Contents – Part II

Directional Segmentation Based on Shear Transform and Shape Features for Road Centerlines Extraction from High Resolution Images .......................... 1
  Ruyi Liu, Qiguang Miao, Jianfeng Song, and Qing Xue

Sparse Representation with Regularization Term for Face Recognition .......... 10
  Jian Ji, Huafeng Ji, and Mengqi Bai

Salient Region Detection by Region Color Contrast and Connectivity Prior ... 21
  Mei-Huan Chen, Yan Dou, and Shi-Hui Zhang

Simultaneously Retargeting and Super-Resolution for Stereoscopic Video .... 31
  Kai Kang, Jing Zhang, Yang Cao, and Zeng-Fu Wang

Local Variation Joint Representation for Face Recognition with Single Sample per Person .......................................................... 41
  Meng Yang, Tiancheng Song, Shiqi Yu, and Linlin Shen

Multi-view Sparse Embedding Analysis Based Image Feature Extraction and Classification ......................................................... 51
  Yangping Zhu, Xiaoyuan Jing, Qing Wang, Fei Wu, Hui Feng, and Shanshan Wu

Automatic Image Semantic Annotation Based on the Tourism Domain Ontological Knowledge Base .................................................. 61
  Pengfei Zhang, Junping Du, Dan Fan, and Yipeng Zhou

Triple Online Boosting Training for Fast Object Detection .................... 70
  Ning Sun, Feng Jiang, Yuze Shan, Jixin Liu, Liu Liu, and Xiaofei Li

Structured Regularized Robust Coding for Face Recognition ............... 80
  Meng Yang, Tiancheng Song, Feng Liu, and Linlin Shen

Research and Application of Moving Target Tracking Based on Multi-innovation Kalman Filter Algorithm ...................................... 90
  Pinle Qin, Guohong Lv, MaoMao Liu, Qiguang Miao, and Xiaoqing Chen

Visual Tracking via Structure Rearrangement and Multi-scale Block Appearance Model ..................................................... 106
  Guang Han, Xingyue Wang, and Jimuyang Zhang

Convolutional Neural Networks for Clothes Categories .......................... 120
  Zhi Li, Yubao Sun, Feng Wang, and Qingshan Liu
Multi-object Segmentation for Abdominal CT Image Based on Visual Patch Classification ................................. 130
   Pan Li, Jun Feng, QiRong Bu, Feihong Liu, and HongYu Wang

Improved 3D Local Feature Descriptor Based on Rotational Projection Statistics and Depth Information ............. 139
   Hui Zeng, Rui Zhang, and Mingming Huang

Pedestrian Tracking in Infrared Image Sequence Based on Spatio-temporal Slice Trajectory Analysis .................. 148
   Dongmei Fu and Pan Shu

Exploring Deep Gradient Information for Face Recognition ............. 159
   Jianjun Qian, Jian Yang, and Ying Tai

A Novel Dynamic Character Grouping Approach Based on the Consistency Constraints ..................................... 170
   Pengfei Xu, Qiguang Miao, Ruyi Liu, Feng Chen, Xiaojiang Chen, and Weike Nie

A Digital Video Stabilization System Based on Reliable SIFT Feature Matching and Adaptive Low-Pass Filtering ........ 180
   Jun Yu, Chang-Wei Luo, Chen Jiang, Rui Li, Ling-Yan Li, and Zeng-Fu Wang

A Tree-Structured Feature Matching Algorithm. .......................... 190
   Xiongwei Sun, Xiubo Ma, Lei Chen, Li Wan, and Xinhua Zeng

Crack Detection in Tread Area Based on Analysis of Multi-scale Singular Area .............................................. 201
   Li Jinping, Hou Wendi, Han Yanbin, and Yin Jianqin

Multiple Scaled Person Re-Identification Framework for HD Video Surveillance Application .......................... 219
   Hua Yang, Xinyu Wang, Wenqi Ma, Hang Su, and Ji Zhu

Aesthetic Image Classification Based on Multiple Kernel Learning .......... 229
   Ningning Liu, Xin Jin, Hui Lin, and De Zhang

1000 Fps Highly Accurate Eye Detection with Stacked Denoising Autoencoder .............................................. 237
   Wei Tang, Yongzhen Huang, and Liang Wang

Motion Compensation Based Fast Moving Object Detection in Dynamic Background ................................. 247
   Wei Zhang, Chenglong Li, Aihua Zheng, Jin Tang, and Bin Luo
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Discriminative Framework for Hashing</td>
<td>257</td>
</tr>
<tr>
<td>Lijie Ding, Xiumei Wang, and Xinbo Gao</td>
<td></td>
</tr>
<tr>
<td>Image Quality Assessment Based on Local Pixel Correlation</td>
<td>266</td>
</tr>
<tr>
<td>Hongqiang Xu, Wen Lu, Yuling Ren, and Lihuo He</td>
<td></td>
</tr>
<tr>
<td>Fast Image Quality Assessment via Hash Code</td>
<td>276</td>
</tr>
<tr>
<td>Lihuo He, Qi Liu, Di Wang, and Wen Lu</td>
<td></td>
</tr>
<tr>
<td>Shooting Recognition and Simulation in VR Shooting Theaters</td>
<td>286</td>
</tr>
<tr>
<td>Shuo Feng, Wei Gai, Yanning Xu, Tingting Cui, Pu Qin, Huiyu Li,</td>
<td></td>
</tr>
<tr>
<td>Dongdong Guan, Chenglei Yang, and Xiangxu Meng</td>
<td></td>
</tr>
<tr>
<td>An Improved Image Quality Assessment in Gradient Domain</td>
<td>293</td>
</tr>
<tr>
<td>Yuling Ren, Wen Lu, Lihuo He, and Tianjiao Xu</td>
<td></td>
</tr>
<tr>
<td>A New Dataset and Evaluation for Infrared Action Recognition</td>
<td>302</td>
</tr>
<tr>
<td>Chenqiang Gao, Yinhe Du, Jiang Liu, Luyu Yang, and Deyu Meng</td>
<td></td>
</tr>
<tr>
<td>Building Segmentation and Classification from Aerial LiDAR via Local</td>
<td>313</td>
</tr>
<tr>
<td>Planar Features</td>
<td></td>
</tr>
<tr>
<td>Jun Chu, Wei Han, Wei Sui, Lingfeng Wang, Qi Wen, and Chunhong Pan</td>
<td></td>
</tr>
<tr>
<td>2DPCANet: Dayside Aurora Classification Based on Deep Learning</td>
<td>323</td>
</tr>
<tr>
<td>Zhonghua Jia, Bing Han, and Xinbo Gao</td>
<td></td>
</tr>
<tr>
<td>An Accelerated Two-Step Iteration Hybrid-norm Algorithm for Image</td>
<td>335</td>
</tr>
<tr>
<td>Restoration</td>
<td></td>
</tr>
<tr>
<td>Yong Wang, Wenjuan Xu, Xiaoyu Yang, Qianqian Qiao, Zheng Jia,</td>
<td></td>
</tr>
<tr>
<td>and Quanxue Gao</td>
<td></td>
</tr>
<tr>
<td>SiftKeyPre: A Vehicle Recognition Method Based on SIFT Key-Points</td>
<td>344</td>
</tr>
<tr>
<td>Preference in Car-Face Image</td>
<td></td>
</tr>
<tr>
<td>Chang-You Zhang, Xiao-Ya Wang, Jun Feng, and Yu Cheng</td>
<td></td>
</tr>
<tr>
<td>RGB-D Salient Object Detection via Feature Fusion and Multi-scale</td>
<td>359</td>
</tr>
<tr>
<td>Enhancement</td>
<td></td>
</tr>
<tr>
<td>Peiliang Wu, Liangliang Duan, and Lingfu Kong</td>
<td></td>
</tr>
<tr>
<td>Object Color Constancy for Outdoor Multiple Light Sources</td>
<td>369</td>
</tr>
<tr>
<td>Liangqiong Qu, Zhigang Duan, Jiandong Tian, Zhi Han, and Yandong Tang</td>
<td></td>
</tr>
<tr>
<td>Feature-Based 3D Reconstruction Model for Close-Range Objects</td>
<td>379</td>
</tr>
<tr>
<td>and Its Application to Human Finger</td>
<td></td>
</tr>
<tr>
<td>Feng Liu, Linlin Shen, and David Zhang</td>
<td></td>
</tr>
</tbody>
</table>
Contour Extraction Based on Human Visual System .......................... 394
   Xiaosheng Yang and Yinfeng Li

A Sparse Pyramid Pooling Strategy ......................................... 406
   Lu Wang, Shengrong Gong, Chunping Liu, Yi Ji, and Mengye Song

A New Research on Contrast Sensitivity Function Based
on Three-Dimensional Space .............................................. 417
   Jiachen Yang, Yun Liu, Wei Wei, Qinggang Meng, Zhiqun Gao,
   and Yancong Lin

An Algorithm Combined with Color Differential Models for License-Plate
Location ................................................................. 429
   Xiangdong Zhang, Peiyi Shen, Juan Song, Liang Zhang, Weibin Gong,
   Wei Wei, Yuanmei Tian, and Guangming Zhu

A New Image Watermarking Algorithm Using the Contourlet Transform
and the Harris Detector ................................................... 439
   Dandan Zhu and Lizhi Lv

Multi-object Visual Tracking Algorithm Based on Grey Relational Analysis
and Generalized Linear Assignment ...................................... 448
   Yanzhao Su, Aihua Li, Zhigao Cui, Hao Fang, and Tao Wang

Codebook Cardinality Spectrum of Distributed Arithmetic Codes
for Nonuniform Binary Sources ........................................... 458
   Yayun Liu and Yong Fang

Author Index ............................................................... 469
Contents – Part I

Fusion Technique for Infrared and Visible Images Based on Improved Quantum Theory Model .................................................. 1
Weiwei Kong, Yang Lei, and Minmin Ren

Skeleton-Based Human Action Recognition with Profile Hidden Markov Models ................................................................. 12
Wenwen Ding, Kai Liu, Fei Cheng, Huan Shi, and Baijian Zhang

Single Image Super-Resolution via Blind Blurring Estimation and Dictionary Learning .......................................................... 22
Xiaole Zhao, Yadong Wu, Jinsha Tian, and Hongying Zhang

Two-layers Local Coordinate Coding .............................................. 34
Wei Xiao, Hong Liu, Hao Tang, and Huaping Liu

A Graph Matching and Energy Minimization Based Algorithm for Lunar Surface Image Mosaic .............................................. 46
Chuan Li, Zhi-Yong Liu, Xu Yang, Hong Qiao, and Chuan-Kai Liu

A Real Time Robust Hand Tracking Method with Normal Cameras .......................................................... 56
Yang Liu, Man Yue Chiu, Hailiang Li, Kangheng Wu, Zhibin Lei, and Qiang Ding

Hypergraph Regularized Autoencoder for 3D Human Pose Recovery .......................................................... 66
Chaoqun Hong, Jun Yu, You Jane, and Xuhui Chen

Target Recognition Based on Feature Weighted Intuitionistic FCM .......................................................... 76
Yang Lei, Shuguang Liu, and Weiwei Kong

The Modified Mumford-Shah Model Based on Nonlocal Means Method for Textures Segmentation .............................................. 86
Jingge Lu, Guodong Wang, and Zhenkuan Pan

Segmentation-Based Salient Object Detection ........................................ 94
Kai-Fu Yang, Xin Gao, Ju-Rong Zhao, and Yong-Jie Li

Non-uniform Motion Deblurring Using Normalized Hyper Laplacian Prior .......................................................... 103
Guodong Wang, Bin Wei, Zhenkuan Pan, Jingge Lu, and Zhaojing Diao
Robust Mean Shift Tracking Based on Refined Appearance Model and Online Update .................................................. 114
  Wangsheng Yu, Zhiqiang Hou, Xiaohua Tian, and Dan Hu

An Effective Multiview Stereo Method for Uncalibrated Images .......... 124
  Peng Cui, Yiguang Liu, Pengfei Wu, Jie Li, and Shoulin Yi

The Human Image Segmentation Algorithm Based on Face Detection and Biased Normalized Cuts ........................................... 134
  Shaojun Qu and Qiaoliang Li

Survey on Eye Movement Based Authentication Systems ...................... 144
  Yun Zhang and Xuanqin Mou

A Discriminant Sparse Representation Graph-Based Semi-Supervised Learning for Hyperspectral Image Classification .......................... 160
  Yuanjie Shao, Changxin Gao, and Nong Sang

Multispectral Image Classification Using a New Bayesian Approach with Weighted Markov Random Fields ........................................... 168
  Shengxi Li, Ying Wang, Jie Li, and Xinbo Gao

Effective Facial Expression Recognition via the Boosted Convolutional Neural Network ................................................................. 179
  Zhenhai Liu, Hanzi Wang, Yan Yan, and Guanjun Guo

Structured Sparse Coding for Classification via Reweighted $\ell_{2,1}$ Minimization ................................................................. 189
  Yong Xu, Yuping Sun, Yuhui Quan, and Yu Luo

Detail-Enhanced Cross-Modality Face Synthesis via Guided Image Filtering ................................................................. 200
  Yunqi Dang, Feng Li, Zhaoxin Li, and Wangmeng Zuo

Edge-Directed Single Image Super-Resolution via Cross-Resolution Sharpening Function Learning ................................................. 210
  Wei Han, Jun Chu, Lingfeng Wang, and Chunhong Pan

Compressive Tracking Based on Particle Filter .................................. 220
  Yun Gao, Hao Zhou, Guowu Yuan, and Xuejie Zhang

An Adaptive Threshold Algorithm for Moving Object Segmentation .......... 230
  Yumin Tian, Dan Wang, Risan Lin, and Qichao Chen

Interactive Registration and Segmentation for Multi-Atlas-Based Labeling of Brain MR Image ................................................. 240
  Qian Wang, Guorong Wu, Min-Jeong Kim, Lichi Zhang, and Dinggang Shen
Negative-Supervised Cascaded Deep Learning for Traffic Sign Classification ......................................................... 249
Kaixuan Xie, Shiming Ge, Rui Yang, Xiang Lu, and Limin Sun

Saliency Detection Based on Non-uniform Quantification for RGB Channels and Weights for Lab Channels .................. 258
Yahui Yuan, Aili Han, and Feilin Han

Edge-Based Unsupervised Evaluation of Image Segmentation ...................... 267
Yihui Liang, Han Huang, and Zhaquanan Cai

An Adaptive Fuzzy Clustering Algorithm Based on Multi-threshold for Infrared Image Segmentation .......................... 277
Jin Liu, Yanli Liu, and Qianqian Ge

Locally Linear Embedding Based Dynamic Texture Synthesis ..................... 287
Weigang Guo, Xinge You, Ziqi Zhu, Yi Mou, and Dachuan Zheng

A Deep Joint Learning Approach for Age Invariant Face Verification ............... 296
Ya Li, Guangrun Wang, Liang Lin, and Huiyou Chang

A New Similarity Measure for Non-local Means Denoising .......................... 306
Bin Cai, Wei Liu, Zhong Zheng, and Zeng-Fu Wang

Mixture Models for Object Detection .............................................. 317
Xiaoqin Kuang, Nong Sang, Feifei Chen, Changxin Gao, and Runmin Wang

An Image Forensic Technique Based on 2D Lighting Estimation Using Spherical Harmonic Frames ................................... 325
Wenyong Zhao and Hong Liu

Class Relatedness Oriented Discriminative Dictionary Learning .................. 335
Pengju Liu, Hongzhi Zhang, Kai Zhang, Changchun Luo, and Wangmeng Zuo

Building an Effective Template Dictionary for Robust Offline Video Tracking ......................................................... 344
Fei Liu, Xiaojin Zhang, Mingyu Fan, Di Wang, Hongxing Jiang, and Xiuzi Ye

Learning Blur Invariant Face Descriptors for Face Verification Under Realistic Environment ........................................... 355
Zhan-Xiang Feng, Yang Yuan, and Jian-Huang Lai

Modified Numerical Scheme for Perona-Malik Model in Image Restoration ................................................................. 366
Zhiyi Ruan, Youjian Shen, and Fengling Liu
Abnormal Event Detection Based on Multi-scale Markov Random Field
Lei Qin, Yituo Ye, Li Su, and Qingming Huang

Light-Weight Spatial Distribution Embedding of Adjacent Features for Image Search
Yan Zhang, Yao Zhao, Shikui Wei, and Zhenfeng Zhu

Cross-Level: A Practical Strategy for Convolutional Neural Networks Based Image Classification
Yu Liu, Baocai Yin, Jun Yu, and Zeng-Fu Wang

Superpixel-Based Global Contrast Driven Saliency Detection in Low Contrast Images
Nan Mu and Xin Xu

Decoupled Marginal Distribution of Gradient Magnitude and Laplacian of Gaussian for Texture Classification
Wufeng Xue, Xuanqin Mou, and Lei Zhang

MR Image Segmentation Using Active Contour Model Incorporated with Sobel Edge Detection
Honggang Zhang, Yunhong Wang, Qingjie Liu, and Di Huang

Spatial-Temporal Feature Fusion for Human Fall Detection
Xin Ma, Haibo Wang, Bingxia Xue, and Yibin Li

Color Image Segmentation Combining Rough Depth Information
Wen Su, Jing Qian, Zhiming Pi, and Zeng-Fu Wang

Author Index

Contents – Part I
Computer Vision
CCF Chinese Conference, CCCV 2015, Xi'an, China, September 18-20, 2015, Proceedings, Part II
Zha, H.; Chen, X.; Wang, L.; Miao, Q. (Eds.)
2015, XX, 472 p. 231 illus., Softcover
ISBN: 978-3-662-48569-9