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Nota di contenuto	1.Characterization of Inverse Problems -- 2.Discretization of Inverse Problems -- 3.Regularization of Linear Inverse Problems -- 4. Regularization of Nonlinear Inverse Problems -- Appendix: A.Results from Linear Algebra -- B.Function Spaces -- C.The Fourier Transform -- D.Proofs of Theorems from Chapter 3.
Sommario/riassunto	The overall goal of the book is to provide access to the regularized solution of inverse problems relevant in geophysics without requiring more mathematical knowledge than is taught in undergraduate math courses for scientists and engineers. From abstract analysis only the concept of functions as vectors is needed. Function spaces are introduced informally in the course of the text, when needed. Additionally, a more detailed, but still condensed introduction is given in Appendix B. A second goal is to elaborate the single steps to be taken when solving an inverse problem: discretization, regularization and practical solution of the regularized optimization problem. These steps are shown in detail for model problems from the fields of inverse

gravimetry and seismic tomography. The intended audience is mathematicians, physicists and engineers having a good working knowledge of linear algebra and analysis at the upper undergraduate level.
