DESCRIPTION

Remote Sensing and Image Interpretation, 7th Edition is designed to be primarily used in two ways: as a textbook in the introductory courses in remote sensing and image interpretation, and as a reference for the burgeoning number of practitioners who use geospatial information and analysis in their work. Because of the wide range of academic and professional settings in which this book might be used, we have made the discussion “discipline neutral.” In short, anyone involved in geospatial data acquisition and analysis should find this book to be a valuable text and reference.

ABOUT THE AUTHOR

Dr. Thomas Lillesand is a professor of engineering at the University of Wisconsin-Madison. He has received the Alan Gordon Memorial Award from American Society of Photogrammetry for significant achievements in remote sensing and photographic interpretation as well as the Earle J. Fennell Award from the American Congress on Surveying and Mapping. He is a member of the American Society of Civil Engineers and is on the academic board for the John C. Stennis Space Center. Dr. Lillesand has published over 125 works on remote sensing and his research interests include geographical information systems, natural resource management, and environmental monitoring.
NEW TO EDITION

• Strongly emphasizes digital image acquisition and analysis, while retaining basic information about earlier analog sensors and methods (from which a vast amount of archival data exist, increasingly valuable as a source for studies of long-term change)

• Expanded coverage of lidar systems and of 3D remote sensing more generally, including digital photogrammetric methods such as structure-from-motion (SFM)

• Images acquired from uninhabited aerial system (UAS) platforms are now included among the figures and color plates, along with images from many of the new optical and radar satellites that have been launched since the previous edition was published.

• Continuing improvement in computational power has led to an increased emphasis on techniques that take advantage of high volume data sets, such as those dealing with neural network classification, object-based image analysis, change detection, and image time-series analysis.

• What was formerly Chapter 4—on visual image interpretation—has been split.
  • The first sections, dealing with methods for visual image interpretation, have been brought into Chapter 1, in recognition of the importance of visual interpretation throughout the book (and the field).
  • The remainder of the former Chapter 4 has been moved to the end of the book and expanded into a new, broader review of applications of remote sensing not limited to visual methods alone.

• Coverage of radar and lidar systems has been moved ahead of the chapters on digital image analysis methods and applications of remote sensing.
FEATURES

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