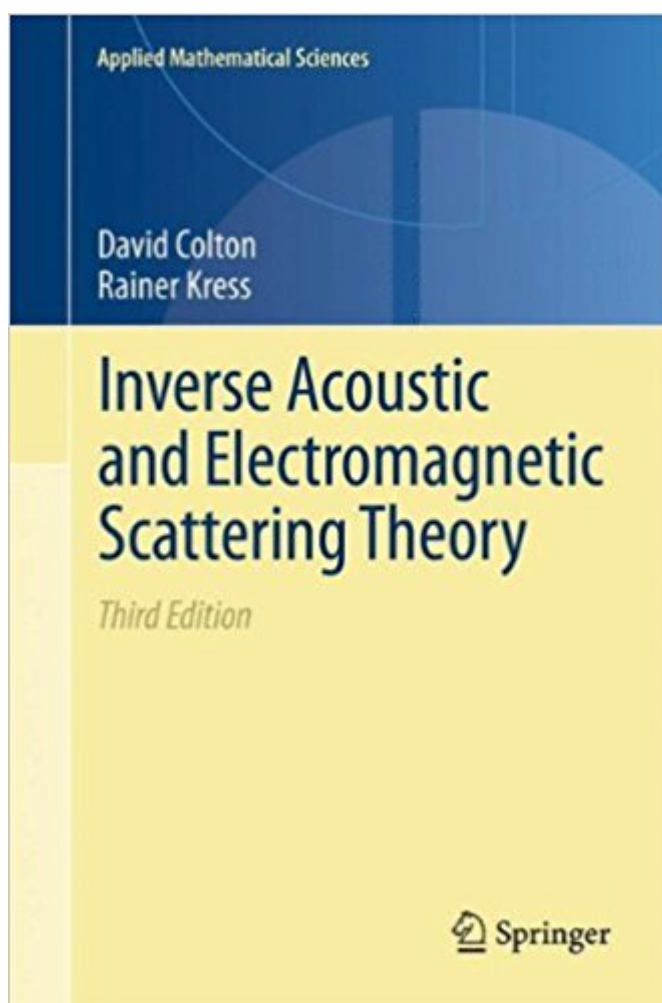


The book was found

Inverse Acoustic And Electromagnetic Scattering Theory (Applied Mathematical Sciences)



Synopsis

The inverse scattering problem is central to many areas of science and technology such as radar and sonar, medical imaging, geophysical exploration and nondestructive testing. This book is devoted to the mathematical and numerical analysis of the inverse scattering problem for acoustic and electromagnetic waves. In this third edition, new sections have been added on the linear sampling and factorization methods for solving the inverse scattering problem as well as expanded treatments of iteration methods and uniqueness theorems for the inverse obstacle problem. These additions have in turn required an expanded presentation of both transmission eigenvalues and boundary integral equations in Sobolev spaces. As in the previous editions, emphasis has been given to simplicity over generality thus providing the reader with an accessible introduction to the field of inverse scattering theory.

Review of earlier editions: *Colton and Kress* have written a scholarly, state of the art account of their view of direct and inverse scattering. The book is a pleasure to read as a graduate text or to dip into at leisure. It suggests a number of open problems and will be a source of inspiration for many years to come. •SIAM Review, September 1994

•This book should be on the desk of any researcher, any student, any teacher interested in scattering theory. •Mathematical Intelligencer, June 1994

Book Information

Series: Applied Mathematical Sciences (Book 93)

Hardcover: 406 pages

Publisher: Springer; 3rd ed. 2013 edition (October 26, 2012)

Language: English

ISBN-10: 1461449413

ISBN-13: 978-1461449416

Product Dimensions: 6.1 x 0.9 x 9.2 inches

Shipping Weight: 1.7 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #986,327 in Books (See Top 100 in Books) #137 in Books > Science & Math > Mathematics > Applied > Graph Theory #568 in Books > Science & Math > Mathematics > Applied > Differential Equations #577 in Books > Science & Math > Physics > Acoustics & Sound

Customer Reviews

The inverse scattering problem is central to many areas of science and technology such as radar and sonar, medical imaging, geophysical exploration and nondestructive testing. This book is

devoted to the mathematical and numerical analysis of the inverse scattering problem for acoustic and electromagnetic waves. In this third edition, new sections have been added on the linear sampling and factorization methods for solving the inverse scattering problem as well as expanded treatments of iteration methods and uniqueness theorems for the inverse obstacle problem. These additions have in turn required an expanded presentation of both transmission eigenvalues and boundary integral equations in Sobolev spaces. As in the previous editions, emphasis has been given to simplicity over generality thus providing the reader with an accessible introduction to the field of inverse scattering theory.

Review of earlier editions: "Colton and Kress have written a scholarly, state of the art account of their view of direct and inverse scattering. The book is a pleasure to read as a graduate text or to dip into at leisure. It suggests a number of open problems and will be a source of inspiration for many years to come." •SIAM Review, September 1994

"This book should be on the desk of any researcher, any student, any teacher interested in scattering theory." •Mathematical Intelligencer, June 1994

[Download to continue reading...](#)

Inverse Acoustic and Electromagnetic Scattering Theory (Applied Mathematical Sciences)
Electromagnetic Wave Propagation, Radiation, and Scattering: From Fundamentals to Applications (IEEE Press Series on Electromagnetic Wave Theory) Applied Functional Analysis: Applications to Mathematical Physics (Applied Mathematical Sciences) (v. 108) Causality, Electromagnetic Induction, and Gravitation: A Different Approach to the Theory of Electromagnetic and Gravitational Fields, 2nd edition Mathematical Problems from Combustion Theory (Applied Mathematical Sciences) (v. 83) Polymers and Neutron Scattering (Oxford Series on Neutron Scattering in Condensed Matter) EMP: Electromagnetic Pulse. Protect Your Family and Survive Long After the EMP (Prepping, Survival, Homesteading, Preparedness, EMP, Electromagnetic pulse) Applied Functional Analysis: Main Principles and Their Applications (Applied Mathematical Sciences) My Acoustic Nemesis: Life Before, During, and After an Acoustic Neuroma The Complete Idiot's Guide to Acoustic Guitar Songs: 30 Acoustic Guitar Hits Flatpicking Guitar Essentials Book/CD (String Letter Publishing) (Acoustic Guitar) (Acoustic Guitar Private Lessons) The Mathematical Theory of Non-uniform Gases: An Account of the Kinetic Theory of Viscosity, Thermal Conduction and Diffusion in Gases (Cambridge Mathematical Library) The Mathematical Theory of Symmetry in Solids: Representation Theory for Point Groups and Space Groups (Oxford Classic Texts in the Physical Sciences) Biological Effects and Dosimetry of Static and ELF Electromagnetic Fields (Basic Life Sciences) Simple Mathematical Models of Gene Regulatory Dynamics (Lecture Notes on Mathematical Modelling in the Life Sciences) Psoriasis: Current Concepts: Symptoms, Treatments,

And Hope, For Psoriatic Arthritis, Plaque Psoriasis, Guttate Psoriasis, Inverse Psoriasis, And
Pustular Psoriasis Shapes and Diffeomorphisms (Applied Mathematical Sciences, Vol. 171)
Principles of Mathematical Analysis (International Series in Pure and Applied Mathematics)
(International Series in Pure & Applied Mathematics) Computational Homology (Applied
Mathematical Sciences) Topological Methods in Hydrodynamics (Applied Mathematical Sciences)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)