1. Record Nr. UNINA9911019868803321

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Titolo	Scattering of electromagnetic waves : advanced topics / / Leung Tsang, Jin Au Kong
Pubbl/distr/stampa	New York, : Wiley, c2001
ISBN	9786610541843 9781280541841 1280541849 9780470351161 0470351160 9780471463795 0471463795 9780471224273 0471224278
Descrizione fisica	1 online resource (432 p.)
Collana	Wiley series in remote sensing
Altri autori (Persone)	KongJin Au <1942->
Disciplina	621.36/78
Soggetti	Electromagnetic waves - Scattering Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"A Wiley-Interscience publication."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	CONTENTS; PREFACE; CHAPTER 1 TWO-DIMENSIONAL RANDOM ROUGH SURFACE SCATTERING BASED ON SMALL PERTURBATION METHOD; 1 Electromagnetic Wave Scattering by a Perfect Electric Conductor; 1.1 Zeroth- and First-Order Solutions; 1.2 Second-Order Solutions; 2 Electromagnetic Wave Scattering by a Dielectric Rough Surface; 2.1 Zeroth- and First-Order Solutions; 2.2 Second-Order Solutions; 3 Coherent Reflection, Emissivities, and Bistatic Scattering Coefficients of Random Dielectric Surfaces; 3.1 Coherent Reflection; 3.2 Emissivities of Four Stokes Parameters; 3.3 Bistatic Scattering Coefficients References and Additional ReadingsCHAPTER 2 KIRCHHOFF APPROACH AND RELATED METHODS FOR ROUGH SURFACE SCATTERING; 1 Kirchhoff Approach; 1.1 Perfectly Conducting Rough Surface; 1.2 Dielectric Rough Surfaces; 1.3 Second-Order Slope Corrections; 2 Phase Perturbation Method; 3 Emissivity Based on Composite Surface Model;

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3.2 Very Low Frequency Effective Permittivity3.3 Effective Permittivity Under the Bilocal Approximation; 3.4 Backscattering Coefficients; 3.5 Results of Effective Permittivity and Bistatic Coefficients; References and Additional Readings; CHAPTER 5 MULTIPLE SCATTERING THEORY FOR DISCRETE SCATTERERS; 1 Transition Operator; 2 Multiple Scattering Equations; 3 Approximations of Multiple Scattering Equations; 3.1 Configurational Average of Multiple Scattering Equations; 3.2 Effective Field Approximation (EFA, Foldy's Approximation); 3.3 Quasi-crystalline Approximation (QCA)
3.4 Coherent Potential (CP)3.5 Quasi-crystalline Approximation with Coherent Potential (QCA-CP); 3.6 Low-Frequency Solutions; 3.7 QCA-CP for Multiple Species of Particles; 4 Ward's Identity and Energy Conservation; 5 Derivation of Radiative Transfer Equation from Ladder Approximation; References and Additional Readings; CHAPTER 6 QUASI-CRYSTALLINE APPROXIMATION IN DENSE MEDIA SCATTERING; 1 Scattering of Electromagnetic Waves from a Half-Space of Dielectric Scatterers-Normal Incidence; 1.1 Coherent Wave Propagation; 1.2 Effective Phase Velocity and Attenuation Rate in the Low-Frequency Limit
1.3 Dispersion Relations at Higher Frequencies

Sommario/riassunto

A timely and authoritative guide to the state of the art of wave scatteringScattering of Electromagnetic Waves offers in three volumes a complete and up-to-date treatment of wave scattering by random discrete scatterers and rough surfaces. Written by leading scientists who have made important contributions to wave scattering over three decades, this new work explains the principles, methods, and applications of this rapidly expanding, interdisciplinary field. It covers both introductory and advanced material and provides students and researchers in remote sensing as well as imaging, op