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| 1. Record Nr.           | UNICASVIA0096327   |
| Autore                  | Volponi, Paolo <1924-1994>   |
| Titolo                  | 2: Il sipario ducale Il pianeta irritabile Il lanciatore di giavellotto Prose minori 1976-1983 / Paolo Volponi ; a cura di Emanuele Zinato   |
| Pubbl/distr/stampa      | Torino, : G. Einaudi, [2002]   |
| ISBN                    | 8806163256   |
| Descrizione fisica      | LXXXI, 776 p. ; 19 cm.   |
| Collana                 | Nuova universale Einaudi ; 230   |
| Lingua di pubblicazione | Italiano   |
| Formato                 | Materiale a stampa   |
| Livello bibliografico   | Monografia   |
| 2. Record Nr.           | UNINA9910484986803321  |
| Titolo                  | Advanced Concepts for Intelligent Vision Systems : 16th International Conference, ACIVS 2015, Catania, Italy, October 26-29, 2015. Proceedings // edited by Sebastiano Battiato, Jacques Blanc-Talon, Giovanni Gallo, Wilfried Philips, Dan Popescu, Paul Scheunders   |
| Pubbl/distr/stampa      | Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015  |
| ISBN                    | 3-319-25903-2  |
| Edizione                | [1st ed. 2015.]  |
| Descrizione fisica      | 1 online resource (XXI, 897 p. 389 illus.)   |
| Collana                 | Image Processing, Computer Vision, Pattern Recognition, and Graphics ; ; 9386  |
| Disciplina              | 004  |
| Soggetti                | Computer security<br>Data encryption (Computer science)<br>Coding theory<br>Information theory<br>Electronic commerce<br>Management information systems<br>Computer science<br>Computers and civilization<br>Systems and Data Security<br>Cryptology<br>Coding and Information Theory<br>e-Commerce/e-business |

Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- Preface -- About the Volume Editors -- Organization -- Contents -- Low-Level Image Processing -- B NRFBE Method for Blur Estimation in Document Images -- 1 Introduction -- 2 Blur Analysis -- 3 Blur Measuring -- 3.1 Principle of the Measurement -- 3.2 Text Blur Measurement -- 4 Experiments -- 4.1 Simulated Blur -- 4.2 Influence of Working Zone Z -- 4.3 Real Images -- 4.4 DIQA Database -- 5 Conclusion -- References -- Edge Width Estimation for Defocus Map from a Single Image -- 1 Introduction -- 2 Edge Width -- 2.1 Gaussian Edge Model -- 2.2 Estimation of Edge Width -- 2.3 The Edge Width Estimation Algorithm -- 3 Defocus Blur Estimation -- 3.1 Sparse Defocus Map -- 3.2 Full Defocus Map -- 4 Results and Discussion -- 4.1 Possible Improvement -- 5 Conclusion -- References -- RSD-DOG: A New Image Descriptor Based on Second Order Derivatives -- 1 Introduction -- 1.1 Related Work -- 2 Directional Filter -- 3 Ridge and Valley Detection Using Difference of Gaussian Filters -- 3.1 Difference of Half Smoothing Filters (DHSF) -- 3.2 Estimating the Direction of Second Order Statistics Such as Ridges and Valleys -- 4 Descriptor Construction -- 5 Experiments and Results -- 5.1 Dataset and Evaluation -- 5.2 Descriptor Performance -- 6 Conclusion -- References -- Ringing Artifact Suppression Using Sparse Representation -- 1 Introduction -- 2 Ringing Suppression -- 2.1 Problem Formulation -- 2.2 Joint Sparse Coding -- 2.3 Ringing Suppression Method -- 3 Evaluation -- 4 Conclusion -- References -- Patch-Based Mathematical Morphology for Image Processing, Segmentation and Classification -- 1 Introduction -- 2 Patch Complete Lattice Learning -- 2.1 Complete Lattice from Patches -- 2.2 Complete Lattice Learning -- 2.3 Patch-Based MM Operators -- 3 Applications -- 3.1 Color Image Processing -- 3.2 Color Image Segmentation. 3.3 Color Image Texture Classification -- 4 Conclusion -- References -- Time Ordering Shuffling for Improving Background Subtraction -- 1 Introduction -- 2 Time Shuffling Strategies -- 2.1 Principle -- 2.2 Random Time Shuffling Strategy -- 2.3 Deterministic Time Shuffling Strategies -- 2.4 Implementation of the Deterministic Strategies -- 3 Experiments and Results -- 3.1 Initialization -- 3.2 Dataset -- 3.3 Background Subtraction Algorithms -- 3.4 Results and Interpretation -- 4 Conclusions -- References -- Fast and Low Power Consumption Outliers Removal for Motion Vector Estimation -- 1 Introduction -- 2 Proposed Method -- 2.1 Pre-processing -- 2.2 Advanced Voting -- 2.3 Motion Estimation Model -- 3 Experimental Results -- 4 Computational Cost Comparison -- 5 Conclusion -- References -- Adaptive Scale Selection for Multiscale Image Denoising -- 1 Introduction -- 2 Motivation of the Work -- 2.1 Atomic Representation and Time-Scale Evolution -- 2.2 Rational Dilation Wavelet Transform -- 3 Scale Selection -- 3.1 Packets of Atoms -- 3.2 Scale Selection Algorithm -- 4 Adaptive RDWT -- 5 Preliminary Experimental Results -- 6 Conclusions -- References -- Secure Signal Processing Using Fully Homomorphic

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## Sommario/riassunto

This book constitutes the thoroughly refereed proceedings of the 16th International Conference on Advanced Concepts for Intelligent Vision Systems, ACIVS 2015, held Catania, Italy, in October 2015. The 76 revised full papers were carefully selected from 129 submissions. AcivS 2015 is a conference focusing on techniques for building adaptive, intelligent, safe and secure imaging systems. The focus of the conference is on following topic: low-level Image processing, video processing and camera networks, motion and tracking, security, forensics and biometrics, depth and 3D, image quality improvement and assessment, classification and recognition, multidimensional signal processing, multimedia compression, retrieval, and navigation.

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