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Record Nr.	UNINA9910139579703321
Autore	Van Zyl Jakob <1967->
Titolo	Synthetic aperture radar polarimetry / / Jakob van Zyl, Yunjin Kim
Pubbl/distr/stampa	Hoboken, N.J., : Wiley, 2011
ISBN	9786613813695
	9781282242579
	1282242571
	9781118116098
	1118116097
	9781118116104
	1118116100
	9781118116074
	1118116070
Edizione	[1st ed.]
Descrizione fisica	1 online resource (334 p.)
Collana	JPL space science and technology series ; ; 2
Classificazione	TEC036000
Altri autori (Persone)	KimYun-jin
Disciplina	621.3848/5
Soggetti	Synthetic aperture radar
	Polarimetric remote sensing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	SYNTHETIC APERTURERADAR POLARIMETRY; CONTENTS; NOTE FROM THE SERIES EDITOR; FOREWORD; PREFACE; ACKNOWLEDGMENTS; AUTHORS; 1 SYNTHETIC APERTURE RADAR (SAR) IMAGING BASICS; 1.1 Basic Principles of Radar Imaging; 1.2 Radar Resolution; 1.3 Radar Equation; 1.4 Real Aperture Radar; 1.5 Synthetic Aperture Radar; 1.6 Radar Image Artifacts and Noise; 1.6.1 Range and Azimuth Ambiguities; 1.6.2 Geometric Effects and Projections; 1.6.3 Signal Fading and Speckle; 1.7 Summary; References; 2 BASIC PRINCIPLES OF SAR POLARIMETRY; 2.1 Polarization of Electromagnetic Waves 2.2 Mathematical Representations of Scatterers2.3 Implementation of a Radar Polarimeter; 2.4 Polarization Response; 2.5 Optimum Polarizations; 2.5.1 General (Bistatic) Case; 2.5.2 Backscatter (Monostatic) Case; 2.5.3 Special Case: Single Scatterer in Backscatter (Monostatic) Case; 2.5.4 Special Case: Multiple Scatterers with

Sommario/riassunto	"This book describes the application of polarimetric synthetic aperture radar to Earth remote sensing based on research at the NASA Jet Propulsion Laboratory (JPL). This book synthesizes all current research to provide practical information for both the newcomer and the expert in radar polarimetry. The text offers a concise description of the mathematical fundamentals illustrated with many examples using SAR data, with a main focus on remote sensing of the Earth.The book begins with basics of synthetic aperture radar to provide the basis for understanding how polarimetric SAR images are formed and gives an introduction to the fundamentals of radar polarimetry. It goes on to discuss more advanced polarimetric concepts that allow one to infer more information about the terrain being imaged. In order to analyze data quantitatively, the signals must be calibrated carefully, which the book addresses in a chapter summarizing the basic calibration algorithms. The book concludes with examples of applying polarimetric analysis to scattering from rough surfaces, to infer soil moisture from radar signals"--