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KEY=SIGNAL - MYLA LIN

Sonar Signal Processing

Artech House Acoustics Library This discussion of sonar signal processing bridges a number of related fields, including acoustic propagation in the medium, detection and estimation theory, filter theory, digital filtering, sensor array processing, spectral analysis, fast transforms and digital signal processing. The book begins with a discussion of the topics of analogue signalling conditioning, digital filtering, and the calculation of the discrete Fourier transform. Other topics discussed include analogue filters and analogue-to-digital conversion, finite impulse and infinite impulse response digital filters, and multirate processing techniques.

Statistical and Adaptive Signal Processing

Spectral Estimation, Signal Modeling, Adaptive Filtering, and Array Processing

Artech House Signal Processing This authoritative volume on statistical and adaptive signal processing offers you a unified, comprehensive and practical treatment of spectral estimation, signal modeling, adaptive filtering, and array processing. Packed with over 3,000 equations and more than 300 illustrations, this unique resource provides you with balanced coverage of implementation issues, applications, and theory, making it a smart choice for professional engineers and students alike.

Academic Press Library in Signal Processing

Array and Statistical Signal Processing

Academic Press This third volume, edited and authored by world leading experts, gives a review of the principles, methods and techniques of important and emerging research topics and technologies in array and statistical signal processing. With this reference source you will: Quickly grasp a new area of research Understand the underlying principles of a topic and its application Ascertain how a topic relates to other areas and learn of the research issues yet to be resolved Quick tutorial reviews of important and emerging topics of research in array and statistical signal processing Presents core principles and shows their application Reference content on core principles, technologies, algorithms and applications Comprehensive references to journal articles and other literature on which to build further, more specific and detailed knowledge Edited by leading people in the field who, through their reputation, have been able to commission experts to write on a particular topic

Academic Press Library in Signal Processing

Communications and Radar Signal Processing

Academic Press This second volume, edited and authored by world leading experts, gives a review of the principles, methods and techniques of important and emerging research topics and technologies in communications and radar engineering. With this reference source you will: Quickly grasp a new area of research Understand the underlying principles of a topic and its application Ascertain how a topic relates to other areas and learn of the research issues yet to be resolved Quick tutorial reviews of important and emerging topics of research in array and statistical signal processing Presents core principles and shows their application Reference content on core principles, technologies, algorithms and applications Comprehensive references to journal articles and other literature on which to build further, more specific and detailed knowledge Edited by leading people in the field who, through their reputation, have been able to commission experts to write on a particular topic

Beamforming

Sensor Signal Processing for Defence Applications

World Scientific Beamforming: Sensor Signal Processing for Defence Applications presents a range of important research contributions concerned with sensor array signal processing and, in particular, with the superresolution beamformers fundamental to many civilian and defence applications. Both space and space-time (STAP) beamforming algorithms and their application to radar systems are considered with emphasis given to "look-down" airborne radars, synthetic aperture radar (SAR), arrayed MIMO radar and a number of common wake-wave detection algorithms for two-dimensional SAR imagery. Furthermore, ocean towed arrays, which find applications in a variety of areas such as defence, oil and gas exploration, and geological and marine life studies, are also considered paying particular attention to receiver positional uncertainties resulting from the array's flexible structure. Array geometrical and electrical uncertainties, design of auto-calibration algorithms, beamforming "pointing" error uncertainties and robustification issues are also presented. This book is self-contained and unified in its presentation, and comprehensively covers some of the classic and fundamental models of beamforming for sensor signal processing. It is suitable as an advanced textbook for graduate students and researchers in the area of signal processing, as well as a reference book for engineers in the defence industry. Contents:Space-Time Adaptive Beamforming Algorithms for Airborne Radar Systems (Rodrigo de Lamare)Transmit Beamforming for Forward-Looking Space-Time Radars (Mathini Sellathurai and David Wilcox)Digital Beamforming for Synthetic Aperture Radar (Karen Mak and Athanassios Manikas)Arrayed MIMO Radar: Multi-target Parameter Estimation for Beamforming (Harry Commin, Kai Luo and Athanassios Manikas)Beamforming for

Wake Wave Detection and Estimation — An Overview (Karen Mak and Athanassios Manikas)Towed Arrays: Channel Estimation, Tracking and Beamforming (Vidhya Sridhar, Marc Willerton and Athanassios Manikas)Array Uncertainties and Auto-calibration (Marc Willerton, Evangelos Venieris and Athanassios Manikas)Robust Beamforming to Pointing Errors (Jie Zhuang and Athanassios Manikas) Readership: Postgraduate students and researchers working in the area of signal processing as well researchers working in the defence industry. The UDRC runs a series of short courses in signal processing for PhD students and industrial researchers and this book is recommended reading. Key Features:Unique treatment of beamformingUnique modelling techniques using array processing of modern radar systems suchs as MIMO, SAR, etc.New material related to the research carried out at UDRC. This book is considered as one of the academic outcomes of the UDRC in Signal ProcessingKeywords:Space-Time Algorithms;Adaptive Beamforming;Transmit Beamforming;Robust Beamforming;Digital Beamforming;Spatiotemporal Beamforming;Forward-Looking STAP Radar;Airborne Radar;Synthetic Aperture Radar;MIMO Radar;Array Calibration;Array Uncertainties

Antenna Arrays and Beam-formation

BoD – Books on Demand Spatial processing and smart antenna beam formation are considered as completely essential approaches to be employed for forthcoming progress in the standards and implementation of the wireless communication systems. The book aims, besides introducing up-to-date contributions that are not readily available in the related literature, to present and demonstrate the recent research ideas in the field of antenna array design and beam-forming algorithms in a synthetic, coherent, and unified manner for the interested researchers. The presented topics range from relatively straightforward mathematical analysis and derivations to simulation and empirical results. The book is designed to serve as an informative reference for the researcher involved in the analysis of the spatial signal processing techniques for smart antenna systems. The book will help the readers, in particular wireless communication researchers, to have wider futuristic and innovative visions for the advances in the field.

Introduction to Direction-of-Arrival Estimation

Artech House Direction-of-Arrival (DOA) estimation concerns the estimation of direction finding signals in the form of electromagnetic or acoustic waves, impinging on a sensor or antenna array. DOA estimation is used for locating and tracking signal sources in both civilian and military applications. This authoritative volume provides an overview and performance analysis of the basic DOA algorithms, including comparisons between the various types.The book offers you a detailed understanding of the arrays pertinent to DOA finding, and presents a detailed illustration of the ESPRIT-based DOA algorithms complete with their performance assessments. From antennas and array receiving systems, to advanced topics on DOA estimation, this book serves as a one-stop resource for professionals and students. Nearly 100 illustrations and more than 281 equations support key topics throughout.

Advances in Adaptive Radar Detection and Range Estimation

Springer Nature

Space-Time Adaptive Processing for Radar, Second Edition

Artech House Space-time adaptive processing (STAP) is an exciting technology for advanced radar systems that allows for significant performance enhancements over conventional approaches. Based on a time-tested course taught in industry, government and academia, this second edition reviews basic STAP concepts and methods, placing emphasis on implementation in real-world systems. It addresses the needs of radar engineers who are seeking to apply effective STAP techniques to their systems, and serves as an excellent reference for non-radar specialists with an interest in the signal processing applications of STAP. Engineers find the analysis tools they need to assess the impact of STAP on a variety of important radar applications. A toolkit of STAP algorithms and implementation techniques allows practitioners the flexibility of adapting the best methods to their application. In addition, this second edition adds brand new coverage on "STAP on Transmit" and "Knowledge-Aided STAP (KA-STAP).

Audio-visual Person Tracking: A Practical Approach

World Scientific This book deals with the creation of the algorithmic backbone that enables a computer to perceive humans in a monitored space. This is performed using the same signals that humans process, i.e., audio and video. Computers reproduce the same type of perception using sensors and algorithms in order to detect and track multiple interacting humans, by way of multiple cues, like bodies, faces or speech. This application domain is challenging, because audio and visual signals are cluttered by both background and foreground objects. First, particle filtering is established as the framework for tracking. Then, audio, visual and also audio-visual tracking systems are separately explained. Each modality is analyzed, starting with sensor configuration, detection for tracker initialization and the trackers themselves. Techniques to fuse the modalities are then considered. Instead of offering a monolithic approach to the tracking problem, this book also focuses on implementation by providing MATLAB code for every presented component. This way, the reader can connect every concept with corresponding code. Finally, the applications of the various tracking systems in different domains are studied./a

Emitter Detection and Geolocation for Electronic Warfare

Artech House This comprehensive resource provides theoretical formulation for detecting and geolocating non-cooperative emitters. Implementation of geolocation algorithms are discussed, as well as performance prediction of a hypothetical passive location system for systems analysis or vulnerability calculation. Comparison of novel direction finding and geolocation algorithms to classical forms are also included. Rooted in statistical signal processing and array processing theory, this book also provides an overview of the application of novel detection and estimation algorithms to real world problems in EW. The book is divided into three parts: detection, angle of arrival estimation, and geolocation. Each section begins with an introductory chapter covering the relevant signal processing theory (either detection or estimation), then provides a series of chapters covering specific methods to achieve the desired end-product. MATLAB® code is provided to assist readers with relevant probability and statistics, RF propagation, atmospheric absorption, and noise, giving readers an understanding of the implementation of the algorithms in the book, as well as developing new approaches to solving problems. Packed with problem sets and examples, this book strikes a balance between introductory texts and reference manuals, making it useful for novice as well as advanced practitioners.

Electronic Warfare Signal Processing

Artech House Written by a prominent expert in the field, this authoritative new resource presents anti-ship missile (ASM) electronic protection (EP) techniques designed to enhance accurate target classification currently being developed by personnel from the People's Republic of China and other nations. This book provides a comprehensive introduction to modern electronic warfare (EW) in an era of information warfare (IW). It explores the capabilities of coherent radar and digital signal processing to rapidly and accurately classify targets. Both naval and air electronic EW are covered in this resource. This book gives insight into modern EW as an information battle and includes guidance on properly testing the effectiveness of electronic attack (EA) systems. Pulsed Doppler radar basics including, electromagnetic pulse, dynamic range, gain control, and Doppler effects are presented. A summary of the ASM sensor and EA model is provided and readers find coverage of the radar range equation, burn through, and the range Doppler map and imaging. Special topic-extended target classifications including, false, decoys, and chaff are explained. Special topic ASM EP waveforms and multiple receiver EP are also covered. This book explores features of algorithms to optimize combining multiple parameters and systems. Moreover, it explains several algorithms proposed by PRC personnel to implement optimal two-channel processing that mitigates cover noise EA.

Orthogonal Methods for Array Synthesis

Theory and the ORAMA Computer Tool

John Wiley & Sons The first time that such a complete systematic analysis of the mathematical and numerical techniques related to the orthogonal methods has been given. With the explosion of the wireless world, greater emphasis than ever before is being placed on the effective design of antennas. Orthogonal Methods for Array Synthesis outlines several procedures of orthogonal methods suitable for antenna array synthesis. The book presents a simple approach to the design of antenna arrays to enable the reader to use the classical Orthogonal Method for synthesis of linear arrays. This theory-based book, which includes rapid, effective solutions to design problems for communications applications and broadcasting, is amply illustrated with real-world examples and case studies. Also included in the book is the ORAMA MS Windows-compatible computer tool, patented by Professor Sahalos and his team. Provides comprehensive coverage of the basic principles of orthogonal methods including an analytical explanation of the orthogonal method (OM) and the orthogonal perturbation method (OP) Gives rapid, cost-effective solutions to antenna design problems for communications applications and broadcasting Illustrates all theory with practical applications gleaned from the author's extensive experience in the field of orthogonal advanced methods for antennas Providing a complete guide to the theory and applications of the Orthogonal Methods, this book is a must-read for antenna engineers and graduate students of electrical and computer engineering and physics.

Basic Radar Analysis, Second Edition

Artech House This highly-anticipated second edition of an Artech House classic covers several key radar analysis areas: the radar range equation, detection theory, ambiguity functions, waveforms, antennas, active arrays, receivers and signal processors, CFAR and chaff analysis. Readers will be able to predict the detection performance of a radar system using the radar range equation, its various parameters, matched filter theory, and Swerling target models. The performance of various signal processors, single pulse, pulsed Doppler, LFM, NLFM, and BPSK, are discussed, taking into account factors including MTI processing, integration gain, weighting loss and straddling loss. The details of radar analysis are covered from a mathematical perspective, with in-depth breakdowns of radar performance in the presence of clutter. Readers will be able to determine the nose temperature of a multi-channel receiver as it is used in active arrays. With the addition of three new chapters on moving target detectors, inverse synthetic aperture radar (ISAR) and constant false alarm rate (CFAR) and new MATLAB codes, this expanded second edition will appeal to the novice as well as the experienced practitioner.

Millimeter-wave and Infrared Multisensor Design and Signal Processing

Artech House on Demand Here's a practical, non-theoretical introduction to the principles, applications and benefits of multi-sensor technology used in smart weapon development, surveillance systems, and an increasing variety of non-military applications. This book provides a broad overview of MMW (millimeter-wave) and IR (infrared) sensor constraints, design principles, system alternatives and targeting applications, and is unique in its coverage of integrated MMW and IR multisensor design.

Industrial Networks and Intelligent Systems

14th EAI International Conference, INISCOM 2018, Da Nang, Vietnam, August 27–28, 2018, Proceedings

Springer This book constitutes the refereed proceedings of the 4th EAI International Conference on Industrial Networks and Intelligent Systems, INISCOM 2018, held in Da Nang, Vietnam, in August 2018. The 26 full papers were selected from 38 submissions and are organized thematically in tracks: Telecommunications Systems and Networks; Industrial Networks and Applications; Hardware and Software Design and Development; Information Processing and Data Analysis; Signal Processing; Security and Privacy.

Space-time Adaptive Processing for Radar

Artech House This authoritative, leading-edge resource gives you a comprehensive overview of sample rate conversion (SRC) and its applications in software configurable radios. The book helps you understand the limits of feasible systems for sample rate conversion, as well as the limits of interpolation. You get sound advice on selecting the appropriate types of SRC for specific applications, and assistance in handling the trade-off between hardware complexity and the clock rate of a system. From an introduction to software radio and a refresher on the fundamentals of sampling and sample rate conversion, to discussions on block signal processing and well-known and novel structures for sample rate conversion, the book offers you practical guidance that enables you to quickly find solutions for your challenging projects in the field. This first-of-its-kind reference concludes with a list of questions that - when answered - helps to design a system for sample rate conversion. Over 890 equations and 90 illustrations support key topics throughout the book.

Signal Processing Fundamentals and Applications for Communications and Sensing Systems

Artech House This cutting-edge book is a clear and thorough exposition of signal-processing fundamentals for communications and major sensing systems. Based on the author's earlier book in this area, this revised and expanded resource offers you expert guidance in the detection of optical, acoustic and radio-frequency signals in noise. It covers digital filtering and parameter estimation, and helps you with problems associated with radar system design, including search, tracking and measurement ambiguity.

The British National Bibliography

Adaptive Signal Processing for Radar

Artech House Radar Library (Ha Walks the reader through adaptive approaches to radar signal processing by detailing the basic concepts of various techniques and then developing equations to analyze their performance. Finally, it presents curves that illustrate the attained performance.

Fourier Transforms in Radar and Signal Processing, Second Edition

Artech House Fourier transforms are used widely, and are of particular value in the analysis of single functions and combinations of functions found in radar and signal processing. Still, many problems that could have been tackled by using Fourier transforms may have gone unsolved because they require integration that is difficult and tedious. This newly revised and expanded edition of a classic Artech House book provides you with an up-to-date, coordinated system for performing Fourier transforms on a wide variety of functions. Along numerous updates throughout the book, the Second Edition includes a critical new chapter on periodic waveforms a topic not covered in any other book and detailed coverage of asymmetric triangular pulse. By building upon Woodward's well known "Rules and Pairs" method and related concepts and procedures, this book establishes a unified system that makes implicit the integration required for performing Fourier transforms on a wide variety of functions. It details how complex functions can be broken down to their

constituent parts for analysis. You can now concentrate on functional relationships instead of getting bogged down in the details of integration. This approach to implementing Fourier transforms is illustrated with many specific examples from digital signal processing as well as radar and antenna operation. DVD-ROM Included! Contains MATLAB programs that implement many of the results presented in the book.

Academic Press Library in Signal Processing, Volume 7

Array, Radar and Communications Engineering

Academic Press Academic Press Library in Signal Processing, Volume 7: Array, Radar and Communications Engineering is aimed at university researchers, post graduate students and R&D engineers in the industry, providing a tutorial-based, comprehensive review of key topics and technologies of research in Array and Radar Processing, Communications Engineering and Machine Learning. Users will find the book to be an invaluable starting point to their research and initiatives. With this reference, readers will quickly grasp an unfamiliar area of research, understand the underlying principles of a topic, learn how a topic relates to other areas, and learn of research issues yet to be resolved. Presents a quick tutorial of reviews of important and emerging topics of research Explores core principles, technologies, algorithms and applications Edited and contributed by international leading figures in the field Includes comprehensive references to journal articles and other literature upon which to build further, more detailed knowledge

Radio Techniques for Probing the Terrestrial Ionosphere

Springer Science & Business Media In the years since the pioneering efforts of Sir Edward Appleton, M. A. F. Barnett, G. Breit, and M. A. Thve, many radio techniques have been employed to investigate the terrestrial ionosphere. The purposes of this book are to examine the basic physical interaction process of radio waves with the ionosphere, scrutinize each of the radio techniques currently in use, and describe the elements of each technique, as well as assess their capabilities and limitations. I have included some of the history of each technique, since we often tend to forget the efforts of the "pioneers". The interaction of radio waves with the terrestrial ionosphere has been described in considerable detail in several "classic" treatments, e.g., Ratcliffe (1959), Al'pert (1963), Budden (1961) and Davies (1965), Rishbeth and e.g., Flock (1979), Davies Garriott (1969), and in other more recent books, (1990), Hargreaves (1979), and Budden (1985). A few of the radio techniques have been described by Hargreaves (1979) and a book by Giraud and Petit (1978) has also included discussion of several of the techniques. The "WITS" handbook No. 2 (1989) also contains description of several radio techniques.

Adaptive Array Measurements in Communications

Artech House One of the most damaging factors associated with any radio communication system is the effect of undesirable or interference signals. This innovative new book gives you the knowledge you need to ensure your adaptive array system is protecting your communication links to the fullest. It presents concepts and procedures that help you realize the maximum processing capabilities of a given system, choose the right system for a specific application, and identify precautionary steps to avoid adverse effects.

Surface Acoustic Waves for Signal Processing

Artech House on Demand "An excellent survey of the field and combines theoretical and practical information -- a very enjoyable and useful work." -- IEEE Transactions on UFFC

Radar 2002

15-17 October 2002, Edinburgh International Conference Centre, Edinburgh, UK.

Inst of Engineering & Technology A collection of the papers given at the RADAR Conference held in 2002.

Radar Imaging for Maritime Observation

CRC Press Based on the experiences of the Department of Information Engineering of the University of Pisa and the Radar and Surveillance System (RaSS) national laboratory of the National Interuniversity Consortium of Telecommunication (CNIT), Radar Imaging for Maritime Observation presents the most recent results in radar imaging for maritime observation. The book explores both the areas of sea surface remote sensing and maritime surveillance providing key theoretical concepts of SAR and ISAR imaging and more advanced and ad-hoc techniques for applications in maritime scenarios. The book is organized in two sections. The first section discusses the fundamentals of standard SAR/ISAR processing and novel imaging techniques, such as Bistatic, Passive, and, 3D Interferometric ISAR. The second section focuses on the applications and results obtained by processing real data from maritime observations like SAR image processing for oil spill, detection in SAR images and fractal analysis. Useful to both beginners and experts in maritime observation, this book provides several examples of (mainly space-borne) radar imaging of maritime targets. Nevertheless, the same principles and techniques apply to the case of manned or unmanned carriers and to ground and air moving targets.

Signal Processing for Passive Bistatic Radar

Artech House This cutting-edge resource introduces the basic concepts of passive bistatic radar, such as bistatic geometry, bistatic radar equation and analysis of different illuminating signals. These techniques, although known for almost a century, have not been developed intensively for decades, mainly due to technical limitations, but today, the passive radar concept can be realized in practice, and is of great interest for military and civilian users. This book provides insight into understanding the potential and limitations of passive radar systems, as well as the differences between signal processing in active and passive radar. Each of the signal processing stages typically applied in passive radar is described, including digital beamforming, clutter removal, target detection, localization and tracking. These concepts are illustrated with both simulated and measured data along with examples of passive radar systems. Correlation processing, which is crucial for passive radar operation, is presented, as well as practical approaches for calculating the cross-ambiguity function. The problems of range and velocity-cell migration are also introduced. The book analyzes and compares different antenna array geometries to show readers the appropriate solution for a particular scenario of passive radar. Cartesian tracking is also presented, based on the extended Kalman filter. Parallel and sequential updating approaches are introduced and compared. These concepts are illustrated with both simulated and measured data along with examples of passive radar systems, making this book useful for both novice and advanced practitioners.

2001 CIE International Conference on Radar Proceedings

October 15-18, 2001, Beijing, China

IEEE Computer Society Press

Books in Print

EW 101

A First Course in Electronic Warfare

Artech House This popular series of tutorials, featured over a period of years in the Journal of Electronic Defense, is now available in a single volume. Organized into chapters with new introductory and supplementary material from the author, you get clear, concise and well-illustrated examinations of critical topics such as antenna parameters, receiver sensitivity, processing tasks, and search strategies, LPI signals, jamming, communication links, and simulation. The chapters define key terms and explain how and why particular technologies are relevant to electronic defense. Detailed charts, diagrams and formulas give you the practical knowledge you need to apply specific techniques in the field.

Digital Signal Processing and Statistical Classification

Artech House This is the first book to introduce and integrate advanced digital signal processing (DSP) and classification together, and the only volume to introduce state-of-the-art transforms including DFT, FFT, DCT, DHT, PCT, CDT, and ODT together for DSP and communication applications. You get step-by-step guidance in discrete-time domain signal processing and frequency domain signal analysis; digital filter design and adaptive filtering; multirate digital processing; and statistical signal classification. It also helps you overcome problems associated with multirate A/D and D/A converters.

Machine Learning Applications in Electromagnetics and Antenna Array Processing

Artech House This practical resource provides an overview of machine learning (ML) approaches as applied to electromagnetics and antenna array processing. Detailed coverage of the main trends in ML, including uniform and random array processing (beamforming and detection of angle of arrival), antenna optimization, wave propagation, remote sensing, radar, and other aspects of electromagnetic design are explored. An introduction to machine learning principles and the most common machine learning architectures and algorithms used today in electromagnetics and other applications is presented, including basic neural networks, gaussian processes, support vector machines, kernel methods, deep learning, convolutional neural networks, and generative adversarial networks. Applications in electromagnetics and antenna array processing that are solved using machine learning are discussed, including antennas, remote sensing, and target classification.

The Regularized Fast Hartley Transform

Low-Complexity Parallel Computation of the FHT in One and Multiple Dimensions

Springer Nature This book describes how a key signal/image processing algorithm – that of the fast Hartley transform (FHT) or, via a simple conversion routine between their outputs, of the real-data version of the ubiquitous fast Fourier transform (FFT) – might best be formulated to facilitate computationally-efficient solutions. The author discusses this for both 1-D (such as required, for example, for the spectrum analysis of audio signals) and m-D (such as required, for example, for the compression of noisy 2-D images or the watermarking of 3-D video signals) cases, but requiring few computing resources (i.e. low arithmetic/memory/power requirements, etc.). This is particularly relevant for those application areas, such as mobile communications, where the available silicon resources (as well as the battery-life) are expected to be limited. The aim of this monograph, where silicon-based computing technology and a resource-constrained environment is assumed and the data is real-valued in nature, has thus been to seek solutions that best match the actual problem needing to be solved.

MIMO Radar: Theory and Application

Artech House This comprehensive new resource provides in-depth and timely coverage of the underpinnings and latest advances of MIMO radar. This book provides a comprehensive introduction to MIMO radar and demonstrates it's utility in real-world applications, then culminates with the latest advances in optimal and adaptive MIMO radar for enhanced detection and target ID in challenging environments. Signal processing prerequisites are explained, including radar signals, orthogonal waveforms, matched filtering, multi-channel beam forming, and Doppler processing. This book discusses MIMO radar signal model, antenna properties, system modeling and waveform alternatives. MIMO implantation challenges are covered, including computational complexity, adaptive clutter mitigation, calibration and equalization, and hardware constraints. Applications for GMTI radar, OTH radar, maritime radar, and automotive radar are explained. The book offers an introduction to optimum MIMO radar and includes details about detection, clutter, and target ID. Insight into adaptive MIMO radar and MIMO channel estimation is presented and techniques and illustrative examples are given. Readers find exclusive flight testing data from DARPA. The breadth of coverage in this all-inclusive resource makes it suitable for both practicing engineers and advanced researchers. The book concludes with discussions on areas for future research.

Multifunction Array Radar

System Design and Analysis

Artech House Radar Library (Ha This book details the advantages of MFAR main parameter design and guides you through parameter and performance evaluation procedures. It presents practical design information on combinations of various radar functions, clutter conditions, multipath, and transmitted waveform design when Doppler filters adapted for clutter cancellation.

Aspects of Radar Signal Processing

American Book Publishing Record

Acousto-optic Signal Processing

Fundamentals & Applications

Artech House Publishers Gain fast access to the underlying theory behind acousto-optic devices with this book. It illustrates the design process with numerical examples and references to pertinent literature, and offers coverage of the fundamentals of acousto-optic interaction theory as well as a discussion of surface wave devices and many of the basic acousto-optic devices. Springer Nature

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