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Introductory digital image processing: A remote sensing perspective

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Introductory Digital Image Processing: A Remote Sensing Perspective

by John R. Jensen

This is an excellent addition to the literature on image processing designed to enhance the understanding and applications of image processing from a remote sensing perspective.

Dr. Jensen has produced a good book which is written in a clear and lucid style. The book introduces the fundamental of image science and processing to a reader who has basic background in remote sensing. Among many good features of this book, the following are noteworthy: First, remotely sensed images of selected terrain types are used as illustrative examples and in many cases, the images are held constant to explain the different processing techniques. Secondly, the emphasis on the earth resource analysis as application illustrations makes this work valuable to non-physics oriented advanced remote sensing students. One of the strong points of this book is the chapter on image enhancement. This chapter is an excellent summary of the current trends in image manipulation and information extraction research. The chapter on the interface of remote sensing and GIS is a very useful component of this text. This text is highly recommended to all those engaged in image processing of remotely sensed data.

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Appendix B:

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Hardware and/or Software

Glossary Index

Published by Prentice-Hall, Englewood Cliffs, New Jersey

Reviewed by Dr. Kalmesh Lulla

Global Change

ed. by T.F. Malone and J.G. Roederer

This volume serves as the proceedings of a 'Symposium on Global Change' sponsored by the International Council of Scientific Unions (ICSU) in 1984 and published in 1985. The volume is organized into eight sections. Of particular interest to the remote sensing community is the section on 'The Tools and Technology'. Dr. S.I. Rasool of Jet Propulsion Laboratory (NASA-USA) has produced an excellent chapter on monitoring global change by satellites. This chapter summarizes the current capability of satellite systems to observe the parameters of global change. Dr. Hutchinson and Bie have expertly discussed the aspects of data base management for global change management. The concerns regarding the merging of remotely sensed data with other sources of data are highlighted. In an extended commentary, Dr. Bickmore has compiled materials for making a case for a world digital data base for direct use by the environmental scientists. An interesting note by Dr. Bowhill gives insights into the utility of the mesosphere - stratosphere - troposphere (MST) radar techniques for the study of the lower and middle atmosphere.

Other sections of this book are also highly informative and readable. The Chapters on Geosphere — Biosphere Research Program; Global Environmental Change; Soil Dynamics and Sustainable Carrying Capacity of the Earth deserve special mention due to their utility for a student of environmental remote sensing. Overall, the editors Drs. Malone and Roederer have done a good job of compiling this volume.

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Preface

Acknowledgments

List of Authors

Overview and Unifying Concepts

Atmosphere and Hydrosphere

Life Systems

Solid Earth

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The Tools and Technology

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Summary Presentation

Published by Cambridge University Press at the ICSU Press 1985

Reviewed by Dr. Kamlesh Lulla