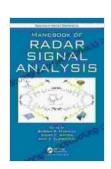
# Handbook of Radar Signal Analysis: Unlocking the Secrets of Radar Technology

Radar (Radio Detection and Ranging) systems have revolutionized modern society, playing a critical role in various industries from air traffic control to military surveillance. At the heart of these systems lies the intricate process of radar signal analysis, a field that has witnessed remarkable advancements in recent years.

Published by the prestigious Academic Press, the *Handbook of Radar Signal Analysis* serves as an indispensable guide to this rapidly evolving field. This comprehensive volume offers a wealth of knowledge and insights for researchers, engineers, and practitioners who seek to delve into the intricacies of radar signal analysis.



## Handbook of Radar Signal Analysis (Advances in Applied Mathematics) by Bassem R. Mahafza

★ ★ ★ ★ 4 out of 5
Language : English
File size : 37852 KB
Screen Reader: Supported
Print length : 706 pages



### **Cutting-Edge Techniques and Practical Applications**

The Handbook of Radar Signal Analysis covers an extensive range of topics, providing an in-depth examination of both established and emerging

techniques in radar signal processing. From fundamental principles to advanced algorithms, the book delves into:

- Time-frequency analysis and its applications in radar
- Waveform design optimization for specific radar applications
- Adaptive radar signal processing for dynamic and uncertain environments
- High-resolution radar imaging techniques for target characterization
- Radar detection and tracking algorithms for improved target discrimination

The book also explores practical applications of radar signal analysis in various fields, including:

- Air traffic control and air surveillance systems
- Ground-penetrating radar for archaeological exploration
- Automotive radar systems for autonomous vehicles
- Medical imaging applications using radar technology
- Radar sensor technology for industrial automation and robotics

#### **In-Depth Insights and Expert Perspectives**

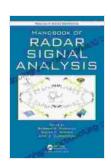
Edited by two renowned experts in the field, Dr. Bassem R. Mahafza and Dr. Alfonso Farina, the *Handbook of Radar Signal Analysis* draws upon the contributions of over 150 leading researchers and practitioners worldwide. Each chapter provides a comprehensive overview of a specific topic, written by experts in their respective areas.

#### The book features:

- In-depth analysis and theoretical foundations of radar signal processing
- Practical case studies and real-world applications
- Detailed mathematical derivations and algorithmic explanations
- Comprehensive references and further reading suggestions

The *Handbook of Radar Signal Analysis* is an essential resource for anyone involved in the field of radar technology. Its breadth of coverage, expert insights, and cutting-edge techniques make it an invaluable guide for researchers, engineers, students, and practitioners alike.

Whether you are seeking to advance your knowledge, tackle complex radar signal analysis challenges, or explore the latest developments in this dynamic field, the *Handbook of Radar Signal Analysis* is the definitive reference that will empower you with the knowledge and tools you need for success.



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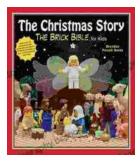
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