

1. Record Nr.	UNINA9910300115903321
Titolo	New Trends in Parameter Identification for Mathematical Models / / edited by Bernd Hofmann, Antonio Leitão, Jorge P. Zubelli
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2018
ISBN	3-319-70824-4
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (345 pages) : illustrations
Collana	Trends in Mathematics, , 2297-024X
Disciplina	511.8
Soggetti	Differential equations Operator theory Mathematical optimization Calculus of variations Numerical analysis Differential Equations Operator Theory Calculus of Variations and Optimization Numerical Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Posterior contraction in Bayesian inverse problems under Gaussian priors -- Convex regularization of discrete-valued inverse problems -- Algebraic reconstruction of source and attenuation in SPECT using first scattering measurements -- On l_1 -regularization under continuity of the forward operator in weaker topologies -- On self-regularization of ill-posed problems in Banach spaces by projection methods -- Monotonicity-based regularization for phantom experiment data in electrical impedance tomography -- An SVD in Spherical Surface Wave Tomography -- Numerical Studies of Recovery Chances for a Simplified EIT Problem -- Bayesian updating in the determination of forces in Euler-Bernoulli beams -- On nonstationary iterated Tikhonov methods for ill posed equation in Banach spaces -- The product midpoint rule for Abel-type integral equations of the first kind with perturbed data -- Heuristic parameter choice in Tikhonov method form minimizers of the

quasi-optimality function -- Modification of Iterative Tikhonov
Regularization Motivated by a Problem of Identification of Laser Beam
Quality Parameters -- Tomographic terahertz imaging using sequential
subspace optimization -- Adaptivity and Oracle Inequalities in Linear
Statistical Inverse Problems: a (numerical) survey -- Relaxing
Alternating Direction Method of Multipliers (ADMM) algorithm for linear
inverse problems.

Sommario/riassunto

The Proceedings volume contains 16 contributions to the IMPA conference “New Trends in Parameter Identification for Mathematical Models”, Rio de Janeiro, Oct 30 – Nov 3, 2017, integrating the “Chemnitz Symposium on Inverse Problems on Tour”. This conference is part of the “Thematic Program on Parameter Identification in Mathematical Models” organized at IMPA in October and November 2017. One goal is to foster the scientific collaboration between mathematicians and engineers from the Brazilian, European and Asian communities. Main topics are iterative and variational regularization methods in Hilbert and Banach spaces for the stable approximate solution of ill-posed inverse problems, novel methods for parameter identification in partial differential equations, problems of tomography, solution of coupled conduction-radiation problems at high temperatures, and the statistical solution of inverse problems with applications in physics.
