Assessing The Accuracy Of Remotely Sensed Data Principles And Practices Second Edition Mapping Science

Accuracy assessment of maps derived from remotely sensed data has continued to grow since the first edition of this groundbreaking book. As a result, the much-anticipated new edition is significantly expanded and enhanced to reflect growth in the field. The new edition features three new chapters, including: Fuzzy accuracy assessment Positional accuracy Case study: Mapping land cover and land use in the Florida panhandle The authors provide a complete presentation of how to assess the positional accuracy of a map along with a discussion of the impact of positional accuracy on thematic accuracy. They also include a more thorough discussion of the special sampling issues that must be considered to effectively assess change. Complete with a 16-page color insert, this second edition continues to provide a complete guide to designing and conducting a state-of-the-art accuracy assessment.

Remote sensing acquires and interprets small or large-scale data about the Earth from a distance. Using a wide range of spatial, spectral, temporal, and radiometric scales remote sensing is a large and diverse field for which this Handbook will be the key research reference. Illustrated throughout, an essential resource for the analysis of remotely sensed data, The SAGE Handbook of Remote Sensing provides researchers with a definitive statement of the core concepts and methodologies in the discipline.

Because the accuracy of remotely sensed data is critical to any successful mapping project, accuracy assessment is an important tool for anyone who uses remote sensing. This is a complete guide to assessing the accuracy of maps generated from remotely sensed data, and the only book available that is devoted solely to this complex topic.

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Digital Analysis of Remotely Sensed Imagery

Remote Sensing and GIS for Ecologists

A Land Use and Land Cover Classification System for Use with Remote Sensor Data

Objective Accuracy Assessment of Thematic Maps Derived from Remotely Sensed Data

Ecological Effects of Water-level Fluctuations in Lakes

Remote sensing is an integral part of geography, GIS and cartography, used by academics in the field and professionals in all sorts of occupations. The 1990s saw the development of a range of new methods of classifying remote sensing images and data, both optical imaging and microwave imaging. This comprehensive survey of the various techniques pul

An important text that identifies and introduces new trends in image analysis Digital Analysis of Remotely Sensed Imagery provides thorough coverage of the entire process of analyzing remotely sensed data for the purpose of producing accurate representations in thematic map format. Written in easy-to-follow language with minimal technical jargon, the book explores cutting-edge techniques and trends in image analysis, as well as the relationship between image processing and other recently emerged special technologies.

Advances in high spatial resolution mapping capabilities and the new rules established by the Federal Aviation Administration in the United States for the operation of Small Unmanned Aircraft Systems (sUAS) have provided new opportunities to acquire aerial data at a lower cost and more safely versus other methods. A similar opening of the skies for sUAS applications is being allowed in countries across the world. Also, sUAS can access hazardous or inaccessible areas during disaster events and provide rapid response when needed. Applications of Small Unmanned Aircraft systems: Best Practices and Case Studies is the first book that brings together the best practices of sUAS applied to a broad range of issues in high spatial resolution mapping projects. Very few sUAS pilots have the knowledge of how the collected imagery is processed into value added mapping products that have commercial and/or academic import. Since the field of sUAS applications is just a few years old, this book covers the need for a compendium of case studies to guide the planning, data collection, and most importantly data processing and map error issues, with the range of sensors available to the user community. Written by experienced academics and professionals, this book serves as a guide on how to formulate sUAS based projects, from choice of a sUAS, flight planning for a particular application, sensors and data acquisition, data processing software, mapping software and use of the high spatial resolution maps produced for particular types of geospatial modeling. Features: Focus on sUAS based data acquisition and processing into map products Broad range of case studies by highly experienced academics Practical guidance on sUAS hardware, sensors, and software utilized Compilation of workflow insights from expert professors and professionals Relevant to academia, government, and industry Positional and thematic map accuracy, UAS curriculum development and workflow replicability issues This book would be an excellent text for upper-level undergraduate to graduate level sUAS mapping application courses. It is also invaluable as a reference for educators designing sUAS based curriculum as well as for potential sUAS users to assess the scope of mapping projects that can be done with this technology.

In a rapidly changing world, there is an ever-increasing need to monitor the Earth’s resources and manage it sustainably for future generations. Earth observation from satellites is critical to provide information required for informed and timely decision making in this regard. Satellite-based earth observation has advanced rapidly over the last 50 years, and there

is a plethora of satellite sensors imaging the Earth at finer spatial and spectral resolutions as well as high temporal resolutions. The amount of data available for any single location on the Earth is now at the petabyte-scale. An ever-increasing capacity and computing power is needed to handle such large datasets. The Google Earth Engine (GEE) is a cloud-based computing platform that was established by Google to support such data processing. This facility allows for the storage, processing and analysis of spatial data using centralized high-power computing resources, allowing scientists, researchers, hobbyists and anyone else interested in such fields to mine this data and understand the changes occurring on the Earth's surface. This book presents research that applies the Google Earth Engine in mining, storing, retrieving and processing spatial data for a variety of applications that include vegetation monitoring, cropland mapping, ecosystem assessment, and gross primary productivity, among others. Datasets used range from coarse spatial resolution data, such as MODIS, to medium resolution datasets (Worldview -2), and the studies cover the entire globe at varying spatial and temporal scales.

Accuracy Assessment of the Discrete Classification of Remotely-sensed Digital Data for Landcover Mapping

Best Practices and Case Studies

Assessing the Accuracy of Mountain Pine Beetle Red Attack Damage Maps Generated from Satellite Remotely Sensed Data

Assessing the Accuracy Using Student-collected Reference Data from the Global Learning and Observations to Benefit the Environment (GLOBE) Program

A Comparison of Sampling and Total Enumeration and Their Effects on Data Accuracy

The concept of remote sensing as a way of capturing information from an object without making contact with it has, until recently, been exclusively focused on the use of Earth observation satellites. The emergence of unmanned aerial vehicles (UAV) with Global Navigation Satellite System (GNSS) controlled navigation and sensor-carrying capabilities has increased the number of publications related to new remote sensing from much closer distances. Previous knowledge about the behavior of the Earth's surface under the incidence different wavelengths of energy has been successfully applied to a large amount of data recorded from UAVs, thereby increasing the special and temporal resolution of the products obtained. More specifically, the ability of UAVs to be positioned in the air at pre-programmed coordinate points; to track flight paths; and in any case, to record the coordinates of the sensor position at the time of the shot and at the pitch, yaw, and roll angles have opened an interesting field of applications for low-altitude aerial photogrammetry, known as UAV photogrammetry. In addition, photogrammetric data processing has been improved thanks to the combination of new algorithms, e.g., structure from motion (SfM), which solves the collinearity equations without the need for any control point, producing a cloud of points referenced to an arbitrary coordinate system and a full camera calibration, and the multi-view stereopsis (MVS) algorithm, which applies an expanding procedure of sparse set of matched keypoints in order to obtain a dense point cloud. The set of technical advances described above allows for geometric modeling of terrain surfaces with high accuracy, minimizing the need for topographic campaigns for georeferencing of such products. This Special Issue aims to compile some applications realized thanks to the synergies established between new remote sensing from close distances and UAV photogrammetry.

This book brings together a collection of invited interdisciplinary persp- tives on the recent topic of Object-based Image Analysis (OBIA). Its c- st tent is based on select papers from the 1 OBIA International Conference held in Salzburg in July 2006, and is enriched by several invited chapters. All submissions have passed through a blind peer-review process resulting in what we believe is a timely volume of the highest scientific, theoretical and technical standards. The concept of OBIA first gained widespread interest within the GIScience (Geographic Information Science) community circa 2000, with the advent of the first commercial software for what was then termed 'obje- oriented image analysis'. However, it is widely agreed that OBIA builds on older segmentation, edge-detection and classification concepts that have been used in remote sensing image analysis for several decades. Nevert- less, its emergence has provided a new critical bridge to spatial concepts applied in multiscale landscape analysis, Geographic Information Systems (GIS) and the synergy between image-objects and their radiometric char- teristics and analyses in Earth Observation data (EO).

The first in-depth book about using imagery with ArcGIS

This book introduces remotely sensed image processing for urban areas using optical and synthetic aperture radar (SAR) data and assists students, researchers, and remote sensing practitioners who are interested in land cover mapping using such data. There are many introductory and advanced books on optical and SAR remote sensing image processing, but most of them do not serve as good practical guides. However, this book is designed as a practical guide and a hands-on workbook, where users can explore data and methods to improve their land cover mapping skills for urban areas. Although there are many freely available earth observation data, the focus is on land cover mapping using Sentinel-1 C-band SAR and Sentinel-2 data. All remotely sensed image processing and classification procedures are based on open-source software applications such QGIS and R as well as cloud-based platforms such as Google Earth Engine (GEE). The book is organized into six chapters. Chapter 1 introduces geospatial machine learning, and Chapter 2 covers exploratory image analysis and transformation. Chapters 3 and 4 focus on mapping urban land cover using multi-seasonal Sentinel-2 imagery and multi-seasonal Sentinel-1 imagery, respectively. Chapter 5 discusses mapping urban land cover using multi-seasonal Sentinel-1 and Sentinel-2 imagery as well as other derived data such as spectral and texture indices. Chapter 6 concludes the book with land cover classification accuracy assessment.

Imagery and GIS

Applications of Small Unmanned Aircraft Systems

Uncertainty in Remote Sensing and GIS

A Practical Guide

Google Earth Engine Applications

'A magnificent achievement. A who's who of contemporary remote sensing have produced an engaging, wide-ranging and scholarly review of the field in just one volume' - Professor Paul Curran, Vice-Chancellor, Bournemouth University Remote Sensing acquires and interprets small or

large-scale data about the Earth from a distance. Using a wide range of spatial, spectral, temporal, and radiometric scales Remote Sensing is a large and diverse field for which this Handbook will be the key research reference. Organized in four key sections: • Interactions of Electromagnetic Radiation with the Terrestrial Environment: chapters on Visible, Near-IR and Shortwave IR; Middle IR (3-5 micrometers); Thermal IR ; Microwave • Digital sensors and Image Characteristics: chapters on Sensor Technology; Coarse Spatial Resolution Optical Sensors ; Medium Spatial Resolution Optical Sensors; Fine Spatial Resolution Optical Sensors; Video Imaging and Multispectral Digital Photography; Hyperspectral Sensors; Radar and Passive Microwave Sensors; Lidar • Remote Sensing Analysis - Design and Implementation: chapters on Image Pre-Processing; Ground Data Collection; Integration with GIS; Quantitative Models in Remote Sensing; Validation and accuracy assessment; • Remote Sensing Analysis - Applications: LITHOSPHERIC SCIENCES: chapters on Topography; Geology; Soils; PLANT SCIENCES: Vegetation; Agriculture; HYDROSPHERIC and CRYSOPHERIC SCIENCES: Hydrosphere: Fresh and Ocean Water; Cryosphere; GLOBAL CHANGE AND HUMAN ENVIRONMENTS: Earth Systems; Human Environments & Links to the Social Sciences; Real Time Monitoring Systems and Disaster Management; Land Cover Change Illustrated throughout, an essential resource for the analysis of remotely sensed data, the SAGE Handbook of Remote Sensing provides researchers with a definitive statement of the core concepts and methodologies in the discipline.

This full color book is a comprehensive visual reference for the interpretation of synthetic aperture radar (SAR) images with examples of how technological specifications may affect interpretation solutions. It contains a summary review of image acquisition parameters of consequence on the visual representation of objects, introduces traditional interpretation keys under different light and applies them for considering regional landscape components and identifying large-scale geographical ensembles. Through elements of interpretation such as the construct of tone, texture, pattern, size, and shape, the book explains the rich unique context of many terrains. It provides also several SAR X- and C-band image examples of regional and large-scale land use and land cover (LULC) ensembles, includes important explanations for each illustration, and highlights selected SAR image applications. Ancillary information includes acquisition specifications, a geographic scale, and the image-center latitude and longitude. Features: Provides ready access to any type of information for an image interpretation problem related to current LULC classification schemes. Presents scalable geographic information interpreted at a regional scale and land cover ensembles that can also be interpreted locally. Provides comparative examples of images acquired from X- and C-band, opposed look directions, near- and far-range incidence angles, like- and cross-polarization modes. Includes practical explanations easily transferred to individual's research projects. Designed as "visual dictionary," SAR Image Interpretation for Various Land Covers: A Practical Guide, is an excellent introduction to the visual interpretation of SAR images for numerous types of LULC. Both practitioners and students will familiarize themselves with and expand their knowledge of geographic information conveyed from radar images while government agencies and businesses that use LULC-related data for emergency response cases of for urban and regional planning, will find this book invaluable.

Detailed and accurate information on the spatial distribution of individual species over large spatial extents and over multiple time periods is critical for rapid response and e□ective management of environmental change. The twenty first century has witnessed a rapid development in both fine resolution sensors and statistical theories and techniques. These innovations hold great potential for improved accuracy of species mapping using remote sensing. Fine Resolution Remote Sensing of Species in Terrestrial and Coastal Ecosystems is a collection of eight cutting-edge studies of fine spatial resolution remote sensing, including species mapping of biogenic and coral reefs, seagrasses, salt and freshwater marshes, and grasslands. The studies illustrate the power of fine resolution imagery for species identification, as well as the value of unmanned aerial vehicle (UAV) imagery as an ideal source of high-quality reference data at the species level. The studies also highlight the benefit of LiDAR (Light Detection and Ranging) data for species identification, and how this varies depending on the species of interest as well as the nature of the context in which the species is found. The broad range of applications explored in the book demonstrates the major contribution of remote sensing to species-level terrestrial and coastal ecosystem studies as well as the potential for future advances. The chapters in this book were originally published as a special issue of the International Journal of Remote Sensing.

*Remote sensing and geographical information science (GIS) have advanced considerably in recent years. However, the potential of remote sensing and GIS within the environmental sciences is limited by uncertainty, especially in connection with the data sets and methods used. In many studies, the issue of uncertainty has been incompletely addressed. The situation has arisen in part from a lack of appreciation of uncertainty and the problems it can cause as well as of the techniques that may be used to accommodate it. This book provides general overviews on uncertainty in remote sensing and GIS that illustrate the range of uncertainties that may occur, in addition to describing the means of measuring uncertainty and the impacts of uncertainty on analyses and interpretations made. Uncertainty in Remote Sensing and GIS provides readers with comprehensive coverage of this largely undocumented subject: * Relevant to a broad variety of disciplines including*

*geography, environmental science, electrical engineering and statistics * Covers range of material from base overviews to specific applications * Focuses on issues connected with uncertainty at various points along typical data analysis chains used in remote sensing and GIS Written by an international team of researchers drawn from a variety of disciplines, Uncertainty in Remote Sensing and GIS provides focussed discussions on topics of considerable importance to a broad research and user community. The book is invaluable reading for researchers, advanced students and practitioners who want to understand the nature of uncertainty in remote sensing and GIS, its limitations and methods of accommodating it.*

Multispectral Image Analysis Using the Object-Oriented Paradigm

UAV Photogrammetry and Remote Sensing

Fine Resolution Remote Sensing of Species in Terrestrial and Coastal Ecosystems

Principles and Practices

Best Practices for Extracting Information from Imagery

A volume in the three-volume Remote Sensing Handbook series, Remote Sensing of Water Resources, Disasters, and Urban Studies documents the scientific and methodological advances that have taken place during the last 50 years. The other two volumes in the series are Remotely Sensed Data Characterization, Classification, and Accuracies, and Land Reso

Most aquatic ecosystems have variable water levels. These water-level fluctuations (WLF) have multiple effects on the organisms above and below the waterline. Natural WLF patterns in lakes guarantee both productivity and biodiversity, while untimely floods and droughts may have negative effects. Human impacts on WLF have led to a stabilization of the water levels of many lakes by hydraulic regulation, untimely drawdown due to water use, or floods due to water release from hydropower plants in the catchments. This book provides a first review in this field. It presents selected papers on the ecological effects of WLF in lakes, resulting from a workshop at the University of Konstanz in winter 2005. Issues addressed here include the extent of WLF, and analyses of their effects on different groups of biota from microorganisms to vertebrates. Applied issues include recommendations for the hydrological management of regulated lakes to reduce negative impacts, and a conceptual framework is delivered by an extension of the floodpulse concept for lakes. Current impacts on water use, including increasing demands on drinking and irrigation water, hydropower etc., and climate change effects on WLF make this book an essential resource for aquatic ecologists, engineers, and decision-makers dealing with the management of lake ecosystems and their catchments.

Containing useful information sources for the management of natural resources, this comprehensive text covers a large range of spatial resolutions and spectral characteristics. The book deals with the data sources and their physical interpretation, as well as processing techniques, such as visual interpretation and automated classifications, textural and structural processing and photogrammetry. There is a section on accuracy assessment and various applications relating to crops, grasslands, soils, landscapes, mines and coasts. The CD-ROM contains software and image data sets explaining the statistical methods of reference and contains a light version of the TeraVue software enabling the reader to compute the different processing spatial data.

Remote Sensing of Forest Environments: Concepts and Case Studies is an edited volume intended to provide readers with a state-of-the-art synopsis of the current methods and applied applications employed in remote sensing the world's forests. The contributing authors have sought to illustrate and deepen our understanding of remote sensing of forests, providing new insights and indicating opportunities that are created when forests and forest practices are considered in concert with the evolving paradigm of remote sensing science. Following background and methods sections, this book introduces a series of case studies that exemplify the ways in which remotely sensed data are operationally used, as an element of the decision-making process, and in the scientific study of forests. Remote Sensing of Forest Environments: Concepts and Case Studies is designed to meet the needs of a professional audience composed of both practitioners and researchers. This book is also suitable as a secondary text for graduate-level students in Forestry, Environmental Science, Geography, Engineering, and Computer Science.

Remote Sensing Handbook - Three Volume Set

Principles and Practices, Second Edition

SAR Image Interpretation for Various Land Covers

Soft Computing and Signal Processing

Classification Methods for Remotely Sensed Data

Truth for vegetation cover percent and type is obtained from very large-scale photography (VLSP), stand structure as measured by size classes, and vegetation types from a combination of VLSP and ground sampling. We recommend using the Kappa statistic with bootstrap confidence intervals for overall accuracy, and similarly bootstrap confidence intervals for percent correct for each category and user and producer accuracy. A procedure is given for mapped plots to be assessed as being partially or totally correct. We recommend the use of primary accuracy for management decisions and secondary accuracy for research decisions to distinguish between accuracy desired.

Bringing a fresh new perspective to remote sensing, object-based image analysis is a paradigm shift from the traditional pixel-based approach. Featuring various practical examples to provide understanding of this new modus operandi, Multispectral Image Analysis Using the Object-Oriented Paradigm reviews the current image analysis methods and demonstrates advantages to improve information extraction from imagery. This reference describes traditional image analysis techniques, introduces object-oriented technology, and discusses the benefits of object-based versus pixel-based classification. It examines the creation of object primitives using image segmentation approaches and the use of various techniques for object classification. The author covers image enhancement methods, how to use ancillary data to constrain image segmentation, and concepts of semantic grouping of objects. He concludes by addressing accuracy assessment approaches. The accompanying downloadable resources present sample data that enable the use of different approaches to problem solving. Integrating remote sensing techniques and GIS analysis, Multispectral Image Analysis Using the Object-Oriented Paradigm distills new tools to extract information from remotely sensed data.

Based upon a special symposium sponsored by the U.S. Environmental Protection Agency (EPA), Remote Sensing and GIS Accuracy Assessment evaluates the important scientific elements related to the performance of accuracy assessments for remotely sensed data, GIS data analysis, and integration products. Scientists from federal, state, and local governments, academia, and nongovernmental organizations present technical papers which examine sampling issues, reference data collection, edge and boundary effects, error matrix and fuzzy assessments, error budget analysis, and change detection accuracy assessment. This compilation contains 20 chapters that represent important symposium outcomes.

This book presents selected research papers on current developments in the fields of soft computing and signal processing from the Third International Conference on Soft Computing and Signal Processing (ICSCSP 2020). The book covers topics such as soft sets, rough sets, fuzzy logic, neural networks, genetic algorithms and machine learning and discusses various aspects of these topics, e.g., technological considerations, product implementation and application issues.

Remotely Sensed Data Characterization, Classification, and Accuracies

Using Open Source Software

Land Cover Classification of Remotely Sensed Data

Remote Sensing and GIS Accuracy Assessment

Spatial Concepts for Knowledge-Driven Remote Sensing Applications

Today, remote sensing technology is an essential tool for understanding the Earth and managing human-Earth interactions. There is a rapidly growing need for remote sensing and Earth observation technology that enables monitoring of world's natural resources and environments, managing exposure to natural and man-made risks and more frequently occurring disasters, and helping the sustainability and productivity of natural and human ecosystems. The improvement in temporal resolution/revisit allows for the large accumulation of images for a specific location, creating a possibility for time series image analysis and eventual real-time assessments of scene dynamics. As an authoritative text, Remote Sensing Time Series Image Processing brings together active and recognized authors in the field of time series image analysis and presents to the readers the current state of knowledge and its future directions. Divided into three parts, the first addresses methods and techniques for generating time series image datasets. In particular, it provides guidance on the selection of cloud and cloud shadow detection algorithms for various applications. Part II examines feature development and information extraction methods for time series imagery. It presents some key remote sensing-based metrics, and their major applications in ecosystems and climate change studies. Part III illustrates various applications of time series image processing in land cover change, disturbance attribution, vegetation dynamics, and urbanization. This book is intended for researchers, practitioners, and students in both remote sensing and imaging science. It can be used as a textbook by undergraduate and graduate students majoring in remote sensing, imaging science, civil and electrical engineering, geography, geosciences, planning, environmental science, land use, energy, and GIS, and as a reference book by practitioners and professionals in the government, commercial, and industrial sectors.

This is a book about how ecologists can integrate remote sensing and GIS in their daily work. It will allow ecologists to get started with the application of remote sensing and to understand its potential and limitations. Using practical examples, the book covers all necessary steps from planning field campaigns to deriving ecologically relevant information through remote sensing and modelling of species distributions. All practical examples in this book rely on OpenSource software and freely available data sets. Quantum GIS (QGIS) is introduced for basic GIS data handling, and in-depth spatial analytics and statistics are conducted with the software packages R and GRASS. Readers will learn how to apply remote sensing within ecological research projects, how to approach spatial data sampling and how to interpret remote sensing derived products. The authors discuss a wide range of statistical analyses with regard to satellite data as well as specialised topics such as time-series analysis. Extended scripts on how to create professional looking maps and graphics are also provided. This book is a valuable resource for students and scientists in the fields of conservation and ecology interested in learning how to get started in applying remote sensing in ecological research and conservation planning.

A volume in the Remote Sensing Handbook series, Remotely Sensed Data Characterization, Classification, and Accuracies documents the scientific and methodological advances that have taken place during the last 50 years. The other two volumes in the series are Land Resources Monitoring, Modeling, and Mapping with Remote Sensing, and Remote Sensing of

An accuracy assessment is considered the best way to demonstrate the effectiveness with which different data sources and methods may be used to map mountain pine beetle red attack damage from

remotely sensed data. Simply reporting overall accuracy, however, does not provide sufficient context to evaluate the map product and may misconstrue the accuracy with which red attack damage is detected and mapped. This publication made several recommendations regarding accuracy assessment in the context of mountain pine beetle red attack detection and mapping.--Document.

Accuracy Assessment of Remote Sensing-derived Change Detection

Remote Sensing of Natural Resources

Update and Review of Accuracy Assessment Techniques for Remotely Sensed Data

A Compendium

Concepts and Case Studies

Highlighting new technologies, Remote Sensing of Natural Resources explores advanced remote sensing systems and algorithms for image processing, enhancement, feature extraction, data fusion, image classification, image-based modeling, image-based sampling design, map accuracy assessment and quality control. It also discusses their applications for evaluation of natural resources, including sampling design, land use and land cover classification, natural landscape and ecosystem assessment, forestry, agriculture, biomass and carbon-cycle modeling, wetland classification and dynamics monitoring, and soils and minerals mapping. The book combines review articles with case studies that demonstrate recent advances and developments of methods, techniques, and applications of remote sensing, with each chapter on a specific area of natural resources. Through a comprehensive examination of the wide range of applications of remote sensing technologies to natural resources, the book provides insight into advanced remote sensing systems, technologies, and algorithms for researchers, scientists, engineers, and decision makers.

Assessing the Accuracy of Remotely Sensed DataPrinciples and Practices, Third EditionCRC Press

The past 10 years have brought amazing changes to the technologies used to turn remotely sensed data into maps. As a result, the principles and practices necessary for assessing the accuracy of those maps have also evolved and matured. This third edition of Assessing the Accuracy of Remotely Sensed Data: Principles and Practices is thoroughly updated and includes five new chapters. Now 15 chapters long, this text is the only one of its kind to provide geospatial analysts with the requisite considerations, tools, and theory necessary to conduct successful and efficient map accuracy assessments; and map users with the knowledge to fully understand the assessment process to ensure effective use of maps. See What’s New in the Third Edition: All original chapters have been updated to include new standards, practices, and methodologies. A new chapter on planning accuracy assessments. A new chapter on assessing maps created using object-based technologies. Two case study chapters - one showcasing the assessment of maps created from traditional methods, and one on the assessment of object-based maps. Emphasis on considering and planning for positional accuracy in concert with thematic accuracy. An appendix containing the internationally recognized ASPRS Positional Accuracy Standards. A new final chapter summarizing the key concepts, considerations and lessons learned by the authors in their decades of implementing and evaluating accuracy assessments. Assessing map accuracy is complex; however, the discussions in this book, together with the many figures, tables, and case studies, clearly present the necessary concepts and considerations for conducting an assessment that is both is practical, statistically reliable, and achievable.

Highlighting new technologies, Remote Sensing of Natural Resources explores advanced remote sensing systems and algorithms for image processing, enhancement, feature extraction, data fusion, image classification, image-based modeling, image-based sampling design, map accuracy assessment and quality control. It also discusses their applications for

Object-Based Image Analysis

The SAGE Handbook of Remote Sensing

Proceedings of 3rd ICSCSP 2020, Volume 1

Processing of Remote Sensing Data

Comp ê ndio de avalia ç ã o de sensoriamento remoto tem á tico compreendendo avalia ç ã o de precis ã o, de precis ã o geom é trica, de precis ã o tem á tica, relat ó rio de erro, representa ç ã o de erro e estudo de casos.

Important Factors in Assessing the Accuracy of Remotely Sensed Forest Vegetation Maps

Principles and Practices, Third Edition

Accuracy Assessment of Percent Canopy Cover, Cover Type, and Size Class

Remote Sensing Thematic Accuracy Assessment

Assessing the Accuracy of Remotely Sensed Data : Principles and Practice