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Sommario/riassunto

This open access book focuses on the practical application of electromagnetic polarimetry principles in Earth remote sensing with an educational purpose. In the last decade, the operations from fully polarimetric synthetic aperture radar such as the Japanese ALOS/PaISAR, the Canadian Radarsat-2 and the German TerraSAR-X and their easy data access for scientific use have developed further the research and data applications at L,C and X band. As a consequence, the wider distribution of polarimetric data sets across the remote sensing community boosted activity and development in polarimetric SAR applications, also in view of future missions. Numerous experiments with real data from spaceborne platforms are shown, with the aim of giving an up-to-date and complete treatment of the unique benefits of fully polarimetric synthetic aperture radar data in five different domains: forest, agriculture, cryosphere, urban and oceans.

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