International Conference on Image Processing and Character Recognition

Table of Contents

Session IP1: Computer Vision
1. A Simple and Robust Approach to the Pose Estimation of Cylinders ........................................ 1
   Zen Chen and Jen-Bin Huang, National Chiao Tung University, R.O.C.
2. Autonomous Land Vehicle Guidance in Complex Room Environments by Computer Vision Techniques ........................................ 9
   Wen-Hsiang Tsai and Kuen-Pei Li, National Chiao Tung University, R.O.C.
3. A Fast Full Search Algorithm for Minimizing the Maximum Difference (MiniMax) in Motion Estimation ........................................ 17
   Kuang-Shyr Wu, Jing-Yi Lu and Ja-Chen Lin, National Chiao Tung University, R.O.C.
4. Determination of Feature Correspondences in Stereo Images Using a Calibration Polygon ........................................ 24
   Zen Chen, Jui-Man Chiu, Jen-Hui Chuang and Tsorng-Lin Chia National Chiao Tung University, R.O.C.
5. Edge-Based Detection of Structured Road Boundaries for Autonomous Land Vehicle ........................................ 32
   Ming-Yang Chern and Chung-Ta Liao, National Chung Cheng University, R.O.C.

Session IP2: Image Processing (1)
1. Resolution Enhancement Using EM Algorithm ........................................ 40
   John Y. Chiang and Y. T. Huang and Yun-Lung Chang, National Sun Yat-Sen University, R.O.C.
2. Panoramic Stereo Imaging System with Automatic Disparity Warping and Fast Seaming ........................................ 48
   Ho-Chao Huang and Yi-Ping Hung, Institute of Information Science, Academia Sinica, R.O.C.
3. Computational Experience About Clustering Using TABU Search ........................................ 56
   Ja-Chen Lin and Wu-Ja Lin, National Chiao Tung University, R.O.C.
4. A Modified Morphological Corner Detection ........................................ 60
   Yuang-Cheh Hsueh, Rey-Sern Lin and Chyi-Hwa Chu National Chiao Tung University, R.O.C.

Session IP3: Image Processing (2)
1. The Gray-Scale Soft Morphological Filters and the Idempotency ........................................ 68
Christopher C. Pu, Ming Hsin Institute of Technology & Commerce, R.O.C.

2. Histogram Matching by Moment Normalization ................................................................. 76
   Yung-Chang Chen and Wen-Hao Wang, National Tsing Hua University, R.O.C.

3. Entropic and Relative Entropic Thresholding Techniques .................................................. 82
   Pau-Choo Chung, Chin-Wen Yang, Chen-I Chang and Jianwei Wang, National Cheng Kung University, R.O.C.

4. A Region-based Vectorization Method ............................................................................... 90
   John Y. Chiang and Y. C. Leu, National Sun Yat-Sen University, R.O.C.

5. Human Face Detection in Color Images ........................................................................... 98
   Chich-Yang Chen and Shiu-Ping Chiang, Feng-Chia University, R.O.C.

6. Face Detection Based on Edge and Intensity Information .................................................. 105
   Shu-Yuan Chen and Chun-Ying Chu, Yuan-Ze Institute of Technology, R.O.C.

Session IP4: Coding & Compression

1. Detection and Concealment of Transmission Errors in MPEG Images ................................. 113
   Jin-Jang Leou and Han-Chiang Shyu, National Chung Cheng University, R.O.C.

2. On the Lossless Compression of Still Images ..................................................................... 121
   Jia-Chen Lin and Trees-Juen Chuang, National Chiao Tung University, R.O.C.

3. A Fast Algorithm for Designing Better Codebooks in Image Vector Quantization ................. 129
   Chang-Biau Yang and Mon-Ching Huang, National Sun Yat-Sen University, R.O.C.

4. A Novel Data Compression Scheme for Chinese Character Patterns ................................... 137
   Jim Z. C. Lai and Wha-Chen Liaw, Feng-Chia University, R.O.C.

5. A Novel Algorithm for Vector Quantization Codebook Design .......................................... 145
   Ting-Chi Wang, Hung-Ru Huang, Chung Yuan Christian University, R.O.C.

Session IP5: Character Recognition

1. An On-line Handwriting Recognition Approach of Chinese Characters for Personal Digital Assistants ................................................................................................................. 153
   Ju-Wei Chen and Sun-Yin Lee, Internet/Application Technology Department, Industrial Technology Research Institute, R.O.C.

2. An Approach to Text Segmentation from Color Document Images with Graphic Background ............................................................................................................................. 161
   Jhing-Fa Wang and Hong-Ming Suen, National Cheng Kung University, R.O.C.

3. A Local-Segment-Based Approach for Spotting Large Vocabulary Chinese Keywords from Mandarin Speech ...................................................................................................... 167
   Bo-Ren Bai and Lin-Shan Lee, National Taiwan University, R.O.C.

4. A Chinese-Character Stroke Extraction Algorithm Based on Contour Information .................. 174
   Chungnan Lee and Bohom Wu, National Sun Yat-Sen University, R.O.C.

5. A Perturbation Technique for Solving the Handwriting Variation Problem in On-Line Handwritten Chinese Character Preclassification ......................................................... 182
Zen Chen, Chi-Wei Lee and Rei-Heng Cheng  
National Chiao Tung University, R.O.C.

Session IP6: Document Analysis

1. Multi-thresholding Character Extraction in a Map .............................................. 190  
   Hsi-Jian Lee and Hsi-Ming Yang, National Chiao Tung University, R.O.C.

2. Field Extraction for Form Documents ................................................................. 198  
   James You, Chen-Chiung Hsieh, H-H Chao and Wen-Tsung Chang,  
   Special System Division, Institute for Information Industry, R.O.C.

3. Segmentation and Understanding of Color Magazine Images .................................. 205  
   Wen-Hsiang Tsai and Shin-Ching Lin, National Chiao Tung University, R.O.C.

4. Recognition of Handwritten Chinese Postal Addresses Using Dual-Expert  
   Classification Scheme ............................................................................................. 213  
   Jhing-Fa Wang and Yih-Ming Su, National Cheng Kung University, R.O.C.

5. Color Texture Segmentation for Clothing Based on Finite Prolate Spheroidal  
   Sequences .................................................................................................................. 220  
   Ling-Ling Wang, Hui-Chien Wu and Chih-Chung Chien, National Tsing Hua  
   University, R.O.C.

Session IP7: Medical Image Processing

1. A Fast Algorithm to Euclidean Distance Transformation by Modeling Ripple  
   Effect ......................................................................................................................... 228  
   Yung-Nien Sun, Ti-Chiun Chang and Yuh-Hwan Liu,  
   National Cheng-Kung University, R.O.C.

2. Directional Property of Fractal - Isotropic or Anisotropic ...................................... 235  
   Ching-Fen Jiang, Kaohsiung Polytechnic Institute, R.O.C.

3. Segmentation of Renal Tubules by Knowledge-Guided Image Analysis ................. 240  
   Qi Chen and Andrew Taylor,  
   New South Wales University, Australia

4. A Computerized System for Detection and Segmentation of Clustered  
   Microcalcifications ................................................................................................. 247  
   Pau-Choo Chung, Chein-I Chang, San-Kan Lee and Chien-Shun Lo,  
   National Cheng Kung University, R.O.C.

5. An Automatic Image Analysis System for Quantitative Assessment of Liver  
   Fibrosis ..................................................................................................................... 254  
   Yung-Nien Sun and Ming-Huwi Horng, National Cheng-Kung University, R.O.C.