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# Antenna Based Hfss Projects With Codes

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Modern Antenna Systems

From Theory to Practice

Latest Trends in Design and Application

Applications of Metamaterials

China Satellite Navigation Conference (CSNC) 2014 Proceedings: Volume I

Proceedings of the 4th International Conference on Electronics, Communications and Networks (CECNET IV), Beijing, China, 12-15 December 2014

2021 IEEE 5th Advanced Information Technology, Electronic and Automation Control Conference (IAEAC)

Microstrip Patch Antennas (Second Edition)

MEMS Based True Time Delay Lines for Phased Antenna Array Systems

Intelligent Communication and Automation Systems

Advances in Communication, Devices and Networking

Handbook of Microstrip Antennas

Electronics, Communications and Networks IV

Advanced Photonics Metasurfaces: Design, Fabrication, and Applications

2020 9th Asia Pacific Conference on Antennas and Propagation (APCAP)

Phased Array Antenna Handbook

Modern Antenna Design

Microstrip Antennas

2018 5th International Conference on Signal Processing and Integrated Networks (SPIN)

Modern Small Antennas

Microstrip Patch Antennas: A Designer's Guide

Analysis and Design of Transmitarray Antennas

Broadband Microstrip Antennas

Antennas

Antenna and EM Modeling with MATLAB Antenna Toolbox

Antenna Fundamentals for Legacy Mobile Applications and Beyond

Antenna-in-Package Technology and Applications

ICDECT 2016, Volume 1

Smart Antennas

Stretchable Bioelectronics for Medical Devices and Systems

2019 International Conference on Communication and Signal Processing (ICCSP)

WiMAX

Microwave Systems and Applications

Microstrip Antenna Design Handbook

Microwave Journal

Technologies, Performance Analysis, and QoS

Microstrip Antenna Design

Compact and Broadband Microstrip Antennas

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Modern Antenna Systems Springer Science & Business Media

The aim of IAEAC 2021 is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in Information Technology, Communication, Network, Electronic and Automation Control. It provides opportunities for the delegates to exchange new ideas and application experiences, to establish business or research relations and to find global partners for future collaboration.

### **From Theory to Practice** IET

Signal Processing, Image Processing, Video Signal Processing, Speech and Audio Processing, Statistical Signal Processing, Biomedical Signal Processing, Communication Theory and Systems, Information Theory and Coding, Wireless Communication, Mobile Communication, Sensor Networks, Optical Networking, Technologies, Signal Processing in CDMA WCDMA

*Latest Trends in Design and Application* BoD - Books on Demand

"This thoroughly revised edition of the Artech House classic, *Phased Array Antenna Handbook*, offers the most up-to-date and broadest view of array antennas and systems. Supported with over 350 equations and more than 270 illustrations, the book offers complete design details that allow practitioners to size an array system with speed and confidence."--BOOK JACKET. Title Summary field provided by Blackwell North America, Inc. All Rights Reserved

### **Applications of Metamaterials** Morgan & Claypool Publishers

The field of antenna engineering has been advancing at a remarkable pace to support modern communication systems. Recently, significant progress has been made in the development of new antennas and techniques targeted for applications in medical, defense, health care, communication, etc. The motivation of this project is to present cutting-edge research materials in the field of antennas for modern wireless communication.

### **China Satellite Navigation Conference (CSNC) 2014 Proceedings: Volume I** Artech House

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.

Proceedings of the 4th International Conference on Electronics, Communications and Networks (CECNET IV), Beijing, China, 12-15 December 2014 John Wiley & Sons

The 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; multipoint network approach; transmission-line model; rectangular microstrip antennas; low-cost printed antennas; printed phased-array antennas; circularly polarised 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 antenna; and microstrip field diagnostics.

### **2021 IEEE 5th Advanced Information Technology, Electronic and Automation Control Conference (IAEAC)** Artech House

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.

Microstrip Patch Antennas (Second Edition) John Wiley & Sons

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 used for the enhancement of the performance parameters of the 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. Provides the latest techniques used for the design of antenna in terms of its 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.

### **MEMS Based True Time Delay Lines for Phased Antenna Array Systems** John Wiley & Sons

This book is based on and describes the operation of the MATLAB Antenna Toolbox modeling tool, which is accessible to virtually every engineering student in the U.S. and abroad. It begins with the simple yet common dipole antenna as a means of illustrating the need to impedance match and to reduce parasitic losses. The book also reviews Maxwell's equations and ties them to antenna analysis via the vector potential. Later chapters introduce the simple loop antenna and its duality to the dipole, as well as a number of practical embodiments using stubs and feed point location. The book concludes with a chapter on antennas that utilize travelling waves along a line. These include long-line antennas, helical antennas, and spiral antennas.

### **Intelligent Communication and Automation Systems** Springer Nature

The idea of the conference is to bring together the Scientists, Scholars, Engineers, Industrialists, and

Students from in and around the world to present the on going research activities and hence to foster research relations between universities and industries This conference provides opportunities for the delegates to exchange new ideas, applications, and experiences, to establish research relations and to find global partners for future collaboration

**Advances in Communication, Devices and Networking** Springer

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.

**Handbook of Microstrip Antennas** Cambridge University Press

The 4th International Conference on Electronic, Communications and Networks (CECNet2014) inherits the fruitfulness of the past three conferences and lays a foundation for the forthcoming next year in Shanghai. CECNet2014 was hosted by Hubei University of Science and Technology, China, with the main objective of providing a comprehensive global forum

Electronics, Communications and Networks IV Springer

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.

Advanced Photonics Metasurfaces: Design, Fabrication, and Applications Artech House Publishers

In recent years, transmitarray antennas have attracted growing interest with many antenna researchers. Transmitarrays combines both optical and antenna array theory, leading to a low profile design with high gain, high radiation efficiency, and versatile radiation performance for many wireless communication systems. In this book, comprehensive analysis, new methodologies, and novel designs of transmitarray antennas are presented. Detailed analysis for the design of planar space-fed array antennas is presented. The basics of aperture field distribution and the analysis of the array elements are described. The radiation performances (directivity and gain) are discussed using array theory approach, and the impacts of element phase errors are demonstrated. The performance of transmitarray design using multilayer frequency selective surfaces (M-FSS) approach is carefully studied, and the transmission phase limit which are generally independent from the selection of a specific element shape is revealed. The maximum transmission phase range is determined based on the number of layers, substrate permittivity, and the separations between

layers. In order to reduce the transmitarray design complexity and cost, three different methods have been investigated. As a result, one design is performed using quad-layer cross-slot elements with no dielectric material and another using triple-layer spiral dipole elements. Both designs were fabricated and tested at X-Band for deep space communications. Furthermore, the radiation pattern characteristics were studied under different feed polarization conditions and oblique angles of incident field from the feed. New design methodologies are proposed to improve the bandwidth of transmitarray antennas through the control of the transmission phase range of the elements. These design techniques are validated through the fabrication and testing of two quad-layer transmitarray antennas at Ku-band. A single-feed quad-beam transmitarray antenna with 50 degrees elevation separation between the beams is investigated, designed, fabricated, and tested at Ku-band. In summary, various challenges in the analysis and design of transmitarray antennas are addressed in this book. New methodologies to improve the bandwidth of transmitarray antennas have been demonstrated. Several prototypes have been fabricated and tested, demonstrating the desirable features and potential new applications of transmitarray antennas.

*2020 9th Asia Pacific Conference on Antennas and Propagation (APCAP)* CRC Press

This book highlights technology trends and challenges that trace the evolution of antenna design, starting from 3rd generation phones and moving towards the latest release of LTE-A. The authors explore how the simple monopole and whip antenna from the GSM years have evolved towards what we have today, an antenna design that is compact, multi-band in nature and caters to multiple elements on the same patch to provide high throughput connectivity. The scope of the book targets a broad range of subjects, including the microstrip antenna, PIFA antenna, and the monopole antenna to be used for different applications over three different mobile generations. Beyond that, the authors take a step into the future and look at antenna requirements for 5G communications, which already has the 5G drive in place with prominent scenarios and use-cases emerging. They examine these, and put in place the challenges that lie ahead for antenna design, particularly in mm-Wave design. The book provides a reference for practicing engineers and under/post graduate students working in this field.

*Phased Array Antenna Handbook* CRC Press

Computing Methodologies 2019 will provide an outstanding international forum for scientists from all over the world to share ideas and achievements in the theory and practice of all areas of inventive systems which includes artificial intelligence, automation systems, computing systems, electronics systems, electrical and informative systems etc Presentations should highlight computing methodologies as a concept that combines theoretical research and applications in automation, information and computing technologies All aspects of inventive systems are of interest theory, algorithms, tools, applications, etc

**Modern Antenna Design** John Wiley & Sons

If you are involved in designing and developing small antennas, this complete cutting-edge guide covers everything you need to know. From fundamentals and basic theory to design optimization, evaluation, measurements and simulation techniques, all the essential information is included. You will also get many practical examples from a range of wireless systems, whilst a glossary is provided to bring you up to speed on the latest terminology. A wide variety of small antennas is covered, and

design and practice steps are described for each type: electrically small, functionally small, physically constrained small and physically small. Whether you are a professional in industry, a researcher, or a graduate student, this is your essential guide to small antennas.

Microstrip Antennas John Wiley & Sons

The book addresses surrogate-assisted design of antenna arrays, in particular, how surrogate models, both data-driven and physics-based, can be utilized to expedite procedures such as parametric optimization, design closure, statistical analysis, or fault detection. Algorithms and design frameworks are illustrated using a large variety of examples including real-world printed-circuit antenna and antenna array structures. This unique compendium contains introductory materials concerning numerical optimization, both conventional (gradient-based and derivative-free, including metaheuristics) and surrogate-based, as well as a considerable selection of customized procedures developed specifically to handle antenna array problems. Recommendations concerning practical aspects of surrogate-assisted multi-objective antenna optimization are also given. The methods presented allow for cost-efficient handling of antenna array design problems (involving CPU-intensive EM models) in the context of design optimization and statistical analysis, which will benefit both researchers, designers and graduate students.

2018 5th International Conference on Signal Processing and Integrated Networks (SPIN) World Scientific

As the demand for broadband services continues to grow worldwide, traditional solutions, such as digital cable and fiber optics, are often difficult and expensive to implement, especially in rural and remote areas. The emerging WiMAX system satisfies the growing need for high data-rate applications such as voiceover IP, video conferencing, interactive gaming, and multimedia streaming. WiMAX deployments not only serve residential and enterprise users but can also be

deployed as a backhaul for Wi-Fi hotspots or 3G cellular towers. By providing affordable wireless broadband access, the technology of WiMAX will revolutionize broadband communications in the developed world and bridge the digital divide in developing countries. Part of the WiMAX Handbook, this volume focuses on the technologies behind WiMAX, its performance capabilities, and its control mechanisms. The book introduces programmable baseband processors suited for WiMAX systems, describes an innovative methodology for the design of multi-band WiMAX antennas, addresses space-time block codes, and reviews space-frequency/space-time-frequency code design criteria. It also proposes a combined call admission control and scheduling scheme, focuses on the performance analysis of the IEEE 802.16 mesh mode, and analyzes the performance of both single-input-single-output and space-time-block-coded OFDM systems in mobile environments. The final section establishes a framework of an ideal reservation period controller, examines the ecosystem in which scheduling for IEEE 802.16e systems must be performed, and presents a fuzzy logic controller for admission control. With the revolutionary technology of WiMAX, the lives of many will undoubtedly improve, thereby leading to greater economic empowerment.

Modern Small Antennas World Scientific

Microwave systems are key components of every modern wireless communication system. The main objective of this book was to collect as many different state-of-the-art studies as possible in order to cover in a single volume the main aspects of microwave systems and applications. This book contains 17 chapters written by acknowledged experts, researchers, academics, and microwave engineers, providing comprehensive information and covering a wide range of topics on all aspects of microwave systems and applications. This book is divided into four parts. The first part is devoted to microwave components. The second part deals with microwave ICs and innovative techniques for on-chip antenna design. The third part presents antenna design cases for microwave systems. Finally, the last part covers different applications of microwave systems.

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