Record Nr. UNISA996466664603316 Autore Groetsch Charles W Titolo Stable Approximate Evaluation of Unbounded Operators [[electronic resource] /] / by Charles W. Groetsch Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, , 2007 **ISBN** 1-280-70079-3 9786610700790 3-540-39943-7 Edizione [1st ed. 2007.] Descrizione fisica 1 online resource (133 p.) Collana Lecture Notes in Mathematics, , 0075-8434;; 1894 Classificazione 31.46 **MAT 470f** SI 850 Disciplina 515.7246 Soggetti Operator theory Numerical analysis **Operator Theory Numerical Analysis** 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 (pages [121]-123) and index. Some Problems Leading to Unbounded Operators -- Hilbert Space Nota di contenuto Background -- A General Approach to Stabilization -- The Tikhonov-Morozov Method -- Finite-Dimensional Approximations. Spectral theory of bounded linear operators teams up with von Sommario/riassunto Neumann's theory of unbounded operators in this monograph to provide a general framework for the study of stable methods for the evaluation of unbounded operators. An introductory chapter provides numerous illustrations of unbounded linear operators that arise in various inverse problems of mathematical physics. Before the general theory of stabilization methods is developed, an extensive exposition of the necessary background material from the theory of operators on Hilbert space is provided. Several specific stabilization methods are

studied in detail, with particular attention to the Tikhonov-Morozov

method and its iterated version.