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Autore	Grewal Mohinder S
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Calculations with No Errors; 2.4.1 User Position Calculations; 2.4.2 User Velocity Calculations; Problem
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3.6.1 Gimbaled Implementations3.6.2 Floated Implementation; 3.6.3 Carouseling and Indexing; 3.6.4 Strapdown Systems; 3.6.5 Strapdown Carouseling and Indexing; 3.7 Software Implementations; 3.7.1 Example in One Dimension; 3.7.2 Initialization in Nine Dimensions; 3.7.3 Gimbal Attitude Implementations; 3.7.4 Gimbaled Navigation Implementation; 3.7.5 Strapdown Attitude Implementations; 3.7.6 Strapdown Navigation Implementation; 3.7.7 Navigation Computer and Software Requirements; 3.8 INS Performance Standards; 3.8.1 Free Inertial Operation; 3.8.2 INS Performance Metrics
3.8.3 Performance Standards3.9 Testing and Evaluation; 3.9.1 Laboratory Testing; 3.9.2 Field Testing; 3.10 Summary; Problem; References; 4: GNSS Signal Structure, Characteristics, and Information Utilization; 4.1 Legacy GPS Signal Components, Purposes, and Properties; 4.1.1 Mathematical Signal Models for the Legacy GPS Signals; 4.1.2 Navigation Data Format; 4.1.3 GPS Satellite Position Calculations; 4.1.4 C/A-Code and Its Properties; 4.1.5 P(Y)-Code and Its Properties; 4.1.6 L1 and L2 Carriers; 4.1.7 Transmitted Power Levels; 4.1.8 Free Space and Other Loss Factors
4.1.9 Received Signal Power

Sommario/riassunto

An updated guide to GNSS, and INS, and solutions to real-world GNSS/INS problems with Kalman filtering Written by recognized authorities in the field, this third edition of a landmark work provides engineers, computer scientists, and others with a working familiarity of the theory and contemporary applications of Global Navigation Satellite Systems (GNSS), Inertial Navigational Systems, and Kalman filters. Throughout, the focus is on solving real-world problems, with an emphasis on the effective use of state-of-the-art integration techniques for those systems, especially the applicati

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Nota di contenuto	COVER; HANDBOOK OF NANOSCALE OPTICS AND ELECTRONICS; COPYRIGHT PAGE; CONTENTS; PREFACE; CONTRIBUTORS; EDITORIAL ADVISORY BOARD; Chapter 1 Optics of Metallic Nanostructures; 1.1 Introduction; 1.2 Surface Plasmon Polaritonic Crystals; 1.3 Metallic Nanorod Arrays; 1.4 Conclusion; Acknowledgments; Chapter 2 Surface Nanophotonics Theory; 2.1 Introduction; 2.2 Background; 2.3 Theoretical and Computational Methods; 2.4 Isolated Apertures in Metal Films; 2.5 Periodic Nanostructured Metal Films; 2.6 Summary and Outlook; Acknowledgments; Chapter 3 Second Harmonic Generation in Nanostructures 3.1 Introduction3.2 Fundamentals of Second Harmonic Generation; 3.3 Particles from Noncentrosymmetrical Material; 3.4 Particles from a Centrosymmetrical Material; 3.5 Metallic Particles; 3.6 Arrays of Metallic Particles; Chapter 4 Organic Electronic Devices with Water-Dispersible Conducting Polymers; 4.1 Introduction; 4.2 Chemistry of Water-

Dispersible Conducting Polymers; 4.3 Conductivity Relationships - Characterization of Optical, Electrochemical, and Structural; 4.4 Applications; 4.5 Concluding Remarks; Acknowledgments
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6.7 Conclusions and Future WorkAcknowledgments; Chapter 7 Spin-Based Data Storage; 7.1 Introduction; 7.2 Spin-Dependent Transport in Magnetic Nanostructures; 7.3 Magnetic Random Access Memory; 7.4 Magnetic Recording; 7.5 Three-Dimensional Magnetic Memory; 7.6 The Role of Fabrication Development in Magnetic Storage; 7.7 Conclusions; Chapter 8 Optical Holographic Data Storage; 8.1 Introduction; 8.2 Fundamentals of Holographic Storage; 8.3 Implementation of Holographic Storage Systems; 8.4 Current Status; 8.5 Future Developments; Chapter 9 Nanostructures and Surface-Enhanced Raman Spectroscopy
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Sommario/riassunto

With the increasing demand for smaller, faster, and more highly integrated optical and electronic devices, as well as extremely sensitive detectors for biomedical and environmental applications, a field called nano-optics or nano-photonics/electronics is emerging - studying the many promising optical properties of nanostructures. Like nanotechnology itself, it is a rapidly evolving and changing field - but because of strong research activity in optical communication and related devices, combined with the intensive work on nanotechnology, nano-optics is shaping up fast to be a field with a p