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   Soggetti   Optical data processing
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   Nota di bibliografia   Includes bibliographical references and index.

   Nota di contenuto   Cognitive Vision -- Implementing the Expert Object Recognition
                       Pathway -- Efficient Pose Estimation Using View-Based Object
                       Representations -- Integrating Context-Free and Context-Dependent
                       Attentional Mechanisms for Gestural Object Reference -- Philosophical
                       Issues in Cognitive Vision -- Reflections on Cognitive Vision Systems --
                       Towards Ontology Based Cognitive Vision -- A Self-Referential
                       Perceptual Inference Framework for Video Interpretation -- Cognitive
                       Vision and Applications -- Recurrent Bayesian Network for the
                       Recognition of Human Behaviors from Video -- Implementation of
                       Traffic Flow Measuring Algorithm Using Real-Time Dynamic Image
                       Processing -- Efficient Fingertip Tracking and Mouse Pointer Control
                       for a Human Mouse -- Real-Time Camera Pose in a Room --

Recognition of Obstacles on Structured 3D Background -- Virtual Post-its: Visual Label Extraction, Attachment, and Tracking for Teleconferencing -- Architecture for Image Labelling in Real Conditions -- Alignment of Sewerage Inspection Videos for Their Easier Indexing -- Information Selection and Probabilistic 2D – 3D Integration in Mobile Mapping -- Tree Supported Road Extraction from Arial Images Using Global and Local Context Knowledge -- Automatic Bridge Detection in High-Resolution Satellite Images -- Computer Platform for Transformation of Visual Information into Sound Sensations for Vision Impaired Persons -- A Real-Time Multisensory Image Segmentation Algorithm with an Application to Visual and X-Ray Inspection -- An Attentive, Multi-modal Laser "Eye" -- Navigating through Logic-Based Scene Models for High-Level Scene Interpretations -- Computer Vision Architectures -- A Real-World Vision System: Mechanism, Control, and Vision Processing -- Learning Optimal Parameters for Self-Diagnosis in a System for Automatic Exterior Orientation -- Multi-agent Activity Recognition Using Observation Decomposed Hidden Markov Model -- VICs: A Modular Vision-Based HCI Framework -- A Miniature Stereo Vision Machine for Real-Time Dense Depth Mapping -- Performance Evaluation -- Performance Evaluation Metrics and Statistics for Positional Tracker Evaluation -- On the Application of the Concept of Dependability for Design and Analysis of Vision Systems -- The CSU Face Identification Evaluation System: Its Purpose, Features, and Structure -- Implementation Methods -- The Imalab Method for Vision Systems -- Dynamically Reconfigurable Vision-Based User Interfaces -- From a CORBA-Based Software Framework to a Component-Based System Architecture for Controlling a Mobile Robot -- Architecture and Classical Computer Vision -- A Framework for Visual Servoing -- Automatic Mapping of Settlement Areas Using a Knowledge-Based Image Interpretation System -- A Software Architecture for Distributed Visual Tracking in a Global Vision Localization System -- Multi-object Tracking Based on a Modular Knowledge Hierarchy -- Monkeys — A Software Architecture for ViRoom — Low-Cost Multicamera System -- Hierarchical Bayesian Network for Handwritten Digit Recognition -- A Spectral Approach to Learning Structural Variations in Graphs -- Sigmoidal Weighted Vector Directional Filter -- Real-Time Extraction of Colored Segments for Robot Visual Navigation -- A Multiple Classifier System Approach to Affine Invariant Object Recognition -- Measuring Scene Complexity to Adapt Feature Selection of Model-Based Object Tracking -- A Framework for Robust and Incremental Self-Localization of a Mobile Robot -- Discriminant Isometric Mapping for Face Recognition -- Extracting Salient Image Features for Reliable Matching Using Outlier Detection Techniques -- Video Annotation -- Brand Identification Using Gaussian Derivative Histograms -- Context Based Object Detection from Video -- A Multimedia System Architecture for Automatic Annotation of Sports Videos -- Automatic Video Interpretation: A Recognition Algorithm for Temporal Scenarios Based on Pre-compiled Scenario Models -- Trajectory Based Assessment of Coordinated Human Activity.

Sommario/riassunto

This book constitutes the refereed proceedings of the Third International Conference on Computer Vision Systems, ICVS 2003, held in Graz, Austria, in April 2003. The 51 revised full papers presented were carefully reviewed and selected from 109 submissions. The papers are organized in topical sections on cognitive vision, philosophical issues in cognitive vision, cognitive vision and applications, computer vision architectures, performance evaluation, implementation methods, architecture and classical computer vision, and video annotation.