

Modern Radar System Analysis Barton

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[Radar System Analysis, Design, and Simulation](#)
CRC Press

This edition is the most comprehensive and informative available on radar systems and technology. Thoroughly revised and updated to reflect the advances made in radar over the past two decades. Charts/graphs.

Monopulse Principles and Techniques

Artech House Radar Library (Ha

This state-of-the-art edition of a radar classic brings you up-to-date on new developments in clutter measurement and modeling and features a wealth of new information not found in other currently available books. Authored by a recognized expert in the field, the book covers everything from basic concepts of radar reflectivity to space-time clutter amplitude and bistatic clutter.

Target Detection by Marine Radar

Artech House

A software that offers radar and electronic warfare engineers a tool for solving the radar equation for the maximum range at which a radar can achieve target detection under conditions of various interference sources, such as thermal noise, surface clutter, precipitation, chaff, and jamming.

A System Simulation Approach Artech House

This revised and updated edition offers complete and up-to-date coverage of modern radar systems, including new material on accuracy, resolution, and convolution and correlation. The book features more than 540 illustrations (drawn in Maple V) that offer a greater understanding of various waveforms, and other two- and three-dimensional functions, to help you more accurately analyze radar system performance.

Architecture, Implementation, and Optimization John Wiley & Sons

Simulation is integral to the

successful design of modern radar systems, and there is arguably no better software for this purpose than MATLAB. But software and the ability to use it does not guarantee success. One must also: Understand radar operations and design philosophy Know how to select the radar parameters to meet the design req

Principles of Synthetic

Aperture Radar Imaging Springer Science & Business Media

Hedy Lamarr's life was punctuated by salacious rumors and public scandal, but it was her stunning looks and classic Hollywood glamour that continuously captivated audiences. Born Hedwig Kiesler, she escaped an unhappy marriage with arms dealer Fritz Mandl in Austria to try her luck in Hollywood, where her striking appearance made her a screen legend. Her notorious nude role in the erotic Czech film *Ecstasy* (1933), as well as her work with Cecil B. DeMille (*Samson and Delilah*, 1949), Walter Wanger (*Algiers*, 1938), and studio executive Louis B. Mayer catapulted her alluring and provocative reputation as a high-profile sex symbol. In *Hedy Lamarr: The Most Beautiful Woman in Film*, Ruth Barton explores the many facets of the screen legend, including her life as an inventor. Working with avant-garde composer and film scorer George Antheil, Lamarr helped to develop and patent spread spectrum technology, which is still used in mobile phone communication. However, despite her screen persona and scientific success, Lamarr's personal life caused quite a scandal. A string of failed marriages, a lawsuit against her publisher regarding her sensational autobiography, and shoplifting charges made her infamous beyond her celebrity. Drawing on extensive

research into both the recorded truths of Lamarr's life and the rumors that made her notorious, Barton recognizes Lamarr's contributions to both film and technology while revealing the controversial and conflicted woman underneath. *Hedy Lamarr: The Most Beautiful Woman in Film* illuminates the life of a classic Hollywood icon.

Modern Radar System Analysis

National Academies Press

This book, *Principles of Modern Radar*, has as its genesis a Georgia Tech short course of the same title. This short course has been presented annually at Georgia Tech since 1969, and a very comprehensive set of course notes has evolved during that seventeen year period. The 1986 edition of these notes ran to 22 chapters, and all of the authors involved, except Mr. Barrett, were full time members of the Georgia Tech research faculty. After considerable encouragement from various persons at the university and within the radar community, we undertook the task of editing the course notes for formal publication. The contents of the book that ensued tend to be practical in nature, since each contributing author is a practicing engineer or scientist and each was selected to write on a topic embraced by his area(s) of expertise. Prime examples are Chaps. 2, 5, and 10, which were authored by E. F. Knott, G. W. Ewell, and N. C. Currie, respectively. Each of these three researchers is recognized in the radar community as an expert in the technical area that his chapter addresses, and each had already authored and published a major book on his subject. Several other contributing authors, including Dr. Bodnar,

Mr. Bruder, Mr. Corriher, Dr. Reedy, Dr. Trebits, and Mr. Scheer, also have major book publications to their credit. Radar Reflectivity of Land and Sea McGraw Hill Professional

This book provides the advanced issues of FPGA design as the underlying theme of the work. In practice, an engineer typically needs to be mentored for several years before these principles are appropriately utilized. The topics that will be discussed in this book are essential to designing FPGA's beyond moderate complexity. The goal of the book is to present practical design techniques that are otherwise only available through mentorship and real-world experience. *Modern Radar Systems* Artech House on Demand

THE MOST COMPLETE GUIDE TO HIGH FREQUENCY OVER-THE-HORIZON RADAR SYSTEMS Written by a leading global expert on the topic, *High Frequency Over-the-Horizon Radar* provides in-depth coverage of the signal processing models and techniques that have significantly advanced OTH radar technology. This pioneering work describes the fundamental principles of OTH radar design and operation, and then delves into the mathematical modeling of HF signals received by actual OTH radar systems based on experimental data analysis. Numerous examples illustrate the practical application of modern adaptive signal processing techniques to real and simulated OTH radar data. This authoritative text covers skywave and surface-wave systems and is an invaluable resource for researchers, engineers, and practitioners working with OTH radar systems and technologies. Key Features: Offers a thorough and accurate treatment of essential concepts ranging

from system design and operation, through to signal processing methods, and their practical application. Provides clear explanations of fundamental principles for scientists, engineers, students, practitioners, technicians, managers, and other professionals starting out in this field. Offers a detailed coverage of theoretical and applied signal-processing concepts and techniques that have become a cornerstone for the effective operation of real-world OTH radar systems. Fills a long-standing void in the contemporary OTH radar literature with over 350 illustrations (color figures available for download), and over 500 references.

Filtering in the Time and Frequency Domains IET

Principles of Synthetic Aperture Radar Imaging: A System Simulation Approach demonstrates the use of image simulation for SAR. It covers the various applications of SAR (including feature extraction, target classification, and change detection), provides a complete understanding of SAR principles, and illustrates the complete chain of a SAR operation. The book places special emphasis on a ground-based SAR, but also explains space and air-borne systems. It contains chapters on signal speckle, radar-signal models, sensor-trajectory models, SAR-image focusing, platform-motion compensation, and microwave-scattering from random media. While discussing SAR image focusing and motion compensation, it presents processing algorithms and applications that feature extraction, target classification, and change detection. It also provides samples of simulation on various scenarios, and includes simulation flowcharts and results that are detailed throughout the book. Introducing SAR imaging from a systems point of view, the author: Considers the recent development of MIMO SAR technology Includes selected GPU implementation Provides a numerical analysis of system parameters (including platforms, sensor, and image focusing, and their influence) Explores wave-target interactions, signal transmission and reception, image

formation, motion compensation Covers all platform motion compensation and error analysis, and their impact on final image radiometric and geometric quality Describes a ground-based SFMCW system *Principles of Synthetic Aperture Radar Imaging: A System Simulation Approach* is dedicated to the use, study, and development of SAR systems. The book focuses on image formation or focusing, treats platform motion and image focusing, and is suitable for students, radar engineers, and microwave remote sensing researchers.

Radar Systems Analysis and Design Using MATLAB CRC Press

This book presents the basic principles, analyses, design formulas, and characteristics of various fin-line configurations. You'll find summaries of hundreds of rigorous formulas as well as approximate closed-form expressions, which can be readily programmed to generate design data for any structure. Discover millimeter-wave integrated circuits and components realized using the various fin-line techniques presented in the text, including directional couplers, power dividers, attenuators, detectors, modulators, and oscillators. An Artech House bestseller!

Basic Principles Artech House Based on the classic *Radar Range-Performance Analysis* from 1980, this practical volume extends that work to ensure applicability of radar equations to the design and analysis of modern radars. This unique book helps you identify what information on the radar and its environment is needed to predict detection range. Moreover, it provides equations and data to improve the accuracy of range calculations. You find detailed information on propagation effects, methods of range calculation in environments that include clutter, jamming and thermal noise, as well as loss factors that reduce radar performance. This invaluable book is supported with nearly 200 illustrations and over 430 equations.

Radar Signal Processing and Adaptive Systems Artech House

Publishers

This study was undertaken in response to a request by the U.S. Air Force that the National Research Council (NRC) examine whether the technologies that underlie the concept of a hypersonic, air-launched, air-breathing, hydrocarbon-fueled missile with speeds up to Mach 81 can be demonstrated in time to be initially operational by 2015. To conduct the study, the NRC appointed the Committee on Review and Evaluation of the Air Force Hypersonic Technology Program, under the auspices of the Air Force Science and Technology Board.

CRC Press

Bogen beskæftiger sig specielt med de grundlæggende teorier inden for søge- og følgeradar. Artech House

A valuable resource for radar engineers and managers of all levels, this revised edition provides an introduction to the capabilities and limitations of radar, as well as a detailed advanced study of key radar signal processing topics. The book explains the concepts and theory of radar signal processing such as resolution, ambiguities, antennas, waveforms, the theory of detecting targets in noise and/or clutter, and tracking using data processing. It also presents equations for the determination of maximum radar range in free space and as affected by multipath and the horizon.

Principles of Modern Radar CRC Press

Developed from the author's graduate-level courses, the first edition of this book filled the need for a comprehensive, self-contained, and hands-on treatment of radar systems analysis and design. It quickly became a bestseller and was widely adopted by many professors. The second edition built on this successful format by rearranging and updating **Review and Evaluation of the Air Force Hypersonic Technology Program** Artech House

"This expanded second edition of an Artech House bestseller offers the most current and comprehensive coverage of radar system performance analysis and system-

level modeling. This revised edition features new material on airborne and space-based radar, radar tracking techniques, radar system design, and operational and performance issues. It also provides new detailed examples, problem sets and solutions, and a comprehensive self-test to help readers evaluate their understanding of the material. Featuring over 255 equations and more than 120 illustrations, this systematic reference offers a clear understanding of the basics of radar design, operation, and applications."--Jacket.

Modern Radar System Analysis Software and User's Manual Version 2.0 IET

Radar is a legal necessity for the safe navigation of merchant ships and, within vessel traffic services, is indispensable to the operation of major ports and harbours. Target Detection by Marine Radar concentrates solely on civil marine operations and explains how marine surveillance radars detect their targets. A chapter has been devoted to the issue of accuracy. The various international regulations governing marine radar are examined, a brief historical background is given to modern-day practice and the book closes with a discussion of ways in which marine radar may develop to meet future challenges.

Software and User's Manual, Version 3.0 CRC Press

Radar System Analysis and Modeling Artech House

High Frequency Over-the-Horizon Radar National Academies Press

Monopulse is a type of radar that sends additional information in the signal in order to avoid problems caused by rapid changes in signal strength. Monopulse is resistant to jamming which is one of the main reasons it is used in most radar systems today. This updated and expanded edition of an Artech House classic offers you a current and comprehensive treatment of monopulse radar principles, techniques, and

applications. The Second Edition features two brand new chapters, covering monopulse countermeasures and counter-countermeasures and monopulse for airborne radar and homing seekers. This essential volume categorizes and describes the various forms of monopulse radar, and analyzes their capabilities and limitations. The book also devotes considerable space to monopulse circuits and hardware components, explaining their functions and performance. This practical resource features numerous photographs and illustrations drawn from actual radar systems and components. This book serves as a valuable reference for both experienced radar engineers and those new to the field.