

1. Record Nr.	UNINA9910483467403321
Titolo	Inverse problems and imaging : lectures given at the C.I.M.E. Summer School held in Martina Franca, Italy, September 15-21, 2002 // Luis L. Bonilla (ed.) ; chapters by: A. Carpio ... [et al.]
Pubbl/distr/stampa	Berlin, : Springer, 2008
ISBN	9783540785477 3540785477
Edizione	[1st ed. 2008.]
Descrizione fisica	xi, 192 p. : ill
Collana	Lecture notes in mathematics, , 0075-8434 ; ; 1943
Altri autori (Persone)	BonillaL. L <1956-> (Luis Lopez) CarpioA (Ana)
Disciplina	621.36/70151
Soggetti	Tomography Geometric tomography Inverse problems (Differential equations)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	to Image Reconstruction -- X-ray Tomography -- Adjoint Fields and Sensitivities for 3D Electromagnetic Imaging in Isotropic and Anisotropic Media -- Polarization-Based Optical Imaging -- Topological Derivatives for Shape Reconstruction -- Time-Reversal and the Adjoint Imaging Method with an Application in Telecommunication -- A Brief Review on Point Interactions.
Sommario/riassunto	Nowadays we are facing numerous and important imaging problems: nondestructive testing of materials, monitoring of industrial processes, enhancement of oil production by efficient reservoir characterization, emerging developments in noninvasive imaging techniques for medical purposes - computerized tomography (CT), magnetic resonance imaging (MRI), positron emission tomography (PET), X-ray and ultrasound tomography, etc. In the CIME Summer School on Imaging (Martina Franca, Italy 2002), leading experts in mathematical techniques and applications presented broad and useful introductions for non-experts and practitioners alike to many aspects of this exciting field. The volume contains part of the above lectures completed and updated by additional contributions on other related topics: a general

presentation and introduction (Moscoso), X-ray tomography (Natterer), Electromagnetic imaging (Dorn, Bertete-Aguirre, Papanicolaou), coherent imaging in telecommunications in a multiple input-multiple output setup (Dorn), polarization based optical imaging (Moscoso), topological derivatives used in shape reconstruction related to inverse scattering problems (Carpio, Rapún), Point interactions (Dell'Antonio, Figari, Teta).

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