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Nota di contenuto	Content-centric computing in visual systems -- Colour image retrieval fitted to «classical» querying -- Quality measures for interactive image retrieval with a performance evaluation of two 3×3 texel-based methods -- Holographic image representations: The Fourier transform method -- Image databases are not databases with images -- Customizing MPEG video compression algorithms to specific application domains: The case of highway monitoring -- A new lossless image compression algorithm based on arithmetic coding -- Analysis of a two step MPEG video system -- Dedicated hardware processors for a real-time image data pre-processing implemented in FPGA structure -- Wavelet transform architectures: A system level review -- Lossless compression of pre-press images using a novel colour decorrelation technique -- Real time hardware architecture for visual robot

navigation -- Speeding up fractal encoding of images using a block indexing technique -- Adding associative meshes to the PACCO I.P. environment -- Smoothing of MPEG multi-program video coding for packet networks -- Audio-visual processing for scene change detection -- Weighted walkthroughs in retrieval by contents of pictorial data -- A new approach to computation of curvature scale space image for shape similarity retrieval -- Optimal keys for image database indexing -- The terminological image retrieval model -- Novel block truncation coding of image sequences for limited-color display -- Image registration with shape mixtures -- Image retrieval by color regions -- Interactive model-based matching retrieval -- Where are the ball and players? Soccer game analysis with color-based tracking and image mosaick -- Histogram families for color-based retrieval in image databases -- Image retrieval by multidimensional elastic matching -- Optimization methods in multilayer classifier networks for automatic control of lamellibranch larva growth -- Neural network for region detection -- Static and dynamic attractors of autoassociative neural networks -- A brain-like approach to multistage hierarchical image processing -- Contextual edge detection using a recurrent neural network -- A divide-and-conquer strategy in recovering shape of book surface from shading -- Reconstruction of 3-D shape and texture by active rangefinding -- Wavelets for multiresolution shape recognition -- Invariant object representation and recognition using Lie algebra of perceptual vector fields -- A fast approach for determining of visibility of 3D object's surfaces -- Direct aspect-based 3-D object recognition -- Visualizing parametric surfaces at variable resolution -- Learning visual ideals -- Adaptive non-cartesian networks for vision -- Adaptive logic networks for facial feature detection -- An appearance-based approach to gesture-recognition -- Exponential vector field tomography -- Detection of rib shadows in digital chest radiographs -- A Markov random field model for bony tissue classification -- A new methodology to automatically segment biomedical images -- Histogram-based image registration for digital subtraction angiography -- A method for segmentation of CT head images -- Automatic recognition of spicules in mammograms -- Specialized environment for medical radiological image visualization -- Interactive segmentation of 3D ultrasound using deformable solid models and active contours -- Computer aided diagnosis system for lung cancer based on helical CT images -- A generalised geometry and intensity based partial volume correction for magnetic resonance images -- A regularization method for unfolding the measured data of different X-ray spectrometers in Compton scattering tomography -- Fast tissue segmentation based on a 4D feature map: Preliminary results -- Texture features in the classification of melanocytic lesions -- Segmentation of sputum color image for lung cancer diagnosis based on neural networks -- Fast face detection via morphology-based pre-processing -- Generalization of shifted fovea multiresolution geometries applied to object detection -- A long term change detection method for surveillance applications -- Automatic pedestrian recognition using real-time motion analysis -- Person identification system based on a trapezoid pyramid architecture of a gray-level image -- Autonomous plant inspection and anomaly detection -- Nobel Chile Jalapeno sorting using structured laser and neural network classifiers -- Development of image processing technique for detection of the rescue target in the marine casualty -- Bimodal histogram transformation based on maximum likelihood parameter estimates in univariate Gaussian mixtures -- A robust structural fingerprint restoration -- A system for the automatic and real time recognition of V.L.P.'s (Vehicle License Plate). -- Spatial correlation

features for SAR images in a small sample size context -- Combination of active sensing and sensor fusion for collision avoidance in mobile robots -- Underwater vegetation detection in high frequency sonar images: A preliminary approach -- Leather inspection through singularities detection using wavelet transforms -- Zoning design for handwritten numeral recognition -- Improving the use of contours and skeletons for off-line cursive script segmentation -- Optical character recognition without segmentation -- Automatic recognition of printed arabic text using neural network classifier -- A novel pair-wise recognition scheme for handwritten characters in the framework of a multi-expert configuration -- A general and flexible deskewing method based on generalized projection -- Logical structure analysis by typographic characteristics extraction -- Combining high-level features with sequential local features for on-line handwriting recognition -- Handwritten Chinese character recognition using displacement extraction based on directional features -- Optical image acquisition, analysis and processing for biomedical applications -- Segmentation of ultrasound image data by two dimensional autoregressive modelling -- Comparison and application of selected statistical shape models in medical imaging -- Two motion-detection algorithms for projection-reconstruction magnetic resonance imaging: Theory and experimental verification -- Image analysis and synthesis using physics-based-modeling for pearl quality evaluation system -- Computer vision and image processing in postal automation -- Adaptive pen user interface with supervised competitive learning -- Joint detection, interpolation, motion and parameter estimation for image sequences with missing data -- The VIRSBS project: Visual intelligent recognition for secure banking services -- The ESPRIT LTR research project: “Nonlinear model-based analysis and description of images for multimedia applications (NOBLESSE)” -- Analysis and segmentation of remote-sensing images for land-cover mapping -- Integration of optical and acoustical imaging sensors for underwater applications -- Project CROMATICA -- The COMPARES Project: Connectionist methods for preprocessing and analysis of remote sensing data -- Reconstruction of severely degraded image sequences -- The CRASH project: Defect detection and classification in ferrite cores.

Sommario/riassunto

This book is part of the refereed 2-volume proceedings of the 9th International Conference on Image Analysis and Processing, ICIAP'97, held in Florence, Italy, September 1997. Both volumes together present several keynote contributions and 173 revised papers selected from over 300 submissions. The contributing authors (more than 400 in number) provide a wealth of new results in the areas of image analysis, pattern recognition and computer vision. Among the basic topics covered are image enhancement, image segmentation, image compression, motion analysis, object recognition, image understanding, and special hardware architectures and systems, etc. Among the application areas covered are biomedical imaging, character recognition, safety and surveillance, object identification, etc.