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Remote Sensing Digital Image Analysis: An Introduction

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Remote Sensing Digital Image Analysis

An Introduction

Third, Revised and Enlarged Edition

Springer
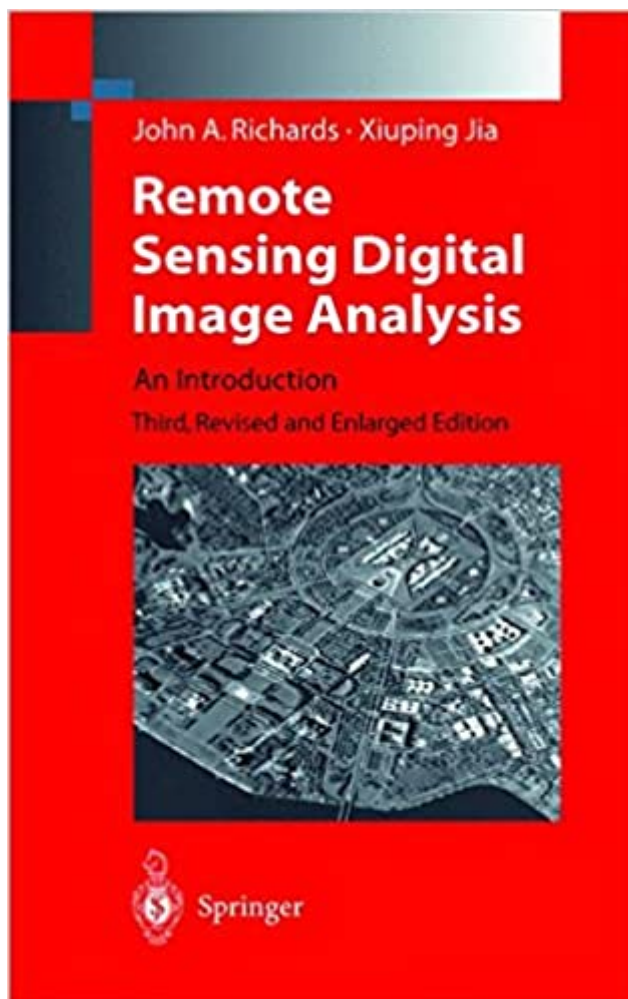
Synopsis

Remote Sensing Digital Image Analysis provides the non-specialist with an introduction to quantitative evaluation of satellite and aircraft derived remotely retrieved data. Each chapter covers the pros and cons of digital remotely sensed data, without detailed mathematical treatment of computer based algorithms, but in a manner conductive to an understanding of their capabilities and limitations. Problems conclude each chapter. This fourth edition has been developed to reflect the changes that have occurred in this area over the past several years. Its focus is on those procedures that seem now to have become part of the set of tools regularly used to perform thematic mapping. As with previous revisions, the fundamental material has been preserved in its original form because of its tutorial value; its style has been revised in places and it has been supplemented if newer aspects have emerged in the time since the third edition appeared. It still meets, however, the needs of the senior student and practitioner.

Book Information

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The book provides the non-specialist with an introduction to quantitative evaluation of satellite and aircraft derived from remotely retrieved data. Each chapter covers the pros and cons of digital remotely sensed data, without detailed mathematical treatment of computer based algorithms, but in a manner conductive to an understanding of their capabilities and limitations. Problems conclude each chapter.

This book had a lot of excellent explanations, though the version I have is older and does not include some more recent advances. Also, while the pictures and images are well chosen, they are in black and white which I find to be less helpful in a remote sensing text.

Although our teacher used this book. This book isn't good. It explained some theory, but not very clearly. You might feel confused without an instructor.

This is a must read for anyone interested (and serious) in remote sensing and digital image analysis. This is not as an introductory book as it claims to be so be aware of that, and some chapters requires a good understanding of math (algebra). If you are advanced in RS then get this book as reference, you won't regret it.

This book does not introduce you to image analysis and image processing itself. For that topic, in depth seeÃ Â Digital Image Processing (3rd Edition)Ã Â for a general text on the subject that is very accessible.This book looks at problems specific to remotely sensed images and their understanding and shows concrete techniques for solving the problems. It's not just a recipe book as there is a good bit of explanation shown too, but it is not a mathematician's book either. It is a practitioner's book. For example, it deals with statistical methods to deal with striping - the problem that sensors used to collect image data do not have the same response. That is not a topic you'd see in Gonzalez and Woods, but you might see the technique mentioned - histogram matching - and now at last you have a use for it.The following is the table of contents since it is not listed in the product description:1. Sources and characteristics of remote sensing image data.2. Error Correction and Registration of image data.3. The Interpretation of image data.4. Radiometric enhancement techniques5. Geometric enhancement using image domain techniques6. Multispectral transformations of image data7. Fourier transformation of image data8. Supervised classification techniques9. Clustering and unsupervised classification10. Feature reduction11. Image classification methodologies12. Multisource and multisensor methods13. Interpretation of hyperspectral image dataA. Missions and sensorsB. Altitudes and periodsC. Binary representation of decimal numbersD. Essential results from vector and matrix algebraE. Some fundamental material from probability and statisticsF. Penalty function derivative of the maximum likelihood ruleThis is not a book on using the computer to solve complex problems, thus there is no programming involved. You need a well-rounded background in image processing, statistics, matrix algebra, and geometric transformations of images in order to get the most from this book. I highly

recommend it.

The book by John Richards and Xiuping Jia is one of the best introductory books in the field of remote sensing. This work may be used as a textbook in a one semester course. This book is well organized, technically correct, with a reasonable level of mathematics for those new in the field.

I'm Forest Engennering and i work with Remote Sensing, so i would like to purchase a books of this.

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