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Titolo	Handbook of Mathematical Models and Algorithms in Computer Vision and Imaging : Mathematical Imaging and Vision / / edited by Ke Chen, Carola-Bibiane Schönlieb, Xue-Cheng Tai, Laurent Younces
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Descrizione fisica	1 online resource (20 illus., 10 illus. in color.)
Disciplina	518
Soggetti	Computer science - Mathematics Optical data processing Mathematical optimization Differential equations, Partial Neural networks (Computer science) Computational Mathematics and Numerical Analysis Computer Imaging, Vision, Pattern Recognition and Graphics Optimization Partial Differential Equations Mathematical Models of Cognitive Processes and Neural Networks Models matemàtics Visió per ordinador Diagnòstic per la imatge Optimització matemàtica Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	A latest update on the state of arts research developments in the fast growing and highly multidisciplinary field of Variational Methods and Effective Algorithms for Imaging and Vision. The emphasis is on the Variational Methods which represent the optimal solutions to class of

imaging and vision problems and on Effective Algorithms which are necessary for the methods to be translate to practical use in various applications. Viewing discrete images as data sampled from functional surfaces enable the use of Advanced tools from Calculus, Functions and Calculus of Variations, Optimization and provide the basis of high resolution imaging through variational models. No other frameworks can provide the comparable accuracy and precision to Imaging and Vision. Ample references are given on topics covered. All chapters will have introductions so that the book is accessible to graduate students. For new comers to the field, the book provides a comprehensive and fast track introduction to the c to save time and get on with tackling new and emerging challenges, rather than running the risk of reproducing / comparing to some old works already done or reinventing same results. For researchers, exposure to the state of arts of research works leads to an overall view of the entire field so as to guide new research directions and avoid pitfalls in moving the field forward and looking into the next 25 years of imaging and information sciences. Primary audience: Graduate students, Researchers, Imaging and vision practitioners, Applied mathematicians, Medical Imagers, Engineers, and Computer scientists.

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