

# Journal of Sedimentary Research

An International Journal of SEPM

Colin P. North and Kitty L. Milliken, Editors

A.J. (Tom) van Loon, Associate Editor for Book Reviews

Review accepted 6 June 2007



***Remote Sensing and Image Interpretation (5th ed.)***, by Thomas M. Lillesand, Ralph W. Kiefer & Jonathan W. Chipman, 2003. Wiley & Sons Ltd., The Atrium, Southern Gate, Chichester, West Sussex PO 19 8SQ, England (customer@wiley.co.uk). 784 pages. Price GBP 37.95; USD 124.95; EUR 57.00. ISBN 978-0-471-15227-9.



Over 25 years this work has been a landmark book for all interested in remote sensing and image interpretation. In the preface, the authors state that the book is written as a textbook for introductory courses in remote sensing and image interpretation, and as a reference book for all using remote-sensing techniques in their daily work or life. This is already the fifth edition, and I only had a few times that the book felt outdated; the authors have done a great job in keeping the book up-to-date, which is not an easy task in this fast-changing subject. This is probably also a result of the addition of a new author for this fifth edition.

The book is extremely comprehensive and very well written. It is well structured and easy to read. Each chapter starts with an introduction paragraph, and when things get more complicated, there are helpful graphics and examples. The authors have also done a great job in adding some historical information on the development of remote sensing.

The book contains eight chapters, starting from dedicated chapters detailing about the concepts of remote sensing, then sensors, and one about photogrammetry. Following those three chapters is one about visual-image interpretation. In this chapter, several applications are given, including geological, agricultural, forestry, water resources, urban, wetland, wildlife, archaeological, and the list goes on. In Chapter 5, the concepts of multispectral, thermal, and hyperspectral remote sensing are explained, including potential applications. Chapter 6 then is about Earth resource satellites with a strong emphasis on the LANDSAT and SPOT missions, but also good information on more recent missions including MODIS. In chapter 7, digital image processing is further explained, including several classification techniques, followed by Chapter 8, where microwave and lidar remote-sensing techniques are explained. These eight chapters are followed by three appendices. In total, almost 800 well written pages give an excellent overview of the history, techniques, and applications of remote sensing and image interpretation for a wide audience.

I feel the strength of the book – that it is so comprehensive – may also be its weakness. As a reference book for those using remote sensing, it is invaluable and I have yet to find a book that can teach me more. Each time I hear of a new technique, application, or sensor design, I grab the book and it helps me in better understanding all the possibilities of remote sensing. This makes it also great for students interested in all aspects of remote sensing. For courses where remote sensing is merely used as a tool (for example using remote sensing for understanding land-use change), other more specialized textbooks may be more appropriate. Although this book would then again be the one I would advise to students who want to dig deeper into various aspects and possibilities of remote sensing.

Guido van der Werf  
Dept of Hydrology  
Faculty of Earth and Life Sciences  
Vrije Universiteit  
De Boelelaan 10851081 HV Amsterdam  
The Netherlands



SEPM - The Society for Sedimentary Geology