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Nota di contenuto	1.STEMPO dynamic Xray tomography phantom -- 2.On a fixed point continuation method for a convex optimization problem -- 3. Majoration Minimization for Sparse SVMs -- 4.Bilevel learning of regularization models and their discretization for image deblurring and super resolution -- 5.Non Log Concave and Nonsmooth Sampling via Langevin Monte Carlo Algorithms -- 6.On the inexact proximal Gauss-Newton methods for regularized nonlinear least squares problems.
Sommario/riassunto	In recent years, non-linear optimization has had a crucial role in the development of modern techniques at the interface of machine learning and imaging. The present book is a collection of recent contributions in the field of optimization, either revisiting consolidated ideas to provide

formal theoretical guarantees or providing comparative numerical studies for challenging inverse problems in imaging. The work of these papers originated in the INdAM Workshop “Advanced Techniques in Optimization for Machine learning and Imaging” held in Roma, Italy, on June 20-24, 2022. The covered topics include non-smooth optimisation techniques for model-driven variational regularization, fixed-point continuation algorithms and their theoretical analysis for selection strategies of the regularization parameter for linear inverse problems in imaging, different perspectives on Support Vector Machines trained via Majorization-Minimization methods, generalization of Bayesian statistical frameworks to imaging problems, and creation of benchmark datasets for testing new methods and algorithms.