

1. Record Nr.	UNINA9910784848503321
Titolo	Mathematics and computation in imaging science and information processing [[electronic resource] /] / editors Say Song Goh, Amos Ron, Zuowei Shen
Pubbl/distr/stampa	New Jersey, : World Scientific, c2007
ISBN	1-281-91870-9 9786611918705 981-270-906-1
Descrizione fisica	1 online resource (276 p.)
Collana	Lecture notes series, Institute for Mathematical Sciences, National University of Singapore ; ; v. 11
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Disciplina	621.36/7
Soggetti	Image processing - Mathematical models Image processing - Data processing Electronic data processing - Mathematical models
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.
Nota di contenuto	CONTENTS; Foreword; Preface; Subdivision on Arbitrary Meshes: Algorithms and Theory Denis Zorin; 1. Introduction; 1.1. Subdivision in computer graphics and geometric modeling; 2. Basics; 2.1. Subdivision curves; 2.2. Subdivision surfaces; 3. Overview of Subdivision Schemes; 3.1. Classification of subdivision schemes; 3.2. Loop scheme; 3.3. Catmull-Clark scheme; 4. Modified Buttery Scheme; 4.1. Doo-Sabin scheme; 4.2. Midedge scheme and other non-integer arity schemes; 4.3. Comparison; 5. Smoothness of Subdivision Surfaces; 5.1. Cr-continuity and tangent plane continuity 5.2. Universal surfaces5.3. Sufficient smoothness criteria; 6. Approximation Properties of Subdivision Surfaces; 6.1. Functional spaces on surfaces; 6.2. Manifold structure defined by subdivision; 7. Conclusions; References; High Order Numerical Methods for Time Dependent Hamilton-Jacobi Equations Chi-Wang Shu; 1. Introduction and Properties of Hamilton-Jacobi Equations; 2. First Order Monotone

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Sommario/riassunto

The explosion of data arising from rapid advances in communication, sensing and computational power has concentrated research effort on more advanced techniques for the representation, processing, analysis and interpretation of data sets. In view of these exciting developments, the program "Mathematics and Computation in Imaging Science and Information Processing" was held at the Institute for Mathematical Sciences, National University of Singapore, from July to December 2003 and in August 2004 to promote and facilitate multidisciplinary research in the area. As part of the program, a series

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