer science and intelligent systems, signal and image processing, and information and communication technology.

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 Cloud Computing, Cyber Security and Digital Forensics, Computer Vision, Signal, Image & Video Processing, Software Engineering in Multidisciplinary Domains and Ad-hoc and Wireless Sensor Networks.

This book describes about the experimental and 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 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. .

This book presents select papers from the International Conference on Emerging Trends in Communication, Computing and Electronics (IC3E 2018). Covering the latest theories and methods in three related fields – electronics, communication and computing, it describes cutting-edge methods and applications in the areas of signal and image processing, cyber security, human-computer interaction, machine learning, electronic devices, nano-electronics, wireless sensor networks, antenna and wave propagation, and mobile communication. The contents of this book will be beneficial to students, researchers, and professionals working in the field of networks and communications.

The book presents high-quality papers from the Third International Conference on Microelectronics, Computing & Communication Systems (MCCS 2018). It discusses the latest technological trends and advances in MEMS and nanoelectronics, wireless communications, optical communication, instrumentation, signal processing, image processing, bioengineering, green energy, hybrid vehicles, environmental science, weather forecasting, cloud computing, renewable energy, RFID, CMOS sensors, actuators, transducers, telemetry systems, embedded systems, and sensor network applications. It includes papers based on original theoretical, practical and experimental simulations, development, applications, measurements, and testing. The applications and solutions discussed in the book provide excellent reference material for future product development.

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.

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. 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.

[Recent Trends in Communication, Computing, and Electronics](#)

[Advanced Computing and Intelligent Engineering](#)

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

[Design of a Compact Microstrip Printed Patch Antenna for RFID Warehouse Management System](#)

[Design and Applications](#)

[Proceedings of the 2nd Mediterranean Symposium on Smart City Applications](#)

[2019 13th European Conference on Antennas and Propagation \(EuCAP\)](#)

[Emerging Innovations in Microwave and Antenna Engineering](#)

[Proceedings of OWT 2020](#)

[Proceedings of the 1st International Multi-Disciplinary Conference Theme: Sustainable Development and Smart Planning, IMDC-SDSP 2020, Cyperspace, 28-30 June 202](#)

[Innovations in Electronics and Communication Engineering](#)

[Advances in Optical Science and Engineering](#)

[Progress in Compact Antennas](#)

Research Paper from the year 2014 in the subject Engineering - Communication Technology, grade: 10, Shantilal Shah Engineering College, language: English, abstract: In this paper design and analysis of annular or circular ring type microstrip patch antenna and the basic terms related to design aspects and study of proposed antenna is presented. Like many available variations of microstrip patch geometries annular or circular ring widely used due to its broadband nature when operated in TM_{12} mode and has smaller circular counterparts when it is operated in its fundamental mode TM_{11} . In this article theoretical and mathematical analysis related to annular ring patch antenna with design is presented and briefly explained. The designed antenna operates at 2.4 GHz resonant frequency so can be used in ISM (Industrial, Scientific and Medical) band wireless applications. The proposed antenna shows good return loss, VSWR as depicted in the graphs.

The book focuses on soft computing and its applications to solve real-world problems in different domains, ranging from medicine and health care, to supply chain management, image processing and cryptanalysis. It includes high-quality papers presented at the International Conference on Soft Computing: Theories and Applications (SoCTA 2018), organized by Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Punjab, India. Offering significant insights into soft computing for teachers and researchers alike, the book inspires more researchers to work in the field of soft computing.

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.

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.

[Microstrip Patch Antennas \(Second Edition\)](#)

[International Conference on Emerging Trends in Engineering \(ICETE\), Vol. 2](#)

[Atti Della Fondazione Giorgio Ronchi Anno LXVII N.2](#)

[A Designer's Guide](#)

[Proceedings of ICACIE 2018, Volume 2](#)

[Micro-Electronics and Telecommunication Engineering](#)

[Optical and Wireless Technologies](#)

[Data Science, Health Informatics, Intelligent Systems, Smart Computing](#)

[Proceedings of the First International Conference, IEM OPTRONIX 2014](#)

[Handbook of Research on Natural Computing for Optimization Problems](#)

[Information and Communication Technology for Competitive Strategies \(ICTCS 2020\)](#)